

The botany at GBIF Spain

The Spanish botanical community activity in GBIF is strong, currently publishing over 16.9 million records through 189 datasets contributed by 72 institutions, which are continuously updating. Equally significant is the use of this data by the scientific community: these datasets have been cited 37,605 in peer-reviewed journals, accounting for 67.6% of all citations for datasets from Spanish entities.



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What is GBIF?

The Global Biodiversity Information Facility (GBIF) is an international network and data infrastructure funded by governments worldwide, providing open access to biodiversity data. GBIF offers common standards and open-source tools for data providers globally to share information about species locations and sightings. Currently, the GBIF network includes 64 countries, 43 organizations, and 2,254 data providers, sharing over 2,900 million biodiversity records. These records are maintained under a common standard with quality control procedures, open-access licenses, and mechanisms for crediting data sources (DOIs).

About GBIF Spain

GBIF Spain (GBIF.ES) <https://www.gbif.es> is the Spanish node of GBIF, comprising a robust network of 118 entities, including research institutes, collections, projects, public agencies, associations, and private companies. These entities are actively involved in mobilizing, publishing, and using biodiversity data. The *GBIF.ES Coordination Unit* is the glue that supports biodiversity-oriented centers in their objectives, particularly in data sharing, including botanical data.

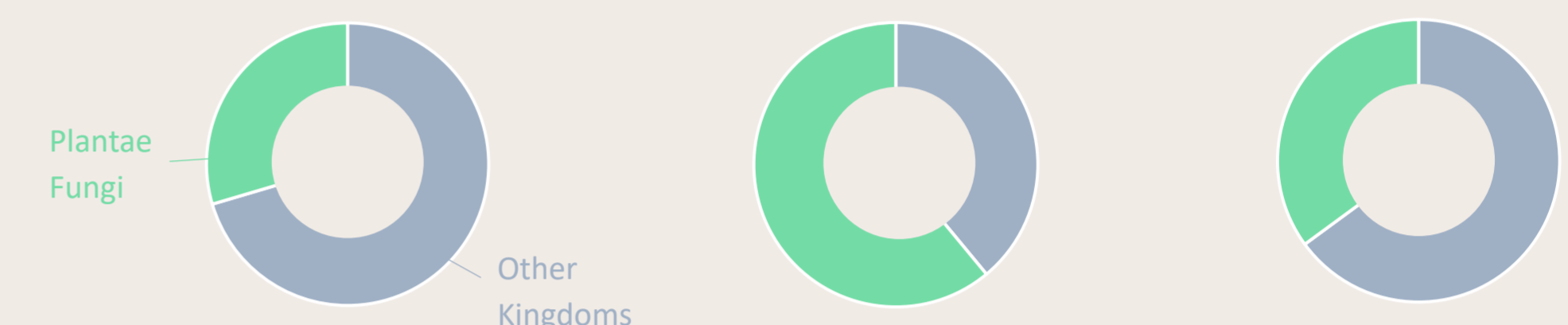
GBIF.ES creation - In 2001, the Ministry of Science and Technology tasked the Spanish National Research Council (CSIC) with initiating and coordinating GBIF activities in Spain. With support from the National Museum of Natural Sciences and the Royal Botanical Garden, CSIC established the Coordination Unit, which began operations in 2003.

GBIF.ES publishes and makes accessible to all through its network of participating entities:

