Topic: Stratigraphy in the Geo Compound Specimen Model
Date: 2023 November 16
Time: 12 PM Eastern

In Attendance

Lindsay Walker, Symbiota	Talia Karim, CUMNH	Erica Krimmel
Ben Norton	Nicole Volden, NMMNH&S	Nicole McGee, DMNS
Jessica Utrup, YPM	Theresa Miller, Specify	Bruce Schumacher, USFS
Holly Little, NMNH	Roger Burkhalter	Juliet Hook, NHMLA
Chris Maves, FMNH	Sierra Swenson, DMNS	Janaki Krishna, UMNH
Jacob Van Veldhuizen, CUMNH	Adam Kowalczyk, MCZ	

Resources

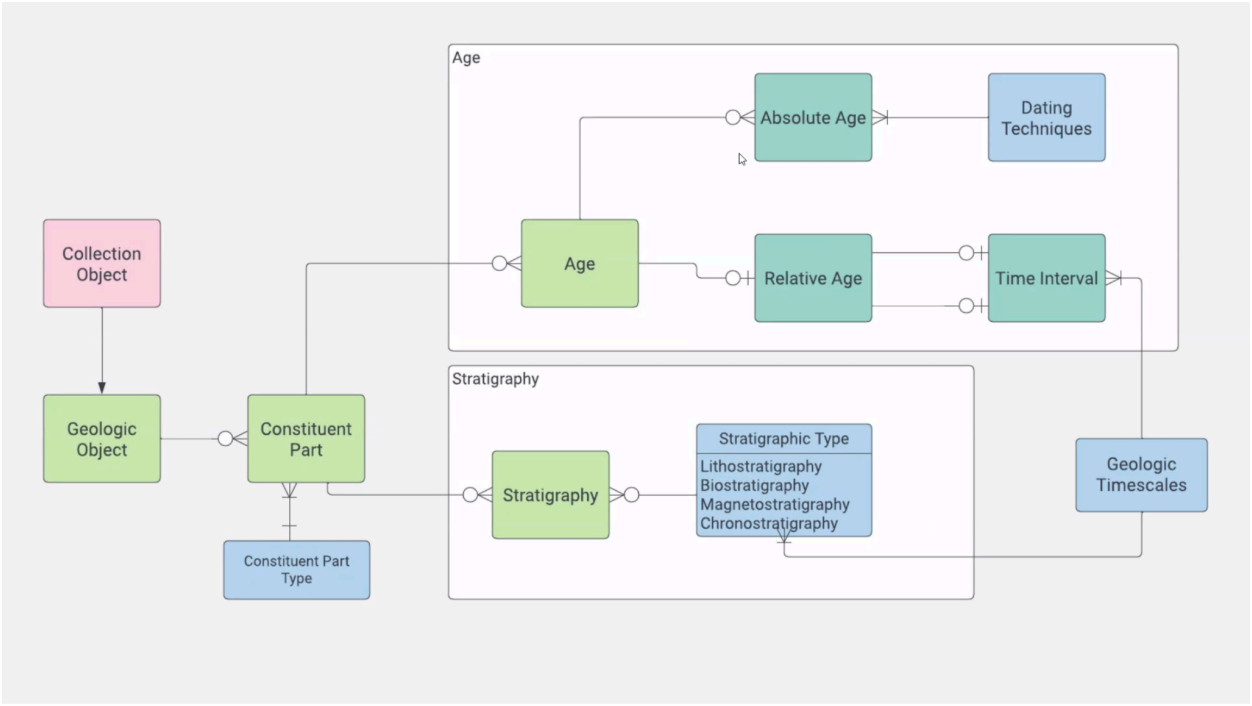
- Paleo Data Working Group Google Folder
- Paleo Data Working Group website schedule of upcoming Happy Hours and recordings/notes from past Happy Hours
- 20231116_paleo-happy-hour_slides

