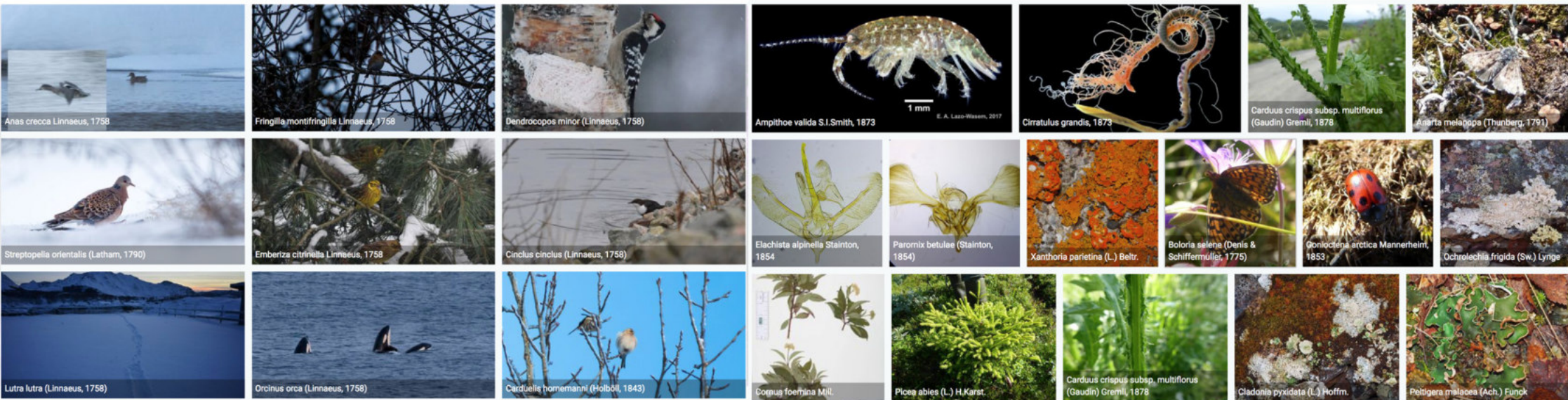




**GBIF**

Global Biodiversity  
Information Facility



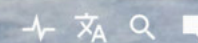
# Sharing Arctic species occurrence data through GBIF

*Tim Hirsch, Deputy Director, GBIF Secretariat*

ARCTIC BIODIVERSITY CONGRESS, ROVANIEMI, 10 OCTOBER 2018



Get data Share Tools Inside GBIF



Login

GBIF | Global Biodiversity Information Facility

# Free and open access to biodiversity data

OCCURRENCES

SPECIES

DATASETS

PUBLISHERS

RESOURCES

“



WHAT IS GBIF?

ABOUT GBIF FINLAND

Polar bears (*Ursus maritimus*) by Sandra Eglite via iNaturalist. Photo licensed under CC BY-NC 4.0.

Occurrence records

1,018,390,553

Datasets

41,030

Publishing institutions

1,275

Species

Learn more about the number of species covered by data in GBIF.org.



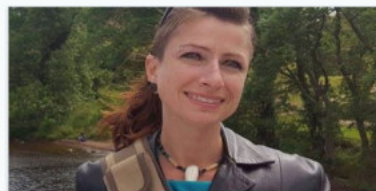
Student award winner investigates climate-driven changes to seaweed distribution...

25 September 2018



Global bans on bird trade needed to stop invasions

5 October 2018



Student award winner explores innovative methods of producing more reliable ecological niche models for highly mobile species

25 September 2018



Training through e-learning: a guiding example from GBIF Spain

Experiences with choosing and setting up an e-learning platform for training in the Spanish-speaking community—and an invitation for other



<https://www.gbif.org/>

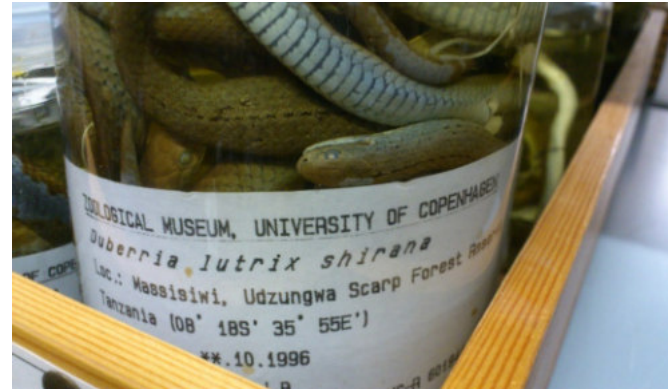


# DATA RICHNESS LEVELS SUPPORTED BY GBIF

FULL TITLE  
BOS Arthropod Collection of University of Oviedo (Spain): Op  
events subset