OCCURRENCES **57,415,708** INSTITUTIONS **118** DATASETS **539**

BOTANICAL COMMUNITY

16,975,530 **72** **189**

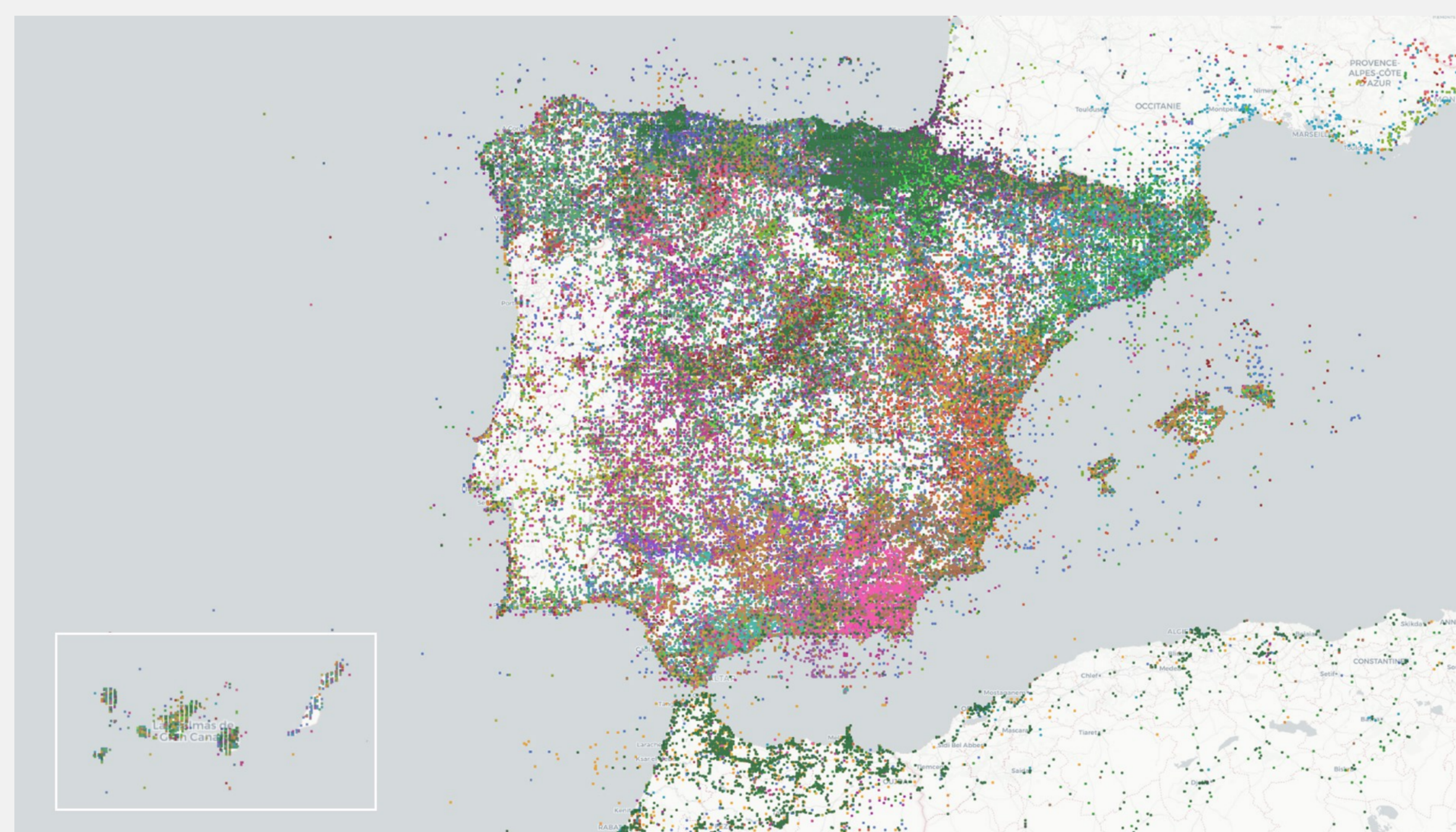
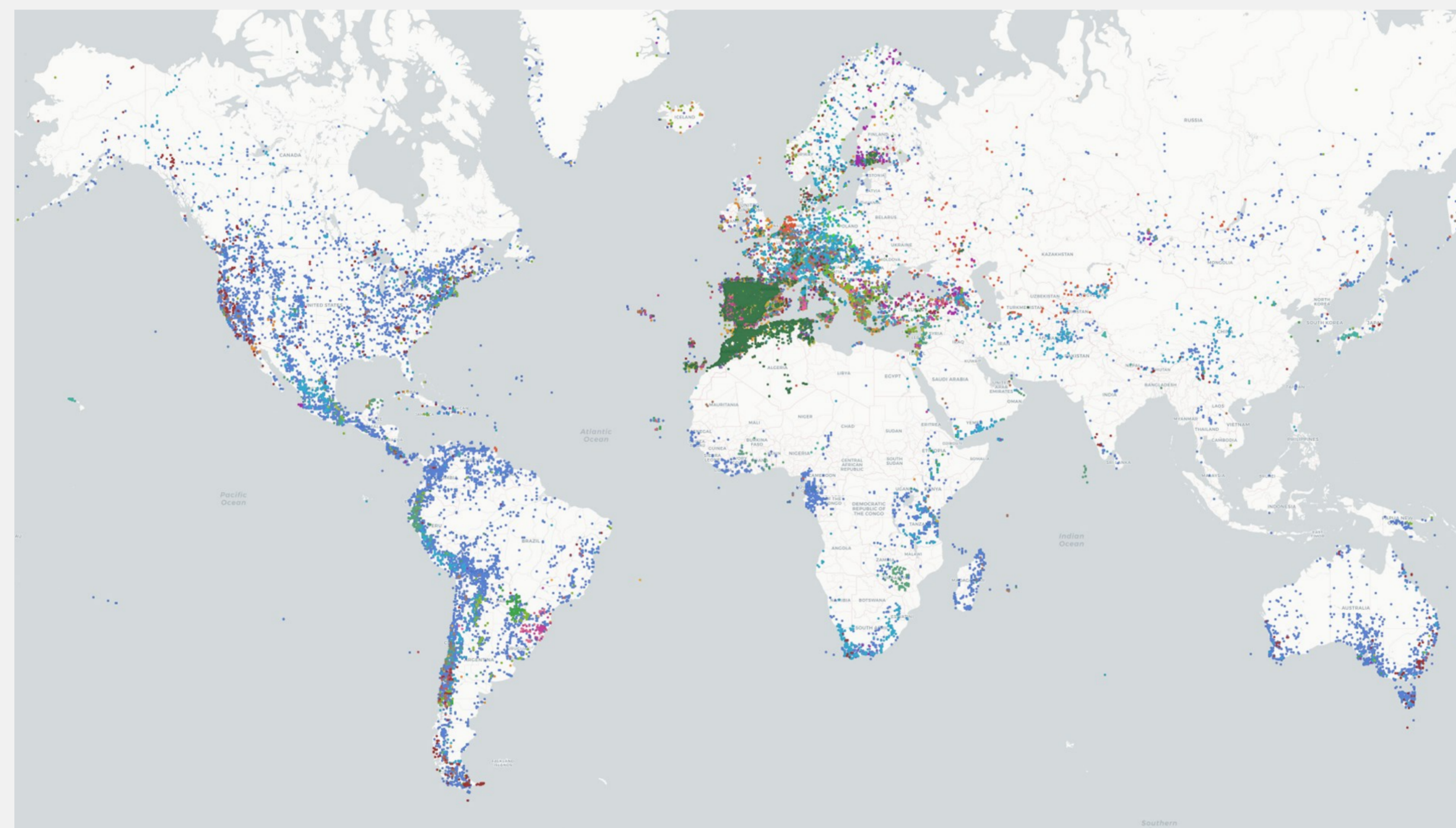


