

Transmitting the global value of GBIF into national impact in the UK

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Datasets ●
91,030

● Hosted portals
16

Country
Participants ●
64

● Peer-review papers
using data
9,532

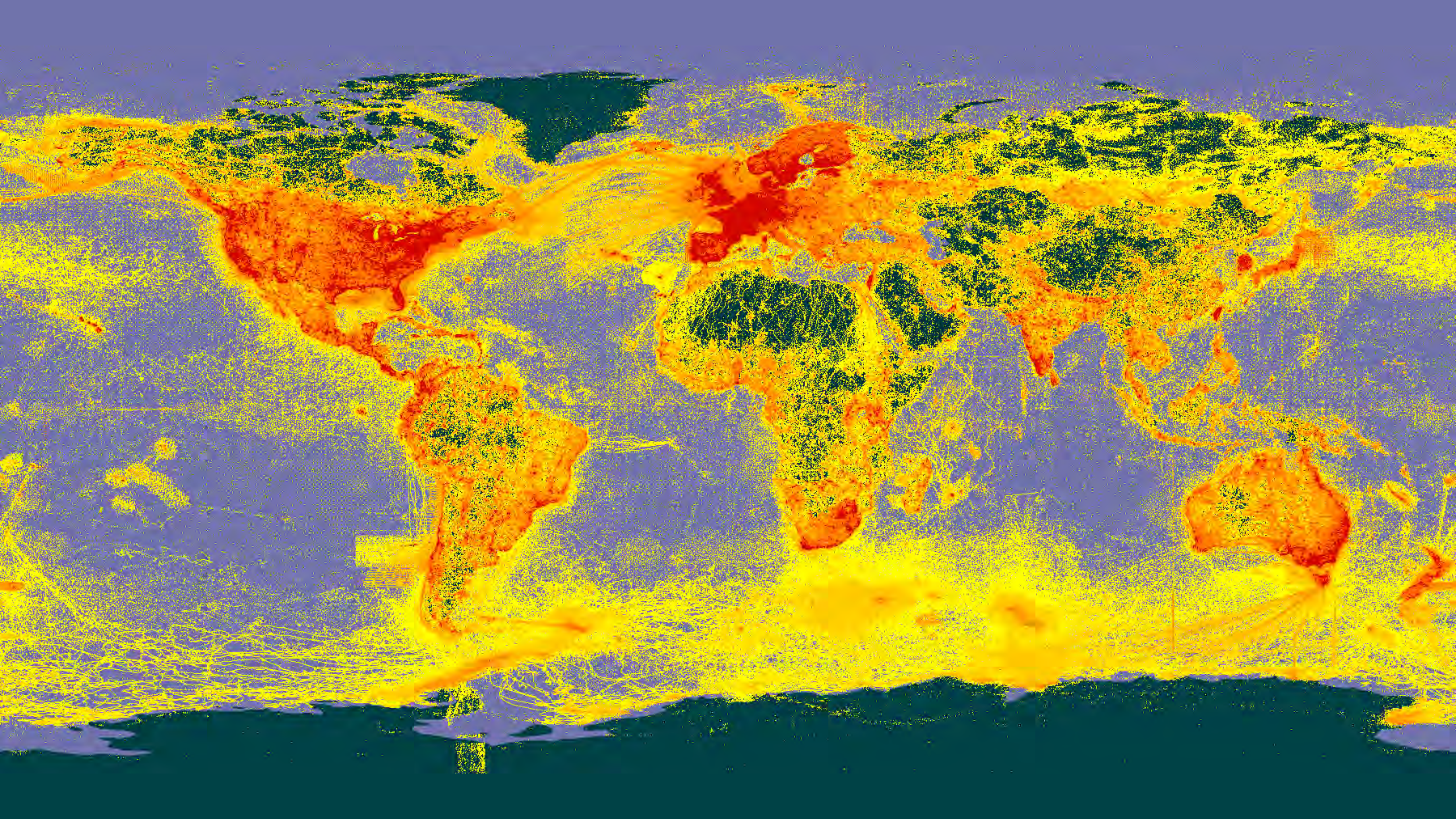
Organizational
Participants ●
43

● Average records
downloaded per month (2023)
161.8 billion

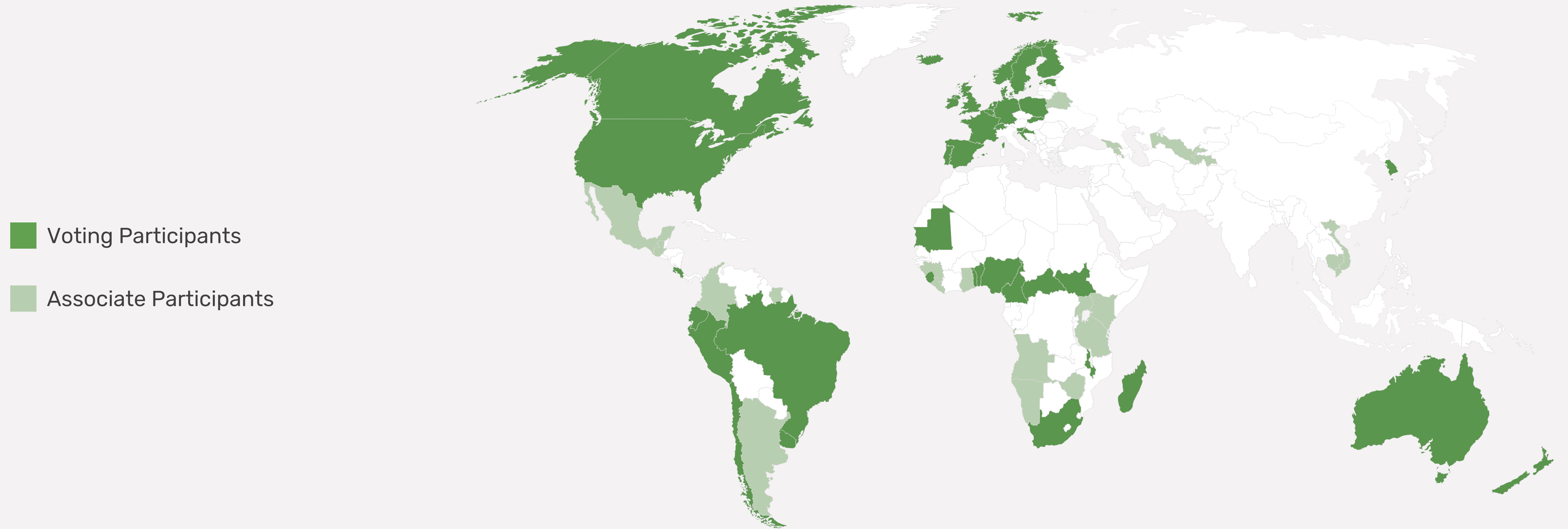
Publishers ●
2,143

● Species
occurrence records
2,587,887,969





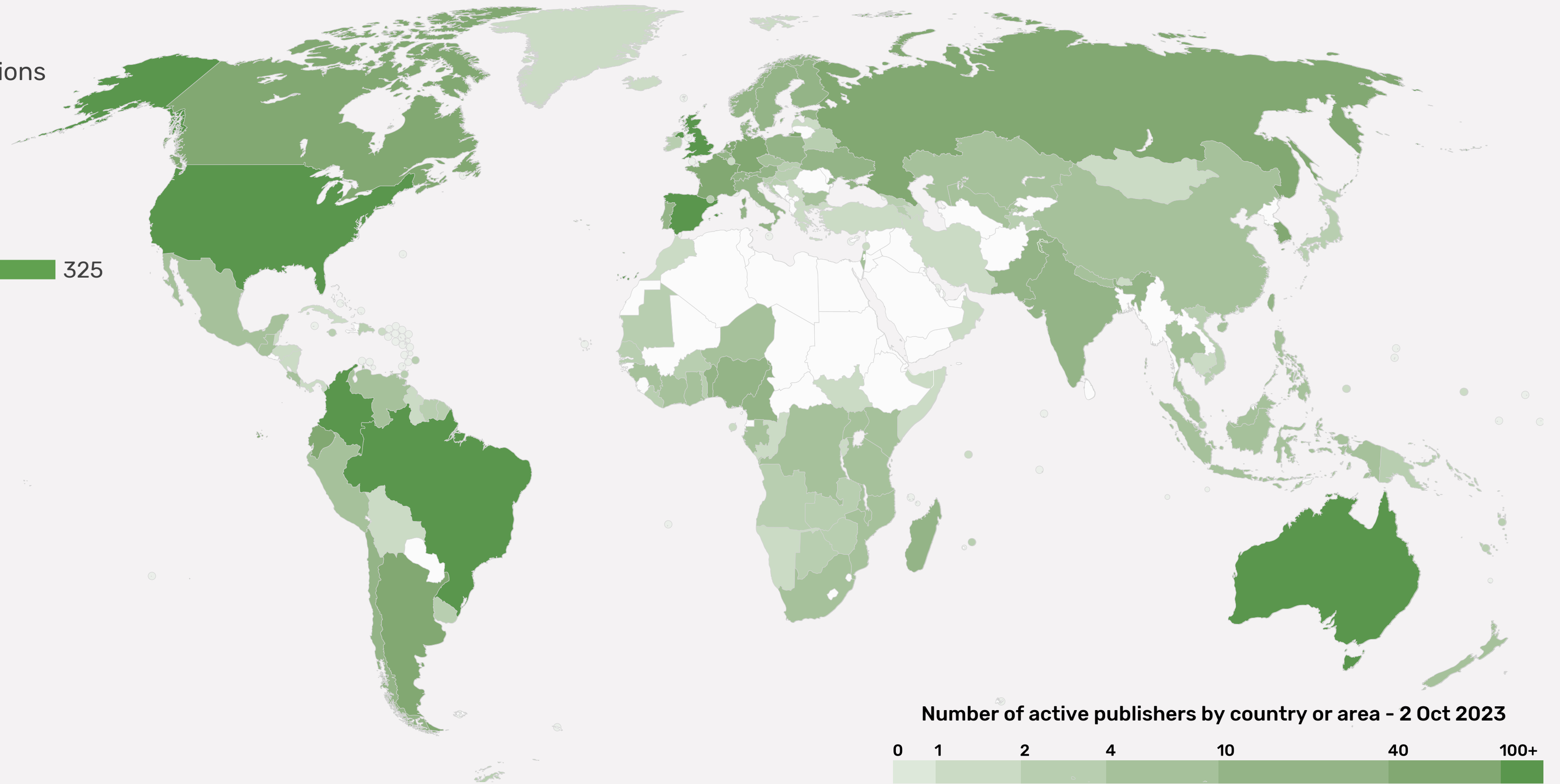
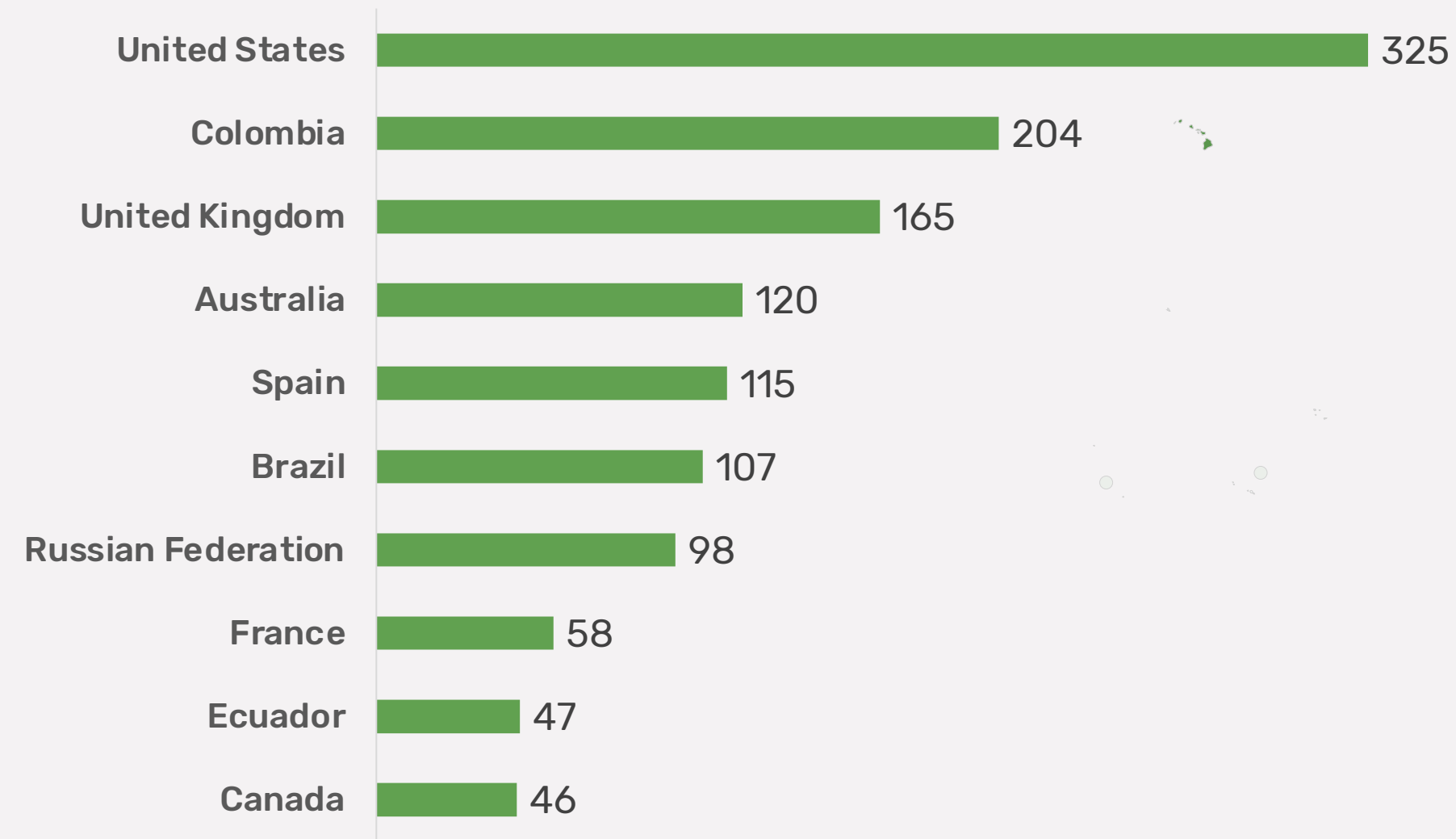
GBIF Participant countries



GBIF network of data publishing institutions

139

countries/areas with institutions sharing data through GBIF



Welcome back!