Agenda

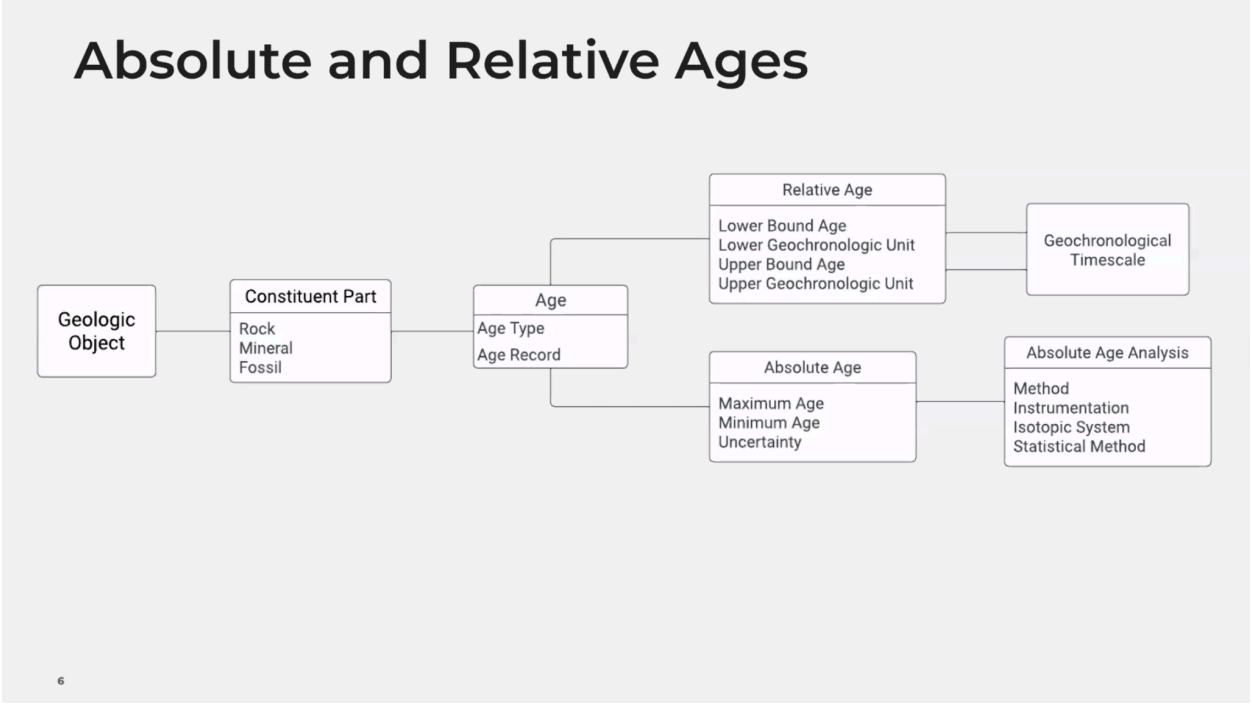
- Announcements/Updates
- Update on the Geology Collection Data Model
    - Types of Stratigraphy
        - Chronostratigraphy
        - Magnetostratigraphy
        - Lithostratigraphy
        - **Biostratigraphy**
    - Relationship between Stratigraphy and Age
        - Compositional and Temporal Context
        - Chronostratigraphic and Geochronlogic Units
        - Biostratigraphic and Magnetostratigraphic Ages

