

The GMBA Mountain Portal towards a global map of mountain biodiversity

Ajay Ranipeta
Map of Life, Yale University

OBJECTIVE

Introduce the **Mountain Portal**, GMBA's⁽¹⁾ open access web portal for mountain biodiversity data mobilization, query, visualization, & analysis

(1) Global Mountain Biodiversity Assessment

www.gmba.unibe.ch

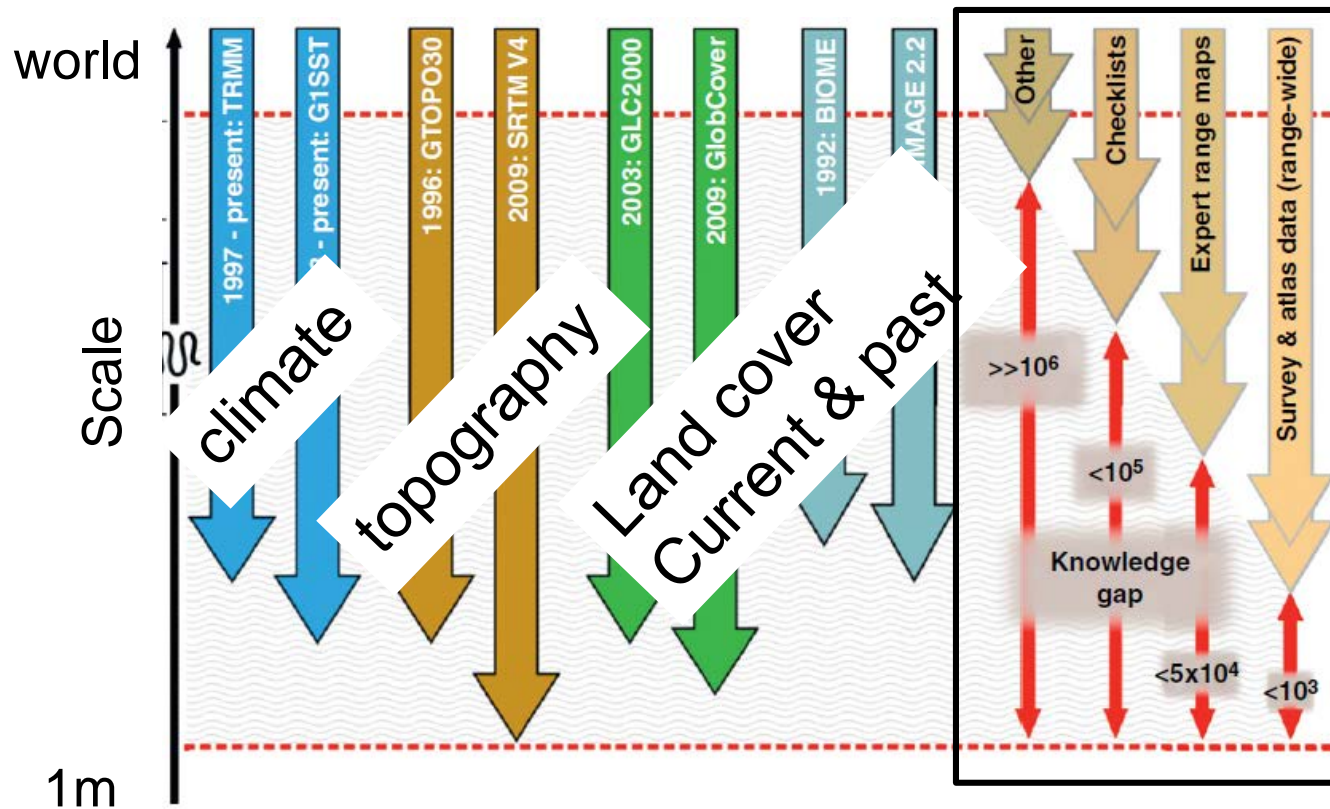
Mountain biodiversity

- Mountains support exceptional diversity
 - Support 1/3 of terrestrial species diversity
 - High numbers of endemic species
 - Mountains host ½ of all 34 global biodiversity hotspot
 - Key to conservation in a changing world
 - Ecosystem to be conserved according to Target no. 1 of SDG 15