Spanish botanical institutions at GBIF

Within Spanish institutions, entities can publish records of their **botanical collections** (physical specimens preserved in herbaria, germplasm banks, etc.) or **databases** (inventories, lists, sampling events, etc.). The *table and graph* list the ten botanical collections and databases with the highest number of records in GBIF.



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Institution	Acronym*	Province	No. specimens	No. records in GBIF
Real Jardín Botánico (CSIC) [3]	MA	Madrid	987,543	814,827
Universitat de València [5]	VAL	Valencia	245,750	266,188
Universidad de Sevilla [2]	SEV	Sevilla	361,964	237,957
Institut Botànic de Barcelona (CSIC-CMNCB) [1]	BC	Barcelona	800,000	186,756
Universidad de Barcelona. CeDocBIV [1]	BCN	Barcelona	400,000	157,020
Universidad de Granada [1]	GDA	Granada	150,000	153,275
Universidad de Salamanca [4]	SALA	Salamanca	148,847	146,589
Universidad de León [5]	LEB	León	125,300	133,312
Universidad de Santiago de Compostela [1]	SANT	A Coruña	107,000	119,675
Universidad Complutense de Madrid (Biológicas) [1]	MACB	Madrid	130,000	119,058
Museo de Ciencias Naturales de Álava [2]	VIT	Álava	185,726	98,037
Universidad de Málaga [4]	MGC	Málaga	101,522	85,863
Universidad Complutense de Madrid (Farmacia) [2]	MAF	Madrid	226,115	77,726
Finca La Orden. Dpto. Producción Forestal y Pastos [1]	HSS	Badajoz	76,000	74,273
Sociedad de Ciencias Aranzadi [3]	ARAN	Guipúzcoa	116,142	74,112

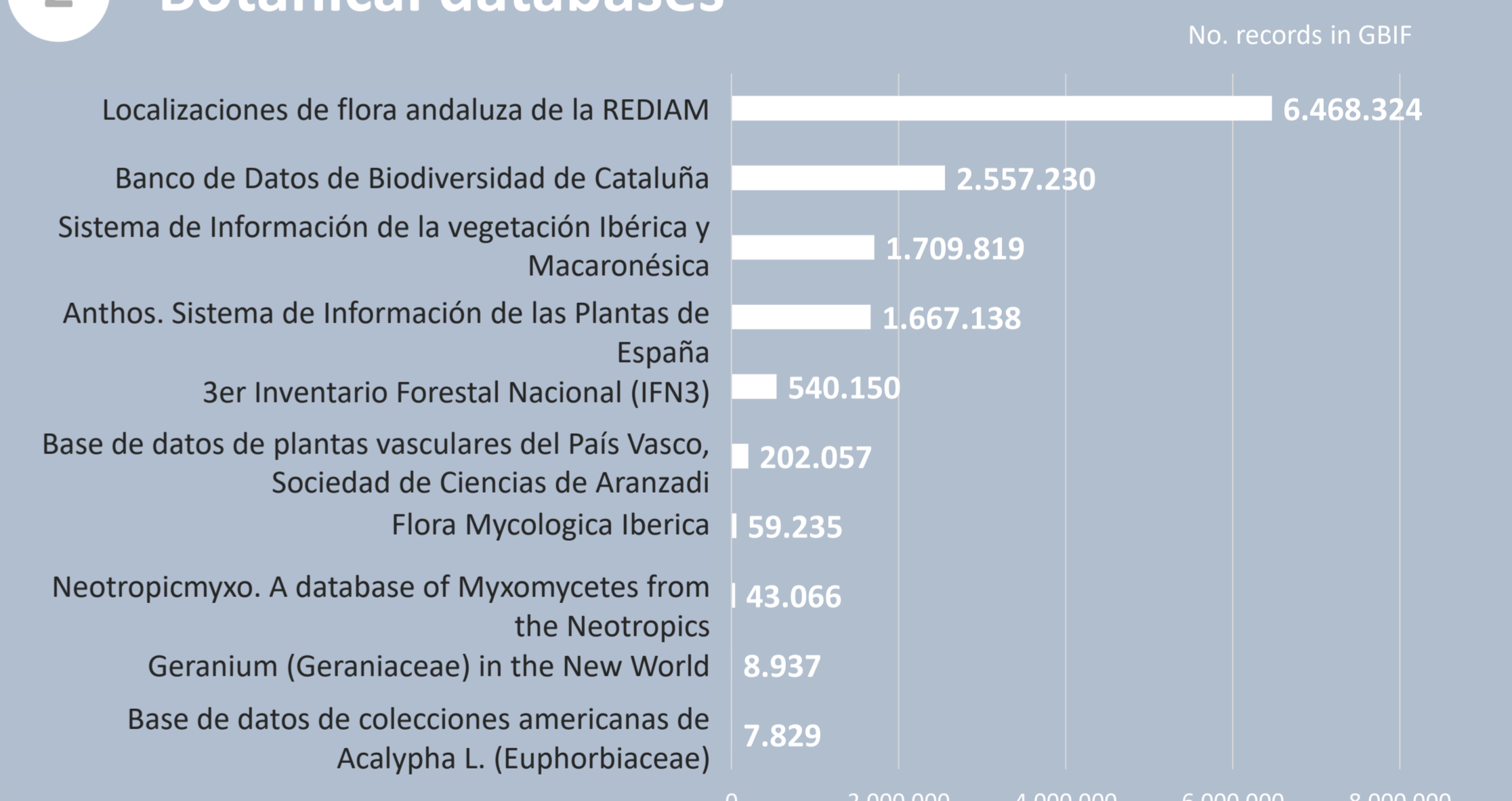
[No.] Number of collections per institution. *Acronyms according to Index Herbariorum.