The UK's return as a GBIF Voting Participant in June **renewed the commitment** of one of GBIF 's founding countries and signalled support of national stakeholders, who include

- **Third-largest data mobilization network** of 185 data-publishing institutions responsible for sharing 2,100+ datasets and 161m records
- (NBN hosts **883 datasets** and **86m records**)
- An **extensive user base** that stands 11th in global web traffic (2023), 7th in downloads (2023), and 3rd all-time in published peer-reviewed uses (4th ytd for 2023)



The value of GBIF

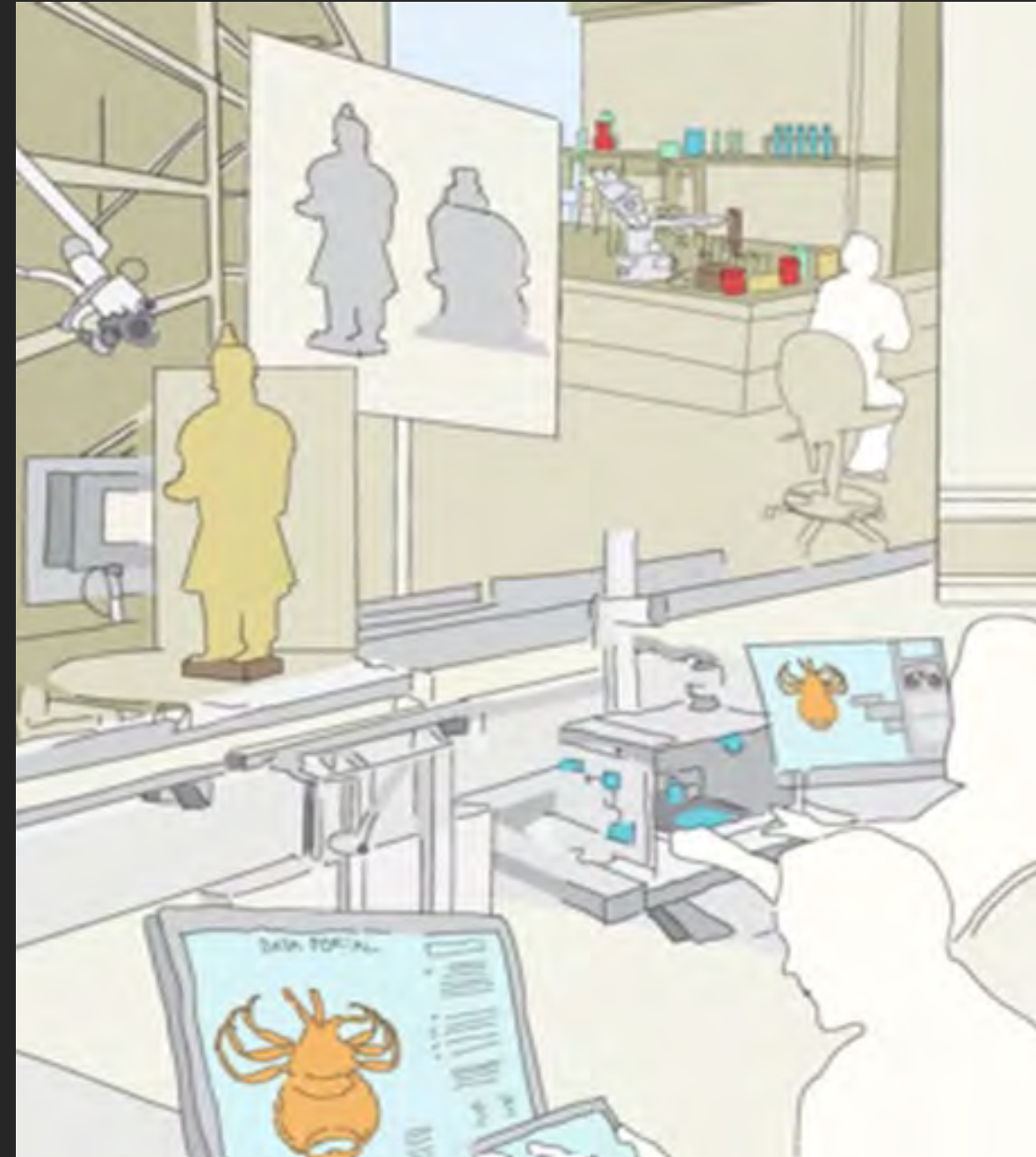


Making the case: benefits of digitization of NHM London collections

Previous analysis by *Frontier Economics* showed potential for £2bn+ in economic benefits for the UK