DESCRIPTION  
In this study, we analyse the relevance of harvestmen distribu  
opportunistic, unplanned, and non-standardised collection ev  
of the Iberian Peninsula. Using specimens deposited in the BO  
the University of Oviedo, we compared these data with data fr  
and periodic collections with pitfall traps in several locations i  
Arthropod Collection, begun in 1977, includes specimens deri  
types, and its recent digitisation allows for this type of compa

## Collection Metadata



## Species Occurrences



## Species Checklists



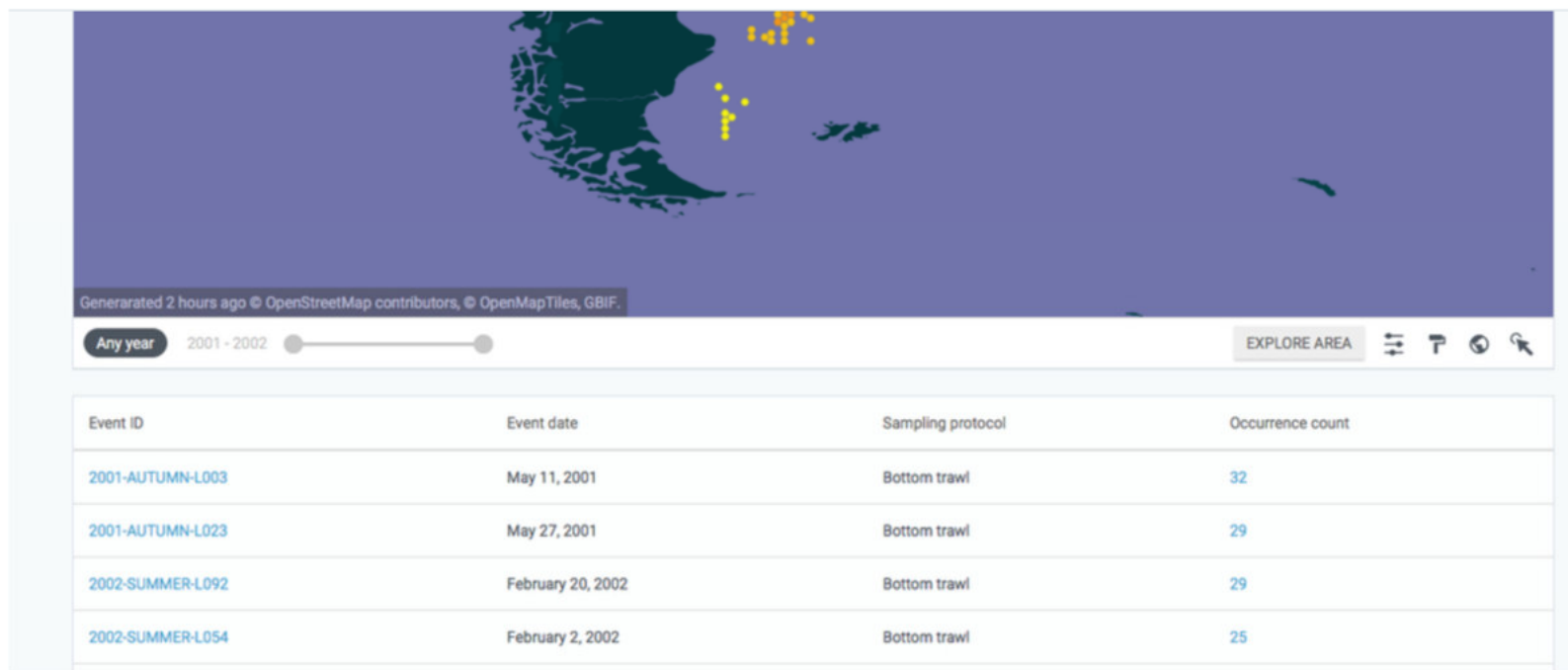
## Sampled Organisms

# RELATIVE ABUNDANCES THROUGH SAMPLING EVENT DATA

NEWS | 20 JULY 2018

## Event lists added to sampling-event datasets

*Enhancement is first in a series that will improve presentation, comparison and visualization of ecological monitoring datasets*



Event list from sampling-event dataset, [Demersal and pelagic species of fish and squid from the Patagonian shelf](#)

# RELATIVE ABUNDANCES THROUGH SAMPLING EVENT DATA

## EVENT DESCRIPTION

### Sampling

Specimens of fish and squid (commercial target and by catch) were taken daily by commercial fishing vessels operating with bottom trawls during autumn (May-June, 2001, 51 catches), winter (July-August, 2001, 38 catches) and summer (January-February, 2002, 112 catches). The fishing company provided the associated data of each fishing haul: date, hour and location decimal Latitude and Longitude of the position while pulling the net) and depth of the catch (the maximum depth reached by the net). Specimens were frozen on board, and identified at species level at the Ichthyology laboratory of Centro Nacional Patagonico, Puerto Madryn, Argentina. The taxonomical identification of species was made by the specialists Dr. A. Gosztonyi and Dr. M. Re and the scientific names and their current accurate spelling were also reviewed using suitable literature (Brunetti et al., 1998; WoRMS web site(<http://www.marinespecies.org/>)). Sex (when possible) and each specimen: wet mass (g) and wet mass of viscera (g, empty stomach), mantle, head and fin length and width (cm) for squid; left and right fin length and width (cm) for skates.

