

Fecha del CVA	14/12/2020
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Parte A. DATOS PERSONALES

Nombre y Apellidos	Andrés Bravo Oviedo		
DNI	50201201K	Edad	44
Núm. identificación del investigador	Researcher ID	T-3878-2019	
	Scopus Author ID	16834328000	
	* Código ORCID	0000-0001-7036-7041	

* Obligatorio

A.1. Situación profesional actual

Organismo	Consejo Superior de Investigaciones Científicas		
Dpto. / Centro	Biogeografía y Cambio Global / Museo Nacional de Ciencias Naturales Biogeografía y Cambio Global		
Dirección	C/ Serrano 115 bis, 28030, Madrid		
Teléfono	(0034) 917452500 - 988100	Correo electrónico	bravo@mncn.csic.es
Categoría profesional	Científico Titular	Fecha inicio	2017
Palabras clave	Bosque mediterráneo; Bosque templado; Bosque plantado; Silvicultura; Biodiversidad; Gestión de recursos naturales		

A.2. Formación académica (título, institución, fecha)

Licenciatura/Grado/Doctorado	Universidad	Año
Programa Oficial de Doctorado en Conservación y Uso Sostenible de Sistemas Forestales	Universidad de Valladolid	2010
Experto Universitario en Métodos Avanzados de Estadística Aplicada	Universidad Nacional de Educación a Distancia	2007
Experto Universitario en Técnicas de Estadística Multivariante	Universidad Nacional de Educación a Distancia	2003
Ingeniero de Montes	Universidad de Valladolid	2001

A.3. Indicadores generales de calidad de la producción científica

Research quality indicators

- 88 Research contributions, >1/3 in the last 5 years. 46 SCI
- H-Index: WoS: 20 Scopus 19, Google-scholar 25; ResearchGate: 22(21)
- 2 positive 6-year research evaluations (2 sexenios)
- 2 positive 5-year teaching evaluations (2 quinquenios)

Research Advisory/Mentoring

- PhD Advisory: 2 (completed) ; 1 (in course)
- MSc Advisory: 4 (completed)
- JAE Intro Advisory: 1 (completed)

Editorial duties

- Reviews Editor with European Journal of Forest Research (<https://www.springer.com/journal/10342/editors>)
- Associate Editor with Annals of Silvicultural Research
- Review Editor with Frontiers in Forests and Global Change

Research Coordination

- Coordinator IUFRO Research Group 1.09 on Ecology and Silviculture of mixed forests
- Deputy Coordinator Grupo de Trabajo de Modelización de la SECF

Competitive fellowships and awards

- 2019 OECD Fellow- Cooperative Research Program
- Doctoral Award (University of Valladolid, 2010)

Parte B. RESUMEN LIBRE DEL CURRÍCULUM

During my MSc studies I was fellow in the Department of Applied Physics of the University of Valladolid where I evaluated the biomass in Scots pine forests using Landsat Images and data from the National Forest Inventory. In 2002 I obtained a FPI grant to start my PhD studies where I developed a growth and survival model for *Pinus pinaster* and *Pinus sylvestris* visiting labs in Austria, Portugal and France. In 2005 I was enrolled in INIA where I completed my PhD on the variability of dominant height growth of *Pinus pinaster*. I developed site index models including climate attributes and simulations of growth under different climate change scenarios (IPCC-SRES). After the PhD I started analyzing the effect of forest management on ecosystem services like carbon sequestration in soils and nutrient recycling (decomposition) in pure and mixed Mediterranean forests and in dry afro-montane forests in Ethiopia. Over the period 2013-2017, I coordinated the European Network on Mixed Forests (www.mixedforests.eu) where I contributed to the advancement of knowledge of the dynamics, ecology and management of mixed forests including a reference definition of mixed forests, studies about the productivity, light interception, canopy structure, the stability of growth and the influence of climate on the maximum size-density relationship in beech-pine stands in Europe. More recently, I started a research line about the influence of functional traits and stress tolerance in the maximum density of forests and ecosystem services trade-offs of temperate forests in USA and Spain. Currently, I am developing a research line at the Department of Biogeography and Global Change (MNCN-CSIC) on adaptive silviculture and applied forest ecology (ASAFE research team) in the context of socio-ecological systems. My activity also includes teaching at DATAFOREST Master degree of the University of Valladolid.

