South Africa

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 South Africa. 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 South Africa contributed to 57 peer-reviewed articles citing GBIF use during 2023 and a total of 330 articles since 2008.

▶ Data availability in South Africa

- Animalia: 33,441,923 occurrences
- Plantae: 2,759,081 occurrences
- Fungi: 129,061 occurrences
- Unknown: 24,686 occurrences
- Protozoa: 2,217 occurrences
- Bacteria: 61,311 occurrences
- Virus: 9,663 occurrences
- Chromista: 74,856 occurrences
- Archaea: 904 occurrences

▶ Data mobilization

Institutions from South Africa published 2,024,259 new occurrence records during 2023 out of a total of 355,993,458 occurrence records added globally to GBIF.org.
Access and usage

Data downloads on GBIF.org from users in South Africa

Users from South Africa

made 4,609 download requests representing 0.7% of all downloads during 2023

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

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 South Africa.

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

Vicente, Trindade, Máguaes et al. (2023) Intraspecific Genetic and Ecological Differentiation in Australian Acacia Species: Insights from Acacia longifolia. *Wattles.*
https://doi.org/10.1079/9781800622197.0007

https://doi.org/10.1079/9781800622197.0009

Deville, Mori, Kawai et al. (2023) Cryptic biodiversity in the commercial diamondback squid *Thysanoteuthis rhombus* Troschel 1857. *Reviews in Fish Biology and Fisheries.*
https://doi.org/10.1007/s11160-023-09813-3

https://doi.org/10.1371/journal.pntd.0011732

James, Coverdale, Shivambu et al. (2023) Potential Climatic Suitability Distribution Model for Wild Boar (Sus scrofa) in South Africa. *African Journal of Wildlife Research.*
https://doi.org/10.3957/056.053.0185
Data availability

Total data available for selected taxonomic groups in South Africa

- **Mammals**: 236,913 occurrences
- **Birds**: 30,944,440 occurrences
- **Bony fish**: 176,477 occurrences
- **Amphibians**: 60,615 occurrences
- **Insects**: 1,482,044 occurrences
- **Reptiles**: 142,403 occurrences
- **Molluscs**: 120,441 occurrences
- **Arachnids**: 108,761 occurrences
- **Flowering plants**: 2,597,945 occurrences
- **Ferns**: 44,767 occurrences
- **Gymnosperms**: 12,322 occurrences
- **Mosses**: 48,971 occurrences
- **Sac fungi**: 87,780 occurrences
- **Basidiomycota**: 29,292 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**  
**Ferns** = Phylum **Pteridophyta**  
**Mosses** = Phylum **Bryophyta**  
**Sac fungi** = Phylum **Ascomycota**  
**Basidiomycota** = Phylum **Basidiomycota**

Change over time in records about biodiversity in South Africa

**Occurrence records available about species occurring in South Africa**

**Species occurrence records accessible through GBIF over time**

**Number of species having occurrence records accessible through GBIF over time**

**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 South Africa

KwaZulu-Natal Museum-Arachnida-Collection. Published by KwaZulu-Natal Museum
https://doi.org/10.15468/kf9hrf

African Bird Atlas Project. Published by FitzPatrick Institute of African Ornithology
https://doi.org/10.15468/s27tr6

The Freshwater Biodiversity Information System (FBIS) Fish Data. Published by Freshwater Research Centre
https://doi.org/10.15468/gmk6hg

KwaZulu-Natal Museum-Crustacea-collection. Published by KwaZulu-Natal Museum
https://doi.org/10.15468/sbg2kg

Filling the gap: Noteworthy herpetological discoveries in North West Province, South Africa. Published by South African National Biodiversity Institute
https://doi.org/10.15468/v9y9p5

KwaZulu-Natal Museum-Entomology-collection. Published by KwaZulu-Natal Museum
https://doi.org/10.15468/vf6as7

kznm-herpetology-collection. Published by KwaZulu-Natal Museum
https://doi.org/10.15468/3fzhxq

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

Newest publishers from South Africa

Freshwater Research Centre
KwaZulu-Natal Museum
FitzPatrick Institute of African Ornithology
The South African Institute for Aquatic Biodiversity
Agricultural Research Council

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

Number of occurrence records downloaded via GBIF.org published by institutions in South Africa

See all publishers from this country or area gbif.org/publisher/search?country=ZA
Data mobilization

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

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

Top data contributors about biodiversity in South Africa

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country or area</th>
<th>No. of occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>South Africa</td>
<td>32,673,617</td>
</tr>
<tr>
<td>2</td>
<td>United States of America</td>
<td>2,201,432</td>
</tr>
<tr>
<td>3</td>
<td>International organization or unknown country</td>
<td>416,967</td>
</tr>
<tr>
<td>4</td>
<td>United Kingdom</td>
<td>405,924</td>
</tr>
<tr>
<td>5</td>
<td>Netherlands</td>
<td>235,443</td>
</tr>
<tr>
<td>6</td>
<td>Germany</td>
<td>105,630</td>
</tr>
<tr>
<td>7</td>
<td>Sweden</td>
<td>94,500</td>
</tr>
<tr>
<td>8</td>
<td>Estonia</td>
<td>81,441</td>
</tr>
<tr>
<td>9</td>
<td>Belgium</td>
<td>57,396</td>
</tr>
<tr>
<td>10</td>
<td>Switzerland</td>
<td>51,054</td>
</tr>
</tbody>
</table>

Table 1. Ranking of countries or areas contributing data about South Africa

Top datasets contributing data about South Africa

- Southern African Bird Atlas Project 2. 18,625,817 occurrences in South Africa. (Last updated 9 Dec 2023)
- EOD – eBird Observation Dataset. 4,689,973 occurrences in South Africa. (Last updated 20 Aug 2023)
- iNaturalist Research-grade Observations. 1,854,834 occurrences in South Africa. (Last updated 2 Jan 2024)

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

GBIF Africa Nodes data mobilization, ecological niche modelling and data paper training and mentorship
This project is centred on providing practical training on ecological niche modelling and the preparation of data papers to participants from up to 10 nodes in Africa using real datasets for threatened or invasive species to be published to the GBIF network.
https://www.gbif.org/project/82204

Cross-continental partnership to investigate data mining approaches for impactful data use cases and stories
*Capacity Enhancement Support Programme, 2022–2023*
https://www.gbif.org/project/CESP2022-005

Mobilizing endemic and economically useful species data for policy and protection
*Capacity Enhancement Support Programme, 2020–2021*
Technical training for data managers at key institutions to ensure the availability of data for target species
https://www.gbif.org/project/2du1KSeBHxlcZF9rfPZvp

Engaging academia to unlock access to biodiversity data in southern Africa
*Capacity Enhancement Support Programme, 2018–2019*
This project will trial a data management and data publication short-course tailored to university students and their lecturers within the Southern African Development Community (SADC) region.
https://www.gbif.org/project/2MNIZMf30AEGOu0SOYEcGO

See all GBIF projects
gbif.org/resource/search?contentType=project