Notes

- Today = Age + Stratigraphy led by Ben Norton

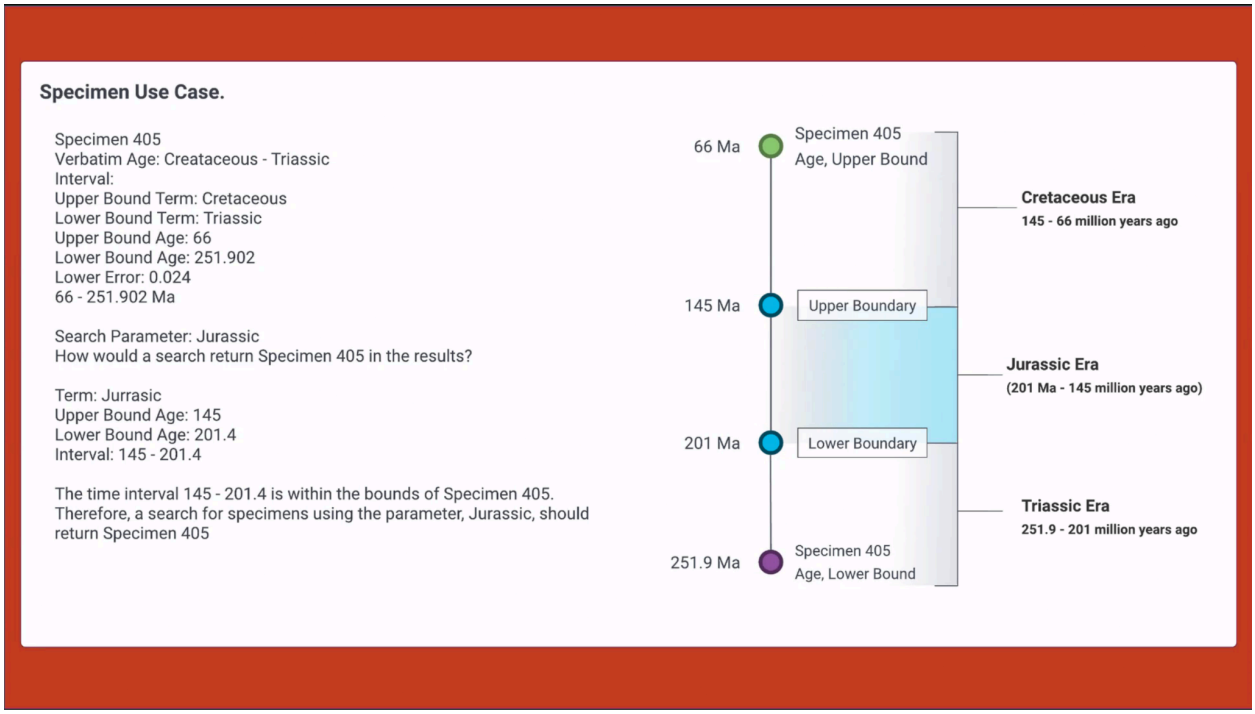


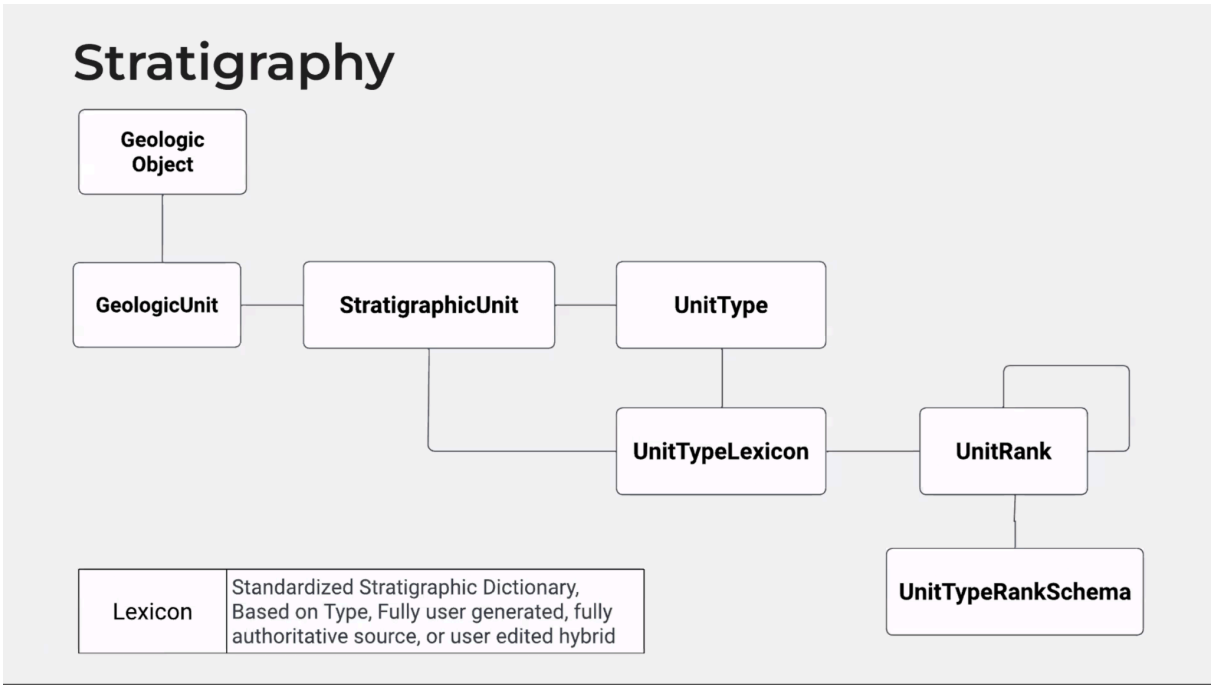
- https://github.com/bijlpeter83/DINOSTRAT