1 Botanical collections

These *maps* illustrate the distribution of records published in GBIF by Spanish botanical collections, both globally and nationally. For comparative purposes, the estimated number of specimens in each collection is also shown in the table (this data is provided by each publishing institution).

77 Collections
5,608,547 Preserved specimens
3,429,373 Records in GBIF

2 Botanical databases



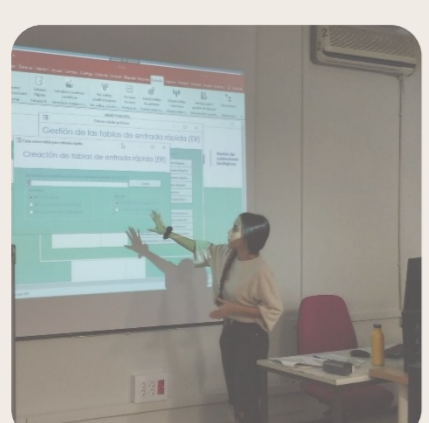
GBIF Spain Services

Workshops

Online and onsite workshops and webinars are addressed to biodiversity data providers.

- Topics:
- Data mobilization
- Ecological niche modeling
- Images for biodiversity studies
- Tools for visualization, and analysis of biodiversity data
- Biodiversity data quality

<https://elearning.gbif.es>



Software & ICT Tools

- Data validation: Darwin Test



- Collection management: Elysia



- <https://gbif.es/en/software>

Data portals

- Data portal: <https://datos.gbif.es>
- Species: <https://especies.gbif.es>
- Botanical collections HUB: <https://coleccion-botanicas.gbif.es>



Citizen science

GBIF.ES promotes and supports citizen science by managing Natusfera, the Spanish platform of iNaturalist.

- <https://spain.inaturalist.org>



Lessons learned

- 1) Training serves as an open door to the outside world, initiating numerous collaborations and partnerships. Through these interactions, GBIF gets known at its best: partnership, data sharing and capacity building in action, and direct contact with participants, all give us excellent feedback and ideas.
- 2) Merely looking after data is not sufficient. The key to GBIF's success lies in motivating and providing skills to biodiversity researchers and data contributors to disseminate their data.

Download the poster!



Have a look at GBIF.ES