Parte C. MÉRITOS MÁS RELEVANTES (ordenados por tipología)

C.1. Publicaciones

AC: Autor de correspondencia; (nº x / nº y): posición firma solicitante / total autores

- 1 **Artículo científico.** Gérard de StreeL; Christian Ammer; Peter Annighöfer; Ignacio Barbeito; Kamil Bielak; Andrés Bravo-Oviedo;; Quentin Ponette. 2021. Mixing has limited impacts on the foliar nutrition of European beech and Scots pine trees across Europe *Forest Ecology and Management*. Elsevier. 479-art. 118551.
- 2 **Artículo científico.** Irene Martín-Forés; Sandra Magro; Andrés Bravo-Oviedo; et al;. 2020. Spontaneous forest regrowth in South-West Europe: Consequences for nature's contributions to people *People and Nature*. BES. 2, pp.980-994.
- 3 **Artículo científico.** Nicolás Cattaneo; Scheneider Robert; Felipe Bravo; Andrés Bravo-Oviedo. 2020. Inter-specific competition of tree congeners induces changes in crown architecture in Mediterranean pine mixtures *Forest Ecology and Management*. Elsevier. 476-art. 118471.
- 4 **Artículo científico.** Bravo-Oviedo (AC); Marchi; Travaglini; et al; Nocentini. (1/9). 2020. Adoption of new silvicultural methods in Mediterranean forests: the influence of educational background and sociodemographic factors on marker decisions *Annals of Forest Science*. Springer. 77-2, pp.48. ISSN 1286-4560.
- 5 **Artículo científico.** de StreeL; Collet; Barbeito; et al; Bravo-Oviedo; Ponette. (5/20). 2020. Contrasting patterns of tree species mixture effects on wood $\delta^{13}C$ along an environmental gradient *European Journal of Forest Research*. Springer. 139-2, pp.225-249.
- 6 **Artículo científico.** Bravo, Felipe; Fabrika, Marek; Ammer, Christian; et al; Bravo-Oviedo, Andres. 2019. Modelling approaches for mixed forests dynamics prognosis. Research gaps and opportunities *Forest Systems*. INIA. 28. ISSN 2171-5068.
- 7 **Artículo científico.** del Río M.; Bravo-Oviedo A.; Ruiz-Peinado R.; Condés S.2019. Tree allometry variation in response to intra- and inter-specific competitions *Trees - Structure and Function*. 33-1, pp.121-138. ISSN 09311890.

