

Challenges and future direction from recent activities of Japan Node of GBIF



地球規模生物多様性
情報機構日本ノード

Japan Node of Global Biodiversity Information Facility

2019.10.18.

Tsuyoshi Hosoya

Node Manager, Japan

National Museum of Nature and Science

JBIF Node strategy (2017-2022)

1. Provide relevant data to the science and the society

- 1) Provide education to both data users and data providers.
- 2) Collect data usecases, and improve data exploitation.

2. Enhance infrastructure

- 1) Stabilize IPT operation.
- 2) Empower governance and activity in S-Net.

3. Improve data quality

- 1) Work on error reduction.
- 2) Provide infrastructure to improve quality of
- 3) Support capacity building to the people at the

4. Fill data gaps

- 1) Grasp status of the present domestic natural cumulated biodiversity data.
- 2) Data analysis of data currently provided from
- 3) Empower calls to data holders to provide data.
- 4) Popularize new data types.

5. Empower engagement with relevant activity

- 1) Increase opportunity for information exchange with local museum/institutes.
- 2) Demonstrate leadership in collaborative activities within Asia.
- 3) Empower engagement through collaboration with relevant activity and research community.

Key points:

**Promotion for
Data publishing
Data use
Data cleaning
Engagement**

100 Museums/Institutes/Universities are providing specimen data

GBIF



National Museum
of Nature & Science



Major activities

Meeting

- Annual symposium for Biodiversity Informatics (for general public, researchers).
- Training course (for researchers).
- Research meeting (for researchers; collecting use case, exchanging information).
- Outreach meetings in local areas (to expand engagement with other museums).

Facilitation

- Search for the “sleeping data” (undigitized legacy data).
- Providing curators directories (Who’s who for curators).
- Data exploitation from the website.
- Dictionaries.

Education

- Translation of GBIF documents/website.
- Brochures.
- Guide for data digitization.

Data mobilization

- Exploiting a mechanism of S-Net (mapping of data).
- Providing tools (eg Red Data checker).
- Dictionaries (eg Local names)

Major challenges

Lack of incentives

Offer Re-formatting fee to adjust DwC

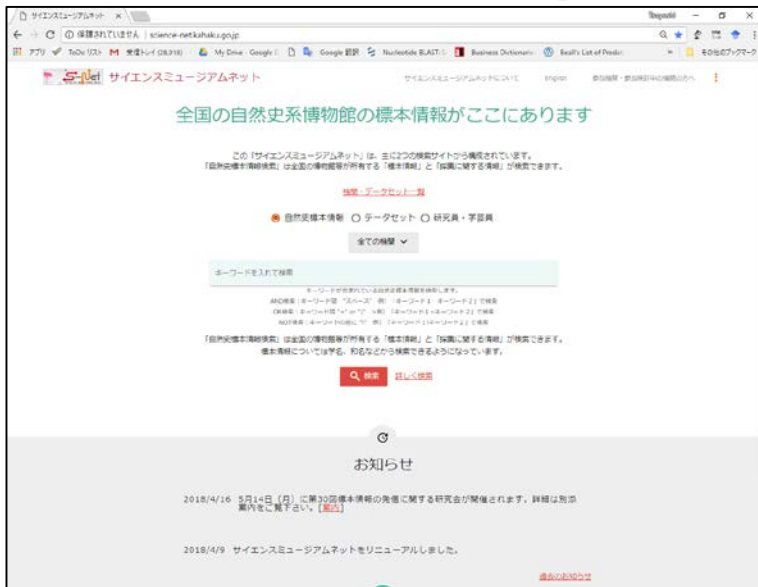
Language barrier

Translation of GBIF Website

Providing materials in Japanese

Science Museum Net (S-Net)

<http://science-net.kahaku.go.jp/>



サイエンスミュージアムネット

レコード種別

[Preserved Specimen \(388\)](#)

機関名 (日本語)

[北海道大学総合博物館 \(144\)](#)

[富山市科学博物館 \(38\)](#)

[もっと見る](#)

コレクションコード

[plant \(91\)](#)

[Insect \(80\)](#)

[もっと見る](#)

国 (日本語)

[日本 \(339\)](#)

[日本国 \(22\)](#)

都道府県 (日本語)

[北海道 \(155\)](#)

[富山県 \(29\)](#)

[もっと見る](#)

