

# Palaeontology

Jort van den Brink - s2789760 - Locations

Wieger Wittrock - s2848260 - Size of Dinosaur

Denzel Hagen - s1978497 - Excavations&Collections

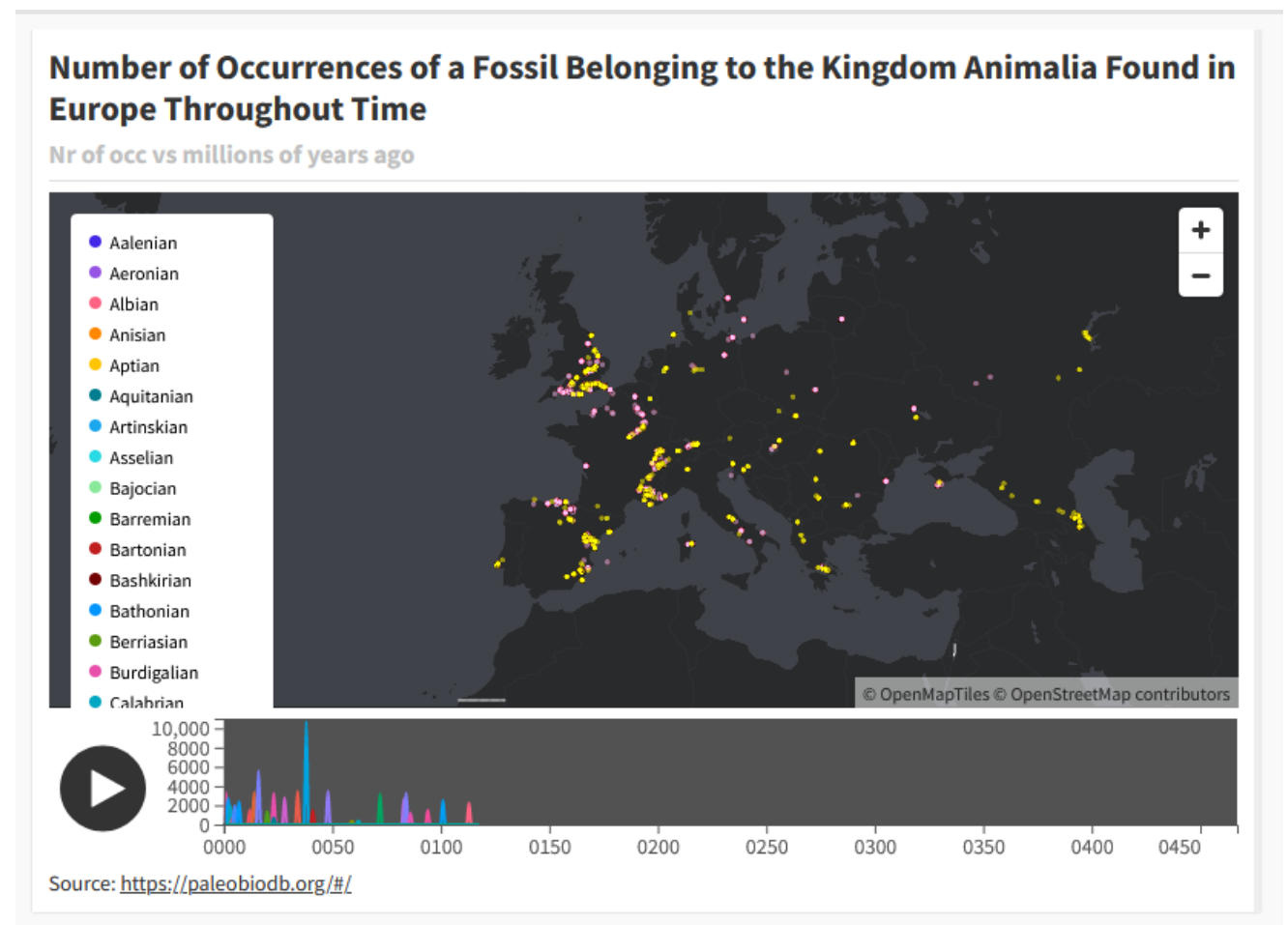
Marinus Bos - s2827603 - Vision

Byron Wider - s2763958 - Lithography

Natan van Bergem - s2853256 - Vertebrates

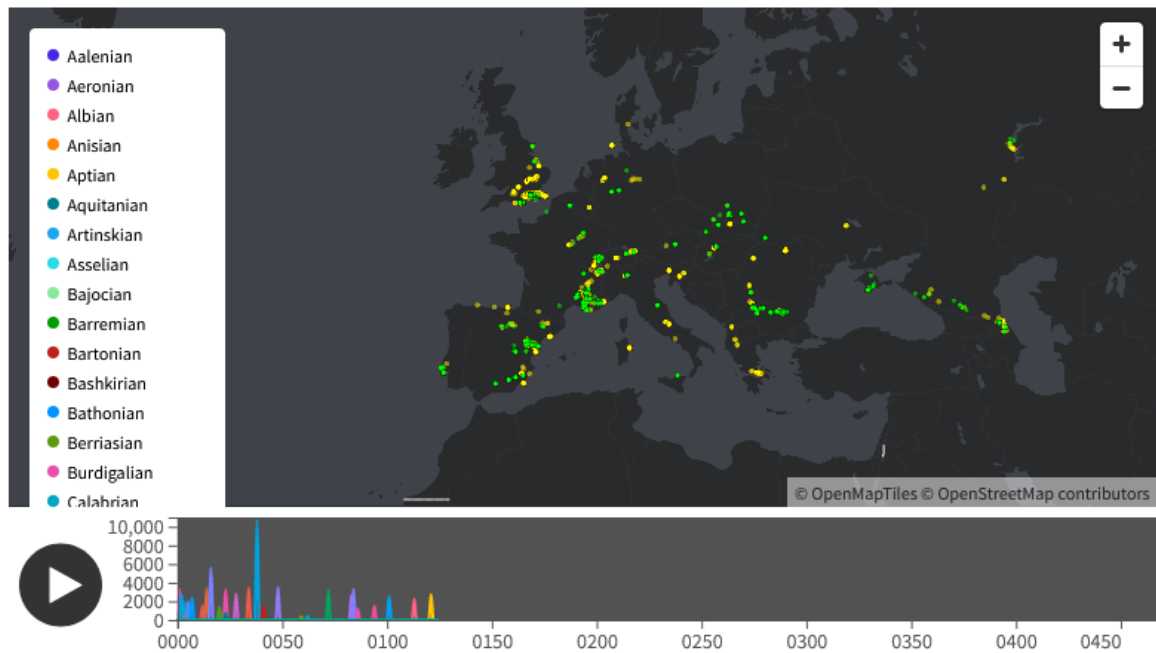
## Jort

Fossil Occurrences per Era



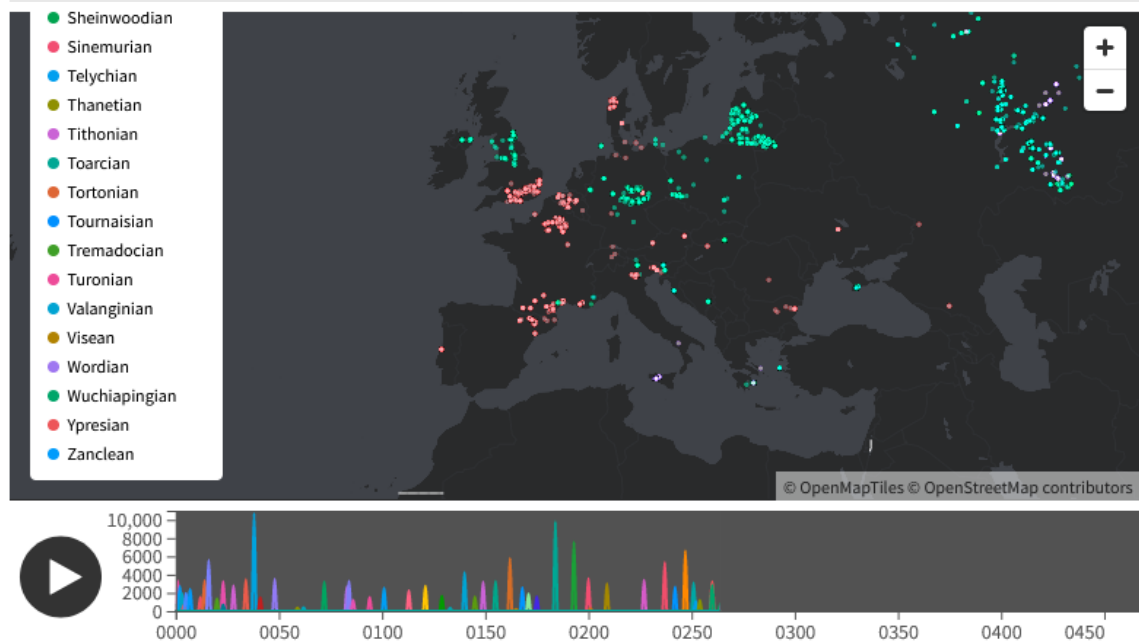
