Integrated biodiversity database on freshwater organisms of Monsoon Asia

Monsoon Asia harbors many global biodiversity hotspots

Hotspots

February 2005
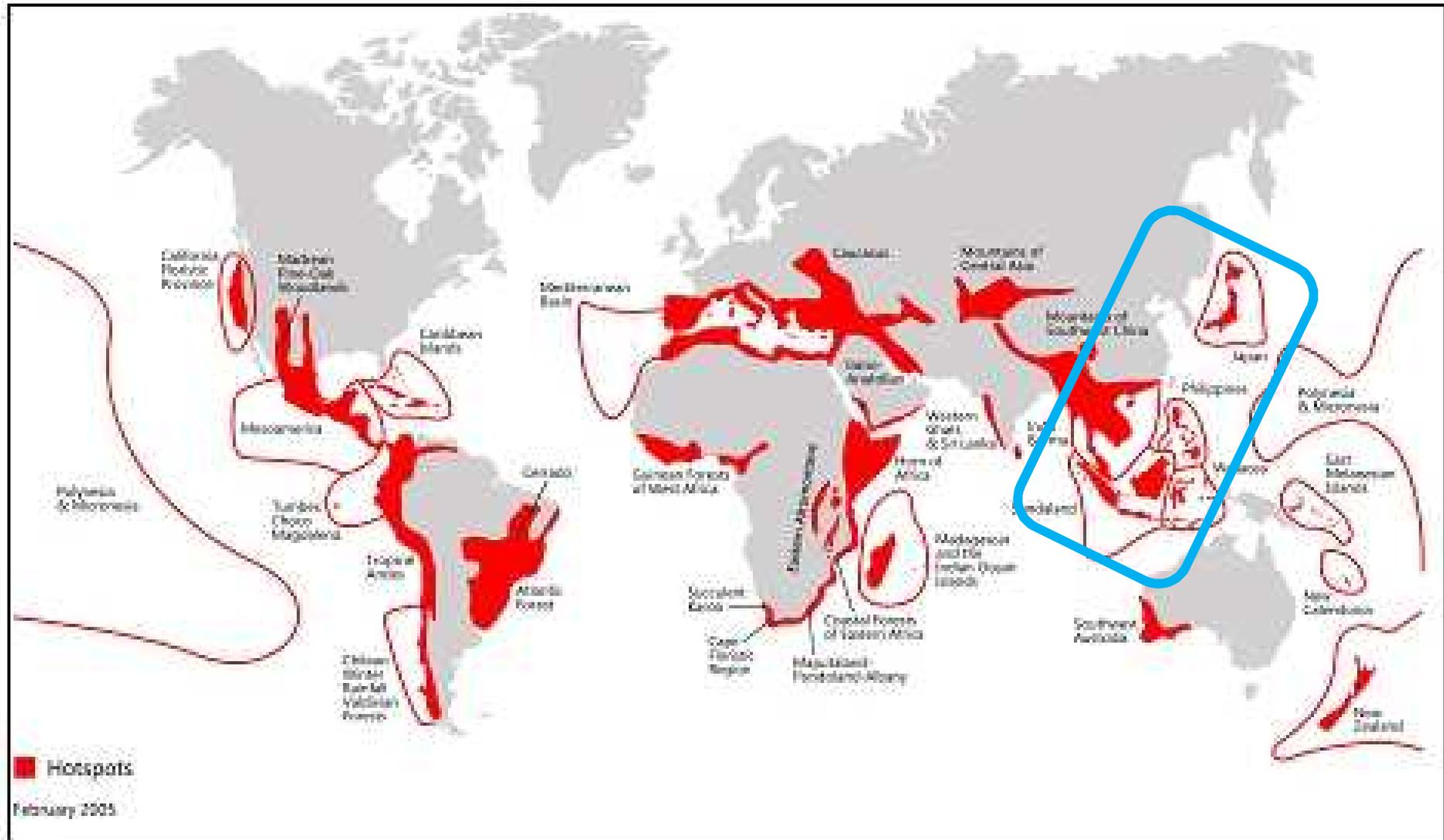