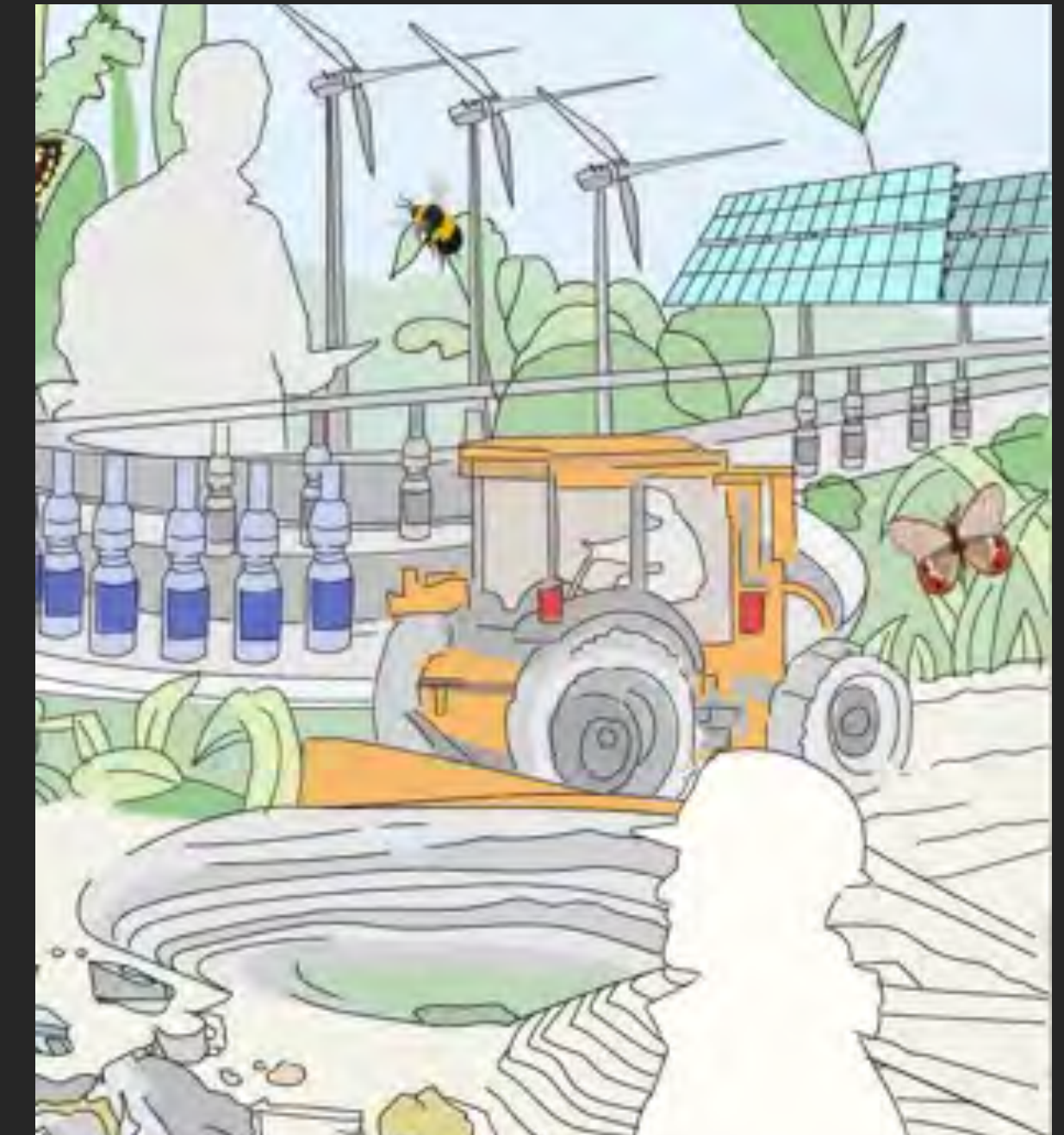
7.6m specimens uploaded by **12 UK collections**, from **248 countries** are freely available to the world via GBIF – c.6% of the UK's collections.



UK collections data 0.3% of GBIF occurrences but cited in 12% of peer reviewed publications
2,710 articles cite UK collections data – which diversify GBIF's taxonomic and geographic coverage.



£18m conservatively estimated to have been saved on visits by researchers citing UK data – and much more in research and economic value added.



>250 publications citing UK institutions' uploads on each of the themes of climate change, invasive species and conservation, for instance.



Economic value of the GBIF network, infrastructure and services

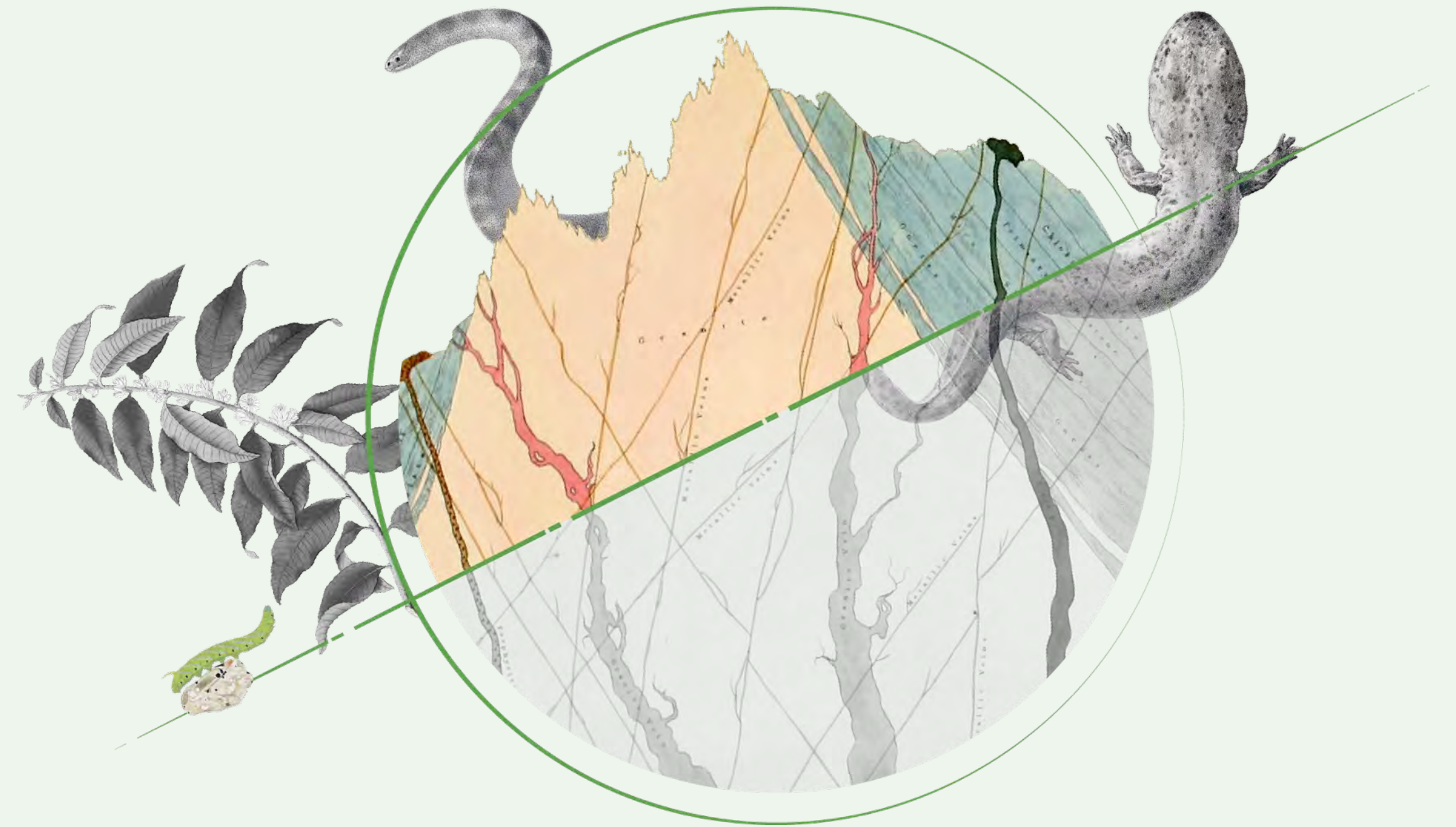


The 2023 report by Deloitte found that, for every **€1 invested** in GBIF, **users receive €3 of benefits** while **society gains up to €12**



