

## **Activity report**



generated January 2024

## Luxembourg

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 Luxembourg. 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



#### Data availability in Luxembourg



Animalia 1,830,230 occurrences



Plantae 1,114,647 occurrences



Fungi
41,501
occurrences



Unknown
1,167
occurrences



Protozoa **346**occurrences



Bacteria
1,123
occurrences



Virus
277
occurrences



Chromista
868
occurrences



Archaea

2
occurrences

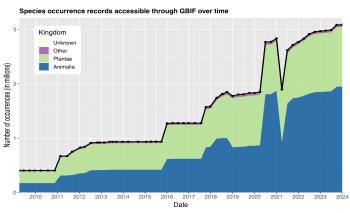
#### ► Data mobilization

Institutions from

Luxembourg

published
118,179

new occurrence records during 2023
out of a total of
355,993,458
occurrence records added
globally to GBIF.org

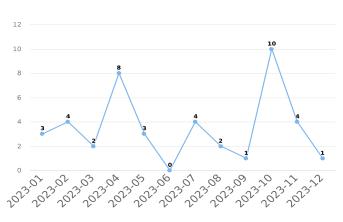


Number of records published by institutions in Luxembourg, categorized by kingdom

#### Access and usage

#### Data downloads on GBIF.org from users in Luxembourg





Monthly downloads requested by users in Luxembourg

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

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 Luxembourg.

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

Thuy, Numberger-Thuy. (2023) The Northernmost Occurrence of the Tropical-Subtropical Brittle Star Ophiocoma (Echinodermata, Ophiuroidea) from a Late Cretaceous Rocky Shore in Southern Sweden. *Taxonomy*.

https://doi.org/10.3390/taxonomy3030020

Caruso, Carvalheiro, Dathe *et al.* (2023) European bee diversity: Taxonomic and phylogenetic patterns. *Journal of Biogeography.* https://doi.org/10.1111/jbi.14614

Cantú-Salazar, Vray, Jakubzik *et al.* (2021) An addition to the list of wild bee fauna of Luxembourg: Nomada kohliSchmiedeknecht, 1882 (Hymenoptera, Apidae), with a list of the species of the genus Nomada .... *Bulletin de la Société des naturalistes luxembourgeois*.

Marshall, Beckers, Vray *et al.* (2020) High thematic resolution land use change models refine biodiversity scenarios: A case study with Belgian bumblebees. *Journal of Biogeography.* https://doi.org/10.1111/jbi.14000

Vilaça, Biosa, Zachos *et al.* (2014) Mitochondrial phylogeography of the European wild boar: the effect of climate on genetic diversity and spatial lineage sorting across Europe. *Journal of Biogeography.* 

See all research from this country or area gbif.org/country/LU/publications/from

#### **Data availability**

#### Total data available for selected taxonomic groups in Luxembourg



Mammals 40,481 occurrences



Birds 1,145,358 occurrences



Bony fish **6,176** occurrences



Amphibians 16,508 occurrences



Insects
563,341
occurrences



Reptiles 8,037 occurrences



Molluscs 15,910 occurrences



Arachnids 20,172 occurrences



Flowering plants
1,052,248
occurrences



Ferns 27,373 occurrences



Gymnosperms 5,867 occurrences



Mosses
23,129
occurrences



Sac fungi 19,512 occurrences



Basidiomycota
21,100
occurrences

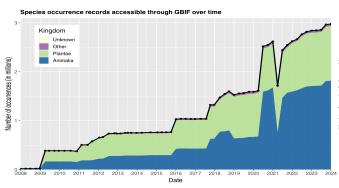
Mammals = Class Mammalia
Birds = Class Aves
Bony fish = Superclass
Osteichthyes p.p.
Amphibians = Class Amphibia

Insects = Class Insecta Reptiles = Class Testudines, Sphenodontia, Squamata & Crocodylia

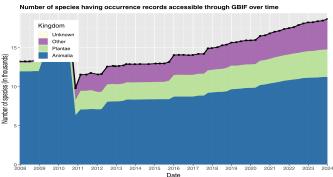
Molluscs = Phylum *Mollusca* 

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 Luxembourg



Occurrence records available about species occurring in Luxembourg



Species for which at least one occurrence record is available in Luxembourg

### 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 Luxembourg

Equisetaceae flora of Luxembourg. *Published by National Museum of Natural History, Luxembourg* https://doi.org/10.15468/j93sn7

Checklist of hard ticks in Luxembourg (Parasitiformes, Ixodida, Ixodidae). *Published by National Museum of Natural History, Luxembourg* https://doi.org/10.15468/wwzej8

Checklist: Atlas and catalogue of the mosquitoes (Diptera, Culicidae) of Luxembourg - 2023. *Published by National Museum of Natural History, Luxembourg* https://doi.org/10.15468/89zzzh

Atlas of Formicidae of Luxembourg 2021. *Published by National Museum of Natural History, Luxembourg* 

https://doi.org/10.15468/wa97dv

Atlas of the Auchenorrhyncha fauna of Luxembourg. *Published by National Museum of Natural History, Luxembourg* 

https://doi.org/10.15468/m3nkye

Checklist of Protura species of Luxembourg 2003. *Published by National Museum of Natural History, Luxembourg* 

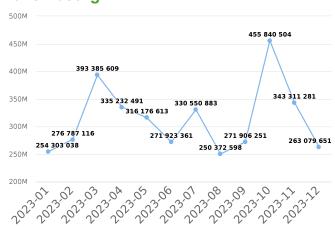
https://doi.org/10.15468/zsrhzx

See all datasets from this country or area: gbif.org/dataset/search?publishing\_country=LU

#### **Newest publishers from Luxembourg**

National Museum of Natural History, Luxembourg

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

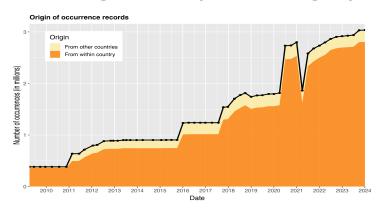


Number of occurrence records downloaded via GBIF.org published by institutions in Luxembourg

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

#### **Data mobilization**







Data sharing with country or area of origin

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

# Top data contributors about biodiversity in Luxembourg

Rank	Country or area	No. of occurrences
1	Luxembourg	2,819,676
2	Netherlands	69,265
3	United States of America	52,943
4	France	16,207
5	Belgium	12,884
6	Germany	7,158
7	Estonia	4,325
8	United Kingdom	2,607
9	Austria	2,380
10	International organization or unknown country	833

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

# Top datasets contributing data about Luxembourg

Collections and observation data National Museum of Natural History Luxembourg. 1,432,184 occurrences in Luxembourg. (Last updated 3 Jul 2023)

MnhnL various project records, Recorder-Lux database. 270,250 occurrences in Luxembourg. (Last updated 6 Jul 2022)

Biotope cadastre of the open landscapes, Recorder-Lux database. 229,355 occurrences in Luxembourg. (Last updated 9 Mar 2022)

Forest vegetation surveys ANF, Recorder-Lux database. 185,132 occurrences in Luxembourg. (Last updated 21 Jun 2022)

Common Bird Monitoring MECDD, Recorder-Lux database. *149,303 occurrences in Luxembourg.* (Last updated 21 Jun 2022)

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

#### Luxembourg participates in the following projects coordinated by GBIF

#### International Living Atlases workshop

Capacity Enhancement Support Programme, 2017–2018

This project will support and strengthen the growing international community of practice around open-source software developed by the Atlas of Living Australia.

<a href="https://www.gbif.org/project/83337">https://www.gbif.org/project/83337</a>

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