Parent event ID: [2001-AUTUMN](#)

Sampling protocol: Bottom trawl

Published by: [ArOBIS Centro Nacional Patagónico](#)

[How to cite](#)

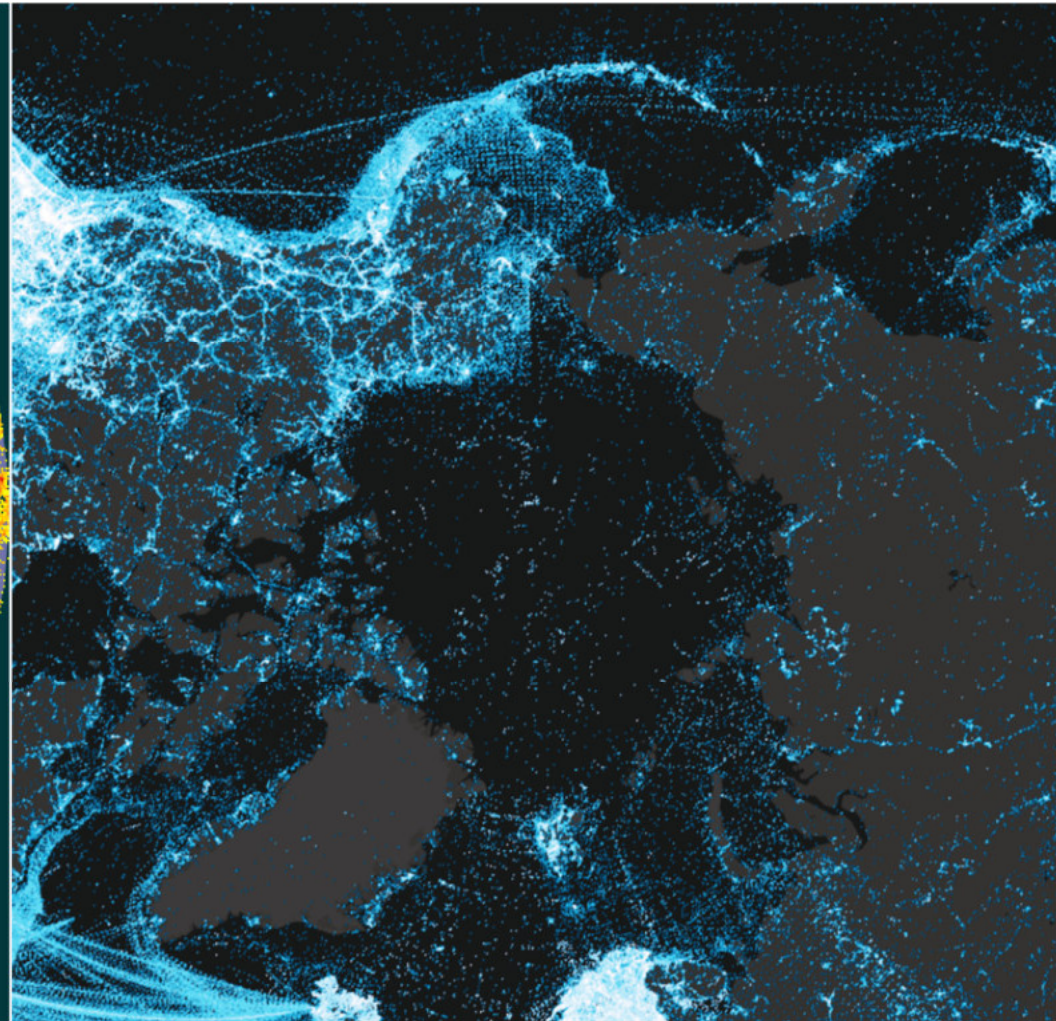
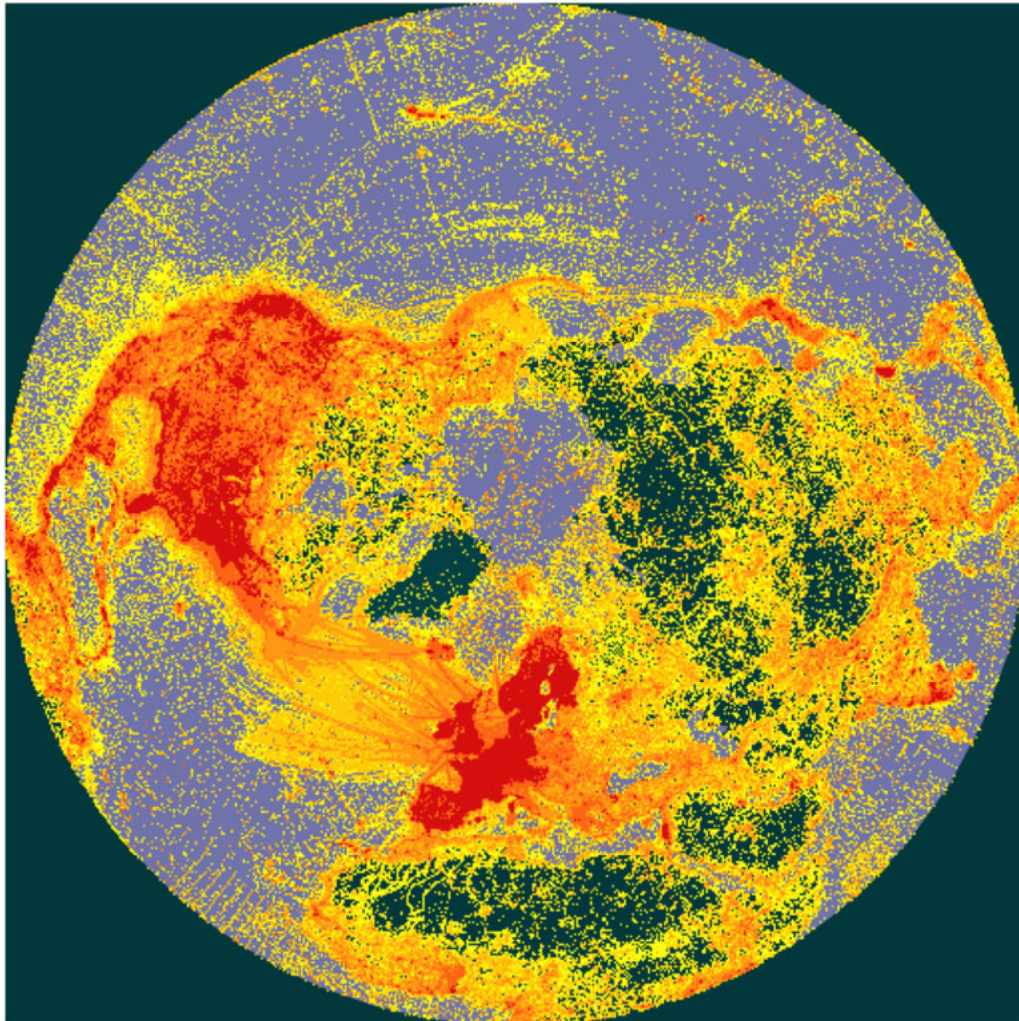