GBIF expands the scope of what is possible

Almost **half of GBIF users (47%)** would have found it **impossible to achieve** the same outcomes in their work without GBIF



Capacity enhancement



GBIF's **focus on people** recognizes that the success of data sharing and conservation efforts relies on in large part on individuals' levels of **skill, knowledge, and engagement**



Individual opportunities for involvement



Mentors & Trainers

www.gbif.org/mentors



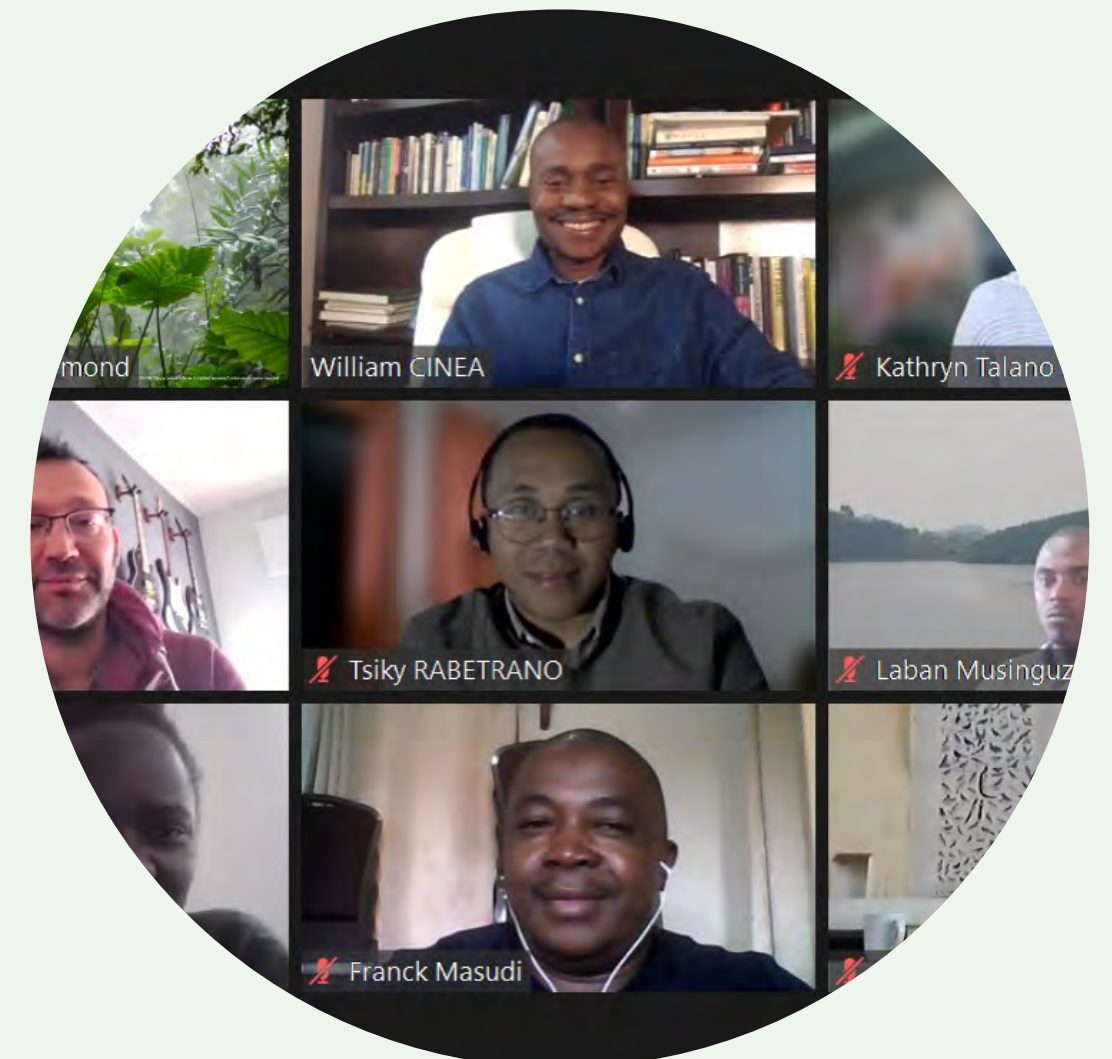
Biodiversity Open Data Ambassadors

www.gbif.org/ambassadors



Data Use Club

www.gbif.org/data-use-club



Webinars & community review

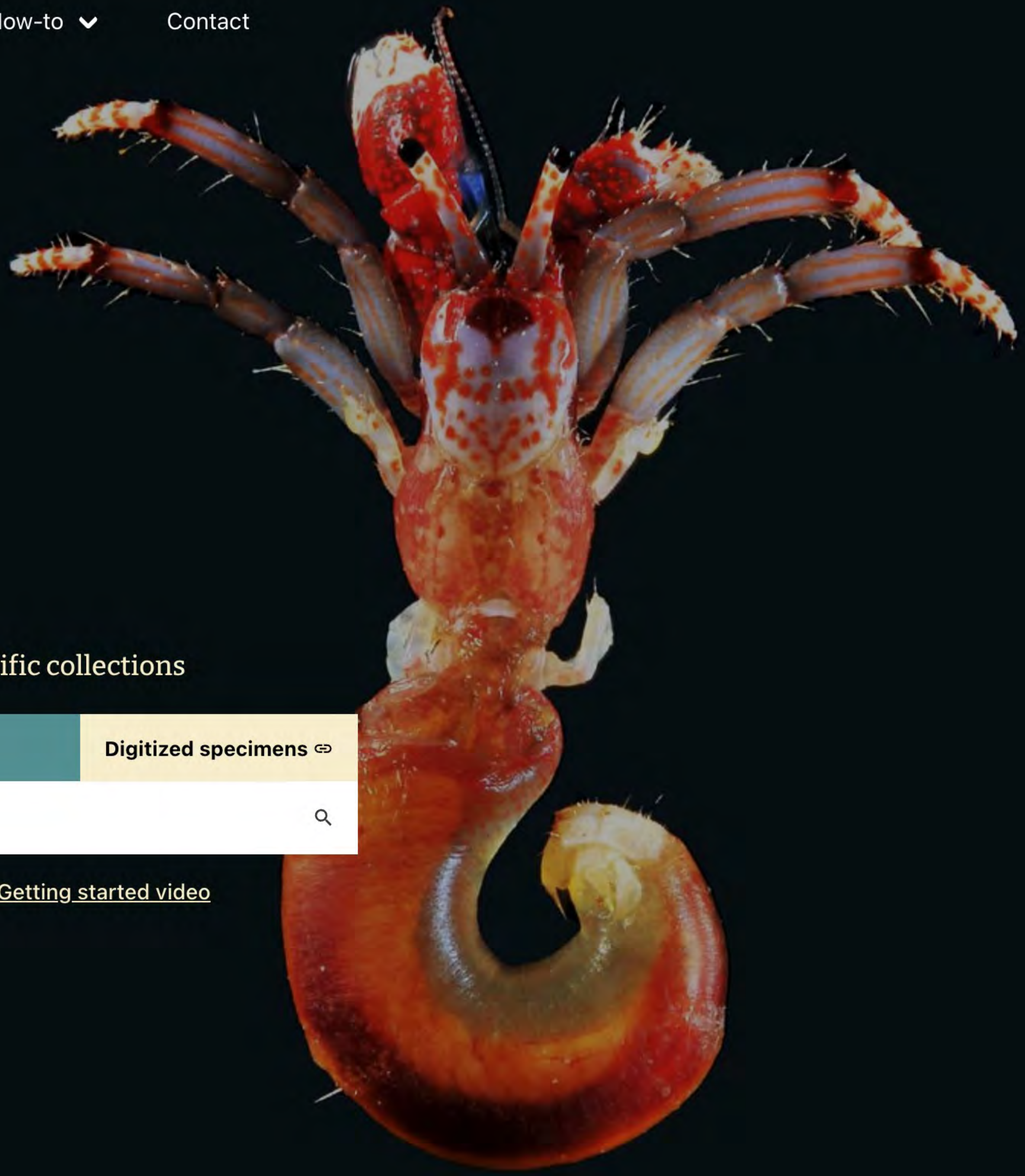
www.gbif.org/events



Shared infrastructure



By embracing a **common code base**, **community-supported open-source tools**, and **hosted and cloud-based services**, GBIF's infrastructure increases access to biodiversity data, promotes collaboration, facilitates data harmonization and fosters innovative research—and **reducing technical costs**





