

ANTONIO GONZÁLEZ HERNÁNDEZ

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PERSONAL INFORMATION

Birth date and place: 20 April 1964 El Aaiún, Western Sahara **Nationality:** Spanish
Contact address: Blas Infante 1, 10º F. 18008-Granada (Spain) **Phone:** +34 606 413 208

EDUCATION

Ph.D. Student, University of Granada, Spain. *Biogeography and conservation of two relictic species of the Western Mediterranean: Abies pinsapo Boiss. and Cedrus atlantica (End.) Carrière.* **since 2012**
Skilled Researcher, University of Almería, Spain. *Biology, ecology and production of plants.* **2000**
Bachelor (and equiv. Master) of Science, University of Granada, Spain. *Biology (Botany).* **1982-1988**

QUALIFICATION SUMMARY

- Habitat and vegetation mapping, field sampling implementation and design
- Environmental Impact Assessment, restoration design and monitoring
- Experience with GIS (ArcGIS, GRASS, QGIS)
- Skills on R (especially on 'dismo' and 'ecospat' packages for Species Distribution Modeling)

RESEARCH EXPERIENCE

Project Researcher **2013**

Dpt. Botany. Univ. Granada.

Designed and implemented the field sampling of current occurrences of *Abies pinsapo* and *Cedrus atlantica* in the Western Mediterranean; located marshes and peat bogs by photo interpretation in Morocco and took part in the field sampling of possible past occurrences of both species; and designed and implemented a GIS relative to variables and occurrences reported.

Research Technician **2001**

Dpt. Plant Biology. Univ. Barcelona

Prepared soil samples of restored limestone quarries in Catalonia, took photographs of samples, analyzed the images and evaluated the soil macroporosity.

Project Researcher **2000**

Arid Zones Experimental Station. Spanish National Research Council (EEZA-CSIC), Almería.

- Sampled stoniness related to plant cover in slopes of an arid basin in Tabernas Desert.
- Evaluated the infiltration of crusts of soil in Tabernas Desert badlands.

Field Assistant **1999**

Ecology Pyrenaic Institute. Spanish National Research Council (IPE-CSIC), Zaragoza.

- Located sampling sites, identified local flora and implemented quantitative population sampling in the assessment of risk of desertification of a Mediterranean sylvopastoral system by grazing, N.P. Cabo de Gata-Níjar, Almería.

Project Researcher **1996-1998**

Zaidin Experimental Station. Spanish National Research Council (EEZ-CSIC), Granada.

- Mapped plant communities and land use of Natural Park of Cabo de Gata-Níjar.
- Mapped pastures and implemented field sampling to evaluate livestock carrying capacity of Natural Park of Cabo de Gata-Níjar.

Project Researcher **1989-1990**

Dpt. Plant Biology. Univ. Granada.

Mapped plant communities by photo interpretation and field sampling of two National Map Sheets in the frame of the Project to Fight the Desertification in the Mediterranean.

PROFESSIONAL EXPERIENCE

Biologist/Consultant

1991-1995, 2002-2008, 2010-2011

Freelance

- Interpreted and verified plant communities and implemented in a GIS the vegetation and land use of Southern Natural Park of Cazorla, Segura y Las Villas.
- Mapped pastures and implemented field sampling to evaluate livestock carrying capacity of National Park of Sierra Nevada.
- Interpreted and mapped pastures of Eastern Andalusia.
- Conducted botanical surveys and plant community inventories in the Natura 2000 network.
- Estimated and mapped biomass yields from forest and crop residues in Granada province as energetic resource.
- Participated in environmental impact assessments and designed corrective measures on highways, regional roads, high-speed railways construction and water conductions building in Southern Spain.
- Surveyed the environmental aspects of disturbing activities (mining, highways, urban and agricultural waste treatment plants, electrical substation, wind farm, gaz pipelines) in Southeastern Spain.
- Designed restoration of abandoned mines and disturbed areas.

Biologist/Consultant

2008-2010

Najarra S.L. Environmental Assessment Engineering

- Participated in environmental impact assessments on municipality and urban planning.
- Participated in environmental impact assessments on provincial road conversion.
- Implemented municipal hydrological models.

Biologist/Consultant

2001-2002

TECNA S.L. Technology on Nature

- Identified impacts and planned possible actions to restore abandoned mining in Almería and Granada provinces, Spain.
- Monitored the environmental aspects on the construction of a desalinized sea water conduction in the arid Southeastern Iberian.
- Performed two comarcal maps of forest resources, Almería, Spain.