学名

[Fraxinus mandshurica Rupr. \(112\)](#)

[Crossotarsus niponicus \(81\)](#)

[もっと見る](#)

界名 (日本語名)

[植物界 \(291\)](#)

[動物界 \(95\)](#)

[もっと見る](#)

門名 (日本語名)

自然史標本情報

該当件数: 388 件 (1-20件目)

20 件ずつ表示 ソート順 ダウンロード 地図表示 絞り込み検索

1 2 3 4 5 6 > >>

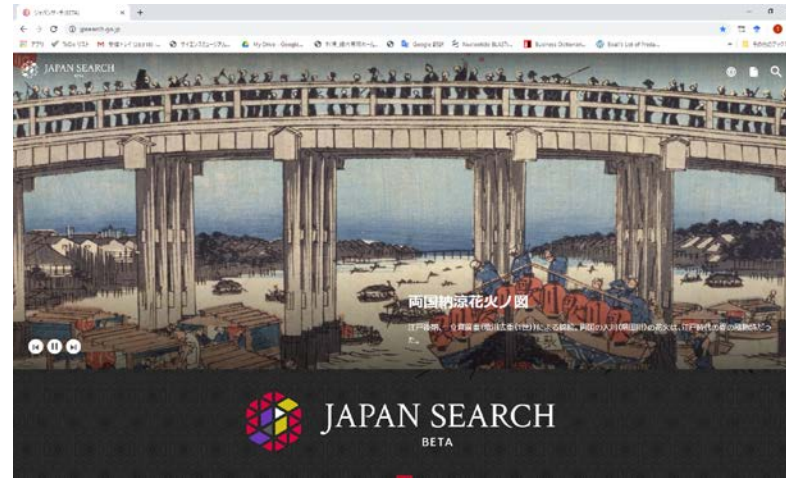
No	学名	和名	記録年月日 (始め)	国 (日本語)	都道府県 (日本語)	機関名 (日本語)
1	Fraxinus mandshurica Rupr. var. japonica Maxim.	ヤチダモ	19360614	日本	福島県	大阪市立自然史博物館 (植物)
2	Fraxinus mandshurica Rupr. var. japonica Maxim.	ヤチダモ	19890626	日本	北海道	兵庫県立人と自然の博物館
3	Fraxinus mandshurica Rupr. japonica Maxim. var.	ヤチダモ	19580521		北海道	釧路市立博物館
4	Fraxinus mandshurica Rupr.	ヤチダモ	19690717	日本	群馬県	群馬県立自然史博物館
5	Fraxinus mandshurica	ヤチダモ	19390729	日本	岐阜県	富山市科学博物館
6	Fraxinus mandshurica Rupr. var. japonica Maxim.	ヤチダモ	19310708	日本	兵庫県	倉敷市立自然史博物館
7	Fraxinus mandshurica Rupr. var. japonica Maxim.	ヤチダモ	19360804	日本	北海道	倉敷市立自然史博物館

- A Website developed to use Natural historical collections.
- 5,27millions of specimen data in DwC + **Japanese**.
- Organization information and meta data for datasets.
- Data available in CC0, CC BY, or CC BY-NC.

Use of S-Net

- Finding materials for research / exhibition.
- Analysis of collective data for research (gap analysis; conservation; preliminary biota survey).
- Promoting understanding of importance of specimens.
- Education.

Engagement with “Japan Search”



- National cross-sector of **federated search portal** for metadata of various contents owned by Japan.
- Digital archives in various fields such as **books, cultural properties, and media arts, and scientific material.**

Unexpected search results with “Japan Search”