Global Registry of Scientific Collections

A worldwide catalogue of scientific collections

Institution name	Digitized specimens 
<input type="text" value="Search institutions"/> 	

Not sure how to get started? [Watch our Getting started video](#)

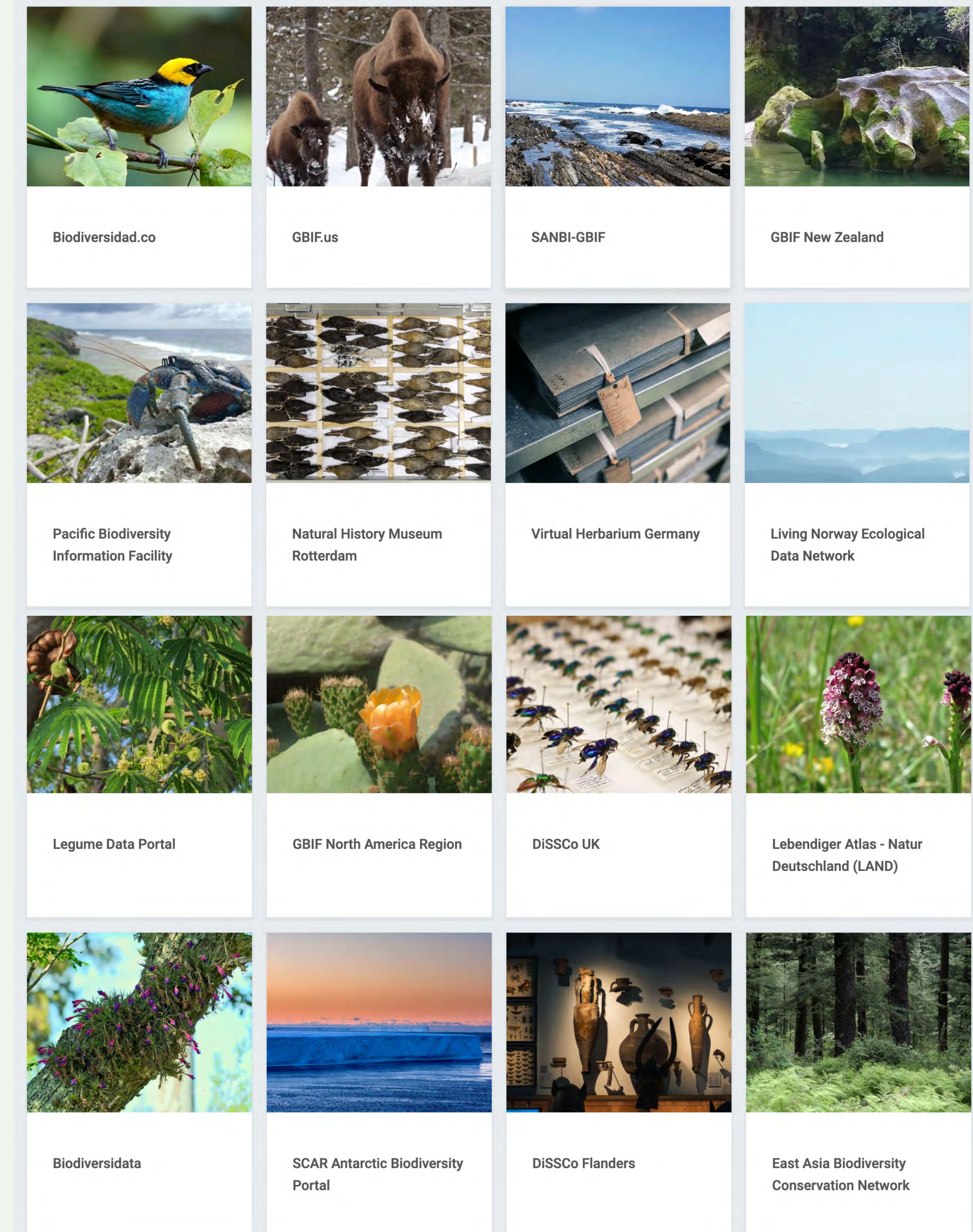


Hosted portals

GBIF hosted portals

- **Simple, lightweight solution** that makes it easier for people to run public data portals
- 16 sites currently in production using a flexible framework that supports differing scopes: **national, regional, single institution, and thematic**
- Another 24 more in development