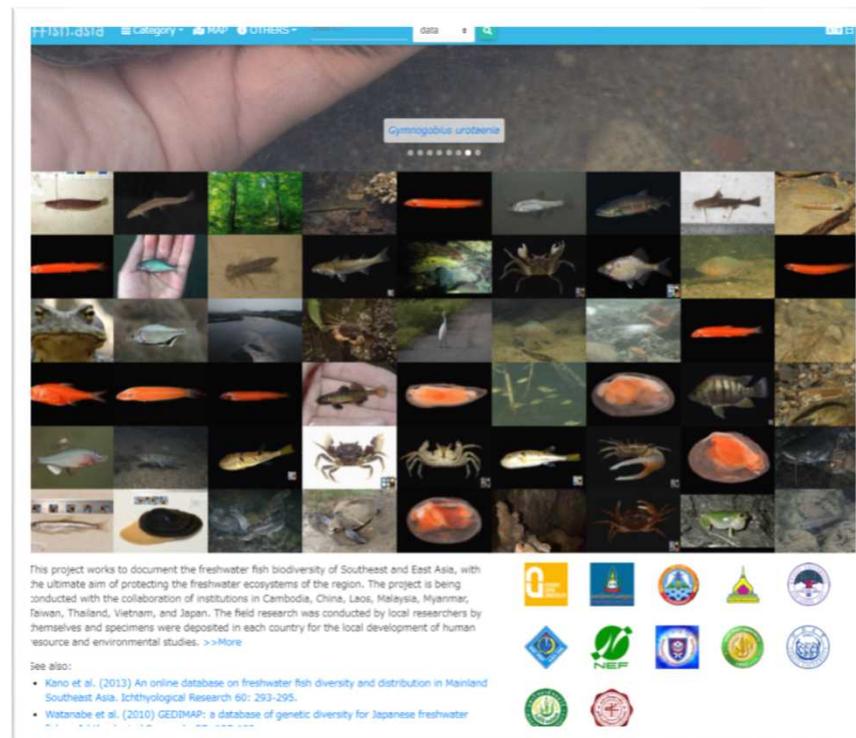# Why does Monsoon Asia have so high biodiversity?
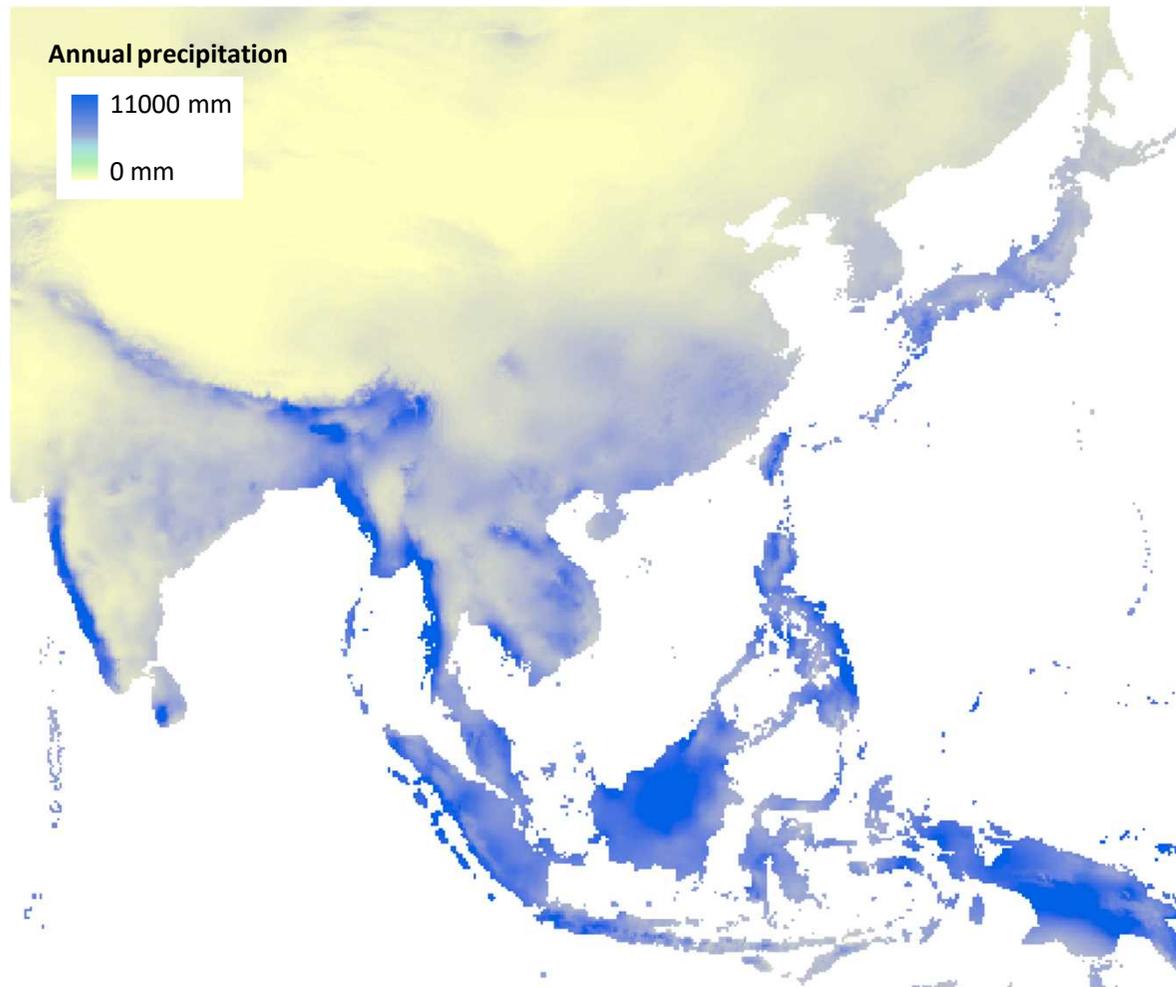
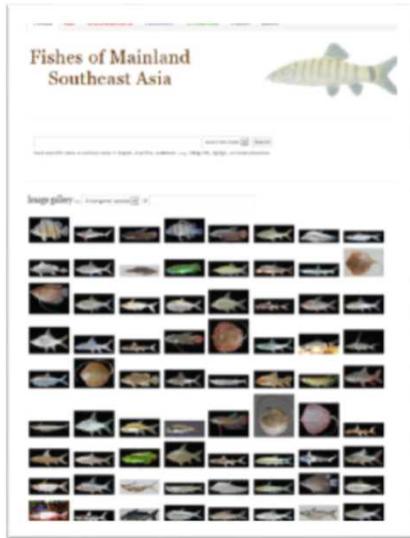Monsoon climate brings adequate preparation to sustain high biodiversity.