## OCCURRENCES PER SPECIES

Species	Count	
<i>Cottoperca gobio</i> (Günther, 1861)	6	<div></div>
<i>Macrurus magellanicus</i> Lönnberg, 1907	5	<div></div>
<i>Seriolella punctata</i> (Forster, 1801)	4	<div></div>
<i>Genypterus blacodes</i> (Forster, 1801)	2	<div></div>

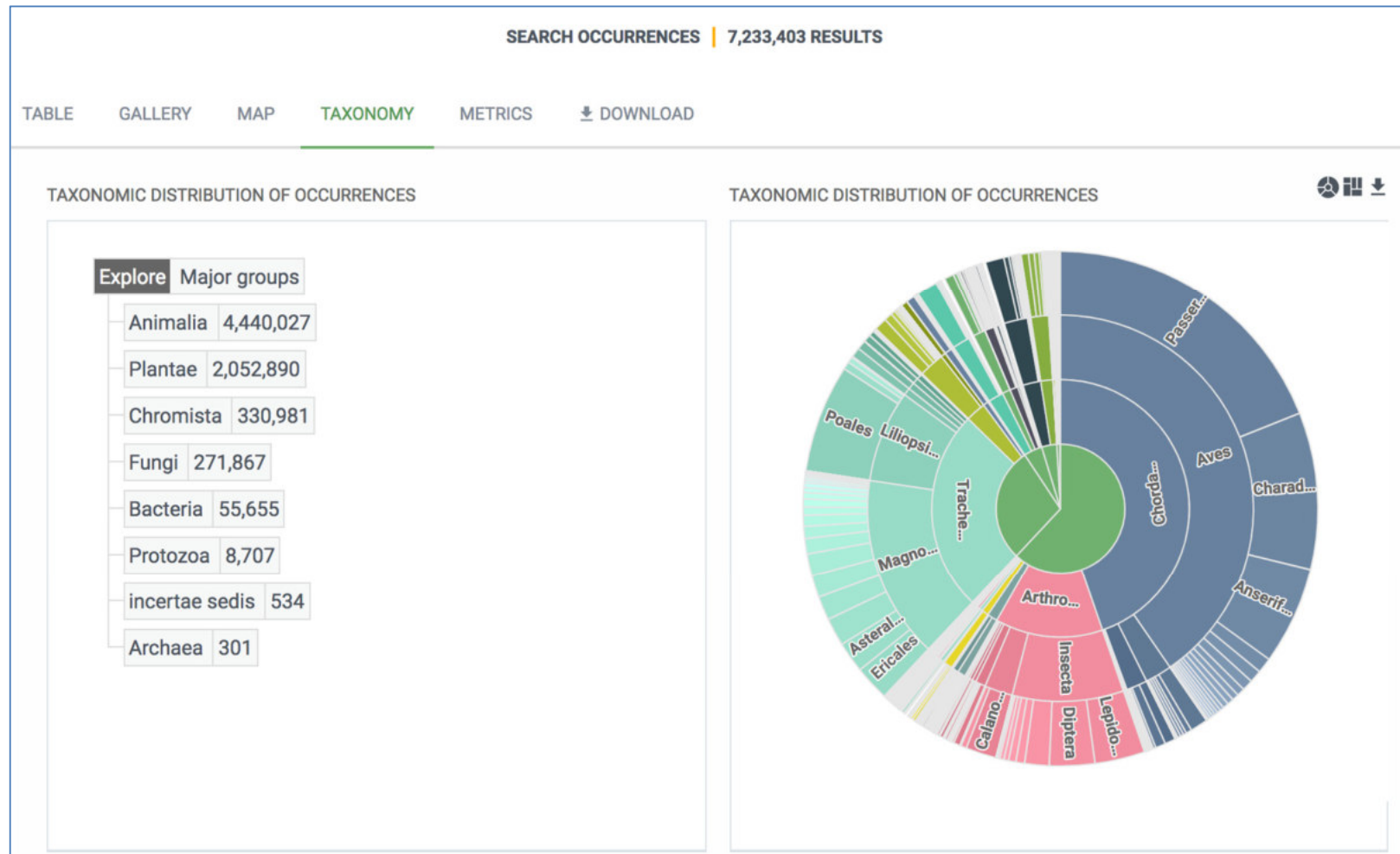










# SPECIES OCCURRENCE RECORDS FROM THE ARCTIC\*




# SPECIES OCCURRENCE RECORDS FROM THE ARCTIC

SEARCH OCCURRENCES | 182,200 WITH IMAGES


TABLE GALLERY MAP TAXONOMY METRICS  DOWNLOAD




*Dendrocopos minor* (Linnaeus, 1758)



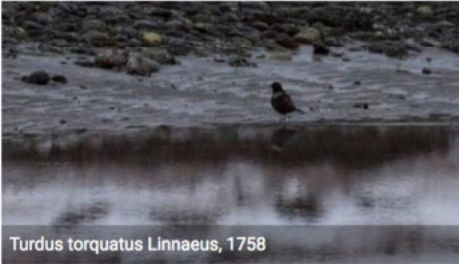
*Lutra lutra* (Linnaeus, 1758)




*Orcinus orca* (Linnaeus, 1758)




*Fringilla montifringilla* Linnaeus, 1758



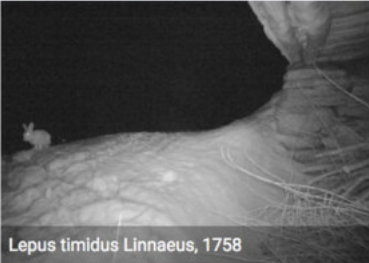
*Turdus torquatus* Linnaeus, 1758




*Cyanistes caeruleus* (Linnaeus, 1758)



*Aquila chrysaetos* (Linnaeus, 1758)



