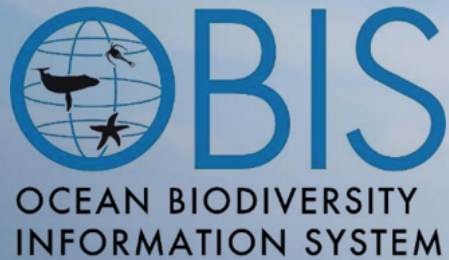


FAIR Marine Biodiversity Data Excellence: From the UK to the UN

Dan Lear, Julie Bunt, Chloe Figueroa
Ashforth, Charlie Gough, Kevin Paxman



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About Me

~30 years experience in marine biodiversity data management

DASSH Coordinator

MEDIN Data Archive Centre WG Co-Chair

Biodiversity Data & Information Group Chair

OBIS Steering Group Co-Chair

MBA Data Lead for EU Projects





Not having FAIR research data costs the European economy at least €10.2bn every year

<https://data.europa.eu/doi/10.2777/02999>

"data professionals are losing 50% of their time every week — 30% searching for, governing and preparing data plus 20% duplicating work"

IDC State of Data Science and Analytics Report 2019

"80 percent of scientific data from publicly-funded research is lost within two decades"

<https://doi.org/10.1016/j.cub.2013.11.014>



About DASSH/OBIS-UK



Centre of excellence for the management of marine biological data (species and habitats)

MEDIN, IODE & CTS Accredited Data Archive

Currently hold >6 million records from over 200 organisations and individuals

Core funded by Defra, Scottish Government and MEDIN (+ project work)



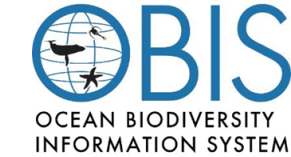
DASSH/OBIS-UK

Expertise in

- Biodiversity data management
- Standards development and compliance
- Metadata creation and management
- Data discovery tools and services
- Standards based data publication

New and evolving projects

- Image annotation > occurrence data
- eDNA occurrence data publication





The Marine Environmental Data and Information Network (MEDIN) is the hub for UK marine data. We work with UK organisations to improve the stewardship and access to UK marine data.

7 data archive centres

MEDIN delivers data through a co-ordinated network of accredited data archive centres, that provide expertise to the marine community.



Bathymetry



Meteorology



Oceanography



Flora, Fauna and Habitat



Fisheries



Geology and Geophysics



Historic Environment

16 sponsors

Providing funding and governance, our consortium of sponsors steer MEDIN's direction.



60+ partners

UK organisations that have committed to practising and promoting good marine data management, our partners help deliver MEDIN's vision.



18,000+ marine datasets

are accessible from the online MEDIN portal



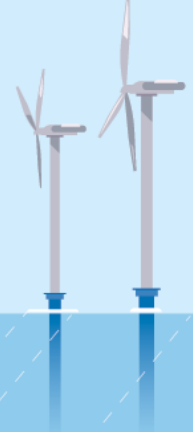
from 600+ organisations

that collect or manage marine data in the UK.





Benefits and Costs of MEDIN



✓ £18.9M benefit

It's easy to find marine data because it's all in one place.

✓ Make better decisions because you have more evidence.

✓ £27.2M benefit

Staying organised with MEDIN is simple, meaning your own data is easy to find and use.

✓ £13.7M benefit

Avoid the cost of a marine survey – you can use the data from MEDIN.

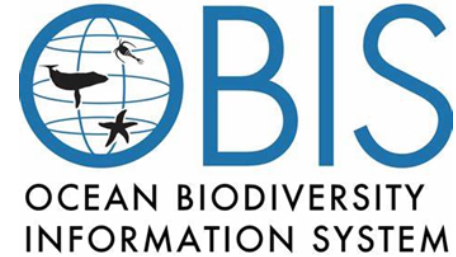
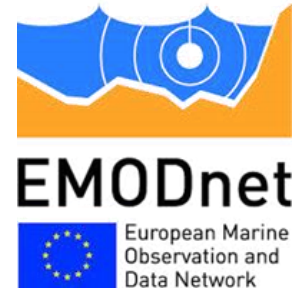
£ £5.5M cost

Coordinate UK marine data management.

