Paleobiology Database

Revealing the History of Life

Paleobiology Database

Mission Statement

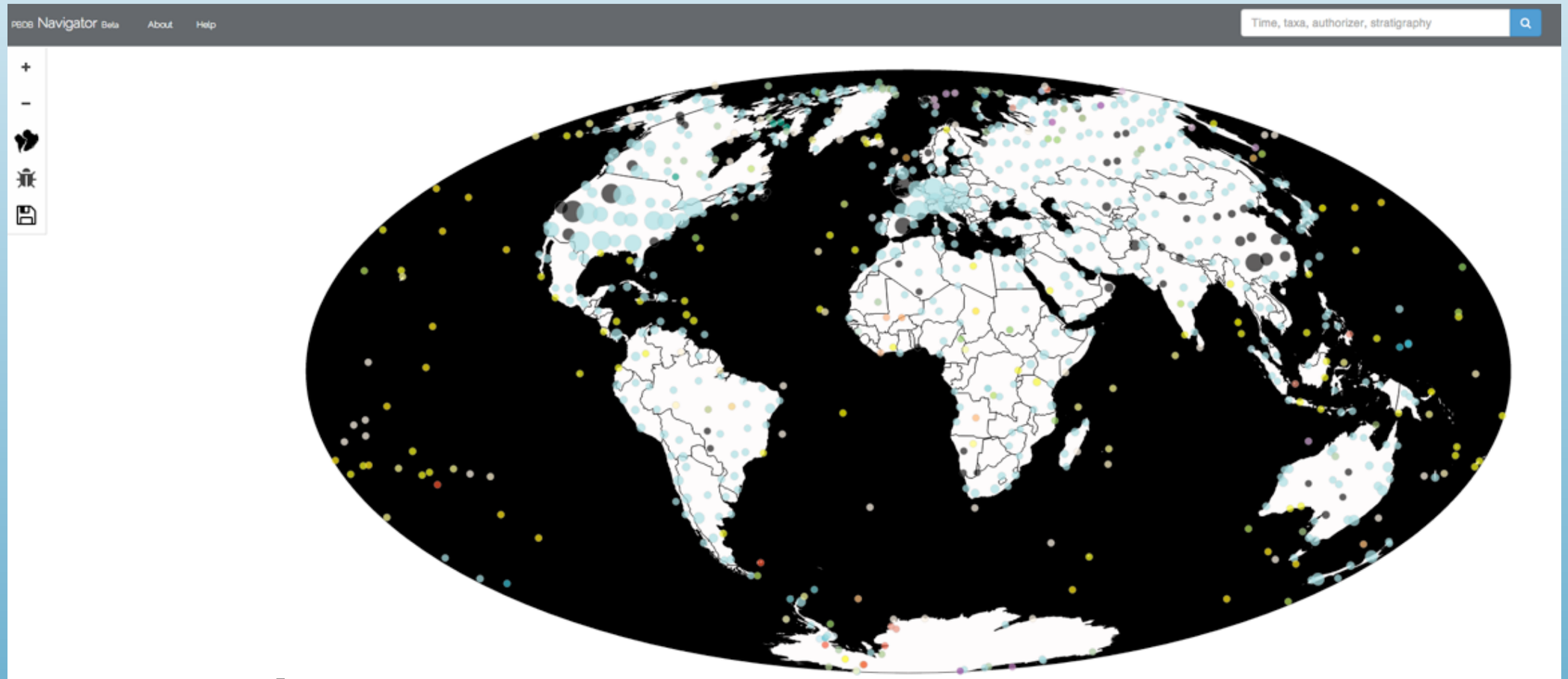
The **Paleobiology Database's** mission is to collect information on the distribution of fossil organisms in time and space. Published scientific literature and field collections are used to document the history of life, its ecological and environmental contexts, morphological traits, and evolutionary relationships. **Paleobiology Database** holds this data in trust for use by researchers, students, and the general public and makes them freely available to all.