<https://www.gbif.org/hosted-portals>



UK Natural Sciences Collections Portal

Discover digitised specimens from UK natural sciences collections

Explore Specimens

Explore Institutions

data.dissco-uk.org/

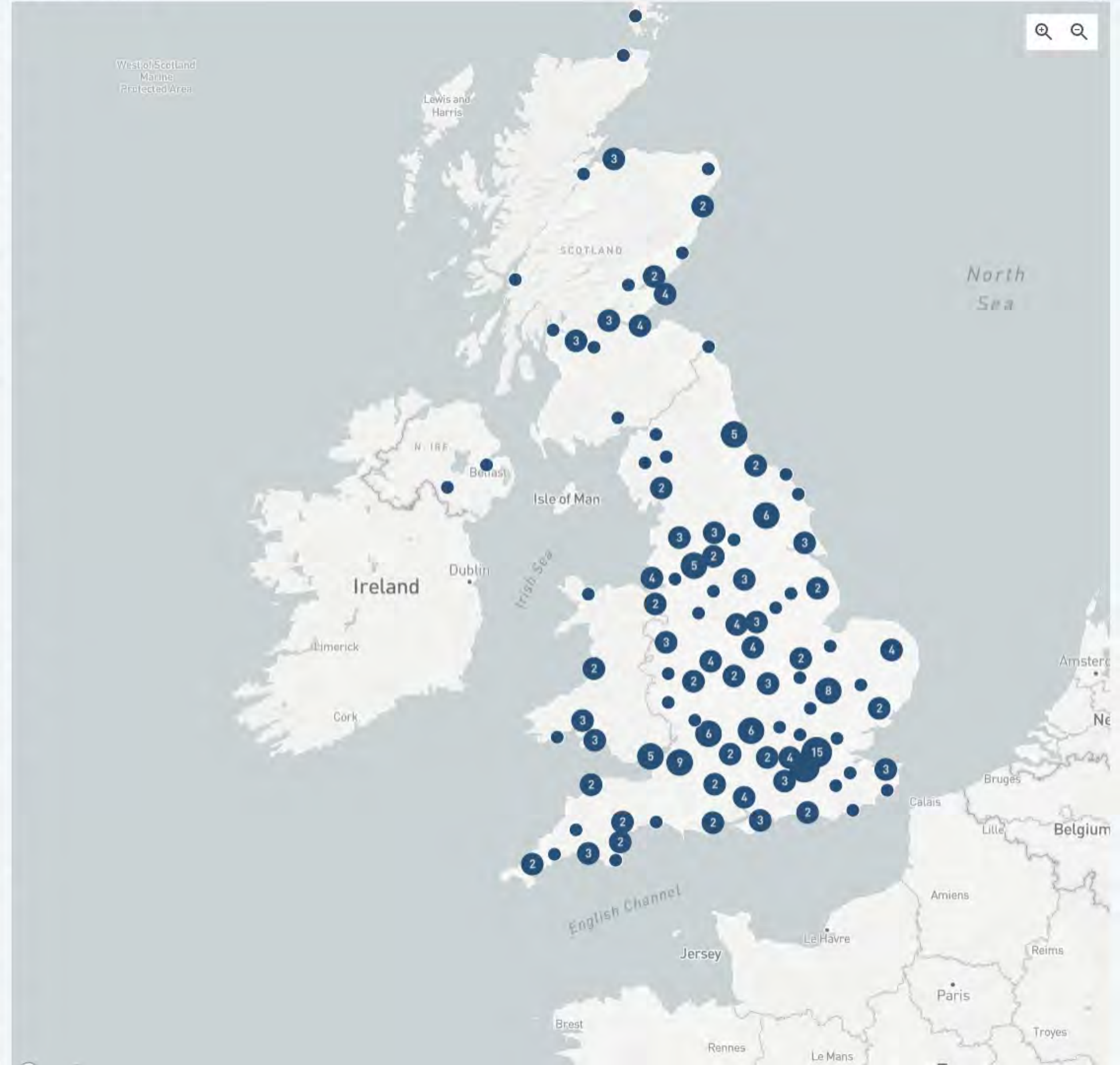
☰ Institutions

Text search Code Number of specimens Specimens in GBIF more

291 results Download as TSV

Title	Code	Country or area	City/town	Collections	Number of specimens	Specimens in GBIF
Natural History Museum, London	NHМУK	United Kingdom	South Kensington	1	80,000,000	5,376,633
Royal Botanic Gardens, Kew	K	United Kingdom	Kew	2	7,000,000	1,353,421
Oxford University Museum of Natural History	OUMNH	United Kingdom	Oxford		6,036,500	3,273
Royal Botanic Garden Edinburgh	RBGE	United Kingdom	Edinburgh	9	3,000,000	1,453,788
University Museum of Zoology, Cambridge	CAMZM	United Kingdom	Cambridge		2,005,500	65,921
World Museum, National Museums Liverpool	NML	United Kingdom	Liverpool	3	1,600,000	15,809
Bristol Museum & Art Gallery	BRSMG	United Kingdom	Bristol	2	1,297,600	25
Norfolk Museums Service	NMS	United Kingdom	Norwich	1	1,275,000	60
Cambridge University Herbarium	CGE	United Kingdom	Cambridge	1	1,100,000	656
Sedgwick Museum of Earth Sciences	CAMSM	United Kingdom	Cambridge		1,093,800	
University of Manchester	MANCH	United Kingdom	Manchester	3	1,000,000	
The Hunterian, University of Glasgow	GLAHM	United Kingdom	Glasgow		981,600	4
Royal Pavilion and Museums Trust	BTNRP	United Kingdom	East Sussex	1	952,500	1
Glasgow Museums, Glasgow Life	GMGL	United Kingdom	Glasgow		600,000	
Yorkshire Museum	YORYM	United Kingdom	York	1	553,000	5
National Museum of Wales	NMWC	United Kingdom	Cardiff	3	550,000	698
University of Oxford	OXF	United Kingdom	Oxford	1	500,000	857
University of Leicester	LTR	United Kingdom	Leicester	1	396,100	264
CABI Bioscience UK Centre	IMI	United Kingdom	Egham	1	385,000	
The Great North Museum : Hancock	NEWHM	United Kingdom	Newcastle upon Tyne		345,900	
Ipswich Museum (Colchester and Ipswich Museums)	IPSMG	United Kingdom	Ipswich	1	340,200	18
Shetland Museum and Archives	SMAA	United Kingdom	Shetland	1	305,700	
University of Oxford	FHO	United Kingdom	Oxford	1	300,000	1,161
Horniman Museum and Gardens	HNN	United Kingdom	UK	1	258,200	1
University of Reading	RNG	United Kingdom	Reading	2	254,000	187

246 results with coordinates



downscaling

The
value
of GBIF



Primary research survey of GBIF users

The online survey of **605 respondents** in summer 2022 focused on three areas:

- **Demographics:** Who uses GBIF-mediated data?
- **Valuation: What is access to data worth?**
- **Experience:** User perspectives on interactions with data and services



The most substantial and quantifiable benefit of GBIF is an average estimated time saving of **64 hours per user** over finding data through alternative sources.

—Economic valuation and assessment of the impact of the GBIF network



Downscaling the value of GBIF-enabled time savings in research



GBIF-enabled papers
per time period

x



Average hourly wage for
researcher / data scientist

x



Average time saved
per paper

=



Value of research
time saved by GBIF



Downscaling the value of GBIF-enabled time savings in research



GBIF-enabled papers per time period

x



Average hourly wage for researcher / data scientist

x



Average time saved per paper

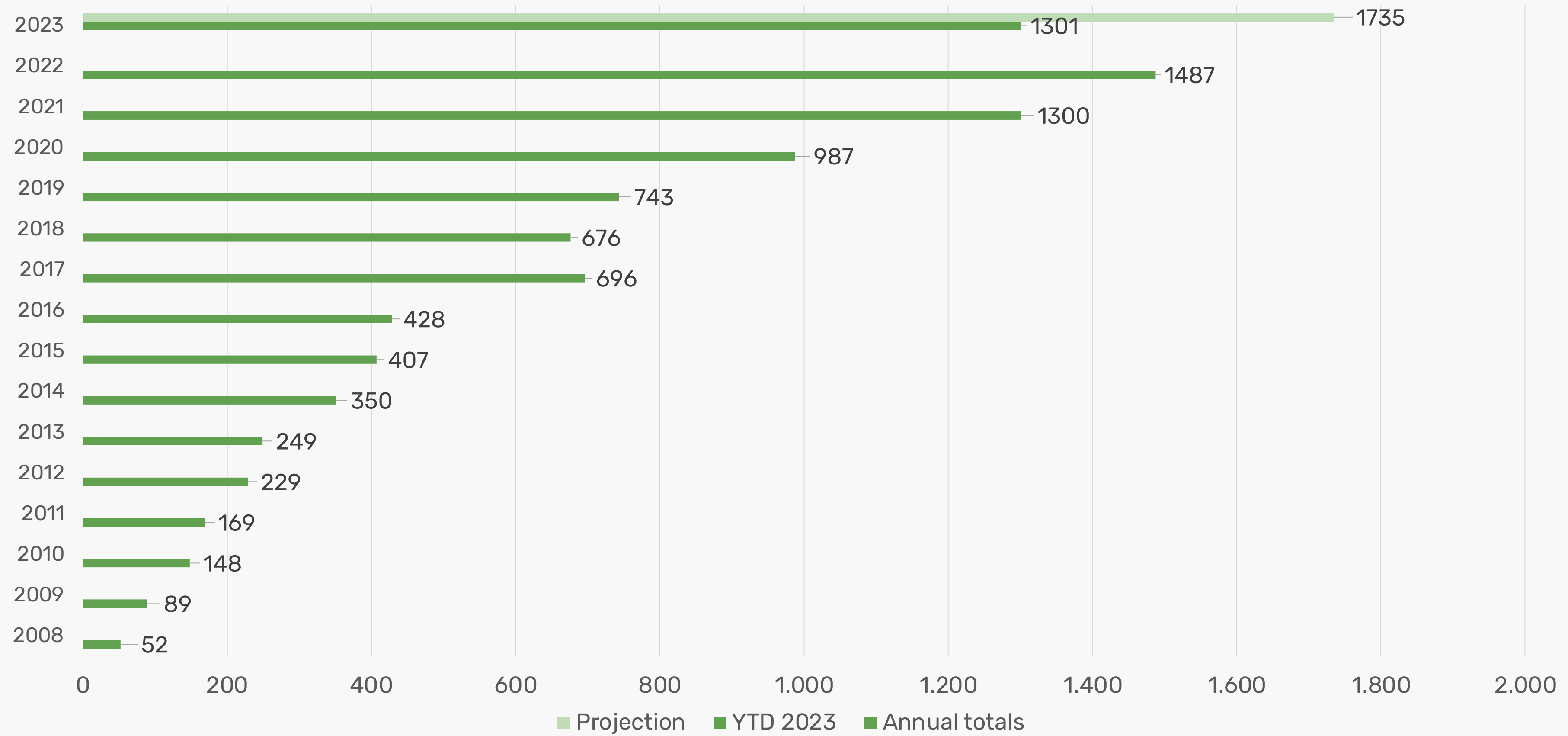
=



Value of research time saved by GBIF



Peer-reviewed publications using GBIF-mediated data



DOIs: from paper to download and back to dataset



The screenshot shows the top portion of a One Earth journal article page. The header is blue with the 'One Earth' logo on the left and a 'Log in' link on the right. Below the header is a search bar with a magnifying glass icon. The main content area has a blue background and features the article title 'Three-quarters of insect species are insufficiently represented by protected areas' in white text. Above the title is a 'Download Full Issue' button with a download icon. Below the title is the author list: 'Shawan Chowdhury • Myron P. Zalucki • Jeffrey O. Hanson • ... David Green • James E.M. Watson • Richard A. Fuller • Show all authors • Show footnotes'. At the bottom of the article preview, it says 'Published: February 01, 2023 • DOI: <https://doi.org/10.1016/j.oneear.2022.12.003>'.



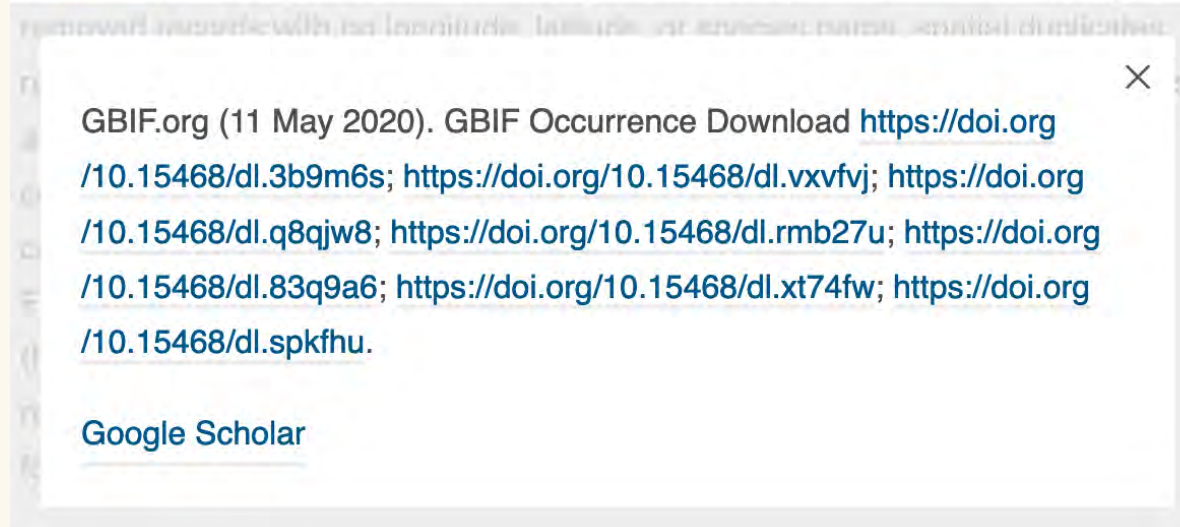
DOIs: from paper to download and back to dataset



The screenshot shows the top portion of a journal article page on the One Earth website. The header is blue with the 'One Earth' logo on the left and a 'Log in' link on the right. Below the header is a search bar with the placeholder text 'Search for...'. The main content area has a blue background and features the article title 'Three-quarters of insect species are insufficiently represented by protected areas'. Below the title, the authors are listed: 'Shawan Chowdhury', 'Myron P. Zalucki', 'Jeffrey O. Hanson', and 'David Green'. There are also links for 'Download Full Issue', 'Show all authors', and 'Show footnotes'. At the bottom of the article preview, it says 'Published: February 01, 2023' and provides the DOI: 'https://doi.org/10.1016/j.oneear.2022.12.003'.