£ £1.8M cost

User investment.

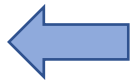
✓ MEDIN's benefits far outweigh the cost of providing the service.



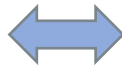
Global

Publish Once, Harvest Many Times

Data and publication standards (DwC-A, JSON-LD)

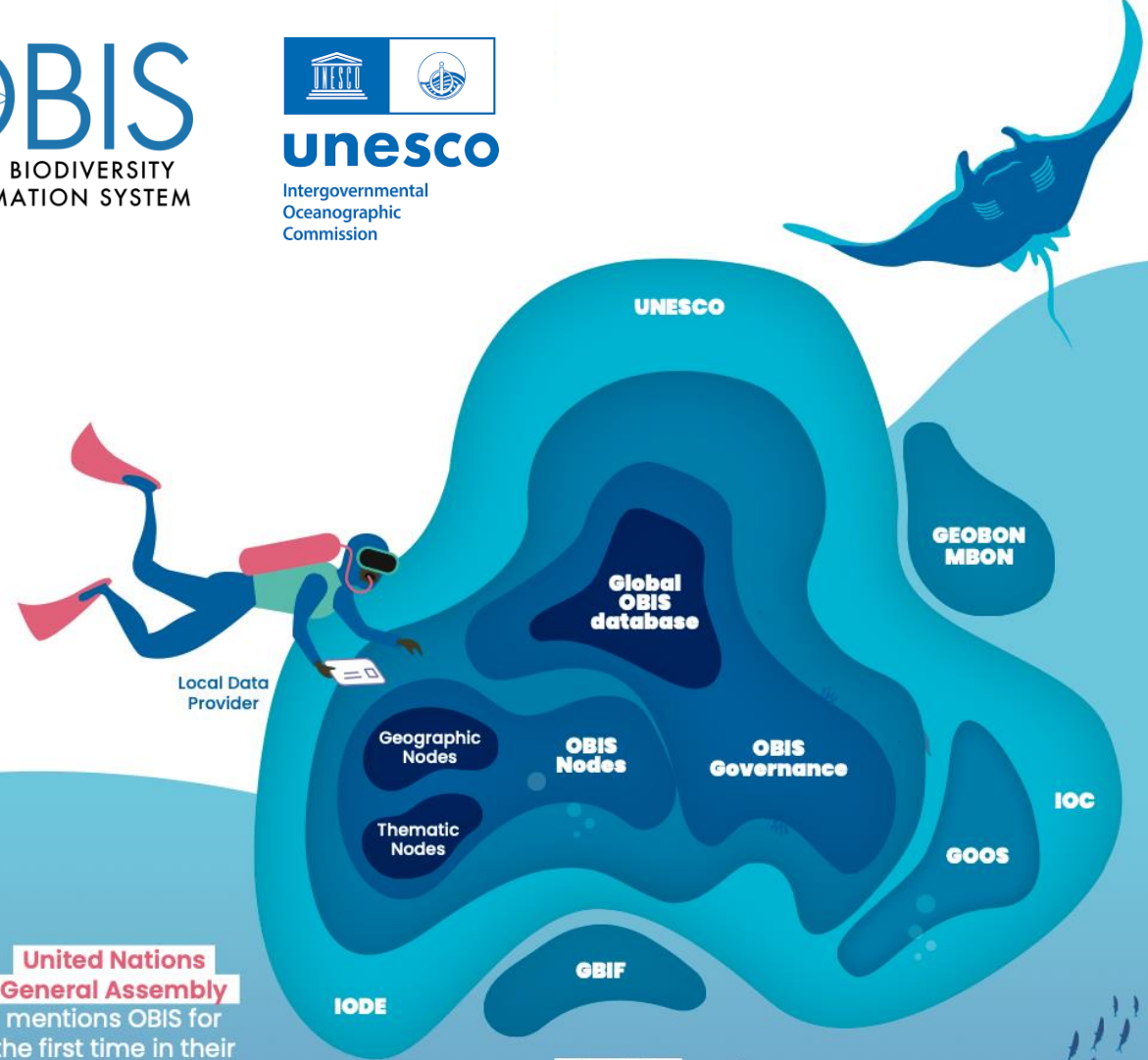
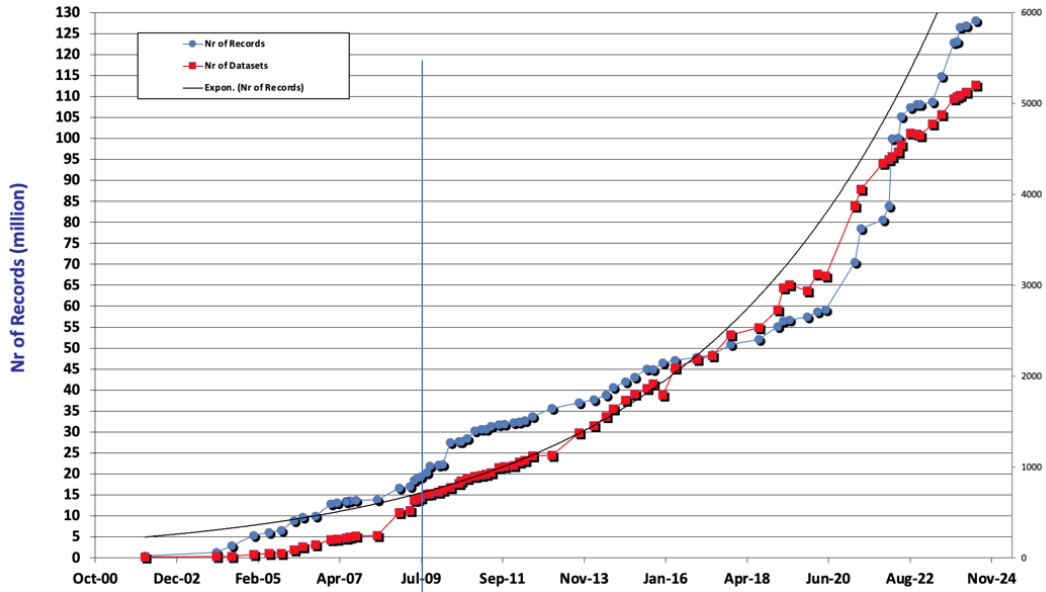