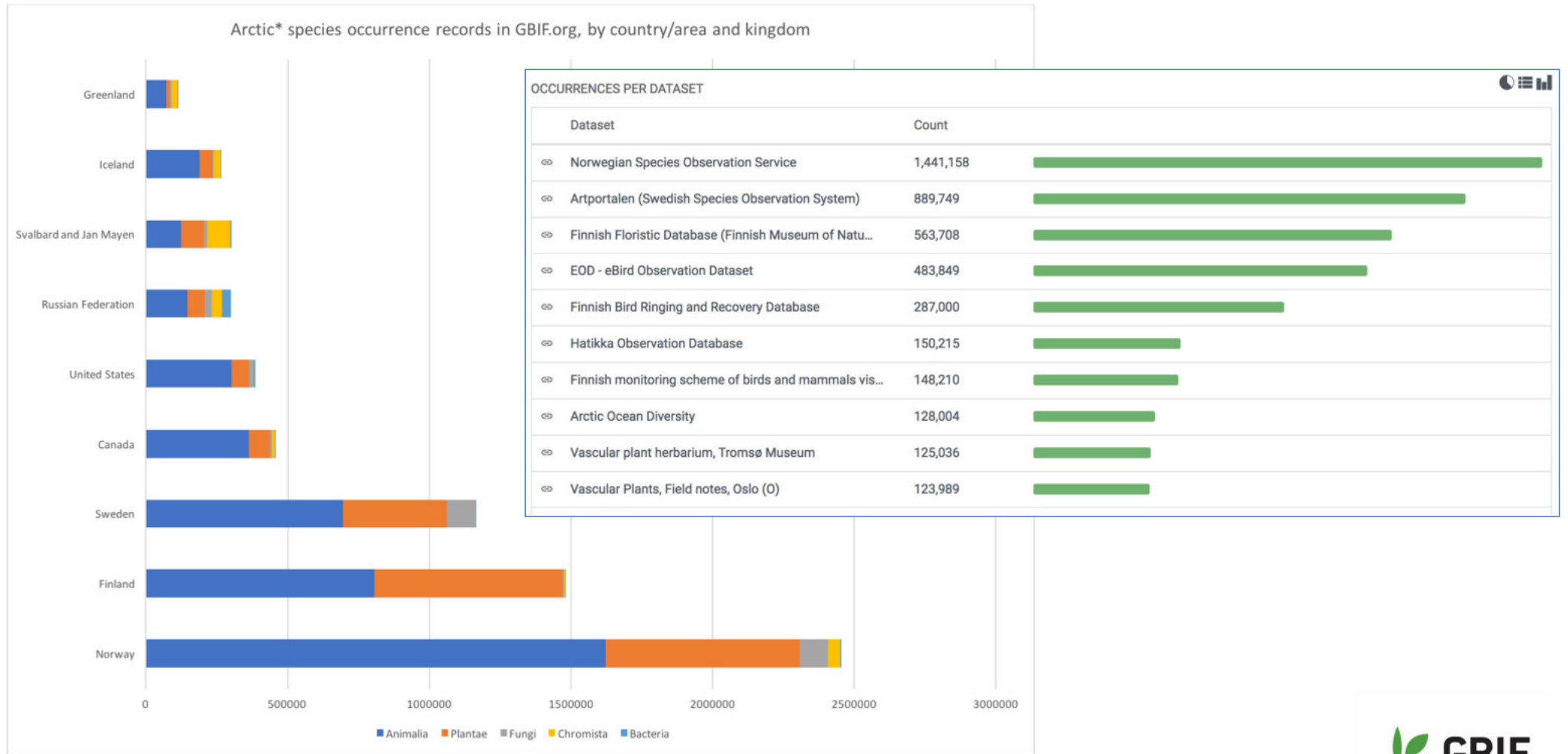
*Lepus timidus* Linnaeus, 1758



*Tetrao tetrix* Linnaeus, 1758



# SPECIES OCCURRENCE RECORDS FROM THE ARCTIC



\* Georeferenced records with latitude higher than 66 degrees N

[https://www.gbif.org/occurrence/search?geometry=POLYGON\(\(-180%2066.180%2066.180%2090.-180%2090.-180%2066\)\)](https://www.gbif.org/occurrence/search?geometry=POLYGON((-180%2066.180%2066.180%2090.-180%2090.-180%2066)))

# CAFF AS A GBIF/OBIS DATA PUBLISHER

PUBLISHER | SINCE 28 SEPTEMBER 2015

## Conservation of Arctic Flora and Fauna

314,826 OCCURRENCES

69 DATASETS

8 CITATIONS



### Archives of the Arctic Seas Zooplankton

Occurrence dataset

Dataset containing over 45579 quantitative zooplankton records. Data collected from scientific cruises from 1900-1973 in the Eurasian Arctic Seas, Polar Basin and the North-West Pacific.

Published by Conservation of Arctic Flora and Fauna

45,697 occurrences 3 citations



### Phytoplankton from the White Sea, Barents Sea, Norwegian Sea and Arctic Basin 1993-2003

Occurrence dataset

This dataset describes the Arctic plankton species and diversity in a study area northwest of Russia. It consists of a large database of 37,300 records from 1993-2003. A total of 434 species are repre...

Published by Conservation of Arctic Flora and Fauna

37,325 occurrences 2 citations



### Arctic Species Trend Index (ASTI) : Marine

Occurrence dataset

The Circumpolar Biodiversity Monitoring Program, a cornerstone programme of the Conservation of Arctic Flora and Fauna (CAFF), Arctic Council working Group is an international network of scientists, g...