Freshwater organisms is the symbolic biodiversity in Monsoon Asia. However, the information has been quite limited.

Using AP-BON network, we have launched an integrated biodiversity database on freshwater organisms of Monsoon Asia
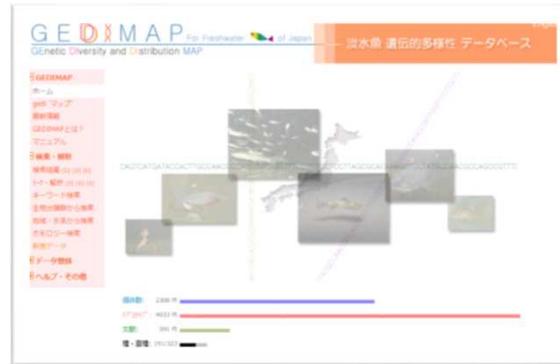
http://ffish.asia

Database on freshwater fishes of mainland Southeast Asia
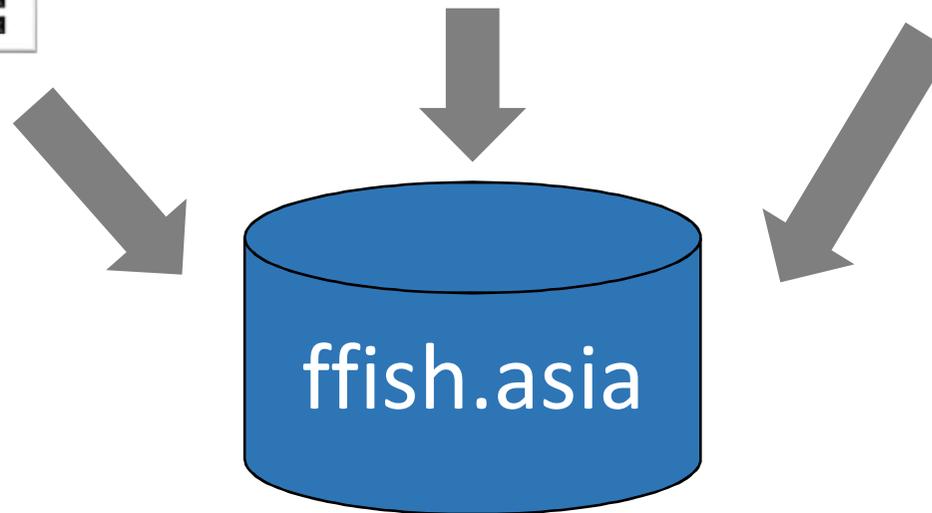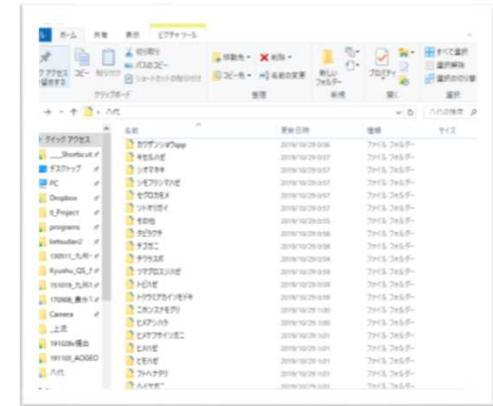
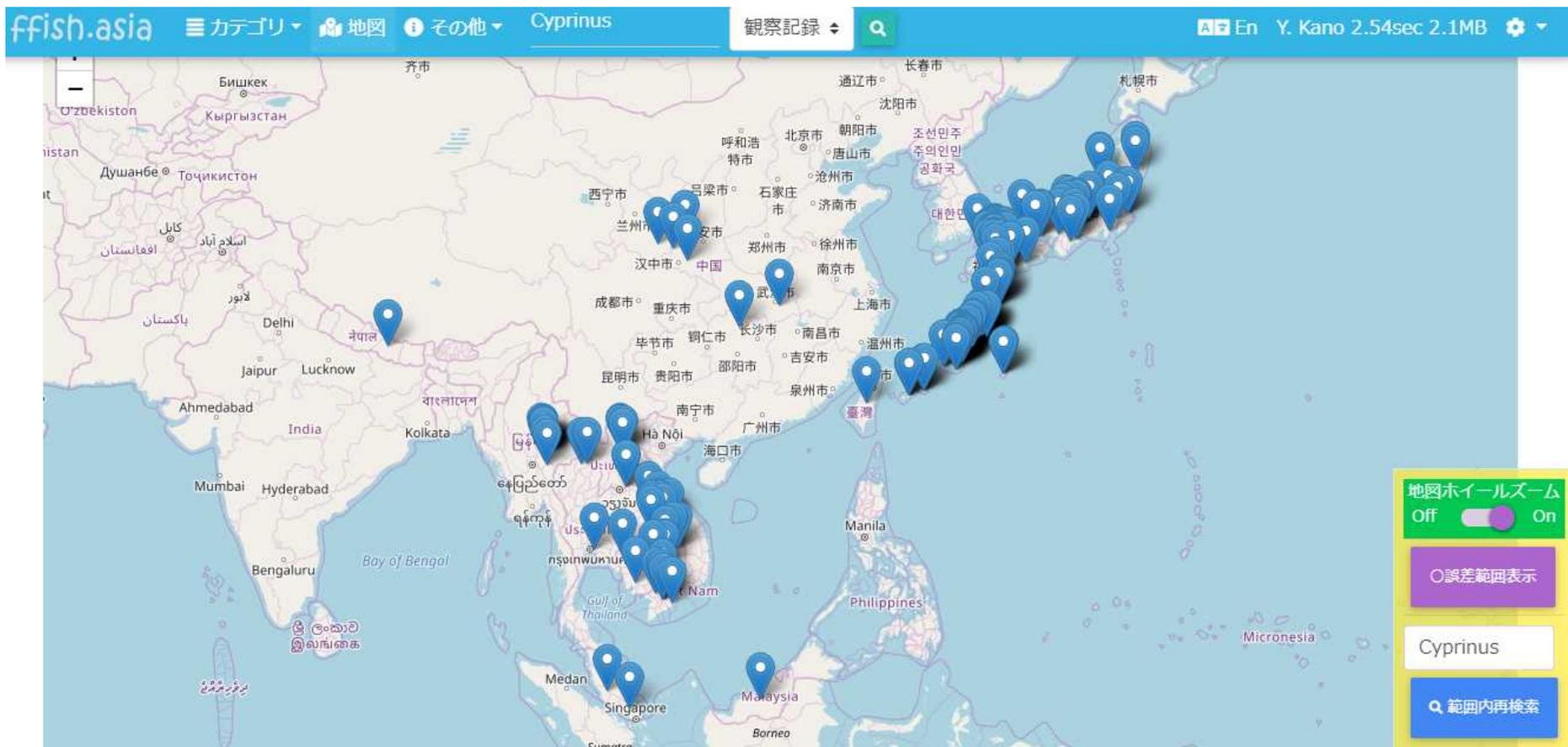Database on gene/DNA information of Japan