カラマツ *Larix kampferi*



Category	records
----------	---------

Natural History	6806
-----------------	------

Book/Publication	926
------------------	-----

Official document	6
-------------------	---

Art	3
-----	---

Cultural Property	2
-------------------	---

Broadcast program	1
-------------------	---

Movie	1
-------	---

**“Chemical reaction”
To be expected !**

Future direction

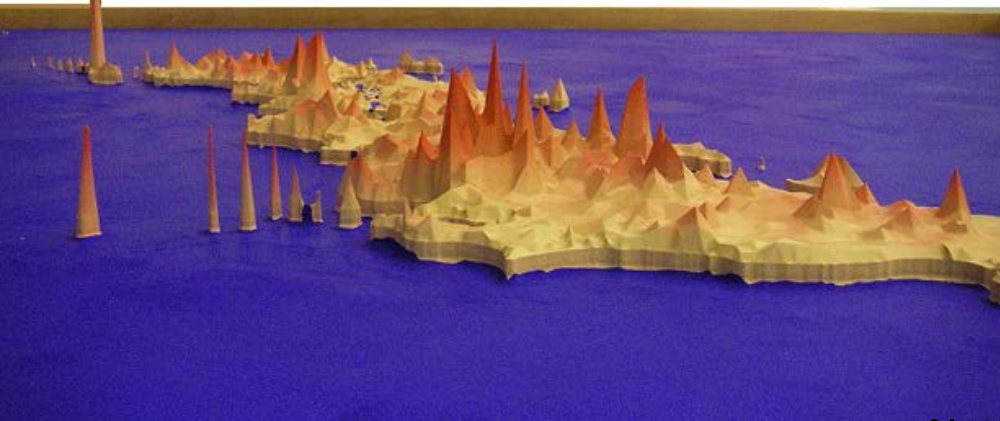
- Contribution to digital archive
- Promotion of data exploitation
 - ... through GBIF website
 - ... through S-Net
- Improve data quality

Backup

Visualization of biodiversity data: 3D map for endemic species

The higher, the more endemic species.

Visualization of places to be conserved.





course for data handling/analysis

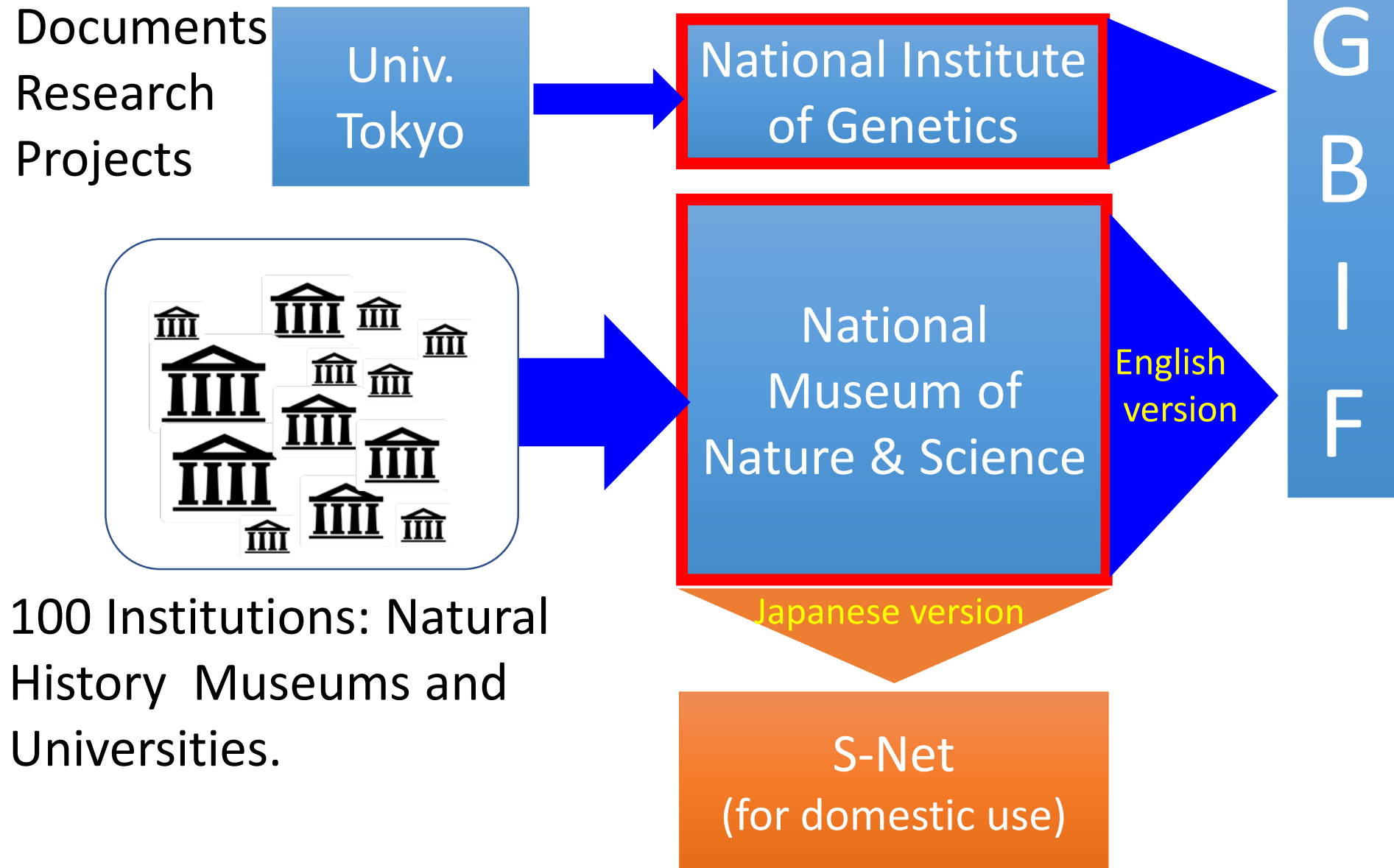
analysis using R
 g data on map
 cal niche modeling