Published by Conservation of Arctic Flora and Fauna

23,562 occurrences 3 citations

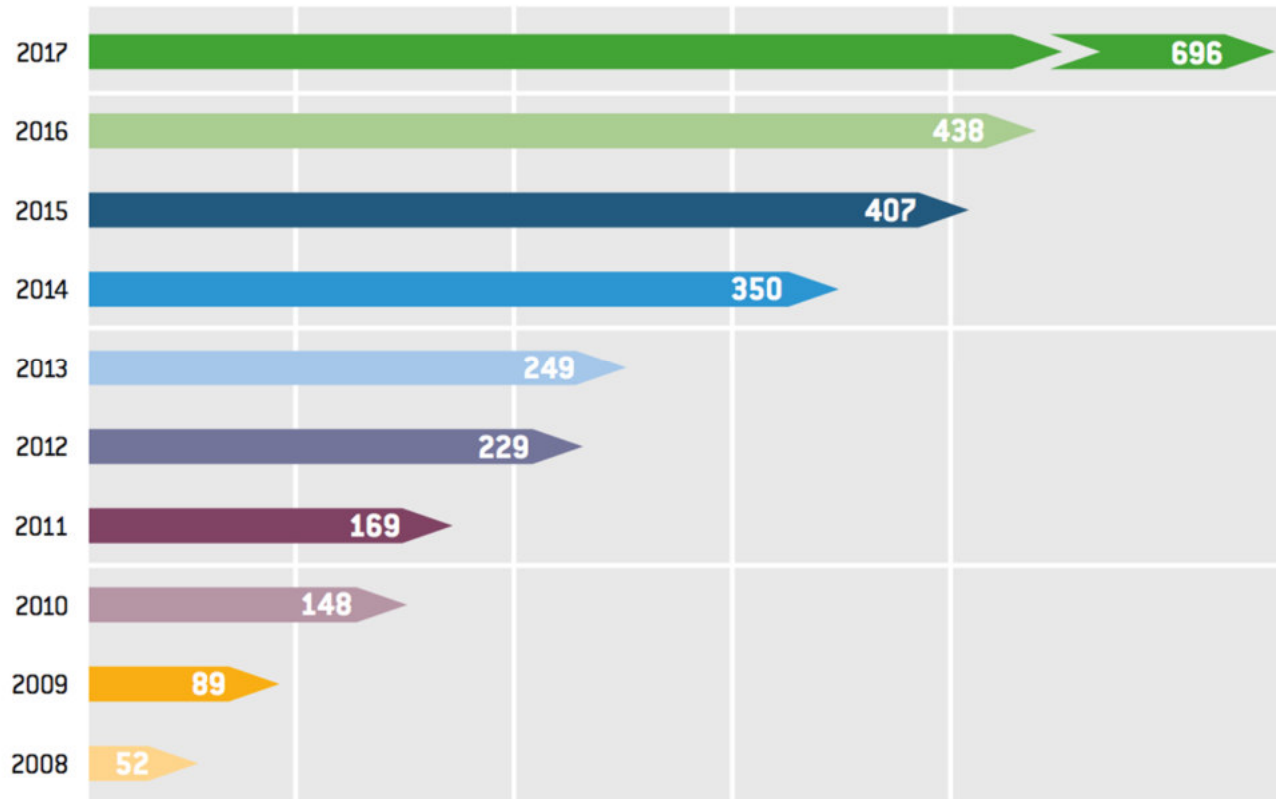


<https://www.gbif.org/publisher/44862593-2fdd-4491-ab79-b500b8272aac>



# REUSE OF GBIF-MEDIATED DATA IN RESEARCH

ANNUAL NUMBER OF PEER-REVIEWED ARTICLES USING GBIF-MEDIATED DATA



# REUSE OF GBIF-MEDIATED DATA IN RESEARCH

## Biodiversity and human health

**BUILDING A NETWORK OF HOSTS**  
ARTIBIUS JAMAICENSIS BY CHI  
**DATA USED:** 47,842 SPECIES OCCURRENCES  
 Rengillo-Correa L, Streps R, Rendón JL and González-transmission pattern complex vector-host ne University Press [CUP]  
 Author country/area: Mexico  
 Research funding: Consejo Dirección General de Asu Fronteras de la Ciencia  
 Chagas disease is a pa

## Crops and pollinators

**IDENTIFYING GAPS TO CROP WILD RELATIVE**  
ROMBUS PENDULANICUS BY KAT  
**DATA USED:** 38,596 SPECIES OCCURRENCES  
 García RM, Parra-Guila  
 Multispecies Collecting St Based on Complementary Ecogeographical Gaps. Cr of America 57(3): 1059.  
 Author country/area: C  
 Research funding: None li  
 As climates change and keeps increasing, crop