## Number of Occurrences of a Fossil Belonging to the Kingdom Animalia Found in Europe Throughout Time

Nr of occ vs millions of years ago



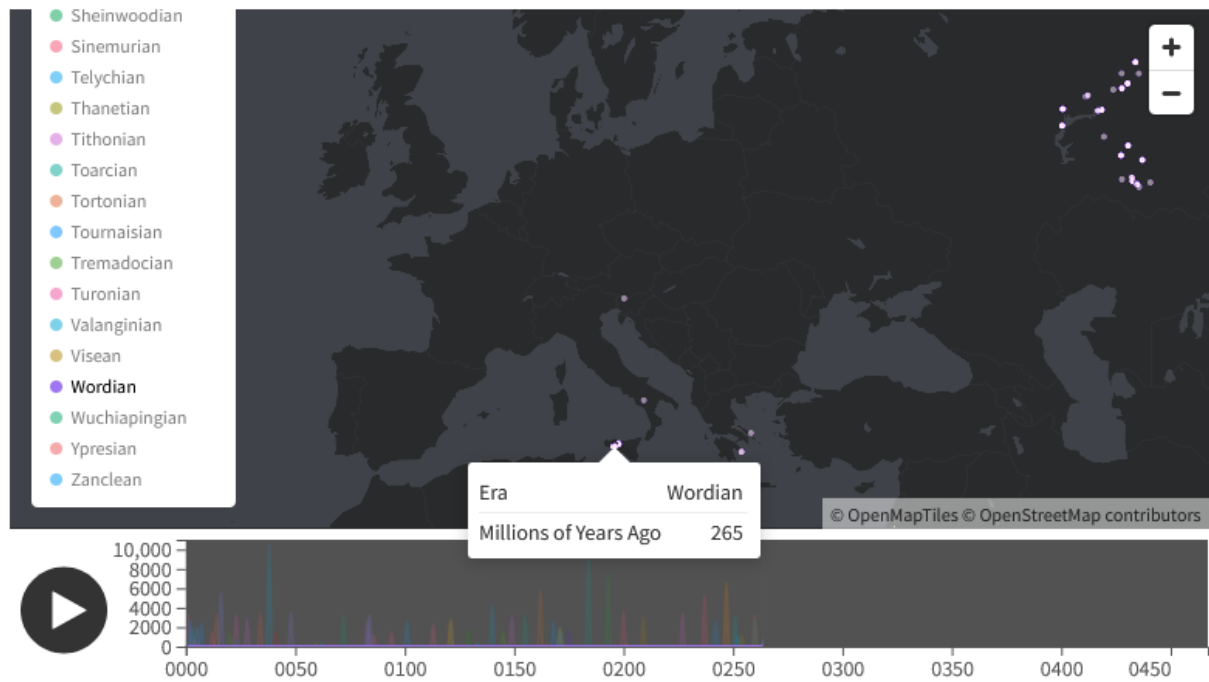
## Number of Occurrences of a Fossil Belonging to the Kingdom Animalia Found in Europe Throughout Time

Nr of occ vs millions of years ago



## Number of Occurrences of a Fossil Belonging to the Kingdom Animalia Found in Europe Throughout Time

Nr of occ vs millions of years ago



Source: <https://paleobiodb.org/#/>

Source:

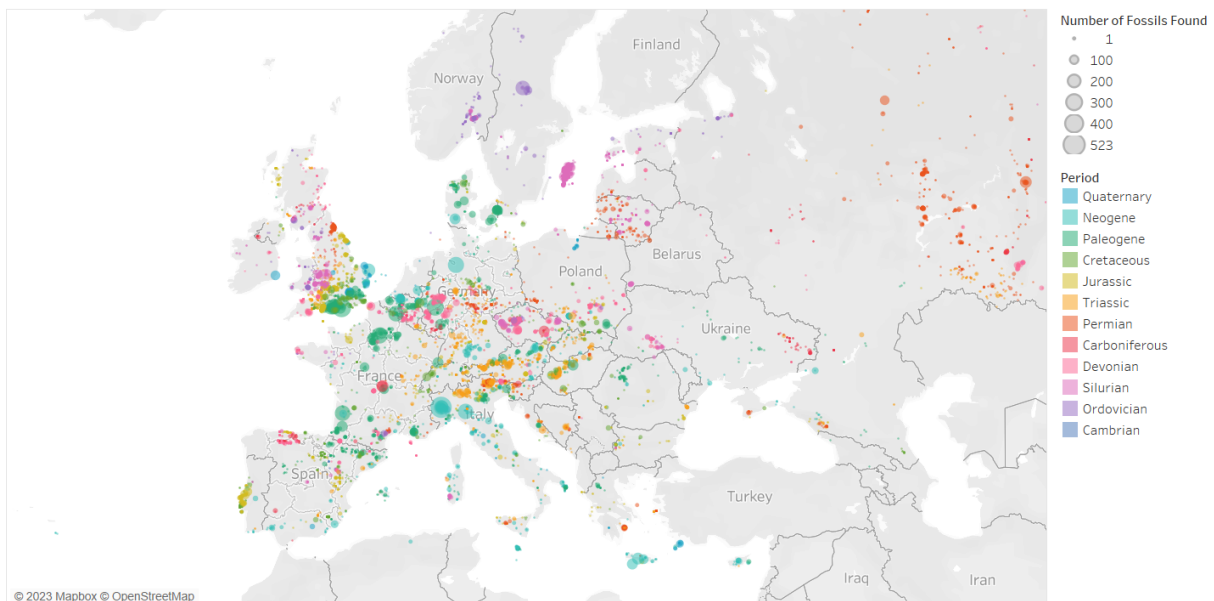
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Modified table:

<https://drive.google.com/file/d/1MnJSwDshELXOzAvEYWd7PvEJq1wmtCw7/view?usp=sharing>

# Denzel

Number of fossil occurrences per dig, by period they originated from



Map based on lng and lat. Color shows details about Period. Size shows sum of N Occs. Details are shown for collection no (CollectionsToCreators.csv) and Name. The data is filtered on formation (CollectionsToCreators.csv) and Action (Period). The formation (CollectionsToCreators.csv) filter excludes Null. The Action (Period) filter keeps 13 members. The view is filtered on Period, which keeps 13 of 13 members.

Source:

[https://paleobiodb.org/data1.2/occs/list.csv?datainfo&rowcount&base\\_name=Animalia&taxon\\_reso=family&cc=EUR&show=aconly](https://paleobiodb.org/data1.2/occs/list.csv?datainfo&rowcount&base_name=Animalia&taxon_reso=family&cc=EUR&show=aconly)

[https://paleobiodb.org/data1.2/colls/list.csv?datainfo&rowcount&base\\_name=Animalia&taxon\\_reso=family&cc=EUR&show=loc](https://paleobiodb.org/data1.2/colls/list.csv?datainfo&rowcount&base_name=Animalia&taxon_reso=family&cc=EUR&show=loc)

[https://paleobiodb.org/data1.2/occs/diversity.csv?datainfo&rowcount&base\\_name=Animalia&count=genera](https://paleobiodb.org/data1.2/occs/diversity.csv?datainfo&rowcount&base_name=Animalia&count=genera)

Modified Tables

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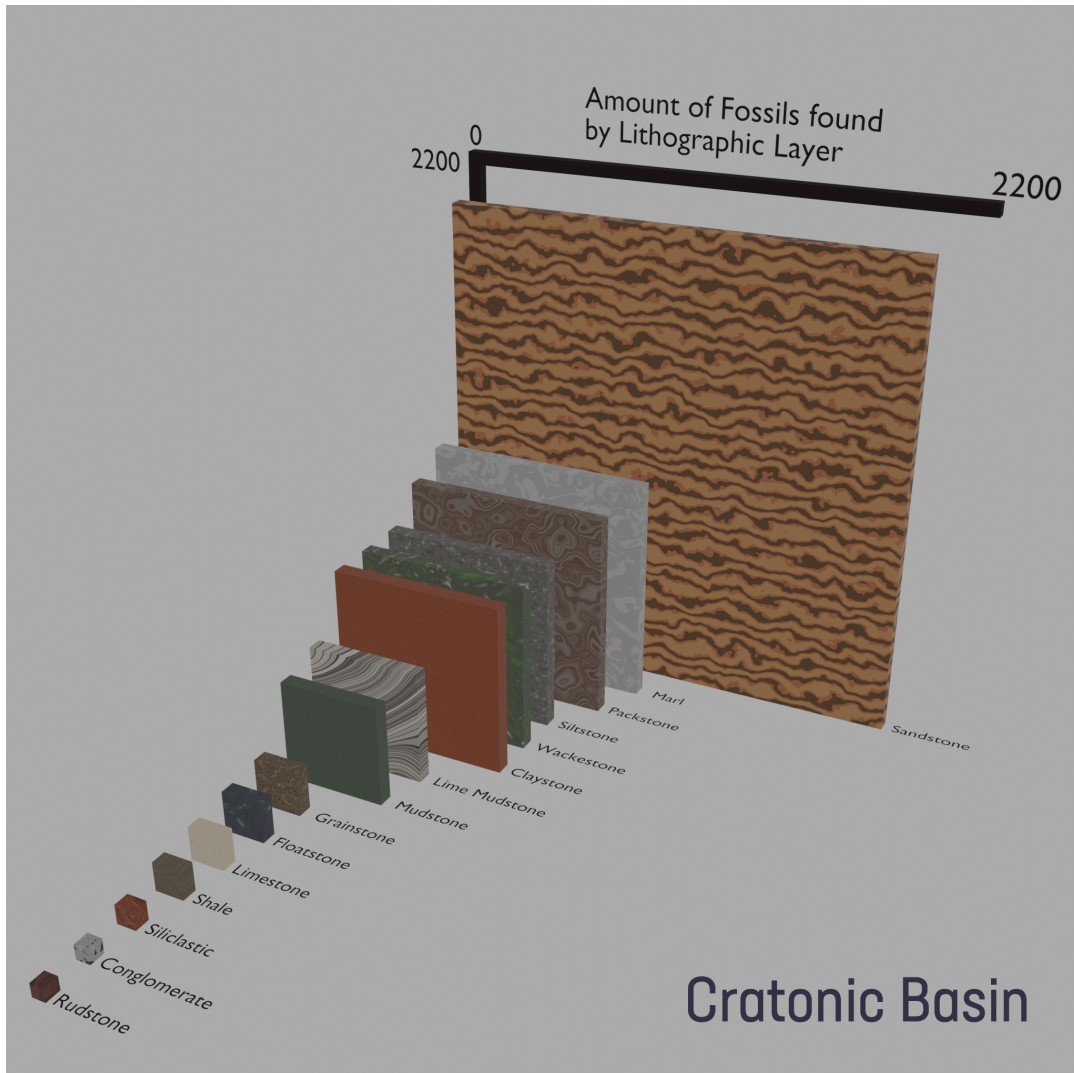
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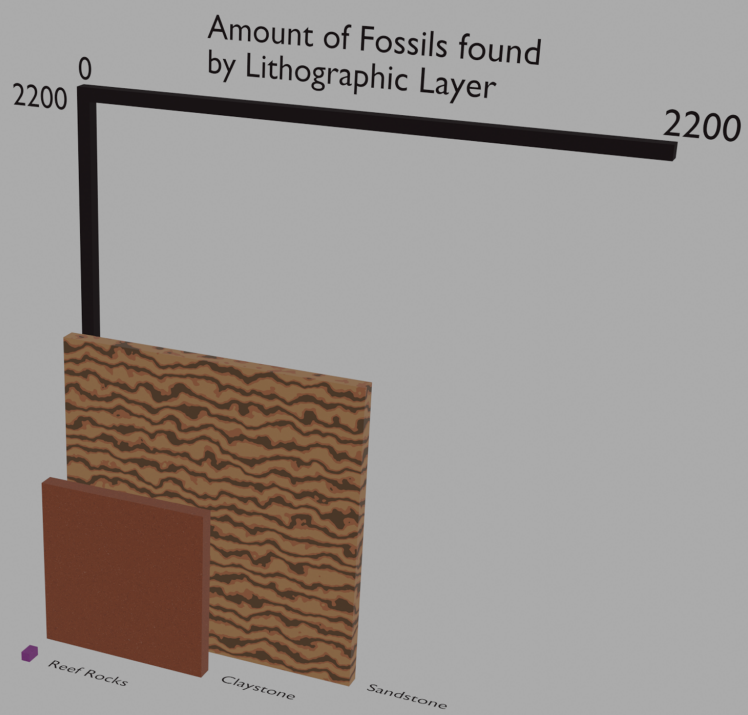
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# Byron