Global biodiversity data

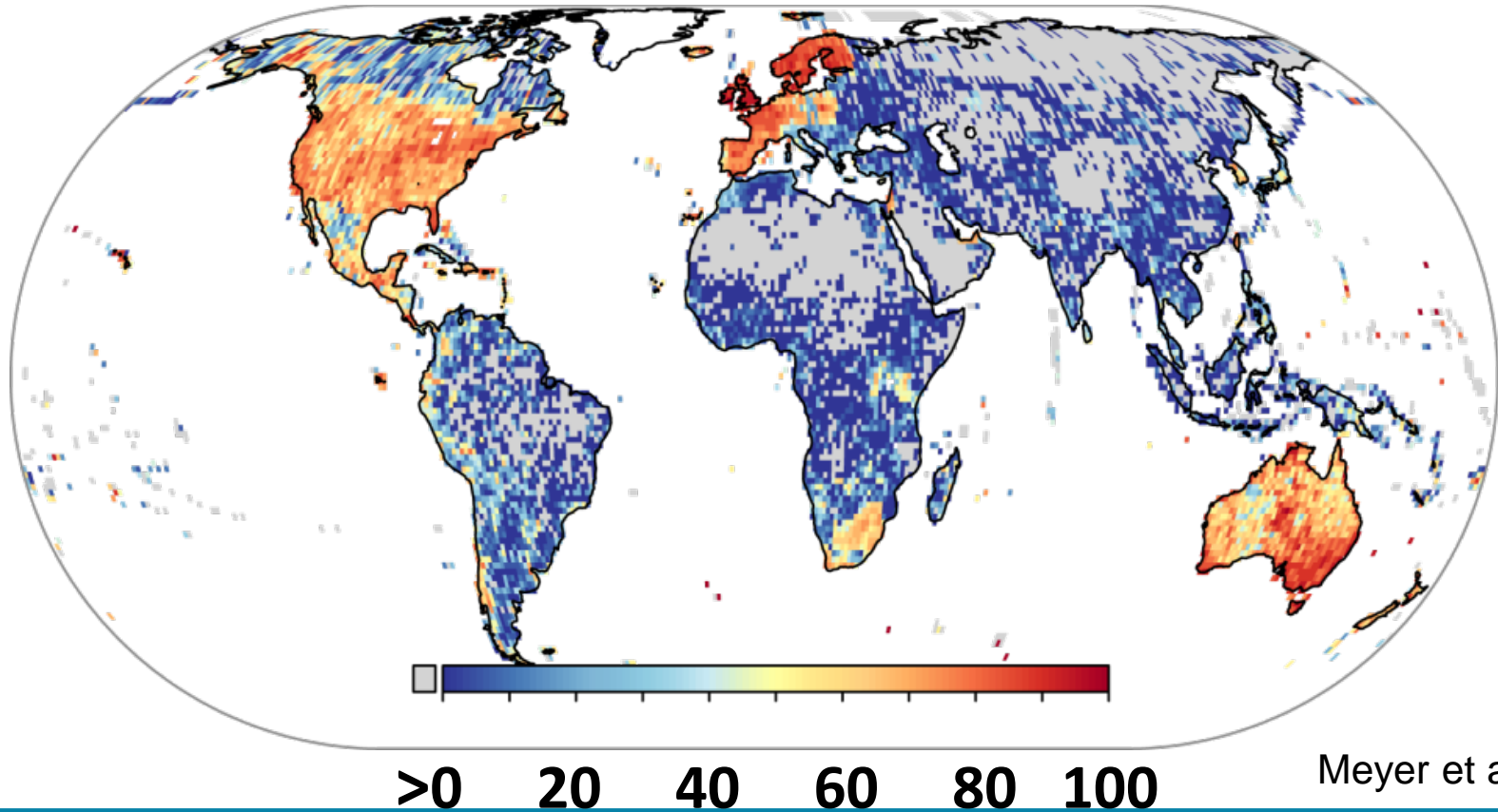
- Available global biodiversity data show limitations (bias, quality, quantity, precision, etc.)



Jetz et al., 2012

Global biodiversity data

- Species distribution globally sparse and biased (inventory completeness – terrestrial vertebrates)



Meyer et al., 2015

Global biodiversity database: mol.org



[login/register](#) en fr es pt de zh

[Species](#)

[Locations](#)

[Overview](#)

[Detailed Map](#)



Colorado

Mammals

Search for a species

Pick Random

Liberian forest
hybomys
Hybomys planifrons

[Learn more](#)

[Update](#)