Geospatial data

We downloaded occurrence records for all insects identified to species level in the GBIF (106,911,975 records).⁵⁹ Using the CoordinateCleaner⁶⁰ R package, we



The screenshot shows a citation window with a close button (X) in the top right corner. The text inside the window reads: 'GBIF.org (11 May 2020). GBIF Occurrence Download <https://doi.org/10.15468/dl.3b9m6s>; <https://doi.org/10.15468/dl.vxvfvj>; <https://doi.org/10.15468/dl.q8qjw8>; <https://doi.org/10.15468/dl.rmb27u>; <https://doi.org/10.15468/dl.83q9a6>; <https://doi.org/10.15468/dl.xt74fw>; <https://doi.org/10.15468/dl.spkfhu>. Below the citation, there is a link to 'Google Scholar'.



DOIs: from paper to download and back to dataset

One Earth Log in

Search for...

ARTICLE | VOLUME 6, ISSUE 2, P139-146, FEBRUARY 17, 2023

Download Full Issue

Three-quarters of insect species are insufficiently represented by protected areas

Shawan Chowdhury • Myron P. Zalucki • Jeffrey O. Hanson • ... David Green • James E.M. Watson • Richard A. Fuller • Show all authors • Show footnotes

Published: February 01, 2023 • DOI: <https://doi.org/10.1016/j.oneear.2022.12.003>

DOWNLOAD | 11 MAY 2020

1,798,641 occurrences included in download

DOI [10.15468/dl.rmb27u](https://doi.org/10.15468/dl.rmb27u)

DOWNLOAD 4 CITATIONS

PLEASE USE THIS CITATION IN PUBLICATIONS

GBIF.org (11 May 2020) GBIF Occurrence Download <https://doi.org/10.15468/dl.rmb27u>

Copy BibTex RIS

Casual records for Scottish Wildlife Trust reserves - Verified data

10.15468/zeay1d 60

60 records at time of download

Involved datasets: 1,332
Involved publishers: 322
Involved publishing countries: 58

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OCCURRENCE DATASET | REGISTERED OCTOBER 1, 2013


Casual records for Scottish Wildlife Trust reserves - Verified data

Published by [Scottish Wildlife Trust](#)

16,646 OCCURRENCES 406 CITATIONS

DATASET METRICS ACTIVITY DOWNLOAD HOME PAGE

This dataset comprises ad hoc species records submitted by the public to Scottish Wildlife Trust for Trust reserves. Records in this dataset have undergone a level of verification, either using the rules provided by national recording schemes and societies available via the NBN Record Cleaner, or other experts, such as Vice County Recorders. These data are provided "as is" and Scottish Wildlife Trust do not have the resources to interpret these data. The Trust would recommend using a Local Record Centre for interpretation purposes and to gain a clear picture of all datasets available, many of which will not yet be on the NBN Atlas.

 **Scottish Wildlife Trust**

Publication date: April 6, 2022
Metadata last modified: May 25, 2022
Hosted by: [National Biodiversity Network](#)



DOIs: from paper to download and back to dataset

One Earth Log in

Search for...

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DATASET METRICS ACTIVITY DOWNLOAD HOME PAGE

Three-quarters of insect species are insufficiently represented by protected areas

Literature

Chowdhury, S. Zalucki, M. Hanson, J. Tiatragul, S. Green, D. Watson, J. ... - (2023) One Earth
Insects dominate the biosphere, yet insect populations are plummeting worldwide. Massive conservation efforts will be needed to reverse these declines. Protected areas (PAs) could act as a safeguard against extinction, but documented coverage of insect representation across the PA estate is limited....

Journal article Peer-reviewed

Data referenced in study [DOI 10.15468/dl.ihepwh](https://doi.org/10.15468/dl.ihepwh) [DOI 10.15468/dl.rmb27u](https://doi.org/10.15468/dl.rmb27u) [DOI 10.15468/dl.szp1si](https://doi.org/10.15468/dl.szp1si) [DOI 10.15468/dl.szyiv7](https://doi.org/10.15468/dl.szyiv7) [DOI 10.15468/dl.tavumq](https://doi.org/10.15468/dl.tavumq) [DOI 10.15468/dl.vxvfvj](https://doi.org/10.15468/dl.vxvfvj) [DOI 10.15468/dl.xt74fw](https://doi.org/10.15468/dl.xt74fw) [DOI 10.15468/dl.yzulee](https://doi.org/10.15468/dl.yzulee)

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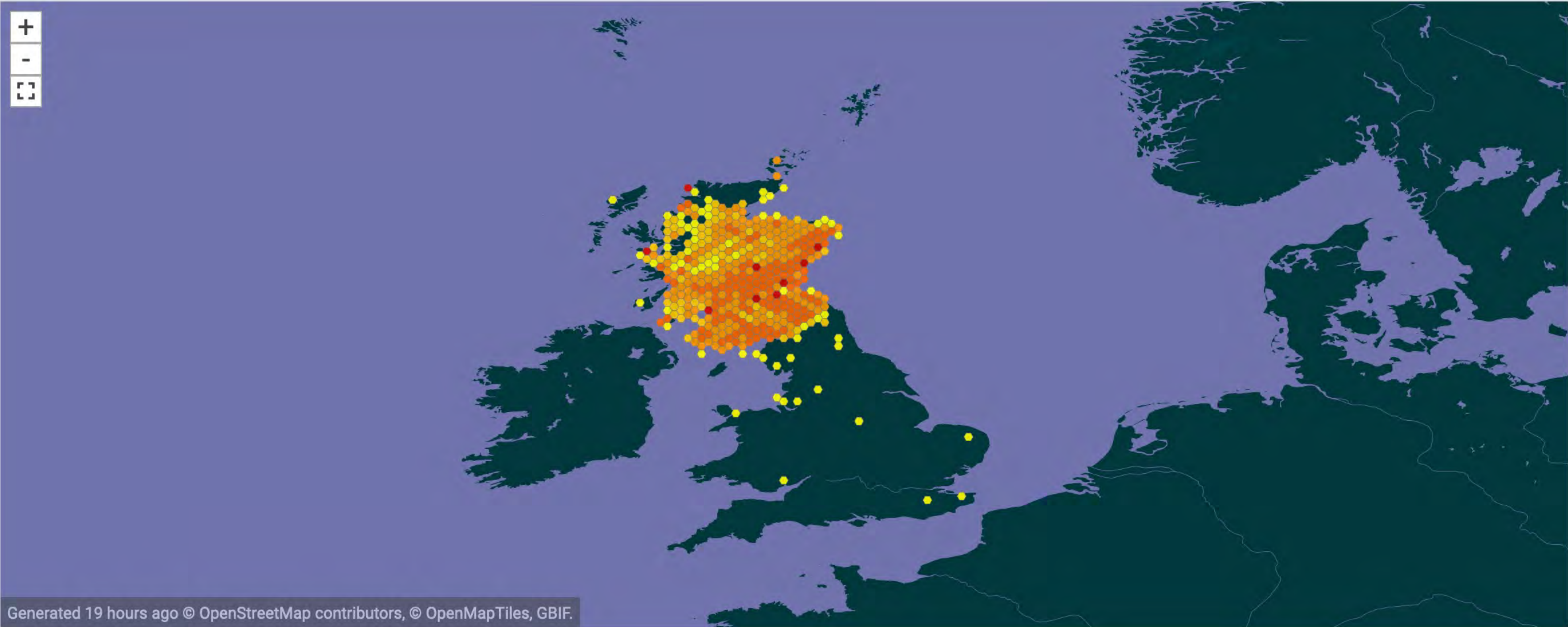
PUBLISHER | SINCE NOVEMBER 15, 2016

Scottish Wildlife Trust

ABOUT METRICS HOME PAGE

341,967 OCCURRENCES 9 DATASETS 664 CITATIONS

341,967 GEOREFERENCED RECORDS



Any year 1900 - 2021

EXPLORE AREA ☰ 📄 🌐 👉

GBIF data citation widget

- Gives data publishers a quick and easy way to display GBIF data citations for both individual datasets and publishers
- Allows embedding of citation counts or citation feeds into their website
- Supports full range of filters and facets available through the literature tracking programme