Our mission is to document all fossil occurrences, along with associated data, and make these data available to everyone.

Web address: paleobiodb.org

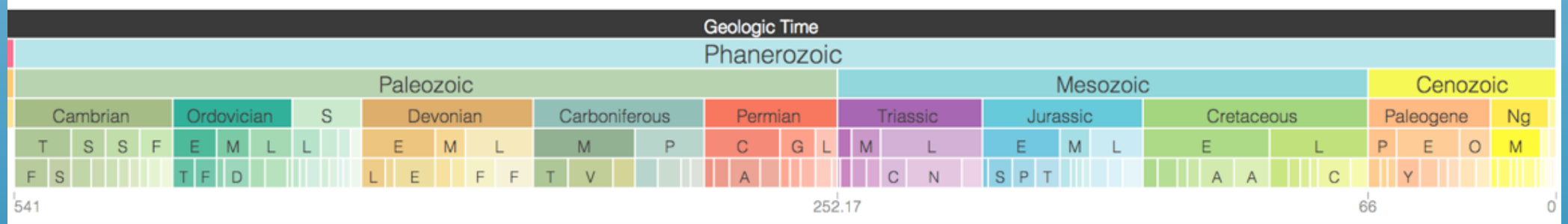
Paleobiology Database

Users and Members



Navigator

Browse



Paleobiology Database

Summary Statistics

as of May 15, 2017

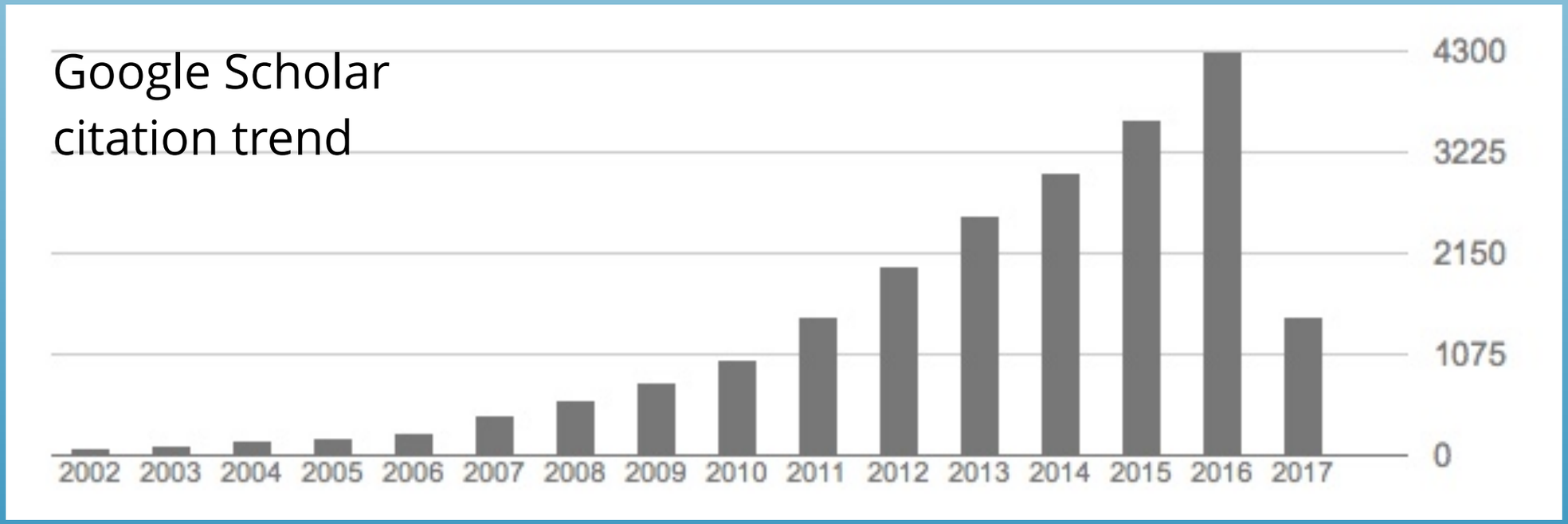
- 62,187 references
- 352,943 taxa
- 633,673 opinions
- 185,598 collections
- 1,332,286 occurrences
- 410 researchers