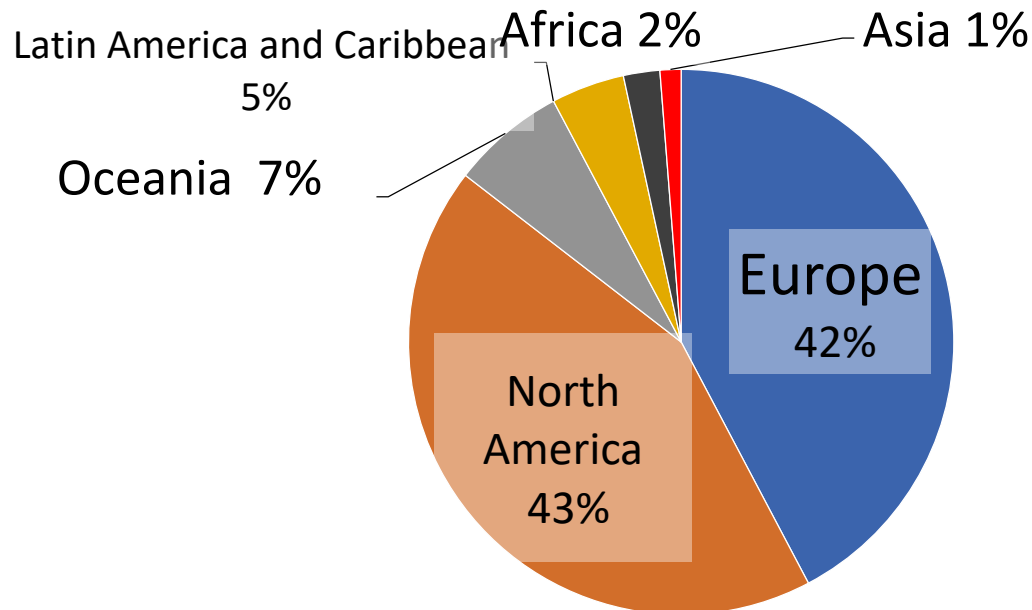
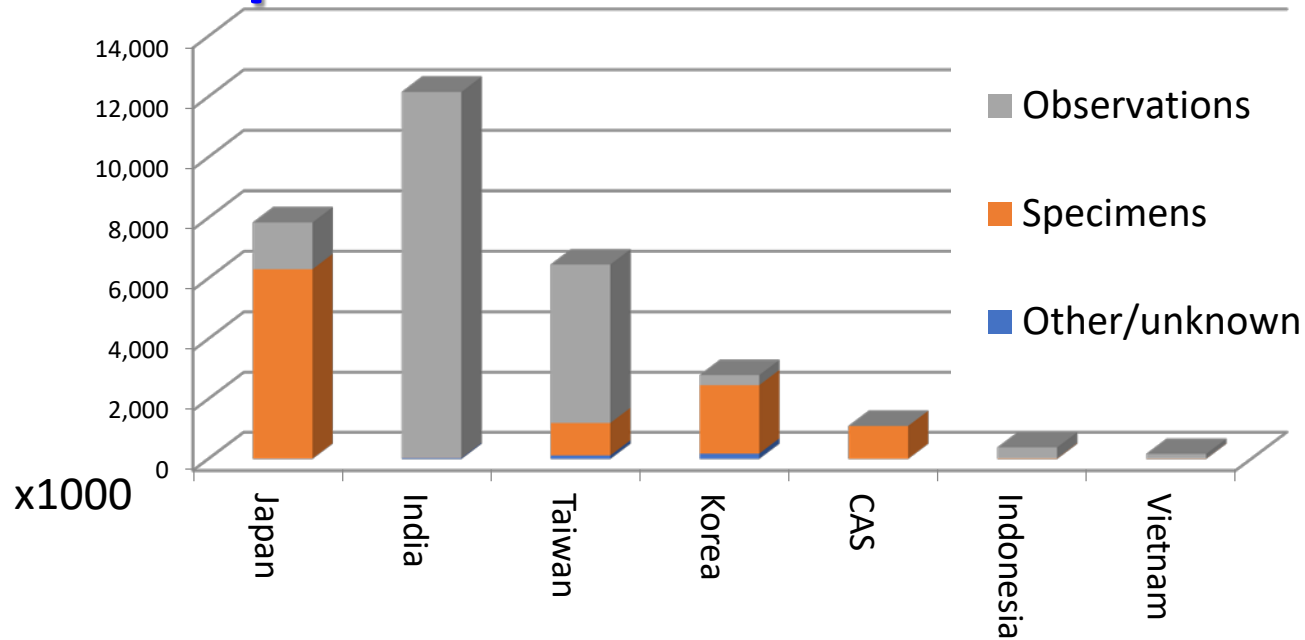
Workshop of general audience/ res