Biologist/Consultant

1991

Mediterraneo S.A. Environment and Urban Assessment

- Performed biological inventories in close to ten Environmental Impact Assessments, mainly golf courses building, in the Costa del Sol, Spain.
- Performed the vegetation map of the Guadalhorce basin, Málaga, Spain.

PEER-REVIEWED PUBLICATIONS

- Alba-Sánchez, F., López-Sáez, J. A., Abel-Schaad, D., Sabariego Ruiz, S., Pérez-Díaz, S., **González-Hernández, A.**, & Linares, J. C. (2019). The impact of climate and land-use changes on the most southerly fir forests (*Abies pinsapo*) in Europe. *The Holocene*. doi:10.1177/0959683619838043
- Alba-Sánchez, F., Abel-Schaad, D., López-Sáez, J. A., Sabariego Ruiz, S., Pérez-Díaz, S., & **González-Hernández, A.** (2018). Paleobiogeografía de *Abies* spp. y *Cedrus atlantica* en el Mediterráneo Occidental (Península Ibérica y Marruecos). *Ecosistemas*, 27, 26-37. doi:10.7818/ECOS.1441.
- Li, X-Y., **González, A.**, & Solé-Benet, A. (2005). Laboratory methods for the estimation of infiltration rate of soil crusts in the Tabernas Desert badlands. *Catena*, 60, 255-266. doi:10.1016/j.catena.2004.12.004
- Alados, C. L.; Pueyo, Y., Navas, D., Cabezudo, B., **González, A.**, & Freeman, D. C. (2005). Fractal analysis of plant spatial patterns: A monitoring tool for vegetation transition shifts. *Biodiversity and Conservation*, 14, 1453-1468. doi:10.1007/s10531-004-9669-3

CHAPTERS OF BOOKS

- Alba-Sánchez, F., **González-Hernández, A.**, & y López-Sáez, J. A. (2019). Historia biogeográfica de la flora de Sierra Nevada. In: J. Peñas & J. Lorite (Eds). *Biología de la Conservación de Plantas en Sierra Nevada. Principios y Retos para su Preservación*. Granada, Spain: Servicio de Publicaciones de la Universidad de Granada.
- Alba-Sánchez, F., López-Sáez, J. A., Abel-Schaad, D., Sabariego Ruiz, S., Pérez-Díaz, S., **González-Hernández, A.**, ... Linares, J. C. (2019). Dinámica de las formaciones boscosas de *Abies pinsapo* en la Sierra de las Nieves durante el Holoceno Final. In: J. Gómez Zotano & J. A. Olmedo (Eds.). *Los bosques de la Serranía de Ronda. Una perspectiva espacio-temporal*. Málaga, Spain: Editorial La Serranía.

SELECTED PRESENTATIONS AND POSTERS

- Alba-Sánchez, F., Alcaraz-Segura, D., López-Sáez, J. A., Abel-Schaad, D., Sabariego-Ruiz, S., Pérez-Díaz, S., Blanco, J., Vargas, G., Cabello, J., Peñas, J., **González-Hernández A.**, & Cheddadi, R. (September, 2017) *Estimating ecosystem functional changes from pollen records in Western Mediterranean*. Presented at Mediterranean Palynology Symposium 2017. Barcelona, Spain.
- González-Hernández, A.**, Nieto-Lugilde, D., Peñas, J., Fitzpatrick, M., & and Alba-Sánchez F.. (2016, October) *Niche overlapping points to ecological divergence between populations of Abies pinsapo at both sides of the Mediterranean Sea*. Presented at International Conference on Ecological Sciences, Sfécologie 2016. Marseille, France.
- González-Hernández, A.**, Peñas, J., Nieto-Lugilde, D., & Alba-Sánchez, F. (2015, January). *Lean pattern in an altitude range shift of a tree species (Abies pinsapo Boiss.)*. Presented at Conference of International Biogeography Society. Bayreuth, Germany.
- González-Hernández, A.**, Peñas, J., Nieto-Lugilde, D., & Alba-Sánchez, F. (2013). *Realized niche vs. reproductive niche: Key for survival*. Presented at 6th Congress of Plant Conservation Biology. Murcia, Spain.