- 8 **Artículo científico.** Sonia Condés; Hubert Sterba; Ana Aguirre; et al;. 2018. Estimation and uncertainty of the mixing effects on Scots pine-European beech productivity from National Forest Inventories data *Forests*. MDPI. 9-518, pp.doi:10.3390/f9090518.
- 9 **Artículo científico.** Bravo-Oviedo; Sonia Condés; Miren del Río; Hans Pretzsch; Mark J. Ducey. 2018. Maximum stand density strongly depends on species-specific wood stability, shade and drought tolerance *Forestry - An International journal of forest research*. Institute of Chartered Foresters - Oxford University Press. 91, pp.459-469. ISSN 0015-752X.
- 10 **Artículo científico.** Rubio-Cuadrado, Alvaro; Bravo-Oviedo, Andres; Mutke, Sven; Del Rio, Miren. 2018. Climate effects on growth differ according to height and diameter along the stem in *Pinus pinaster* Ait.*IFOREST-BIOGEOSCIENCES AND FORESTRY*. 11. ISSN 1971-7458.
- 11 **Artículo científico.** Coll, Lluís; Ameztegui, Aitor; Collet, Catherine; et al; Ponette, Quentin. 2018. Knowledge gaps about mixed forests: What do European forest managers want to know and what answers can science provide? *FOREST ECOLOGY AND MANAGEMENT*. 407. ISSN 0378-1127.
- 12 **Artículo científico.** Rubio-Cuadrado Á.; Camarero J.; del Río M.; Sánchez-González M.; Ruiz-Peinado R.; Bravo-Oviedo A.; Gil L.; Montes F.2018. Long-term impacts of drought on growth and forest dynamics in a temperate beech-oak-birch forest *Agricultural and Forest Meteorology*. 259, pp.48-59. ISSN 01681923.
- 13 **Artículo científico.** Solino, Mario; Yu, Tianqi; Alia, Ricardo; et al; Garcia del Barrio, Jose M.2018. Resin-tapped pine forests in Spain: Ecological diversity and economic valuation *SCIENCE OF THE TOTAL ENVIRONMENT*. 625. ISSN 0048-9697.
- 14 **Artículo científico.** Ignacio Barbeito; Mathieu Dasset; Dominik Bayer; et al; Hans Pretzsch. 2017. Terrestrial laser scanning reveals differences in crown structure of *Fagus sylvatica* in mixed vs . pure European forests *Forest Ecology and Management*. Elsevier {BV}. 405, pp.381-390.
- 15 **Artículo científico.** Ricardo Ruiz-Peinado; Andrés Bravo-Oviedo; Eduardo López-Senespleda; Felipe Bravo; Miren del Río. 2017. Forest management and carbon sequestration in the Mediterranean region: A review *Forest Systems*. INIA. 26-2, pp.eR04S.
- 16 **Artículo científico.** Forrester; Ammer; Annighöfer; et al; Bravo-Oviedo. 2017. Predicting the spatial and temporal dynamics of species interactions in *Fagus sylvatica* and *Pinus sylvestris* forests across Europe *Forest Ecology and Management*. Elsevier. 405, pp.112-133.
- 17 **Artículo científico.** Miren del Río; Andrés Bravo-Oviedo; Hans Pretzsch; Magnus Löf; Ricardo Ruiz-Peinado. 2017. A review of thinning effects on Scots pine stands: From growth and yield to new challenges under global change *Forest Systems*. INIA. 26-2, pp.eR03S.
- 18 **Artículo científico.** Forrester, DI; Christian Ammer; Peter J. Annighöfer; et al; ;. (6/22). 2017. Effects of crown architecture and stand structure on light absorption in mixed and monospecific *Fagus sylvatica* and *Pinus sylvestris* forests along a productivity and climate gradient through Europe *Journal of Ecology*. Wiley. 10.1111/1365-2745.12.
- 19 **Artículo científico.** Ducey, M.J.; Woodall, C.W.; Bravo-Oviedo, A.(3/3). 2017. Climate and species functional traits influence maximum live tree stocking in the Lake States, USA *Forest Ecology and Management*. Elsevier. 386, pp.51-61.
- 20 **Artículo científico.** Condés, S.; Vallet, P.; Bielak, K.; et al; Bravo-Oviedo, A.; del Río, M.(4/11). 2017. Climate influences on the maximum size-density relationship in Scots pine (*Pinus sylvestris* L.) and European beech (*Fagus sylvatica* L.) stands *Forest Ecology and Management*. Elsevier. 385, pp.295-307.
- 21 **Artículo científico.** del Río, M.; Pretzsch, H.; Ruíz-Peinado, R.; et al; Bravo-Oviedo, A.(32/32). 2017. Species interactions increase the temporal stability of community productivity in *Pinus sylvestris*-*Fagus sylvatica* mixtures across Europe *Journal of Ecology*. British Ecological Society. Online First.
- 22 **Artículo científico.** Bravo-Oviedo, A. (AC); Ruiz-Peinado, R.; Onrubia, R.; del Río, M.(1/4). 2017. Thinning alters the early-decomposition rate and nutrient immobilization-release pattern of foliar litter in Mediterranean oak-pine mixed stands *Forest Ecology and Management*. Elsevier. 391, pp.309-320.