Kano's original data about freshwater organisms of Japan

FiMSEA

GEDIMAP

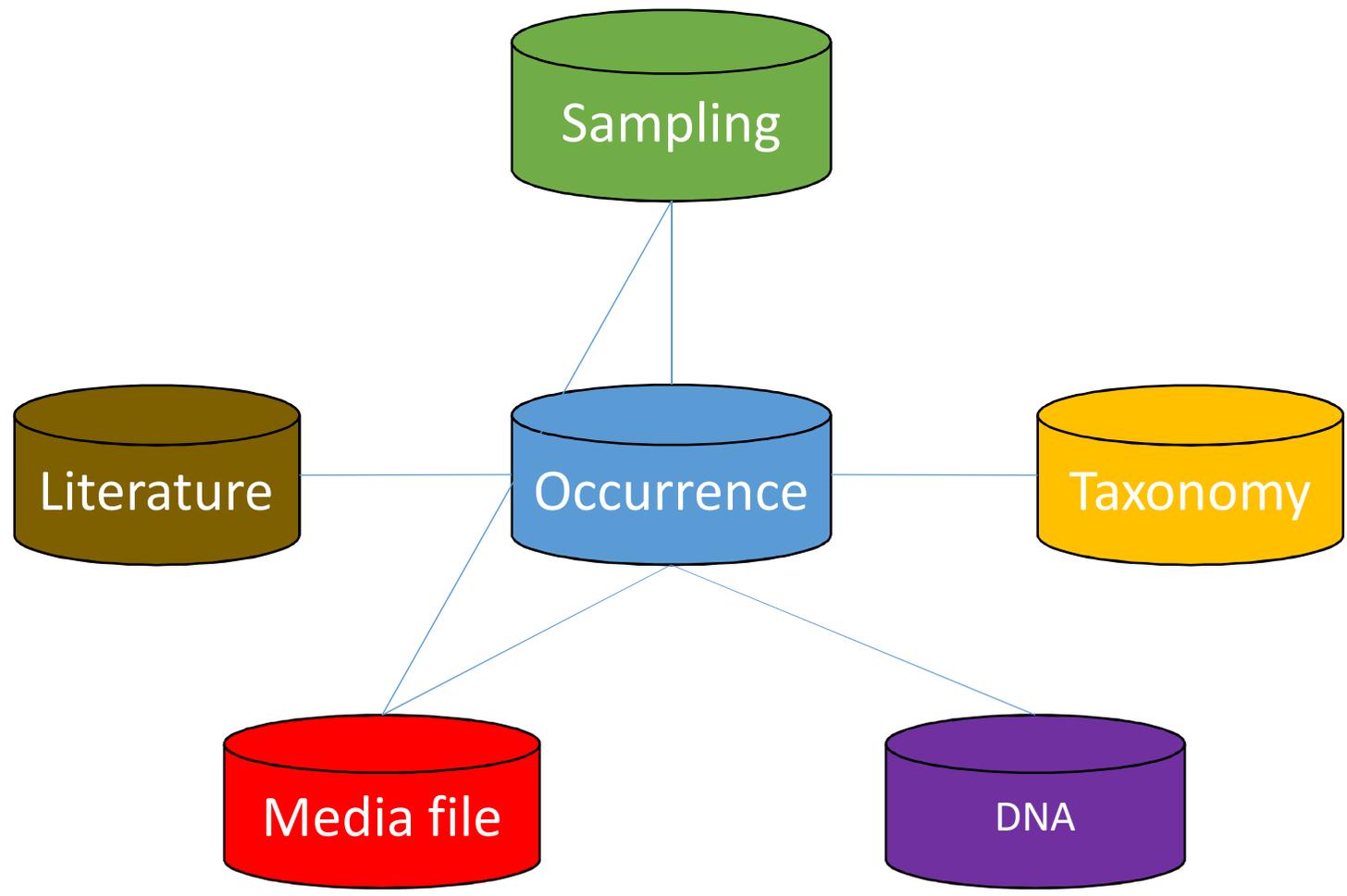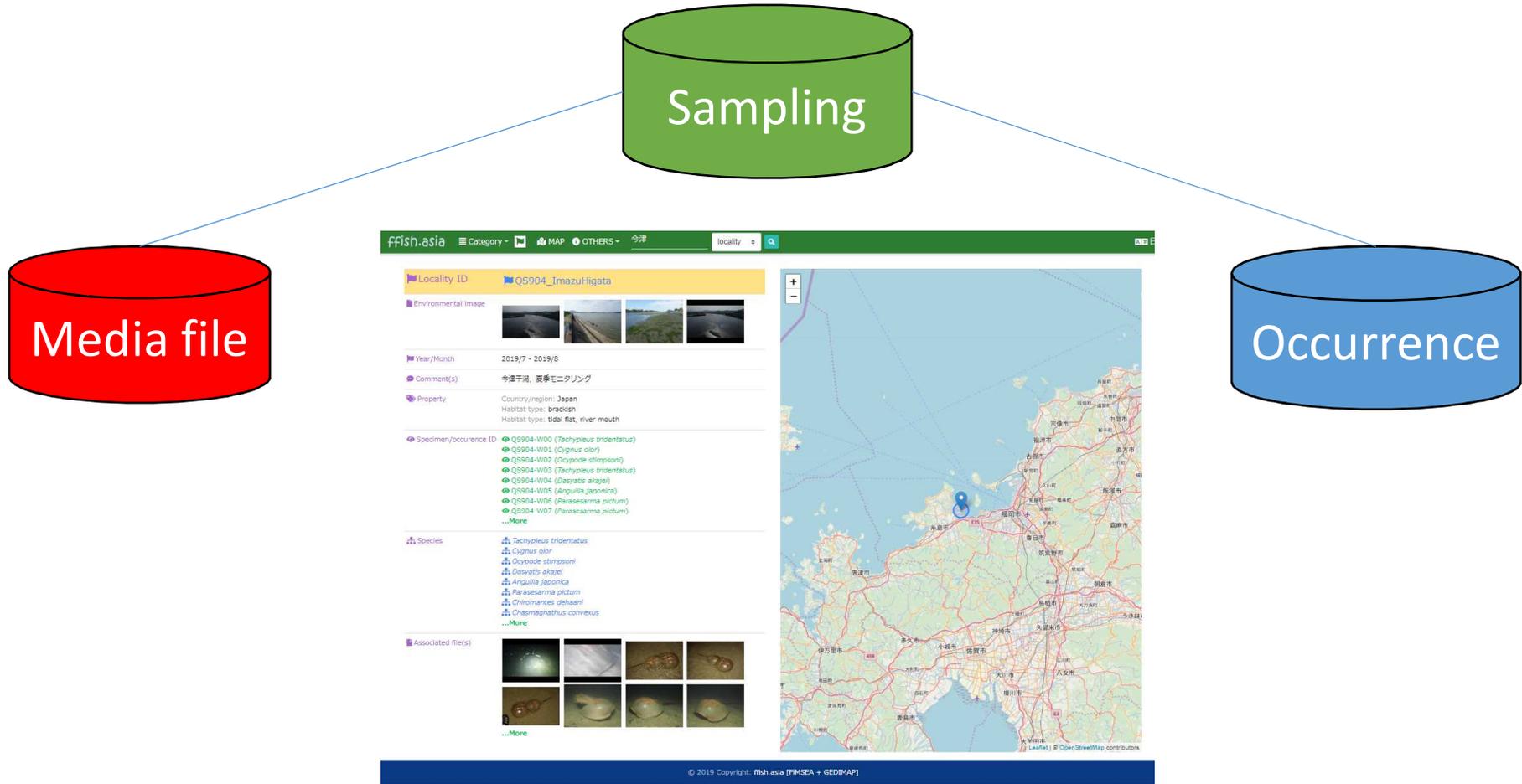ffish.asia

