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 35 peer-reviewed articles citing GBIF use during 2020 and a total of 187 articles since 2008.

▶ Data availability in South Africa

- Animalia: 25,674,826 occurrences
- Plantae: 2,358,068 occurrences
- Fungi: 49,370 occurrences
- Unknown: 24,627 occurrences
- Protozoa: 1,940 occurrences
- Bacteria: 16,486 occurrences
- Virus: 16,486 occurrences
- Chromista: 78,954 occurrences
- Archaea: 499 occurrences

▶ Data mobilization

Institutions from South Africa published 1,707,223 new occurrence records during 2020 out of a total of 268,835,604 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 3,145 download requests representing 1.4% of all downloads during 2020.

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.

Zingore, Sithole, Abdel-Rahman et al. (2020) Global risk of invasion by Bactrocera zonata: Implications on horticultural crop production under changing climatic conditions. *PLOS ONE.*
https://doi.org/10.1371/journal.pone.0243047

Number of first and last names doesn't match/. (2020) Occurrence Record of and Possible Invasion by Scarlet Sage (Salvia coccinea Buc’hoz ex Etl.) in South Africa. *Russian Journal of Biological Invasions.*
https://doi.org/10.1134/s2075111720040098

https://doi.org/10.1016/j.sajb.2020.11.027

Sutton, Anderson, Franco et al. (2020) Geographic range estimates and environmental requirements for the harpy eagle derived from spatial models of current and past distribution. *Ecology and Evolution.*
https://doi.org/10.1002/ece3.7068

https://doi.org/10.1002/ece3.7043

See all research from this country or area gbif.org/country/ZA/publications
## Data availability

Total data available for selected taxonomic groups in South Africa

<table>
<thead>
<tr>
<th>Taxonomic Group</th>
<th>Occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mammals</td>
<td>172,382</td>
</tr>
<tr>
<td>Birds</td>
<td>24,058,348</td>
</tr>
<tr>
<td>Bony fish</td>
<td>129,319</td>
</tr>
<tr>
<td>Amphibians</td>
<td>35,011</td>
</tr>
<tr>
<td>Insects</td>
<td>838,434</td>
</tr>
<tr>
<td>Reptiles</td>
<td>96,821</td>
</tr>
<tr>
<td>Molluscs</td>
<td>97,199</td>
</tr>
<tr>
<td>Arachnids</td>
<td>70,667</td>
</tr>
<tr>
<td>Flowering plants</td>
<td>2,211,077</td>
</tr>
<tr>
<td>Gymnosperms</td>
<td>8,825</td>
</tr>
<tr>
<td>Ferns</td>
<td>39,839</td>
</tr>
<tr>
<td>Mosses</td>
<td>51,974</td>
</tr>
<tr>
<td>Sac fungi</td>
<td>38,834</td>
</tr>
<tr>
<td>Basidiomycota</td>
<td>7,519</td>
</tr>
</tbody>
</table>

Mammals = Class Mammalia  
Birds = Class Aves  
Bony fish = Superclass  
Osteichthytes  
Amphibians = Class Amphibia  
Insects = Class Insecta  
Reptiles = Class Reptilia  
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 for which at least one occurrence record is available in South Africa

**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

FBIP: Great Escarpment Biodiversity Research Programme data mobilisation. *Published by South African National Biodiversity Institute*
https://doi.org/10.15468/qwpfu2

FBIP: Diversities of microbiomes from South African arid and natural soils. *Published by South African National Biodiversity Institute*
https://doi.org/10.15468/73t5su

FBIP: Actinopterygii and Elasmobranchii occurrence record throughout South Africa. *Published by South African National Biodiversity Institute*
https://doi.org/10.15468/zvvx7d

FBIP: Atlas of African Echinodermata. *Published by South African National Biodiversity Institute*
https://doi.org/10.15468/zre6h9

FBIP: Insectivorous bat monitoring in the Kruger National Park - 2. *Published by South African National Biodiversity Institute*
https://doi.org/10.15468/6zcw7v

FBIP: Mycorrhizal and root endophytic fungi associated with Orchids. *Published by South African National Biodiversity Institute*
https://doi.org/10.15468/hrhfap

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

Newest publishers from South Africa

KwaZulu-Natal Museum
Animal Demography Unit, Department of Zoology, University of Cape Town
The South African Institute for Aquatic Biodiversity
Agricultural Research Council
Endangered Wildlife Trust

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

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

Number of occurrence records downloaded via GBIF.org published by institutions in South Africa
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>26,392,017</td>
</tr>
<tr>
<td>2</td>
<td>United States of America</td>
<td>836,849</td>
</tr>
<tr>
<td>3</td>
<td>United Kingdom</td>
<td>286,890</td>
</tr>
<tr>
<td>4</td>
<td>Netherlands</td>
<td>187,644</td>
</tr>
<tr>
<td>5</td>
<td>Germany</td>
<td>94,248</td>
</tr>
<tr>
<td>6</td>
<td>Sweden</td>
<td>91,796</td>
</tr>
<tr>
<td>7</td>
<td>Switzerland</td>
<td>44,744</td>
</tr>
<tr>
<td>8</td>
<td>France</td>
<td>44,421</td>
</tr>
<tr>
<td>9</td>
<td>Belgium</td>
<td>43,576</td>
</tr>
<tr>
<td>10</td>
<td>Australia</td>
<td>23,553</td>
</tr>
</tbody>
</table>

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

See all contributing countries and areas or datasets: gbif.org/country/ZA/about

### Top datasets contributing data about South Africa

- **Southern African Bird Atlas Project 2.** 14,512,352 occurrences in South Africa. (Last updated 6 Aug 2020)
- **EOD - eBird Observation Dataset.** 2,327,265 occurrences in South Africa. (Last updated 30 Jun 2020)
- **PRECIS.** 917,367 occurrences in South Africa. (Last updated 1 Nov 2018)
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

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/2du1KSeBHxlczF9xrfPZvp

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