DASSH
Marine Biological Association

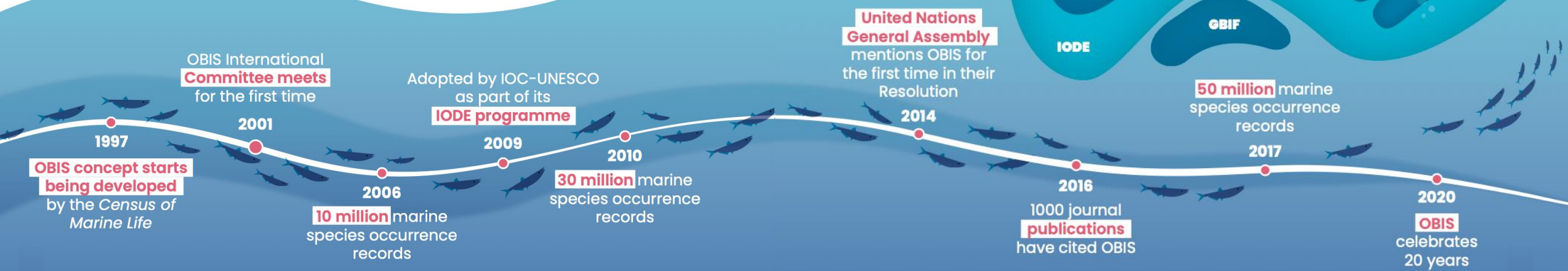


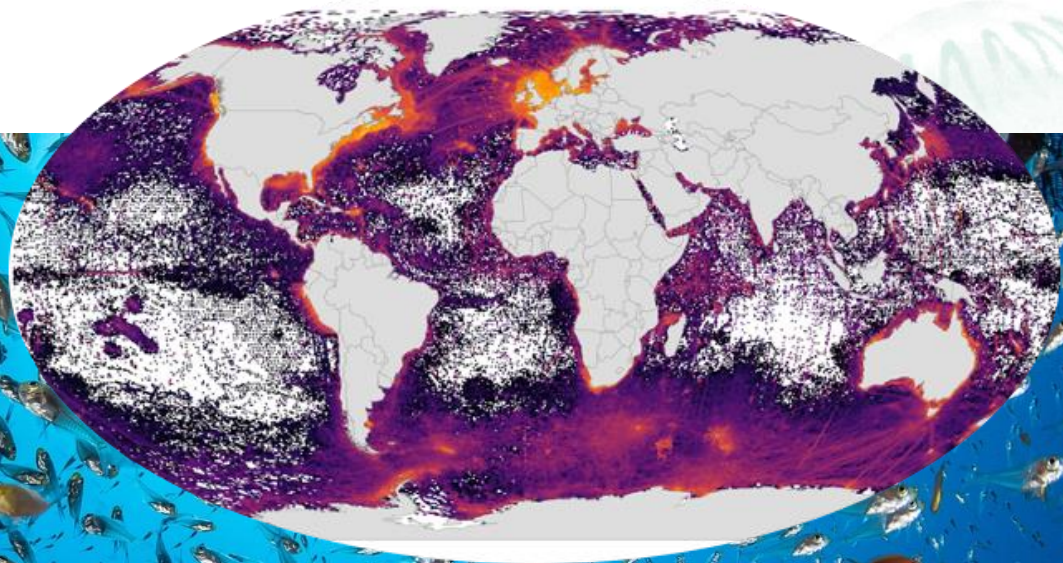
National

Data Providers (Individuals > Orgs > Multinationals)



Origins, History and Achievements





OBIS in Numbers

- 131 million records
- 178 million measurements
- 23.9 million DNA sequences
- 5,329 datasets
- 193,000 marine species
- 99 countries (21 SIDS and 16 Africa)
- 200 scientific papers per year

Ocean Info Hub:

Building the interoperable marine digital ecosystem



DATA

Existing Ocean data catalogues & services (like Ocean Biodiversity Information System, OceanExpert, AquaDocs, Ocean Best Practices System) and emerging ones