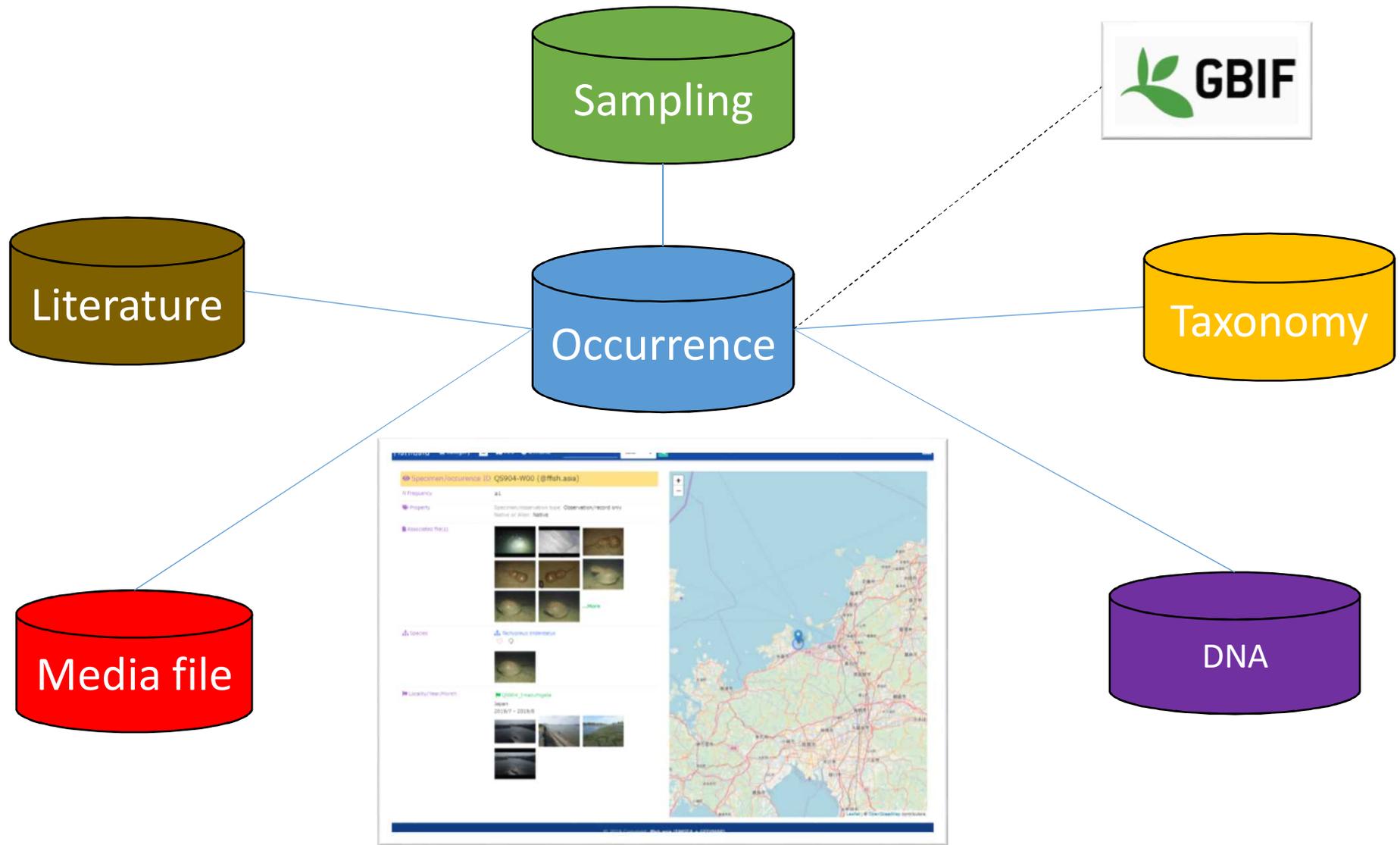Data distribution: Japan, Thailand, Lao PDR, Cambodia, Vietnam, Malaysia, Myanmar

Structure of the database

6 tables

Sampling

Literature   Occurrence   Taxonomy

Media file   DNA

Sampling

Media file

Occurrence

Locality, date, environment, etc

Observation/specimen data
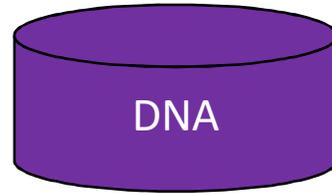(N. of individuals, specimen condition,
native/alien, etc)

Taxonomy

Scientific name, taxonomical information, standard name, local name, etc.

