Biodiversity Information Serving Our Nation (BISON)
Integrated Taxonomic Information System (ITIS)
EcoINFORMA

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Biodiversity Information Serving Our Nation - (bison.usgs.ornl.gov)

- National Clearinghouse
- US Node of GBIF
- 243(257)+ million records & growing
- Nearly all species
- Every state and county
- 55 environmental layers
- Who, what, when, where for every record.
- 1456 data sets from 332 global providers across Federal, State, and local GoV’ts, NGOs and Academia.

Customers Love BISON!
“...we’re really excited at [BISON’s] performance in producing and mapping extremely large search-result sets (I generated one with 1.8 million hits in a matter of seconds).”
Scott L. Cross, Ph.D. NOAA National Oceanographic Data Center/National Coastal Data Development Center, Charleston, SC. April, 22, 2013

More than a million professional and citizen scientists have gathered the data that is in BISON.
Everyone gets credit

<table>
<thead>
<tr>
<th>Australian Antarctic Data Centre</th>
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</table>
A Research Center can automatically summarize millions of its records and give tens of thousands of their citizen scientists a fast and elegant view of their data.

*Without making a significant investment in new cyberinfrastructure...*
You could spot mistakes in the data automatically...

### Taxonomy

<table>
<thead>
<tr>
<th>Provider ID</th>
<th>Scientific Name</th>
<th>ITIS Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>281</td>
<td>Aceria fumana</td>
<td>Aceria fumana</td>
<td>Fume</td>
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</table>
Custom Maps & Checklists

For Any Area Including Polygons

USGS
You could see the potential effects of climate change on a species at the click of a button...

*Taenionema atlanticum (Winter Stonefly)* as its habitat suitability shifts using the A2 scenario for three future timesteps. The A2 storyline and scenario family: a very heterogeneous world with continuously increasing global population and regionally oriented economic growth that is more fragmented and slower than in other storylines. Layers are CURRENT & A2 scenario, 2039, 2069, and 2099.
Distribution of Barn Swallow (Hirundo rustica)
Probability by ordinal day of the year for the 1920’s
Search & Refine

Basis of Record
Provider
State/County

Higher taxa
Year range
Centroids

USGS
Biodiversity Information Serving Our Nation (BISON) - U.S. species occurrence data & maps

ITIS Enabled Search by Scientific Name

Found 168,063,755 matches for all species using ITIS taxonomy

Basis of Record
- fossil (1178885)
- literature (352344)
- living (26867)
- observation (138638408)
- specimen (22799334)
- unknown (4867917)

Provider
- Academy of Natural Sciences (186225)
- Herpetology (15227)
- MAL (138773)
- ORN (32225)
- Acadia University (210)

State/Territory
- Alabama (1901591)
- Alaska (1822498)
- American Samoa (4815)
- Arizona (3855981)
- Arkansas (1729069)
- California (18273849)
- Colorado (2922860)
- Commonwealth of the Northern Mariana Islands (10217)

Core Science Systems
Dynamically Generated and Interactive 3D Pie Chart of the Relative Representation of Providers of Plant Specimen Records in BISON

Total Plant Specimens: 7168180

Click on a wedge to show the number of records from an individual provider.
The Power of ITIS
Recent ITIS World Updates

Aloes
Archaea
Bacteria
Booidea
Chiroptera
Dipodidae
Worms
Mussels

Gliridae
Lampyridae
Muroidea
Parulidae
Primates
Strepsiptera
Turtles

*97% of all occurrences in BISON are covered by ITIS*
Discover and explore data resources on ecosystems and biodiversity, including ecosystem components, functions, and services.

HIGHLIGHTS

Biodiversity Resource Hub
Biodiversity Information Serving Our Nation

Ecosystem Services Resource Hub
EnviroAtlas

Land Cover Dynamics Resource Hub
Multi-Resolution Land Characteristics Consortium

UPDATES


On December 9th, the secretary of the U.S. Department of the Interior, Sally Jewell, formally announced during the plenary session of A Community on Ecosystem Services (ACES) 2014 conference the launch of the U.S. Ecoinformatics-based Open Resources and Machine Accessibility. Continued

Ecosystems.data.gov and EcoINFORMA

The Ecosystems Community (Ecosystems.data.gov) is now publicly available in Data.gov and provides access to ecosystem and biodiversity-related data. This community is the central web portal of the U.S. Ecoinformatics-based Open Resources and Machine Accessibility (EcoINFORMA) initiative. Visit the EcoINFORMA section. Continued
Promoting synergy in the innovative use of environmental data across academia, non-profits, local and state governments, industry and the Federal government

A workshop hosted by NatureServe and the US Geological Survey with funding from the National Science Foundation