indexed through ODIS-Arch specifications

PATTERNS

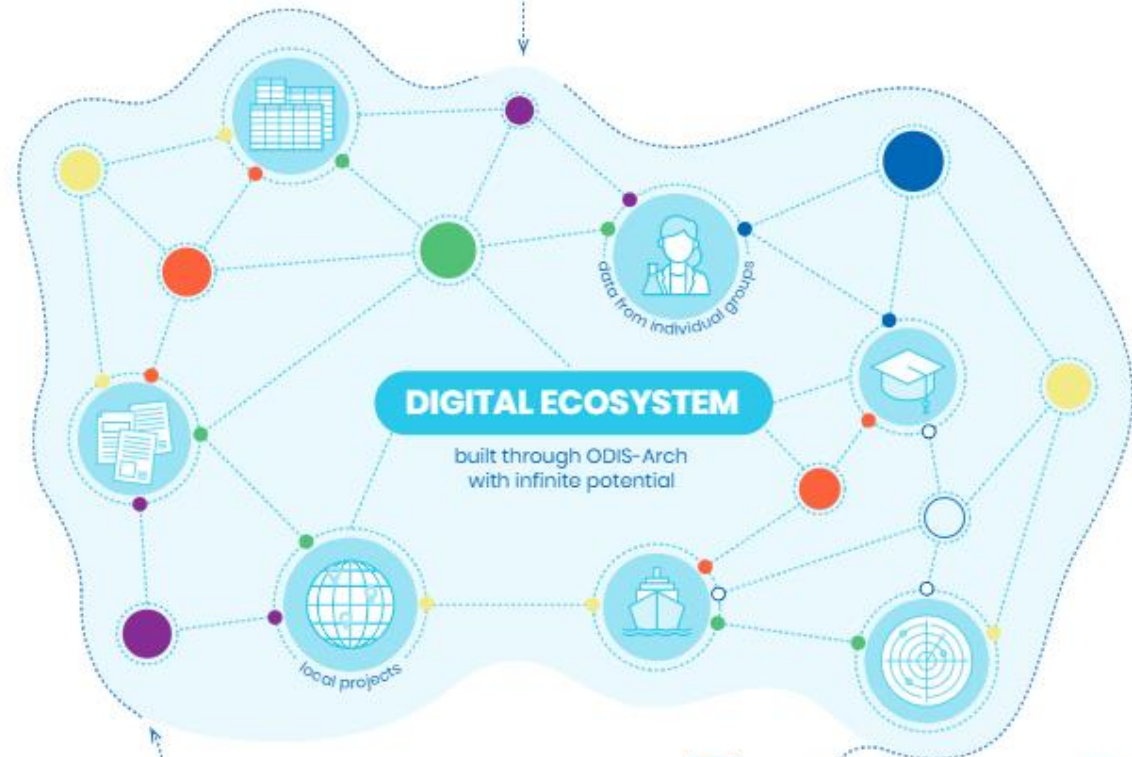
Specifications to describe different data types

Experts and institutions/organisations

Documents Training opportunities

Spatial data and maps Projects

Research vessels



SEARCH
through InfoHub platform and other search engines



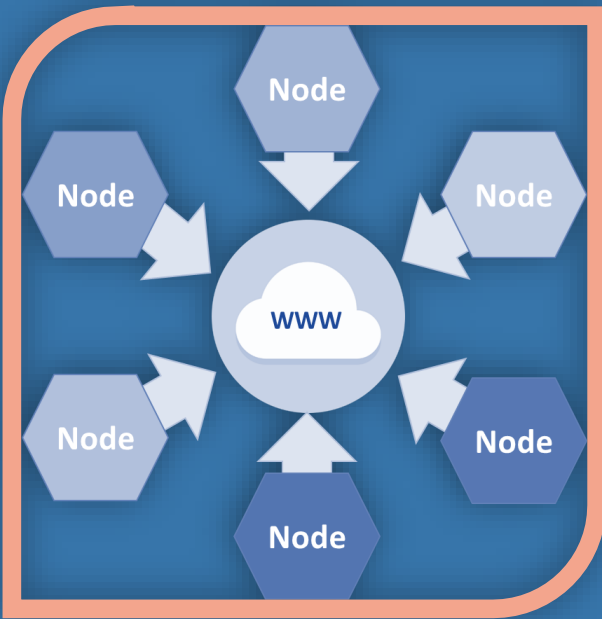
CONNECT
marine and coastal Ocean data centres across the globe

PROVIDING DATA

USING DATA

The ODIS/OIH Mission

To build a sustainable, interoperable, and inclusive **digital ecosystem** for all ocean stakeholders



- Improve discovery and interoperability of existing information systems across sectors (private, public, etc)
- Link a *diverse* network of *independent* regional and thematic nodes that will share the metadata that they choose to expose
- ODIS links nodes through a JSON-LD+schema.org based, decentralized interoperability architecture
- Partners aligned to ODIS-Arch are also discoverable by Google, Microsoft, Yahoo, YANDEX, et al.