Global Gene Bank

DNA sequence, *N*, region, etc

Media file

Media file associated with

occurrence (observation/specimen), or

sampling (environment).

photo

CT/3D data

Media file

movie

sound

eDNA

Scientific literature/paper information

Structure of the database
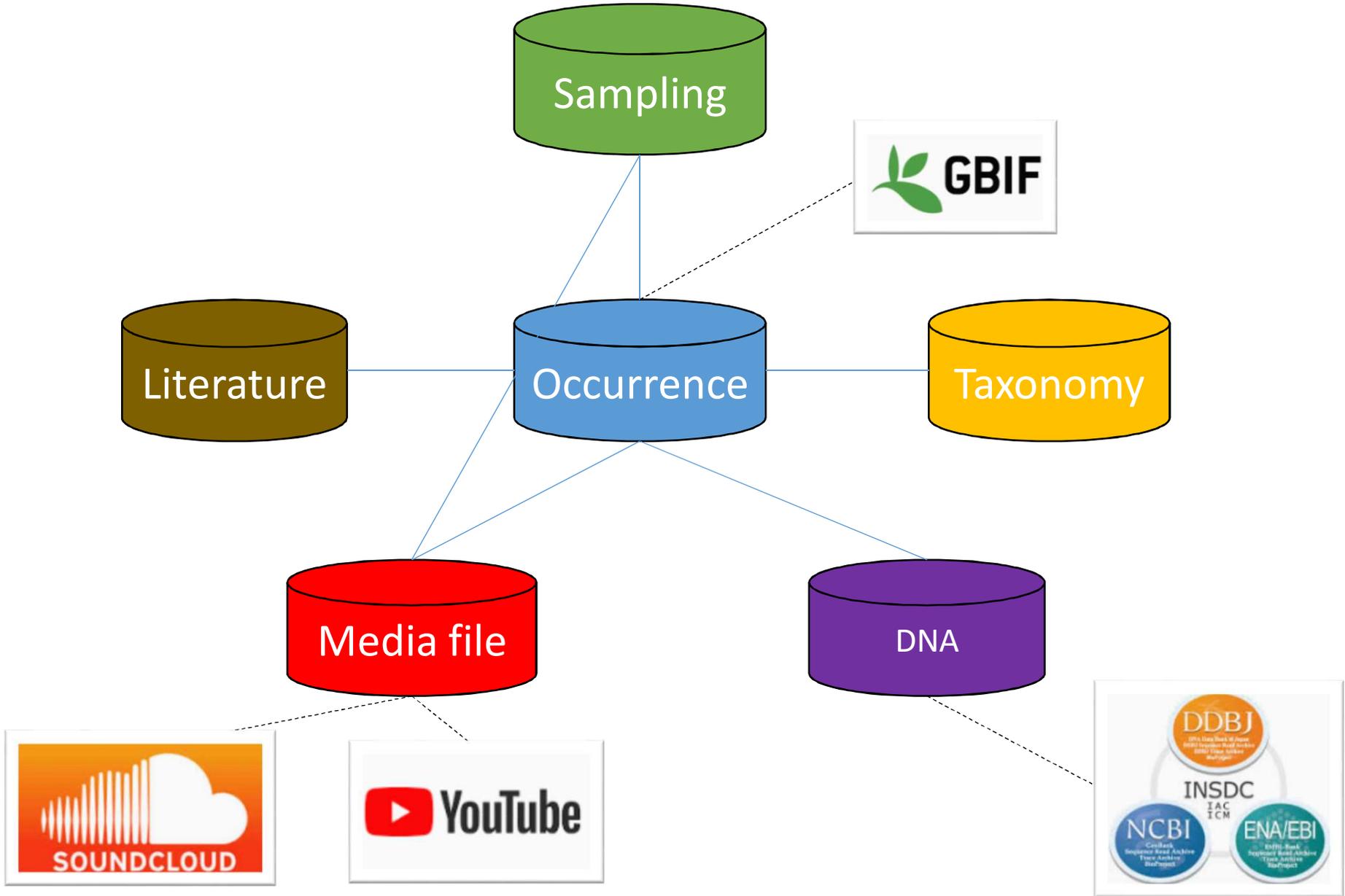
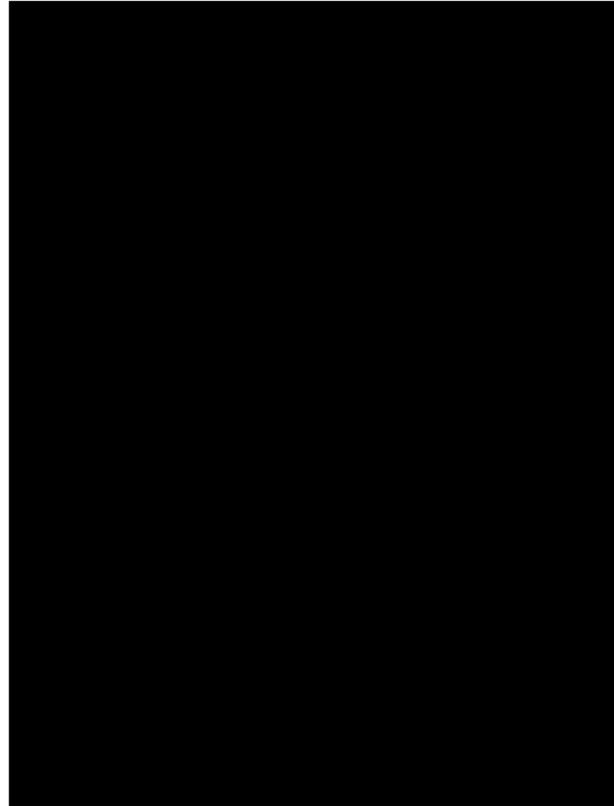Features of the database