eg.
 Invasive species
 Species diversity in Japan
 Naming organisms in nature
 Database and biodiversity

Data publication flow



Data published from Asian countries



**More data from
Asia expected**

National Museum of Nature and Science

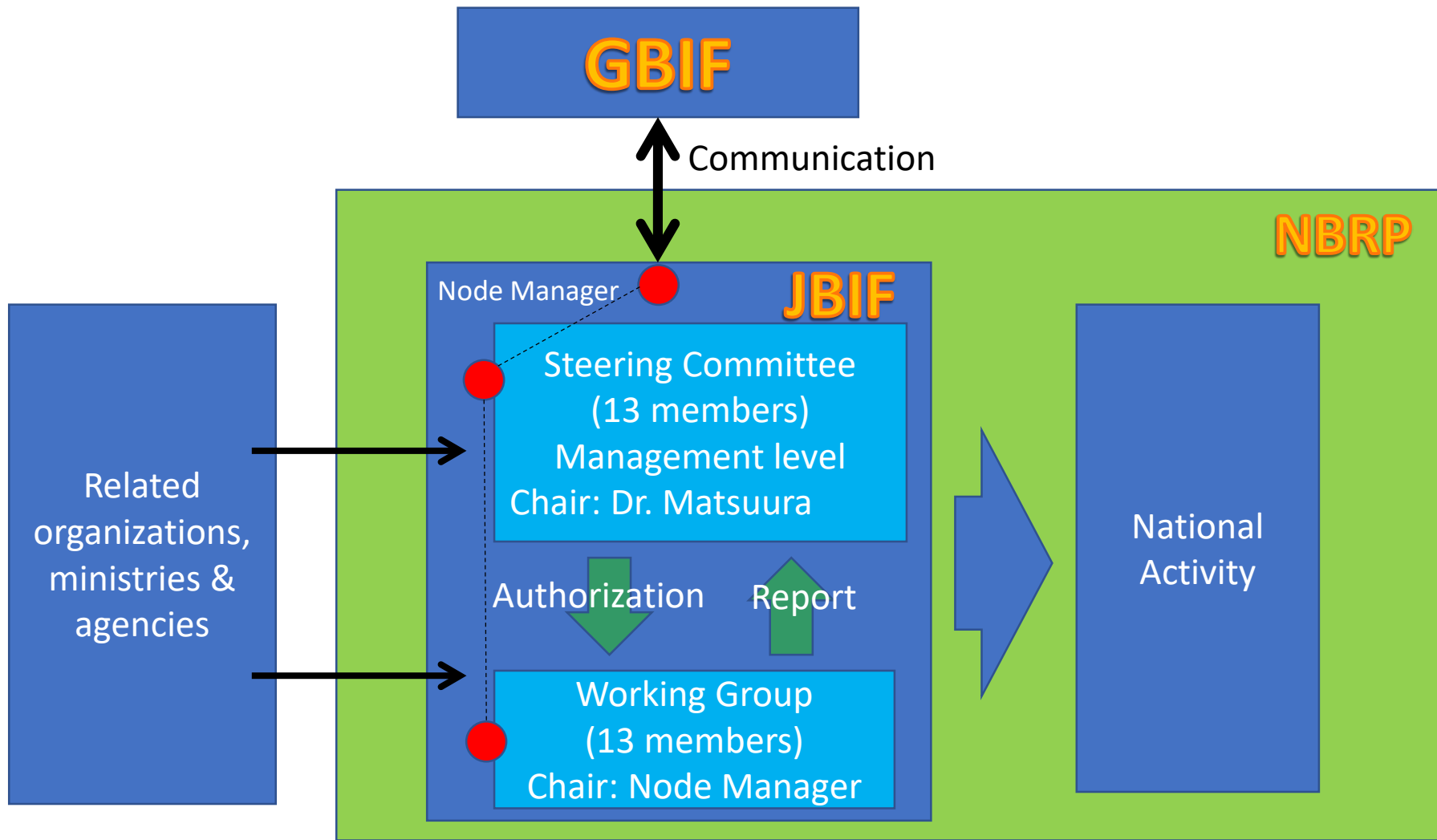
Formerly the National Science Museum

Established in 1877

Mission: To deepen the public appreciation of the earth, life, science and technology, and to encourage people to think about how humankind, the natural world, and science and technology should best relate to each other.

1. Elucidating the history of life and the history of science and technology through evidentiary research, **using specimens** and other resources.
2. **Collecting and systematically organizing our vast collection of specimens**, providing a national collection that supports all manners of scientific research.





- Node Manager works as a point person between JBIF and GBIF.
- To enhance the communication, some members of Working Group overlaps with Steering Committee members.
- Node Manager works as a manager of the working group.
- Members of SC & WG: Universities & National Institutes.

JBIF: two-layered structure

Steering Committee (14)



Report



Authorize

Working Group(10)

- Some members are also involved as Steering Committee members.
- WG: mostly younger generations from various institutes.