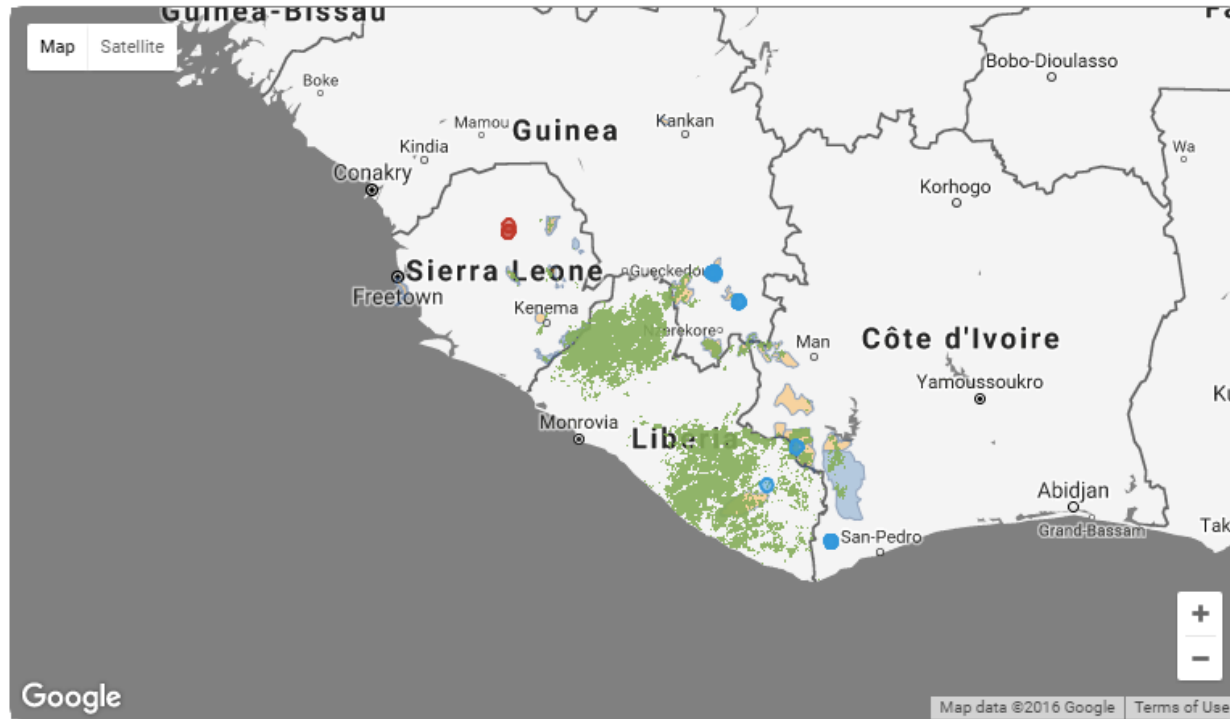
Records outside suitable range

Records in suitable range

Suitable range

Strict Parks

All Parks



Habitat Associations ON OFF

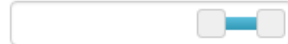
Elevation ON OFF

0 - 8000 meters



Tree cover: ON OFF

75 - 100%



Landcover ON OFF

Woodlands

Forests Woody Savannas

Shrublands

Open Closed

Herbaceous

Savannas Grasslands

Cultivated

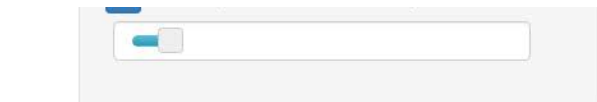
Cropland Cropland Mosaics

Barren Urban

Barren Urban

Water

Wetlands Water Bodies



Why do we need a mountain portal?

- Existing demand for a tool to explore, access, provide, and work with mountain biodiversity data
 - Users: scientists, stakeholders, policy makers
 - Current conservation and sustainable development priorities: development of SDG indicators
- GMBA Mountain Portal developed to address these needs
- Map of Life is an obvious platform to host GMBA mountain layers

Portal Overview

- Web interface based on Map of Life
- Open access
- Target audience: scientists, practitioners, policy makers, public (specific tools for specific users)
- Platform for data upload and sharing

Portal Overview

➤ Layers

- Ruggedness filter (Koerner et al., 2011)
- Thermal belt (Koerner et al., 2011)
- Inventory of mountains and mountain regions (Koerner et al., in review)

➤ Current implementations

- Visualization of mountains and mountain inventory
- Visualization of thermal belts within mountains
- Browsing of species inventories by location (mountain polygon)
- Visualization of species ranges

Mountain Portal

➤ www.mountainbiodiversity.org

Outlook

- Streamlining platform
- Interactive improvement of available inventory of mountain regions (in press, Alpine Botany)
- Gather additional information for mountain regions and/or globally (E.g. socio-demographic data, climatic data, etc.)
- Ongoing effort to collect more biodiversity information
 - *If you have data please share them with our community!*

THANK YOU!

Additional information:

gmba.unibe.ch

gmba@ips.unibe.ch