Paleobiology Database

Output Statistics

May 15, 2017

- 283 Official Paleobiology Database publications
- 789 papers using PBDB data on Google Scholar
- 16,921 citations to these papers on Google Scholar
- h-index of 68 according to Google Scholar



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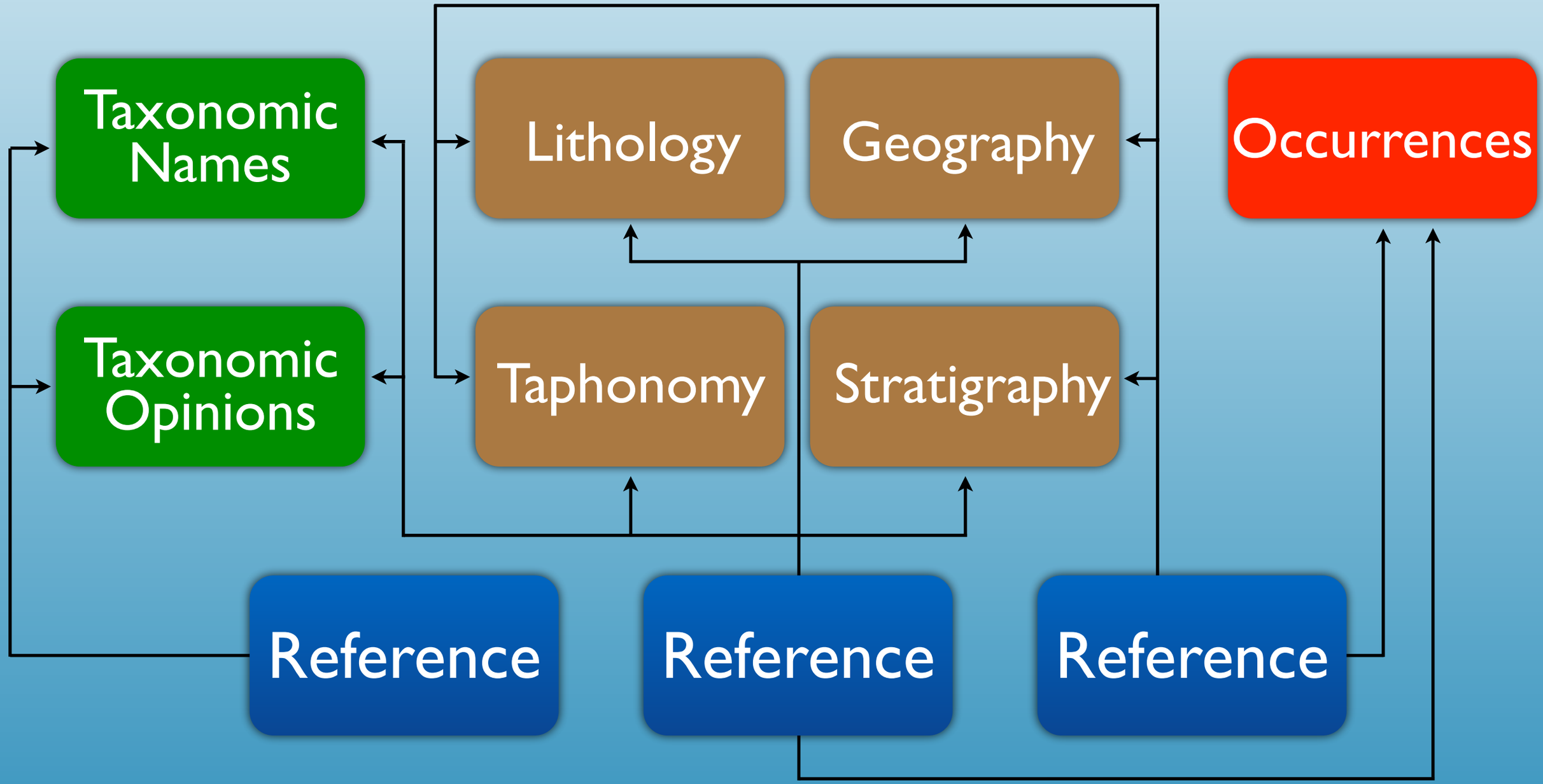
Primary Data Types

