Taiwan

This report provides a series of summary charts, statistics and other details about the mobilization and use of open-access species data through the GBIF network, relating to users and participating institutions in Taiwan. These metrics show status at the time of report generation, unless otherwise noted. Taken together, the elements of this report can help guide and measure progress toward the information needs for biodiversity research, as well as for national commitments on biodiversity and sustainable development.

▶ Access and usage

Researchers from Taiwan contributed to 11 peer-reviewed articles citing GBIF use during 2023 and a total of 87 articles since 2008.

▶ Data availability in Taiwan

<table>
<thead>
<tr>
<th>Kingdom</th>
<th>Occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animalia</td>
<td>16,570,566</td>
</tr>
<tr>
<td>Plantae</td>
<td>1,408,770</td>
</tr>
<tr>
<td>Fungi</td>
<td>44,111</td>
</tr>
<tr>
<td>Unknown</td>
<td>67,681</td>
</tr>
<tr>
<td>Protozoa</td>
<td>3,109</td>
</tr>
<tr>
<td>Bacteria</td>
<td>45,908</td>
</tr>
<tr>
<td>Virus</td>
<td>8,020</td>
</tr>
<tr>
<td>Chromista</td>
<td>80,636</td>
</tr>
<tr>
<td>Archaea</td>
<td>997</td>
</tr>
</tbody>
</table>

▶ Data mobilization

Institutions from Taiwan published 2,804,992 new occurrence records during 2023 out of a total of 355,993,458 occurrence records added globally to GBIF.org.

Number of records published by institutions in Taiwan, categorized by kingdom.
Access and usage

Data downloads on GBIF.org from users in Taiwan

Users from Taiwan made 1,580 download requests representing 0.3% of all downloads during 2023.

Monthly downloads requested by users in Taiwan

Recent peer-reviewed articles using GBIF-mediated data by co-authors based in Taiwan

The GBIF Secretariat maintains and reports on an ongoing literature tracking programme, giving priority to substantive uses of GBIF-mediated data in peer-reviewed literature while identifying the countries or areas of the authors’ institutional affiliations. The citations below represent the five most recent journal articles with at least one co-author from Taiwan.

Those interested in assisting the Secretariat in identifying additional peer-reviewed uses of GBIF-mediated data may forward relevant citations to comms@gbif.org.


Lee, Lee, Hsu et al. (2023) Phylogeny, ancestral ranges and reclassification of sand dollars. Scientific Reports. https://doi.org/10.1038/s41598-023-36848-0


Luu, Hsieh, Chuang et al. (2023) Langbiangia, a new genus of Gesneriaceae endemic to Langbiang Plateau, southern Vietnam and a taxonomic endeavor to achieve key targets of the post-2020 global biodiversity framework. PLOS ONE.
Data availability

Total data available for selected taxonomic groups in Taiwan

- **Mammals**: 151,707 occurrences
- **Birds**: 14,532,422 occurrences
- **Bony fish**: 100,487 occurrences
- **Amphibians**: 519,687 occurrences
- **Insects**: 1,097,038 occurrences
- **Reptiles**: 56,619 occurrences
- **Molluscs**: 47,813 occurrences
- **Arachnids**: 12,895 occurrences
- **Flowering plants**: 1,168,076 occurrences
- **Ferns**: 188,014 occurrences
- **Gymnosperms**: 11,061 occurrences
- **Mosses**: 13,302 occurrences
- **Sac fungi**: 22,117 occurrences
- **Basidiomycota**: 16,800 occurrences

**Mammals** = Class *Mammalia*
**Birds** = Class *Aves*
**Bony fish** = Superclass *Osteichthyes* p.p.
**Amphibians** = Class *Amphibia*
**Insects** = Class *Insecta*
**Reptiles** = Class *Testudines, Sphenodontia, Squamata & Crocodylia*
**Molluscs** = Phylum *Mollusca*
**Arachnids** = Class *Arachnida*
**Flowering plants** = Phylum *Magnoliophyta*
**Gymnosperms** = Superclass *Gymnospermae*
**Mosses** = Phylum *Bryophyta*
**Sac fungi** = Phylum *Ascomycota*
**Basidiomycota** = Phylum *Basidiomycota*

Change over time in records about biodiversity in Taiwan

**WHY MIGHT THE AMOUNT OF MOBILIZED DATA DECREASE?**
Datasets are sometimes removed by publishers, but more often decreases in the number of records are due to the removal of duplicate records and datasets.