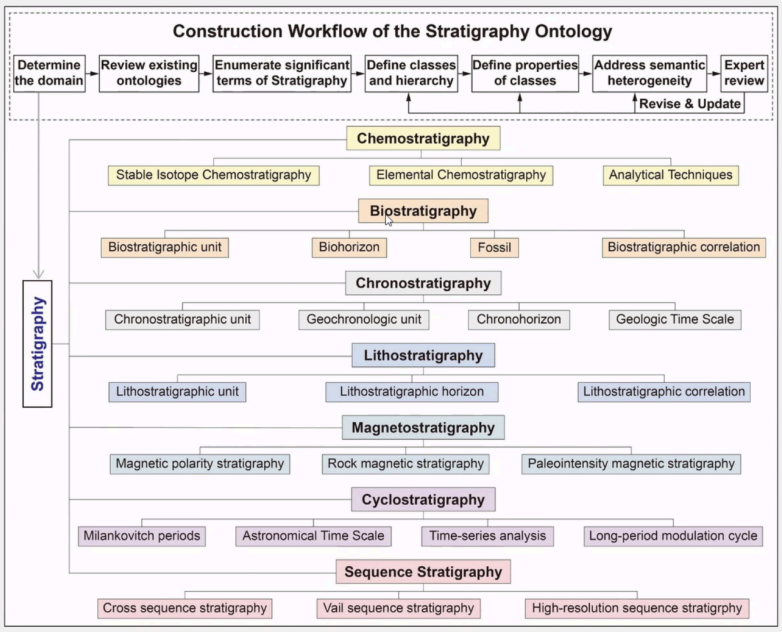


- Introducing PetroChron Antarctica database
  - https://unisthaus.maps.arcgis.com/apps/webappviewer/index.html?id=41510d1424d742cc8bb7a0bade72dd9b
- “Polymorphic” table relationship