## Ecology, evolution, behaviour and systematics

**ASSESSING ENDEMICITY OF JAPANESE FUNGI**  
MAKERA LAURINA BY LINGER https://www.gbif.org/occurrence/1091444  
**DATA USED:** 109,144 SPECIES OCCURRENCES  
 剛崎英夫, 志穂美穂, 健太郎保坂  
 An assessment of fungi endemic to Japan [Japanese Journal of Mycology].  
 Author country/area: Japan  
 Research funding: None listed  
 Summary by Tsuyoshi Hosoya [GBIF]  
 Fungi are one of the most important groups of organisms. Although not been given to species with interest biology, such as endangered or in none of these have been examined. In the present paper, the authors

## Impacts of climate change

**PORT STEPHENS, AUSTRALIA - A HOT SPOT FOR BIODIVERSITY?**  
PORT STEPHENS, AUSTRALIA - A HOT SPOT FOR BIODIVERSITY?  
**DATA USED:** 154 SPECIES OCCURRENCES  
 Nimba MJ, Willan RC and Smith SDA [2017] Stephens, eastern Australia, a global biodiversity hotspot for Aplysiidae (Gastropoda: Mollusca). Informa UK Limited  
 Author country/area: Australia  
 Research funding: Southern Cross University of NSW, Joyce W. Vickery Research  
 Sea hares are heterobranch sea slug family with large ear-like rhinophores the vernacular name of the group. Most globally distributed family usually of year, while producing up to 180 million species grow to a size of up to two k

## Invasive alien species

**PREDICTING ANTARCTIC SUITABILITY OF THE WORLD'S WORST TERRESTRIAL INVADERS**  
HULPES HULPES BY PER HANSEN https://www.gbif.org/occurrence/1269537010  
**DATA USED:** 2,329,509 SPECIES OCCURRENCES  
 Duffy GA, Coetzee BWT, Letombe G, Akerman AH, MA and Chown SL [2017] Barriers to globally invasive species are weakening across the Antarctic. Distributions. Wiley 23(9): 982–996.  
 Author country/area: Australia  
 Research funding: Australian Antarctic Division  
 Due to its geographic isolation and climate, the Antarctic region has been somewhat protected from biological invasions, however, with warming and increased human traffic, the protection of the region may be diminishing. In a new study, researchers used species distribution models to predict the suitability of the Antarctic region for the world's worst terrestrial invaders.

## Species conservation and protected areas

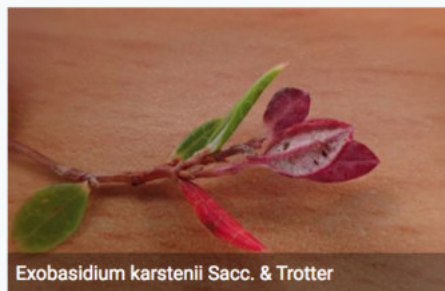
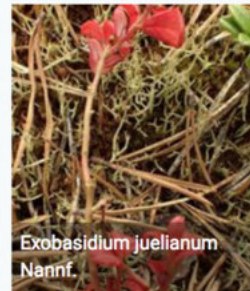
**ASSESSMENT OF THE GLOBAL DISTRIBUTION OF REPTILES**  
TRACHEMYS SCRIPTA SUBSP. ELEGANS BY AMALIBRAHIM https://www.gbif.org/occurrence/1269537010  
**DATA USED:** 14,680 SPECIES OCCURRENCES  
 Roll U, Feldman A, Novosolov M, Allison A, Bauer AM, Bernard R, Böhm M, Castro-Herrera F, Chirio L, Collen B, Colli GR, Dabool L, Das I, Doan TM, Grismer LL, Hoogmoed M, Itescu Y, Kraus F, LeBreton M, Lewin A, Martins M, Maza E, Melite D, Nagy ZT, de C. Nogueira C, Pauwels OSG, Pinheiro-Donoso D, Powney GD, Sindaco R, Tallonin OJS, Torres-Carvajal O, Trappe J-F, Vidan E, Uetz P, Wagner P, Wang Y, Orme CDL, Grenyer R and Melri S [2017] The global distribution of tetrapods reveals a need for targeted reptile conservation.  
 Consisting of researchers from 13 countries, the Global Assessment of Reptile Distributions group published a large study analysing 10,000 reptile species, thus updating the knowledge on global patterns. Based on literature, field studies and online databases including GBIF.org, the authors produced distribution maps of all species, and from those derived important knowledge on reptile species richness. Their results revealed that reptile richness patterns—largely dominated by snakes—correspond well to



<https://www.gbif.org/science-review>



# THANK YOU!



[thirsch@gbif.org](mailto:thirsch@gbif.org)

<https://www.gbif.org/>