**SPECIES COUNTS** represent the number of binomial scientific names for which GBIF has received data records, organized as far as possible using synonyms recorded in key databases like the Catalogue of Life.
Most recent datasets from publishers in Taiwan

The Survey Data of Mianhua and Huaping Islets Wildlife Refuge. Published by Ceta explorers Co., Ltd
https://doi.org/10.15468/vednhh

Survey records of the project: “A day in the life of spinner dolphins” inshore of Hualien, eastern Taiwan | 臺灣花蓮近海飛旋海豚的一天調查紀錄. Published by Kuroshio Ocean Education Foundation
https://doi.org/10.15468/vmz5ng

Investigation and Monitoring for Ecology at the Taipei Water Special District,(2023-2024)(1/2). Published by Taipei Water Management Branch, WRA, MOEA
https://doi.org/10.15468/7essfk

a_dataset_of_arbuscular_mycorrhizal_fungi_in_cupressaceae_plants. Published by National Science and Technology Council (NSTC)
https://doi.org/10.15468/udukae

A traits database of 454 bird species in Taiwan. Published by Taiwan Forestry Research Institute
https://doi.org/10.15468/52qr34

Taijiang national park oysters measurement 2022-2023. Published by Taiwan Biodiversity Information Facility (TaiBIF)
https://doi.org/10.15468/edkzza

See all datasets from this country or area: gbif.org/dataset/search?publishing_country=TW

Newest publishers from Taiwan

Ceta explorers Co., Ltd
Taipei Water Management Branch, WRA, MOEA
Department of Oceanography, National Sun Yat-sen University, Kaohsiung Taiwan
Water Resources Agency, Ministry of Economic Affairs
Institute of Molecular & Cellular Biology, National Tsing Hua University

See all publishers from this country or area: gbif.org/publisher/search?country=TW

Occurrence records downloaded from GBIF.org, published by institutions in Taiwan

Number of occurrence records downloaded via GBIF.org published by institutions in Taiwan
Data mobilization

Data sharing with country or area of origin by national institutions in Taiwan

The chart above shows the number of records shared over time by publishers within Taiwan, with separate colours for records about species occurring within undefined and those occurring elsewhere.

Top data contributors about biodiversity in Taiwan

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country or area</th>
<th>No. of occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Taiwan</td>
<td>17,310,012</td>
</tr>
<tr>
<td>2</td>
<td>United States of America</td>
<td>511,059</td>
</tr>
<tr>
<td>3</td>
<td>United Kingdom</td>
<td>135,273</td>
</tr>
<tr>
<td>4</td>
<td>Japan</td>
<td>84,213</td>
</tr>
<tr>
<td>5</td>
<td>Germany</td>
<td>54,323</td>
</tr>
<tr>
<td>6</td>
<td>Netherlands</td>
<td>27,920</td>
</tr>
<tr>
<td>7</td>
<td>International organization or unknown country</td>
<td>23,199</td>
</tr>
<tr>
<td>8</td>
<td>Colombia</td>
<td>20,057</td>
</tr>
<tr>
<td>9</td>
<td>France</td>
<td>15,209</td>
</tr>
<tr>
<td>10</td>
<td>Estonia</td>
<td>15,059</td>
</tr>
</tbody>
</table>

Table 1. Ranking of countries or areas contributing data about Taiwan

Top datasets contributing data about Taiwan

EOD – eBird Observation Dataset. 10,958,655 occurrences in Taiwan. (Last updated 20 Aug 2023)

Taiwan Wild Bird Federation Bird Records Database. 1,853,589 occurrences in Taiwan. (Last updated 6 Sep 2022)

iNaturalist Research-grade Observations. 969,178 occurrences in Taiwan. (Last updated 2 Jan 2024)

Acoustic detections of birds using the SILIC in Yushan National Park, Taiwan. 802,670 occurrences in Taiwan. (Last updated 15 Nov 2022)

Taiwan Moth Occurrence Data Collected From Social Network. 610,189 occurrences in Taiwan. (Last updated 3 Jan 2024)

See all contributing countries and areas or datasets: gbif.org/country/TW/about
Taiwan participates in the following projects coordinated by GBIF

Mobilizing biodiversity data from ASEAN protected areas
BIFA: Biodiversity Information Fund for Asia, 2016–2016
The goal of this project was to facilitate the mobilization of biodiversity information from ASEAN Heritage Parks - regionally significant protected areas for biodiversity.
https://www.gbif.org/project/82651

A bilingual open-source checklist and digitization of Taiwan’s bee fauna
BIFA: Biodiversity Information Fund for Asia, 2021–2023
https://www.gbif.org/project/BIFA6_033

Improving knowledge of Asian pteridophytes through DNA sampling of specimens in regional collections
BIFA: Biodiversity Information Fund for Asia, 2021–2023
https://www.gbif.org/project/BIFA6_010

Biodiversity informatics cookbook
BIFA: Biodiversity Information Fund for Asia, 2016–2017
GBIF nodes in India, Japan, Korea and Taiwan will produce a biodiversity informatics ‘cookbook’ – an open-access learning resource to support regional training activities.
https://www.gbif.org/project/82649