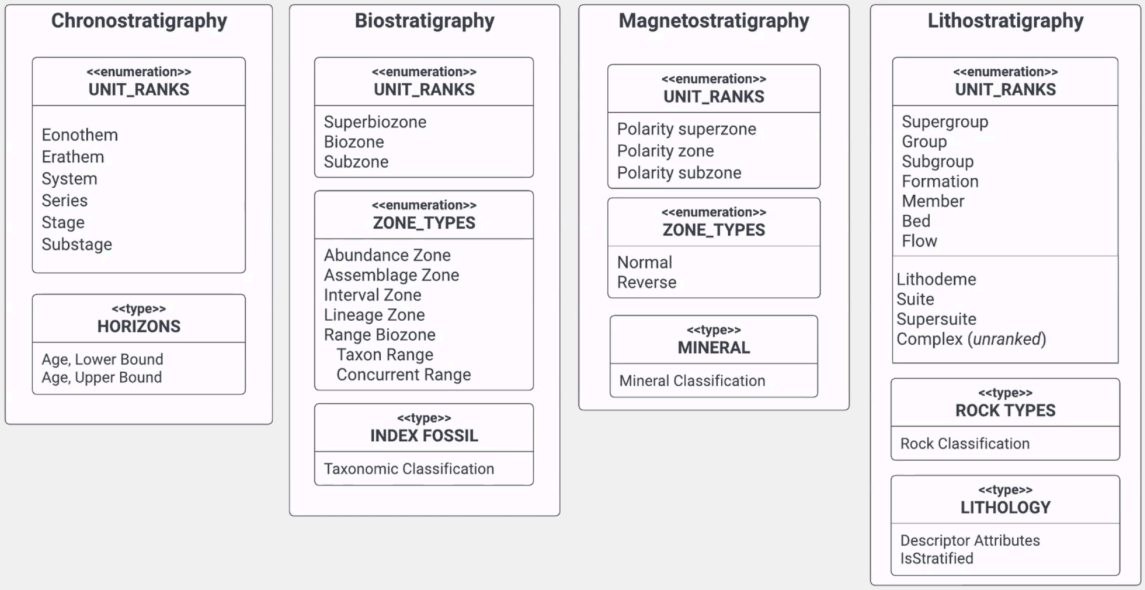
- Bio + Magneto → Chrono

- 

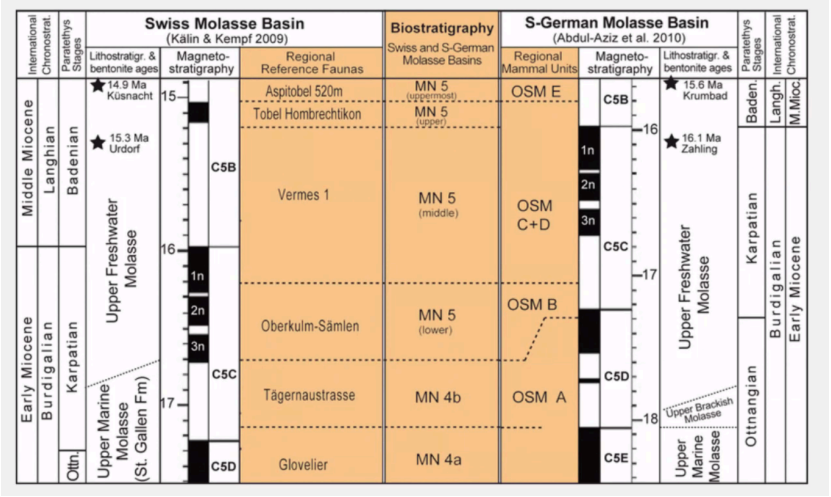
    - Need to store intervals of time numerically to enable more robust searching
    - GBIF does not translate this to numeric values yet, textual search only
    - Doesn't appear that most people have a way to record regional time intervals in their local databases
        - Roger uses a "verbatim" field
- All rocks have lithology, but biostratigraphy only applies to rocks with fossils (same goes for magneto, etc.)
    - 



Xu et al. 2023



- Each of the four categories needs to be handled independently… e.g.:



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- Discussion
  - Ben's role has been to describe how this information relates and works, but his conceptual data model isn't necessarily how it will be implemented in Specify. His model needs to be translated into the software and adopted elsewhere.
    - This effort relates to the TDWG Mineralogy Task Group
  - CMS have more bio-focused customers, which is why there hasn't been a lot of energy put into these types of developments for geo
    - Some industry software (not CMS) have attempted something similar to deal with microfossils, mineralogy, volcanics, geochemistry
    - https://www.neotomadb.org/
      - Very complex and in depth data model

Zoom Chat