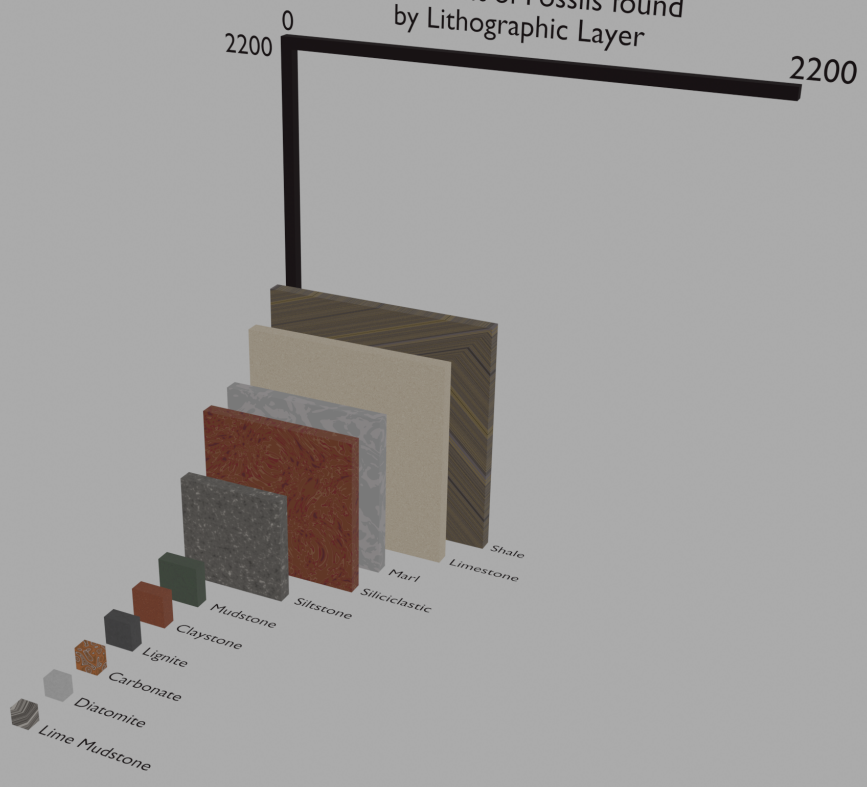
Oceanic And River Tectonics:



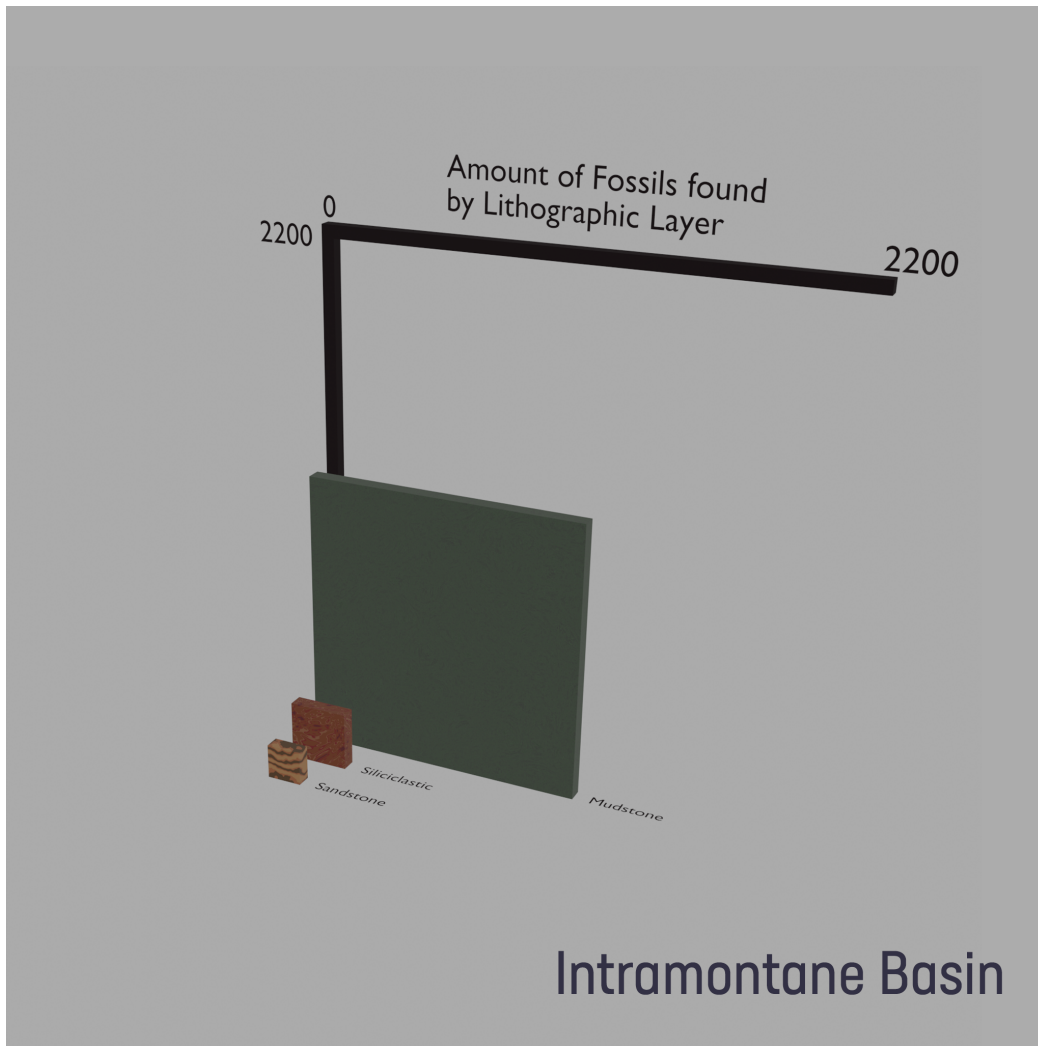


Deep Ocean Basin

Amount of Fossils found  
by Lithographic Layer



Rift



Source:

[https://paleobiodb.org/data1.2/specs/list.csv?datainfo&rowcount&base\\_name=animalia&cc=EUR&show=lith,lithext](https://paleobiodb.org/data1.2/specs/list.csv?datainfo&rowcount&base_name=animalia&cc=EUR&show=lith,lithext)

[https://paleobiodb.org/data1.2/specs/list.csv?datainfo&rowcount&base\\_name=animalia&cc=EUR&pgm=gplates,scotese,seton&show=paleoloc,stratext](https://paleobiodb.org/data1.2/specs/list.csv?datainfo&rowcount&base_name=animalia&cc=EUR&pgm=gplates,scotese,seton&show=paleoloc,stratext)

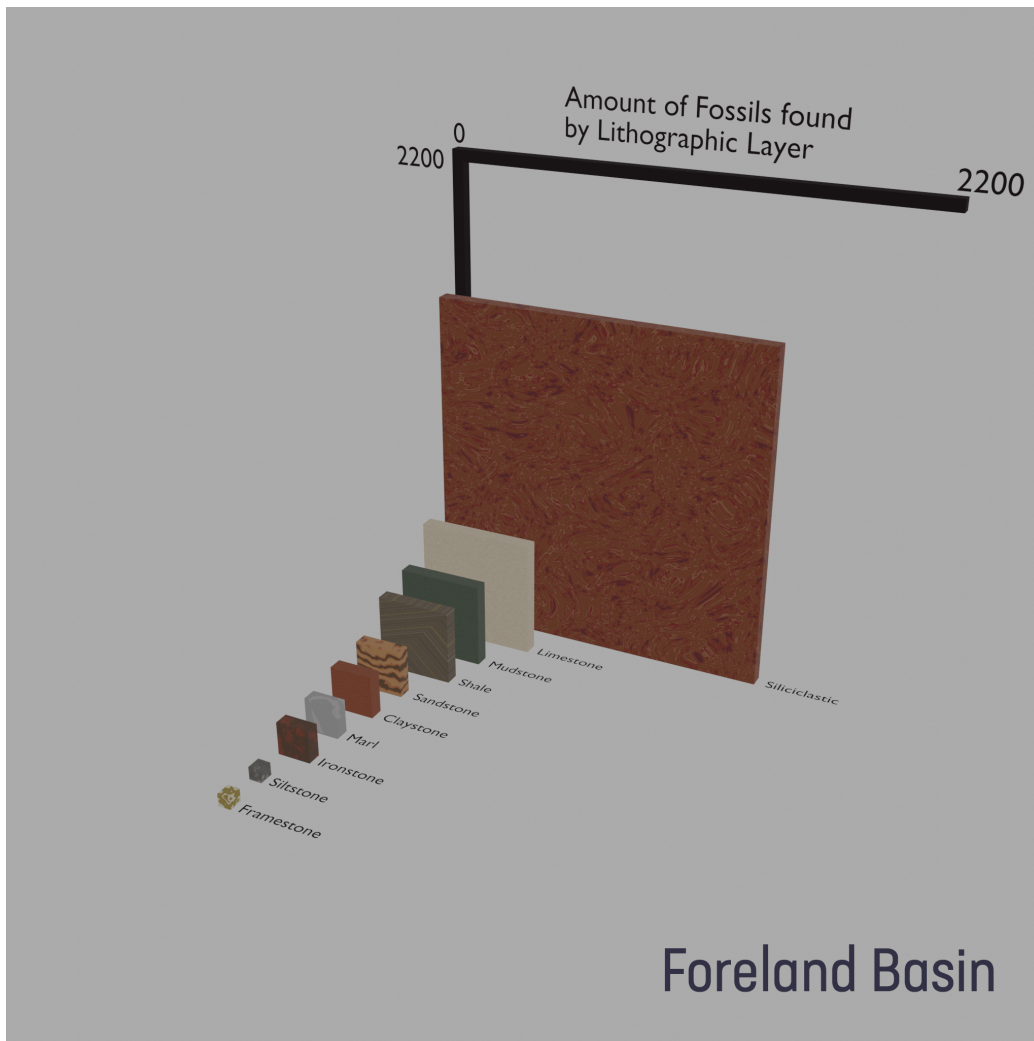
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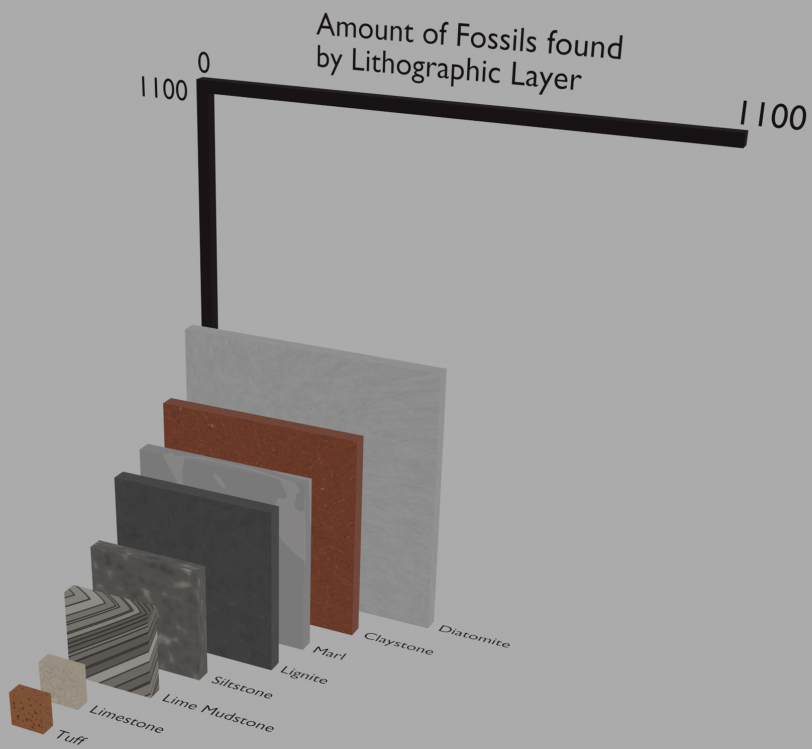
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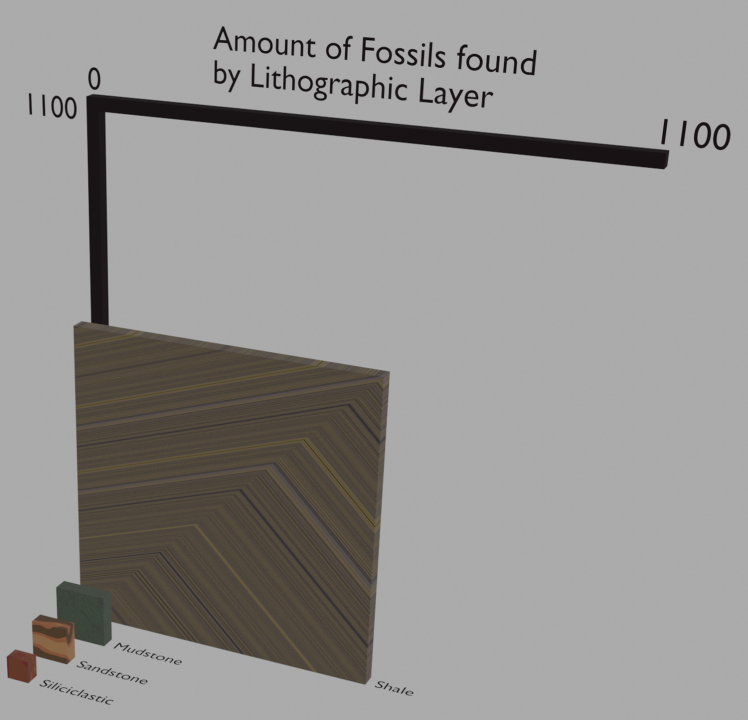