- Both Steering Committee and Working Group is composed of people from multiple administration although NBRP is under governance of MEXT.

Steering Committee

Biodiversity Center of Japan (MoE)	1
Hokkaido University	1
Hyogo University / Prefectural Museum	1
Japan Agency for Marine-Earth Science and Technology	1
Japan Science and Technology Agency	1
Tokyo Metropolitan University	1
National Institute of Environmental Studies (MoE)	1
National Institute of Genetics	1
National Museum of Nature and Science	2
Tokyo University	1
Tokyo University Museum	1
Yamashina Institute for Ornithology	1

Working Group consisted of some more members from local museums, universities, and national institutes incl. Nat. Mus. Nat. Sci.

S-Net search result

science-net.kahaku.go.jp/s/specimen/#%2Fs%2Fsi%2F%7B"keyword": "Amanita%20muscaria", "sz": 20, "fr": 0, "details": %7... ☆

(28,918) - サイエンスミュージアムネット My Drive - Google Drive Google 翻訳 Nucleotide BLAST: Search 》 その他のブックマーク

自然史標本情報

該当件数: 45 件 (1-20件目)

20 件ずつ表示 ソート順 ダウンロード 地図表示

絞り込み検索

1 2 3 > >>

No	学名	和名	記録年月日 (始め)	国 (日本語)	都道府県 (日本語)	機関名 (日本語)
1	Amanita muscaria (L.:Fr.) Pers.	ヘニテング タケ	20091004	日本	群馬県	群馬県立自然史博物館
2	Amanita muscaria (L.) Lam.	ヘニテング タケ	19920302	ニュージーランド		国立科学博物館
3	Amanita muscaria (L.) Lam.		20060929	日本	山梨県	国立科学博物館
4	Amanita muscaria (L.) Lam.	ヘニテング タケ	19890929	日本	山梨県	国立科学博物館
5	Amanita muscaria (L.) Lam.		20131009	日本	長野県	国立科学博物館
6	Amanita muscaria (L.:Fr.) Pers.	ヘニテング タケ	20010924	日本	北海道	神奈川県立生命の星・地球博物館
	Amanita muscaria	ヘニテング				埼玉県立自然史博物館