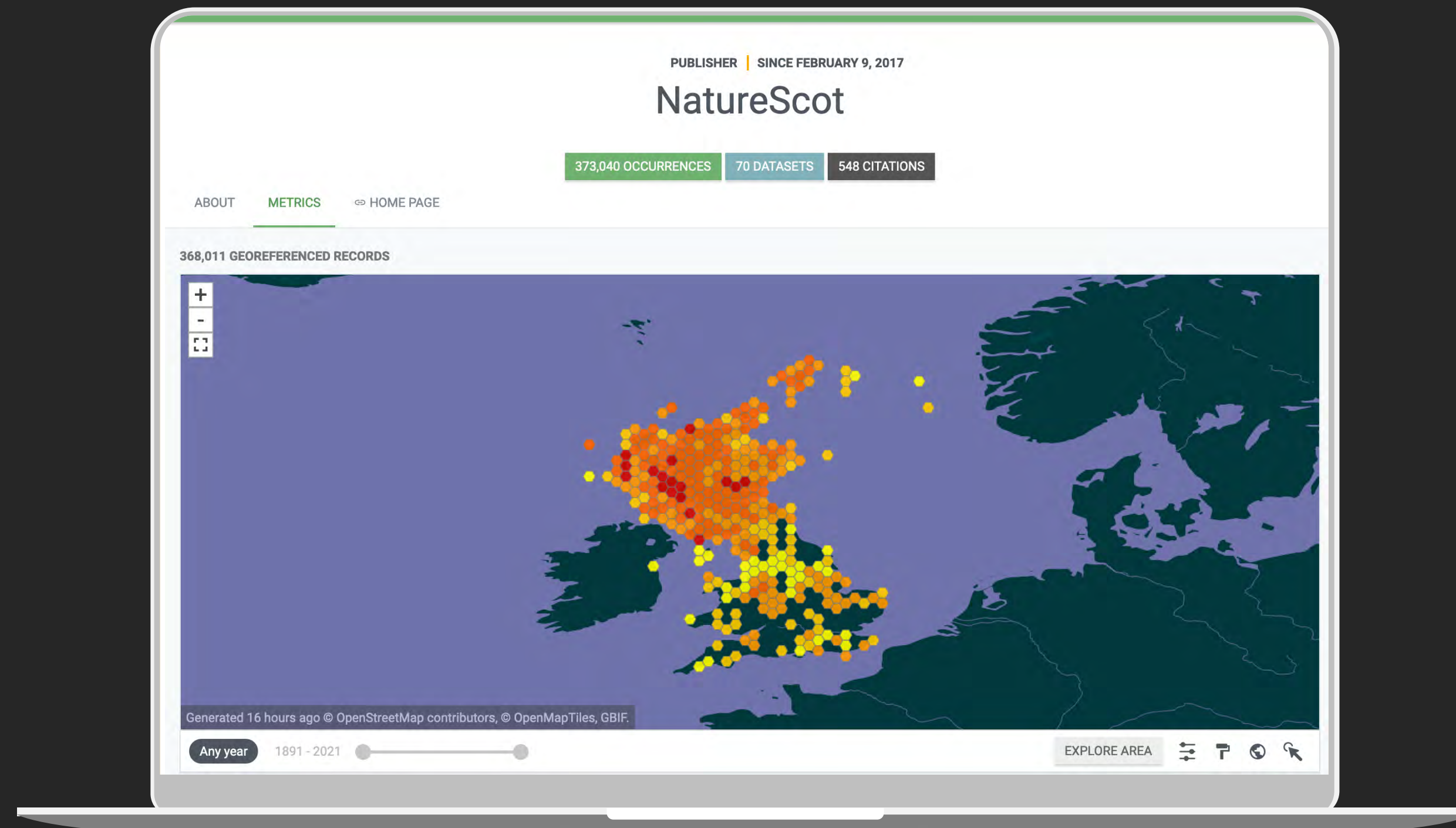


Citation widget in action: NatureScot

Button code

```
<iframe src="https://www.gbif.org/  
api/widgets/literature/button?  
publishingOrganizationKey=98ba8467-  
5081-4d15-b168-32d893e18b76"  
scrolling="no" frameborder="0"  
allowtransparency="true"  
allowfullscreen="false"  
style="width: 140px; height:  
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```

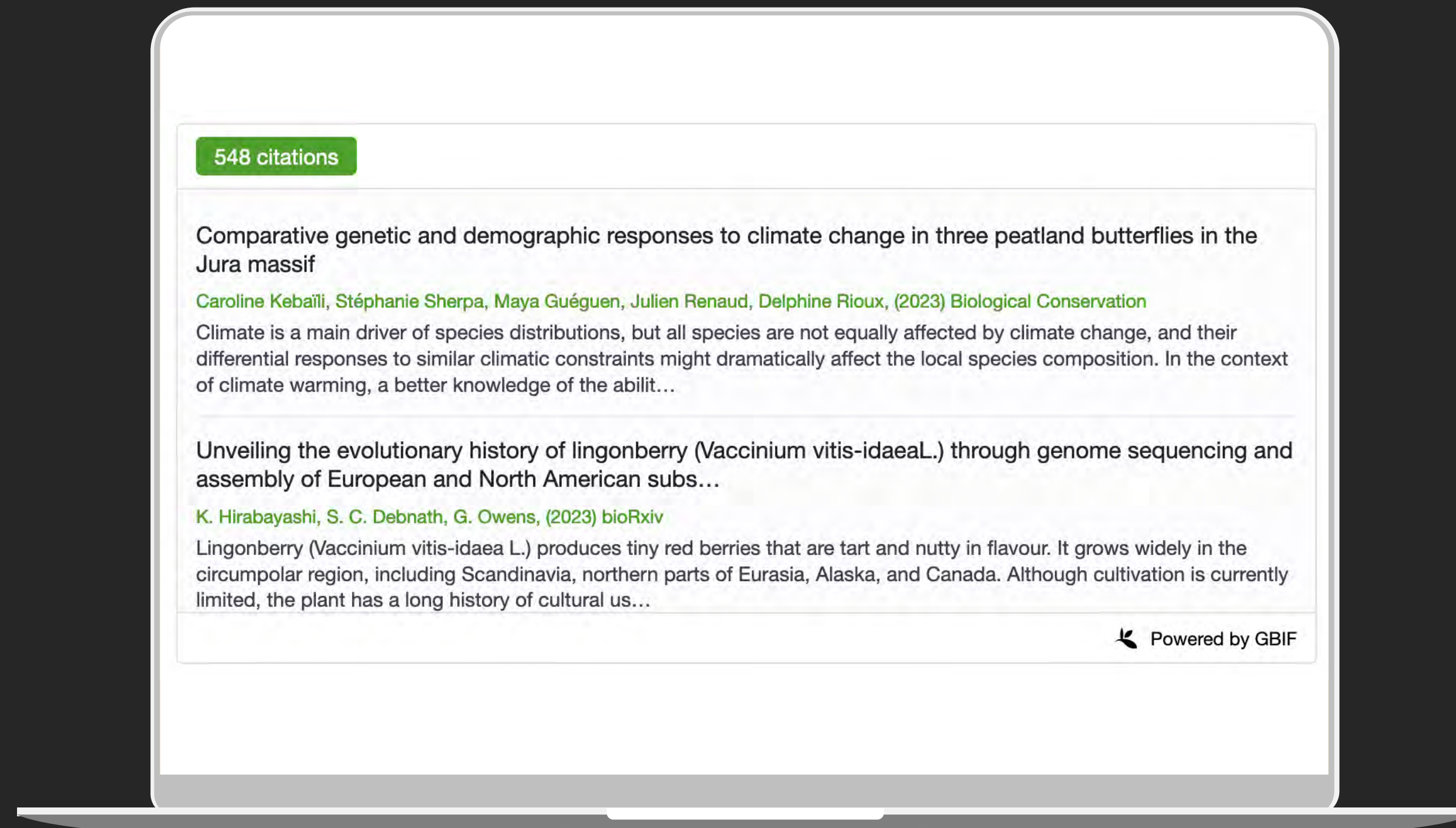
 548 citations



Citation widget in action: NatureScot

Widget code

```
<iframe src="https://www.gbif.org/
api/widgets/literature/latest?
publishingOrganizationKey=
98ba8467-5081-4d15-b168-
32d893e18b76" scrolling="no"
frameborder="0"
allowtransparency="true"
allowfullscreen="false"
style="width: 100%; height:
350px;"></iframe>
```



downscaling

The
value
of GBIF



Support materials for public outreach across the NBN & GBIF networks



Thank you! (and happy Thanksgiving!)

Kyle Copas | kcopas@gbif.org



[@kylecopas@scicomm.xyz](https://scicomm.xyz) | [@gbif@ecoevo.social](https://ecoevo.social)