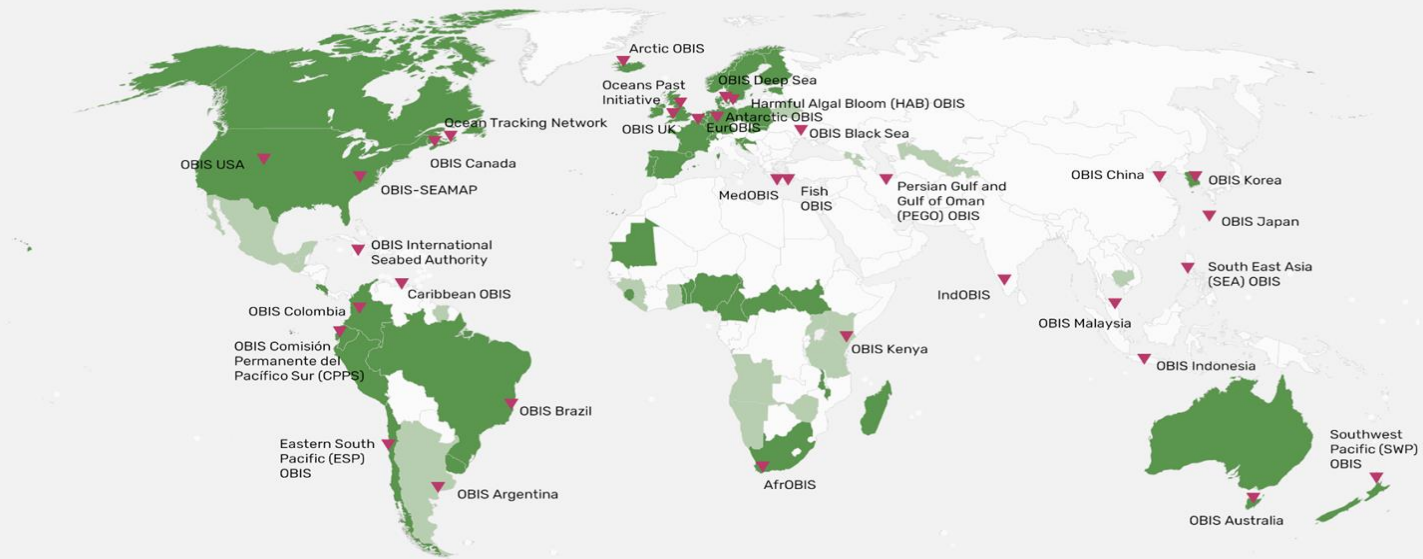
OBIS Supports



...to enable science-based decision making

OBIS-GBIF Joint Strategy for Marine Biodiversity Data

GBIF and OBIS Networks



Unified information driving transformation



livingdata2025.com

Organized by



Supported by



October - 2025
Bogotá, Colombia

Organized by
TDWG, GBIF, OBIS and GEO BON

Supported by
Humboldt Institute

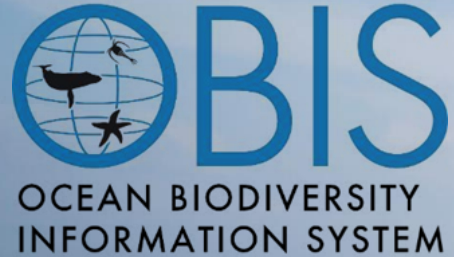


LIVING DATA 2025

Unified information
driving transformation



Thank you



“Theories desert us, while data defend us. They are our true resources, our real estate, and our best pedigree. In the eternal shifting of things, only they will save us from the ravages of time and from the forgetfulness or injustice of men.”

Santiago Ramón y Cajal



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