Filtering search by time and space

e.g. "Anabas", central Cambodia, 2005-2010, summer (Jul-Aug-Sep)

Features of the database

Various type of media file
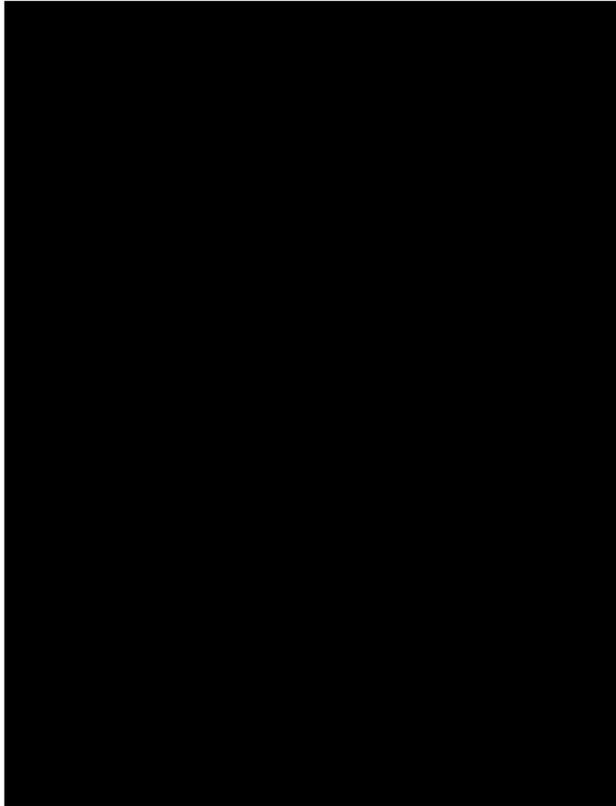
Movie
(YouTube embedded)