Bibliographic, Taxonomic, Geologic & Geographic, Occurrence



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Bibliographic Data

- All data in the PBDB are associated with a **Reference**
- Most references are journal articles or books
- Unpublished data can be entered by creating a "placeholder" reference that can be replaced later
- Reference data can be downloaded later as a CSV or RIS formatted file

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Taxonomic Data

- Two types of taxonomic data are entered into the Paleobiology Database, **taxonomic names** and **taxonomic opinions**
- **Taxonomic names** include the names themselves, as well as the author and year of publication
- **Taxonomic opinions** express the taxonomic status of names and/or what parent taxon the names belong to

Albertocetus
Agorophius

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Geologic & Geographic Data

- All data about the geology and geography associated with fossils is associated with a **collection** in the database
- A **collection** is basically the intersection of a geographic locality, a temporal bound, and geologic unit
- A collection also includes information on taphonomy and collection methods

54075

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Occurrence Data

- **Occurrences** of fossils are associated with individual collections
- **Occurrences** may be expressed at any taxonomic level
- Occurrences can be tabulated as numbers of individuals, specimens, or MNIs, etc.
- Individual occurrences can be identified as the holotype occurrence

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Data Exploration and Retrieval

- All data entry functions have parallel search functions
- References, Taxonomic Names and Opinions, and Collections can be retrieved using one of these search functions
- These can be used to search for duplicates before entry or to explore the data in a cursory fashion

Xenorophidae

Paleobiology Database

Data Download

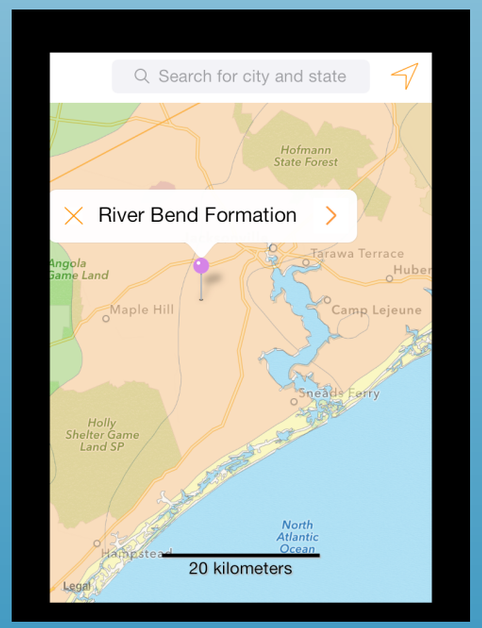
- The Download function can be used to retrieve References, Collections, Taxonomic Names and Opinions, and Occurrences
- All downloads of Occurrences are accompanied by files of References and Taxa
- It is better to download more data fields than fewer when you do any kind of download. Trust me.

Xenorophidae

Paleobiology Database

Application Programing Interface (API)

- The API allows users to access virtually all public PBDB data automatically
- Allows users to write scripts to perform virtually any analysis
- It also allows users to write apps that use PBDB data in ways we have not yet envisioned.



Paleobiology Database

Why use or join PBDB?

- PBDB has a **vast quantity of data** entered in a standardized format, available for analysis.
- **New analysis tools** for PBDB data are coming on line quickly, and are also available for use.
- If PBDB does NOT have data you need, you or your team can **enter data yourselves**, and make it available to all for additional analysis.

Bottom line: *Enter data into PBDB because it is* ***good for you****, and* ***useful to the paleobiology community.***