- 23 **Artículo científico.** Aldea, J.; Bravo, F.; Bravo-Oviedo, A.; Ruiz-Peinado, R.; Rodríguez, F.; del Río, M.(3/6). 2017. Thinning enhances the species-specific radial increment response to drought in Mediterranean pine-oak stands *Agricultural and Forest Meteorology*. Elsevier. 237, pp.371-383.
- 24 **Capítulo de libro.** Andrés Bravo-Oviedo; Hans Pretzsch; Miren del Río. 2018. Mixed forests' future Dynamics, *Silviculture and Management of mixed forests*. Springer. pp.In Press.
- 25 **Capítulo de libro.** Andrés Bravo-Oviedo. 2018. The role of mixed forests in a social-ecological world *Dynamics, Silviculture and Management of Mixed Forests*. Springer. pp.In Press.
- 26 **Capítulo de libro.** Bravo, F; del Río, M.; Bravo-Oviedo, A.; Ruiz-Peinado, R.; del Peso, C.; Montero, G.(3/6). 2017. Forest Carbon Sequestration: The Impact of Forest Management F. Bravo et al. (eds.), *Managing Forest Ecosystems: The Challenge of Climate Change*. *Managing Forest Ecosystems* 34. Springer. pp.251-275.
- 27 **Capítulo de libro.** del Río, M.; Barbeito, I.; Bravo-Oviedo, A.; et al; Bravo, F. (3/10). 2017. Mediterranean Pine Forests: Management Effects on Carbon Stocks F. Bravo et al. (eds.), *Managing Forest Ecosystems: The Challenge of Climate Change*. *Managing Forest Ecosystems* 34. Springer. pp.301-327.
- 28 **Libro o monografía científica.** Andrés Bravo-Oviedo; Hans Pretzsch; Miren del Río. 2018. Dynamics, Silviculture and Management of Mixed Forests *Managing Forest Ecosystems*. Springer. 31, pp.978-3-319-91952-2, 440629.
- 29 **Libro de divulgación.** Álvaro Rubio-Cuadrado; Jesús Julio Camarero; Gabriel Sangüesa-Barreda; Miren del Río; Ricardo Ruiz-Peinado; Andrés Bravo-Oviedo; Luis Gil; Fernando Montes. 2019. Pasado, presente y futuro de los bosques de montaña (II): Respuestas del crecimiento radial frente al cambio climático *Proyectos de investigación en parques nacionales: 2013-2017*. Organismo Autónomo Parques Nacionales. pp.173-192.
- 30 Cattaneo, Nicolas; Bravo-Oviedo, Andres; Bravo, Felipe. 2018. Analysis of tree interactions in a mixed Mediterranean pine stand using competition indices *EUROPEAN JOURNAL OF FOREST RESEARCH*. 137. ISSN 1612-4669.
- 31 Rubio-Cuadrado, Alvaro; Camarero, J. Julio; Del Río, Miren; Sanchez-Gonzalez, Mariola; Ruiz-Peinado, Ricardo; Bravo-Oviedo, Andres; Gil, Luis; Montes, Fernando. 2018. Drought modifies tree competitiveness in an oak-beech temperate forest *FOREST ECOLOGY AND MANAGEMENT*. 429. ISSN 0378-1127.

C.2. Proyectos

- 1 COMFOR-SUDOE Andrés Bravo Oviedo. (Museo Nacional de Ciencias Naturales). 01/11/2020-28/02/2023. 390.000 €.
- 2 CGL2017-83170-R. COMEDIAS. COMPRENDIENDO EL BOSQUE MEDITERRANEO: AVANCE Y SOSTENIBILIDAD EN ESCENARIOS DE CAMBIO GLOBAL Fernando Valladares Ros. (Consejo Superior de Investigaciones Científicas). 2018-2022. 181.500 €.
- 3 REFORM - Mixed Species forest management. Lowering risk, increasing resilience SUMFOREST. Miren del Río. (INSTITUTO NACIONAL DE INVESTIGACIÓN Y TECNOLOGÍA AGRARIA Y ALIMENTARIA (INIA)). 2016-2020.
- 4 Proyecto de Innovación docente. Manejo de grandes bases de datos biofísicos en la docencia de Posgrado Universidad de Valladolid. Pajares, J.(Universidad de Valladolid). 2015-2016.

C.3. Contratos

- PII 201830I094 ECOLOGÍA FORESTAL APLICADA. AYUDA A LA TOMA DE DECISIONES PARA UNA GESTIÓN FORESTAL BASADA EN PROCESOS NATURALES. Consejo Superior de Investigaciones Científicas. Andrés Bravo Oviedo. 22/11/2018-22/11/2019. 5.000 €.

C.4. Patentes