Sound/Soundscape
(SoundCloud embedded)
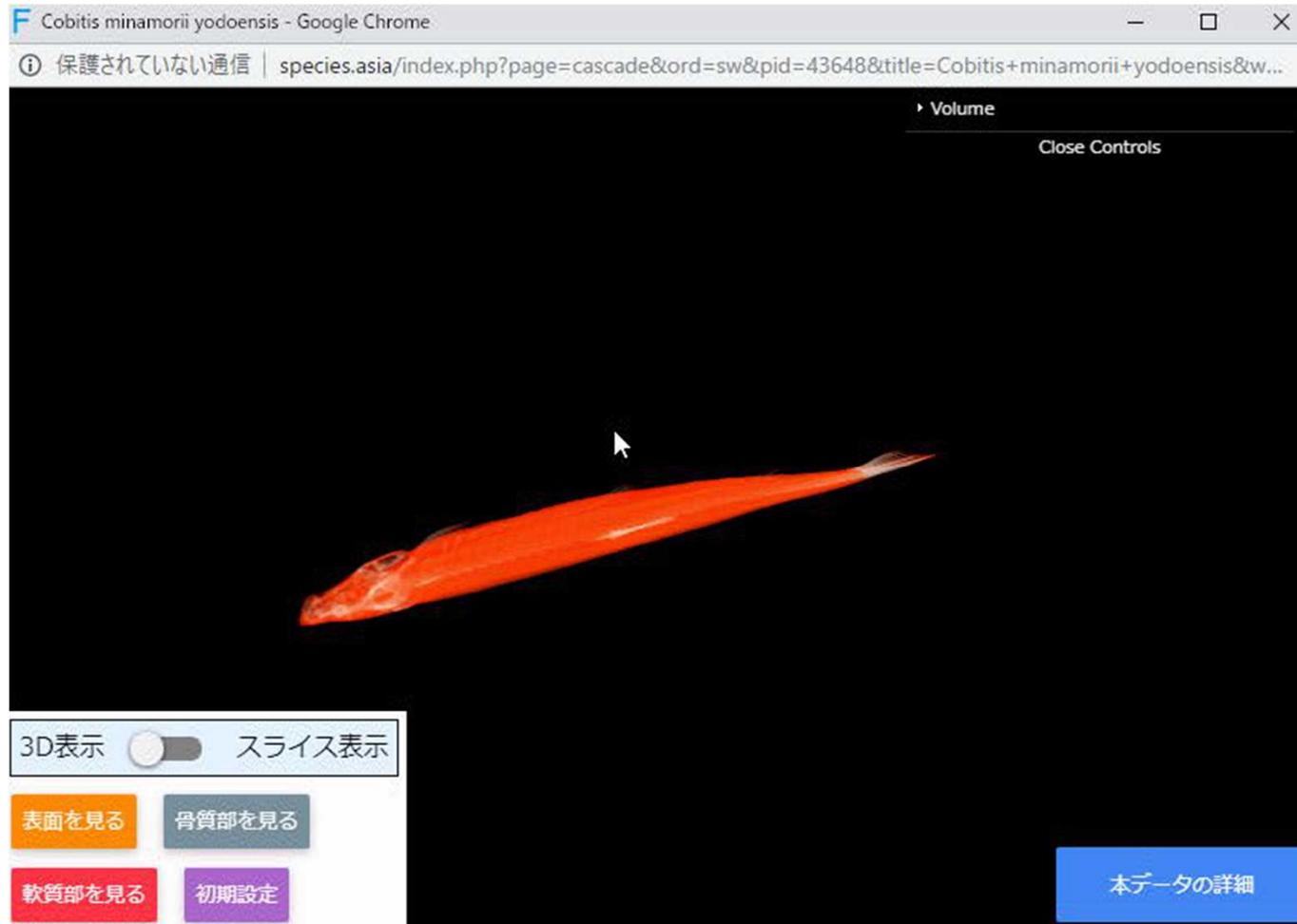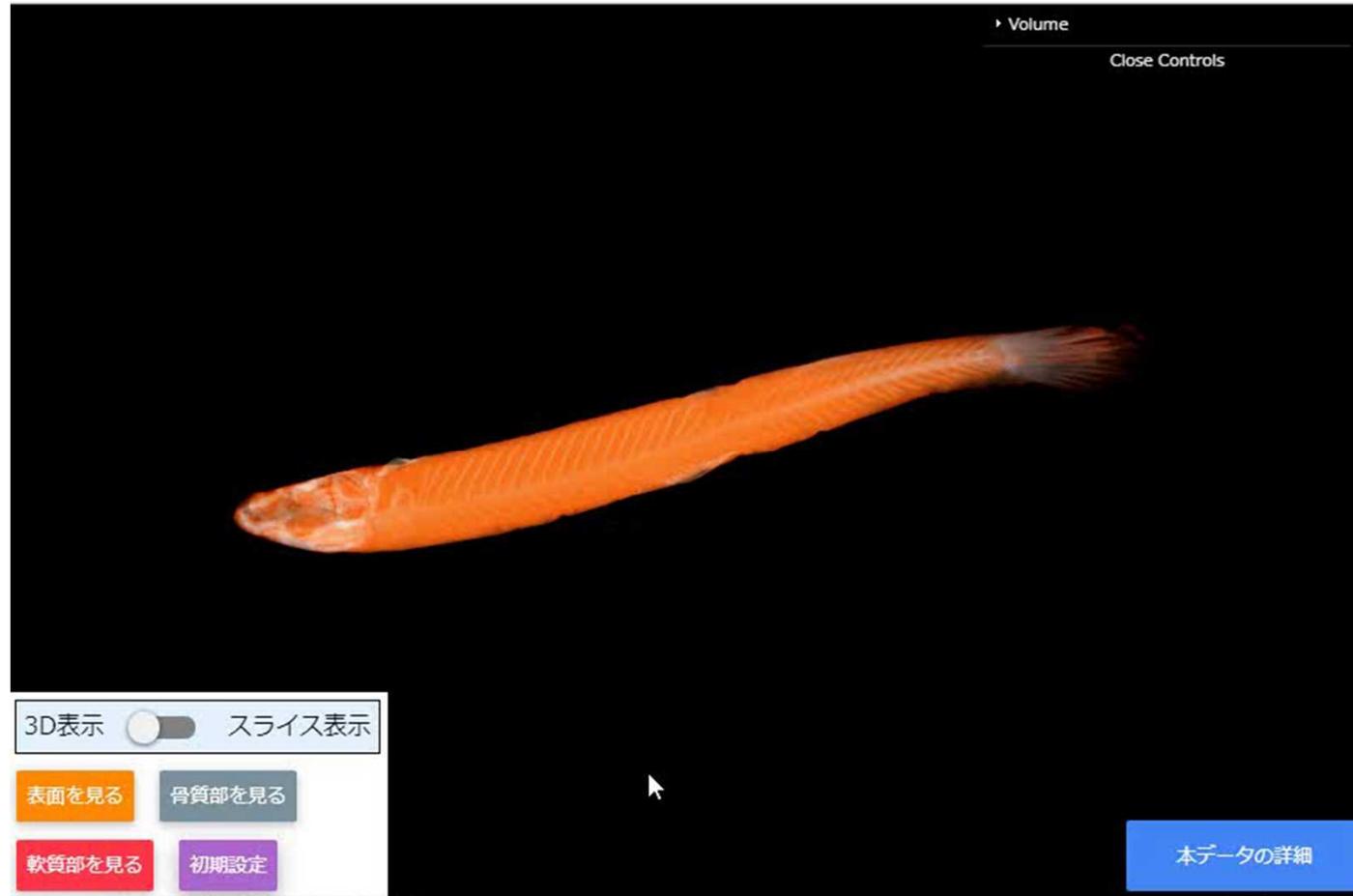
Environmental DNA
(.fastq raw data)

Features of the database

Various type of media file

Online browse-able CT/3D model

(The holotype of *Cobitis minamorii tokaiensis*)

Features of the database

Various type of media file

Specimen of extinct species (*Misgurnus* sp. [Jindai])

Features of the database

Direct link from paper to dataset

Access a dataset directly from an peculiar URL in paper

Features of the database

DNA blast system

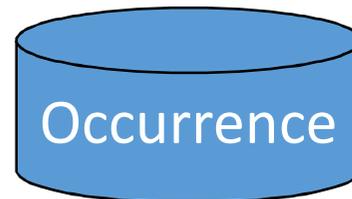Search DNA data by "Blast"

Current status of the database
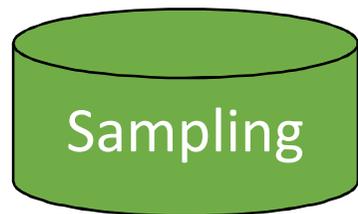
Sampling 7,521

Occurrence 49,360

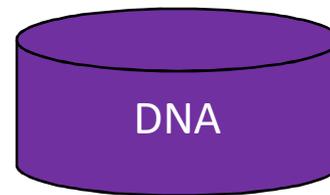Taxonomy 2,215

DNA 6942

10,000

Media file 74,616

Literature 717

Perspective of the database (2020~2025)

- More data on freshwater fishes of Myanmar

- More data on any fresh-brackish water organisms of Japan

- More CT scanned data; especially holotypes and extinct species