Land Tectonics:

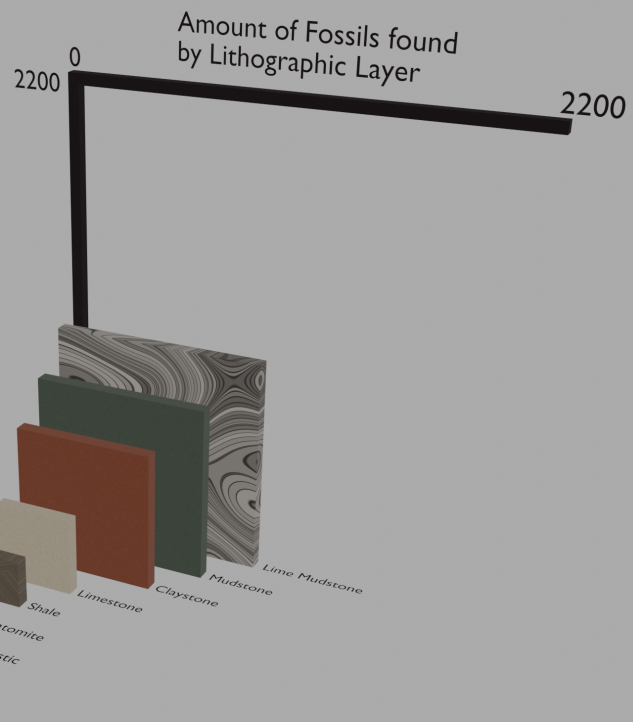




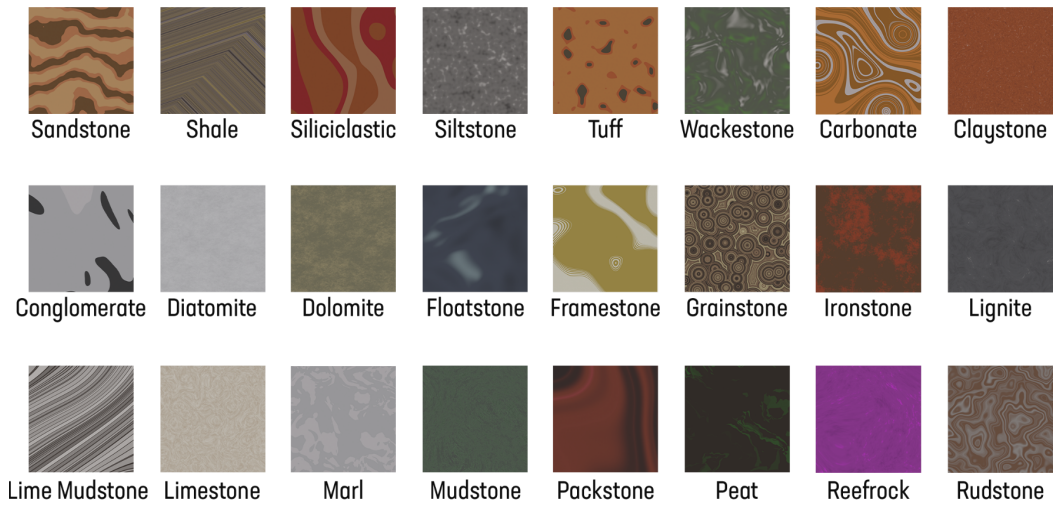
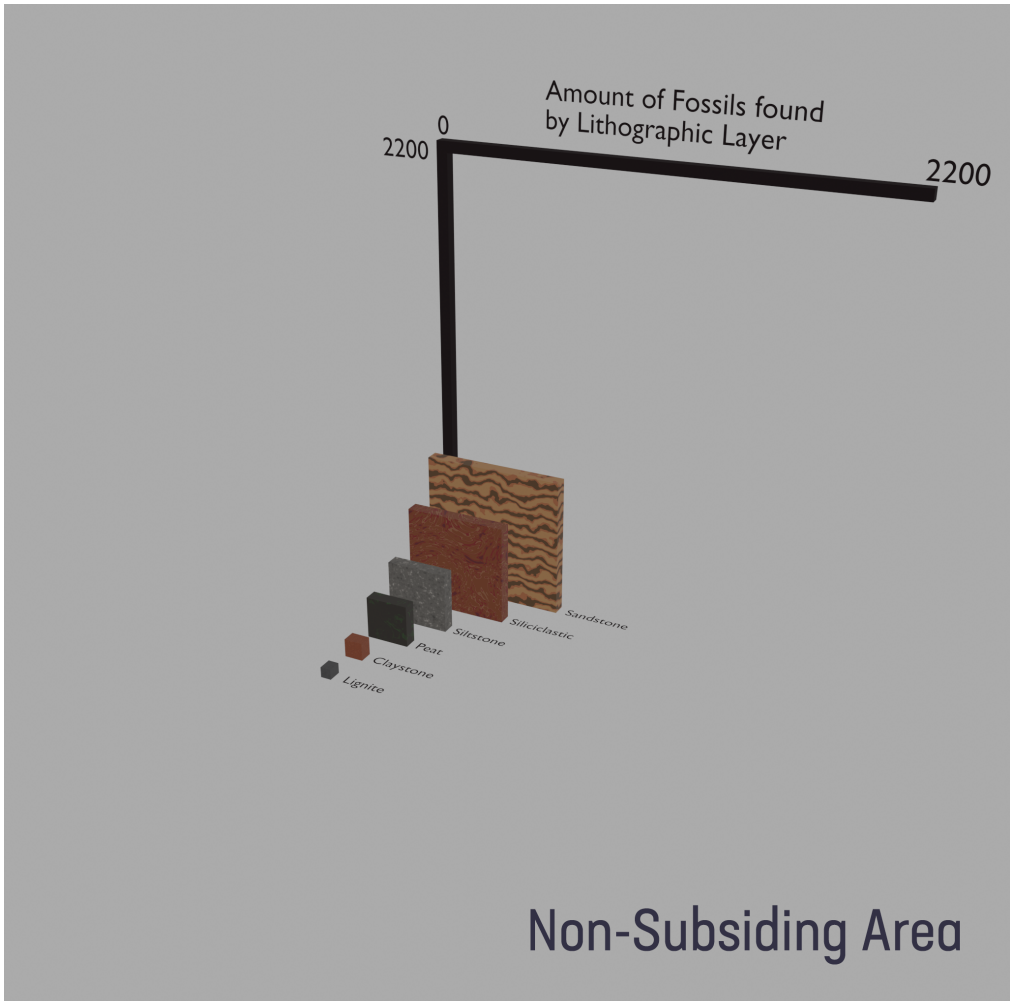
## Volcanic Basin



## Pull Apart Basin



Passive Margin



Source:  
[https://paleobiodb.org/data1.2/specs/list.csv?datainfo&rowcount&base\\_name=animalia&cc=EUR&show=lith,lithext](https://paleobiodb.org/data1.2/specs/list.csv?datainfo&rowcount&base_name=animalia&cc=EUR&show=lith,lithext)  
[https://paleobiodb.org/data1.2/specs/list.csv?datainfo&rowcount&base\\_name=animalia&cc=EUR&pgm=gplates,scotese,seton&show=paleoloc,stratext](https://paleobiodb.org/data1.2/specs/list.csv?datainfo&rowcount&base_name=animalia&cc=EUR&pgm=gplates,scotese,seton&show=paleoloc,stratext)

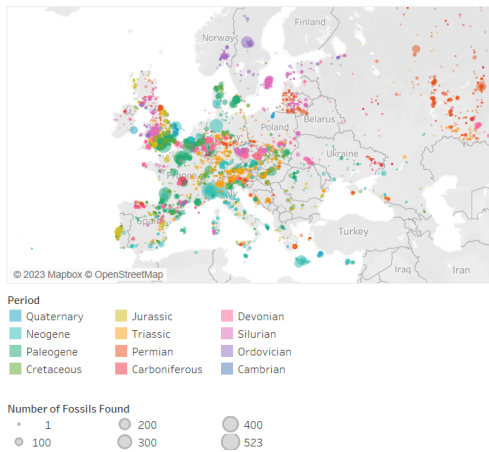
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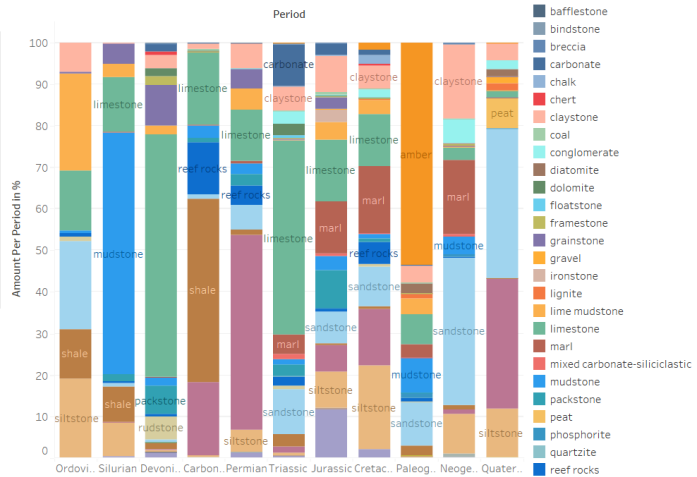
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Interactive Data (link to tables used under the corresponding images)

Number of fossil occurrences per dig, by period they originated from



Fossil Occurrence per Lithology Layer per Period



Source:

[https://paleobiodb.org/data1.2/occs/list.csv?datainfo&rowcount&base\\_name=Animalia&taxon\\_reso=family&cc=EUR&show=aconly](https://paleobiodb.org/data1.2/occs/list.csv?datainfo&rowcount&base_name=Animalia&taxon_reso=family&cc=EUR&show=aconly)

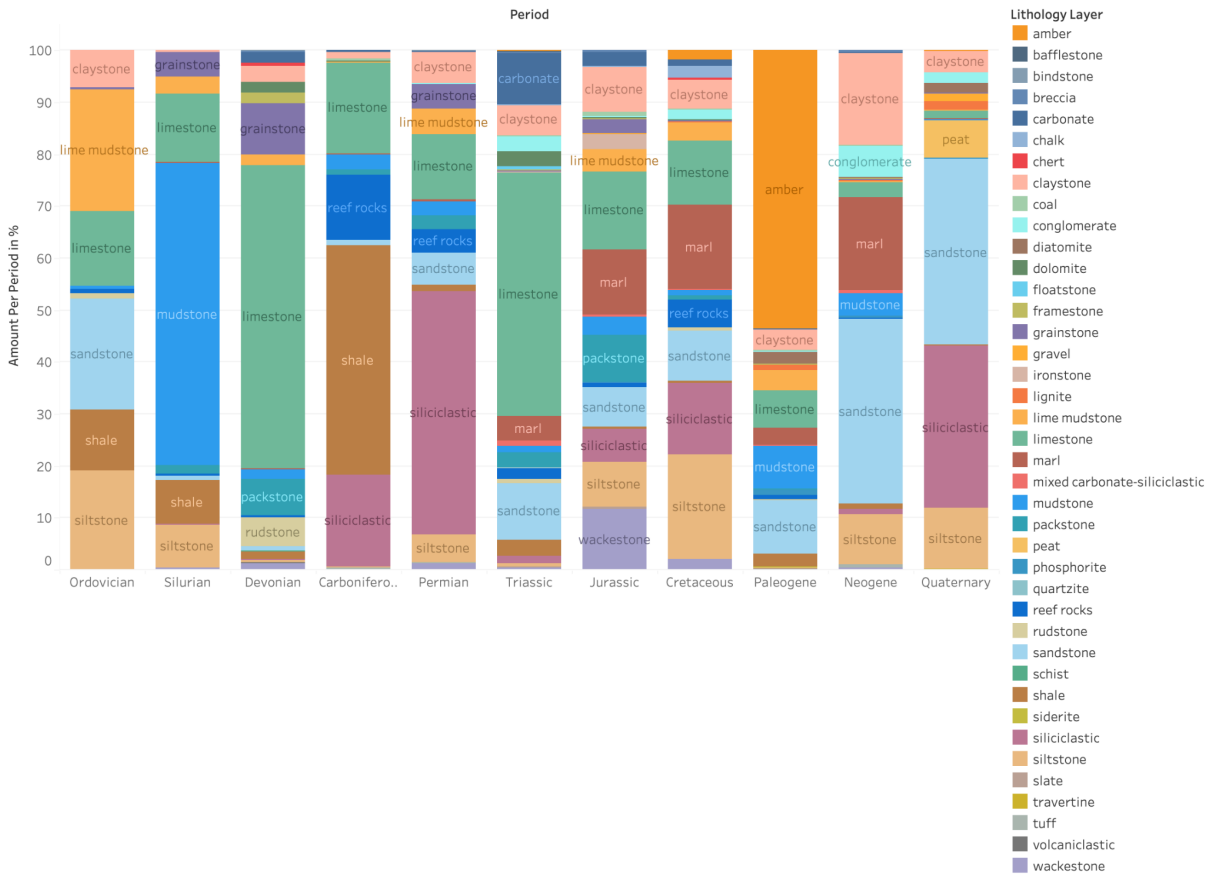
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Fossil Occurance per Lithology Layer per Period



Source:

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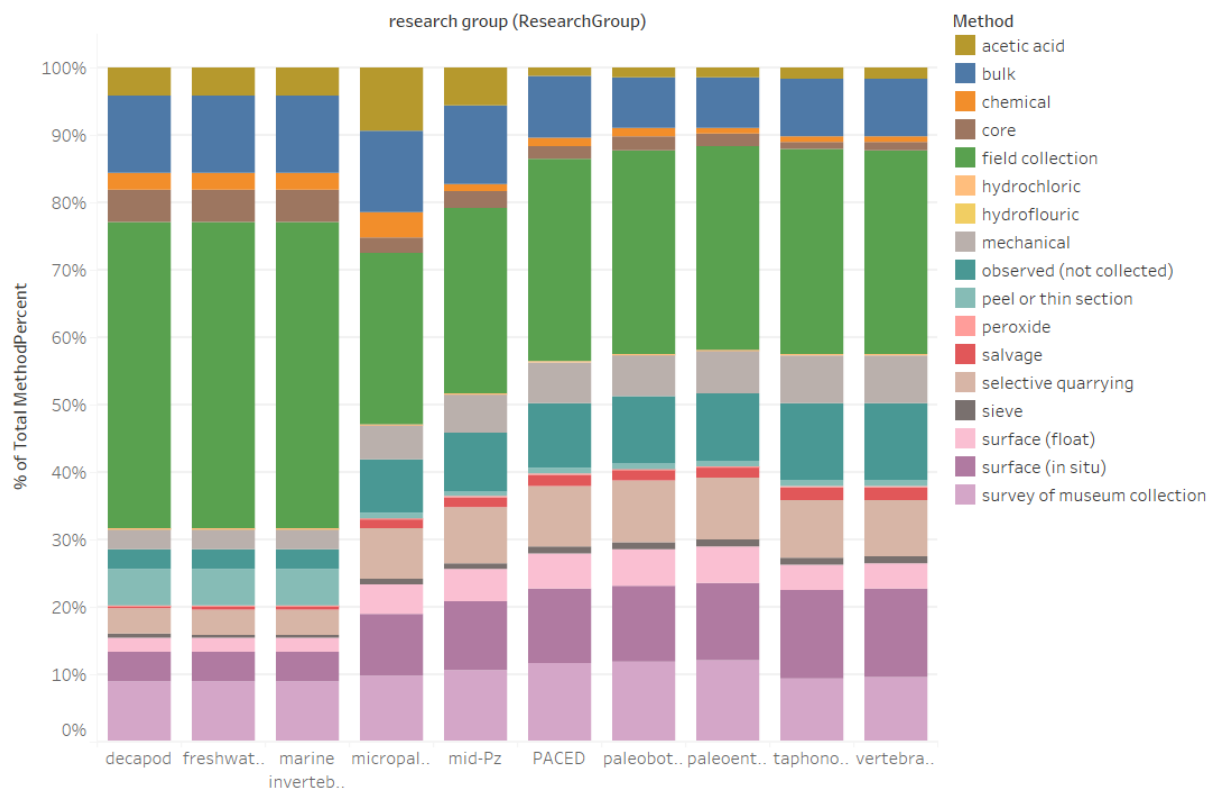
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# Denzel

Percentage of methods used per research field



% of Total MethodPercent for each research group (ResearchGroup). Color shows details about Method. The view is filtered on Method and research group (ResearchGroup). The Method filter excludes Null. The research group (ResearchGroup) filter excludes Null and GCP. Percents are based on each column of the table.

Source:

[https://paleobiodb.org/data1.2/colls/list.csv?datainfo&rowcount&base\\_name=Animalia&taxon\\_reso=family&cc=EUR&show=methods.resgroup](https://paleobiodb.org/data1.2/colls/list.csv?datainfo&rowcount&base_name=Animalia&taxon_reso=family&cc=EUR&show=methods.resgroup)

Modified Tables:

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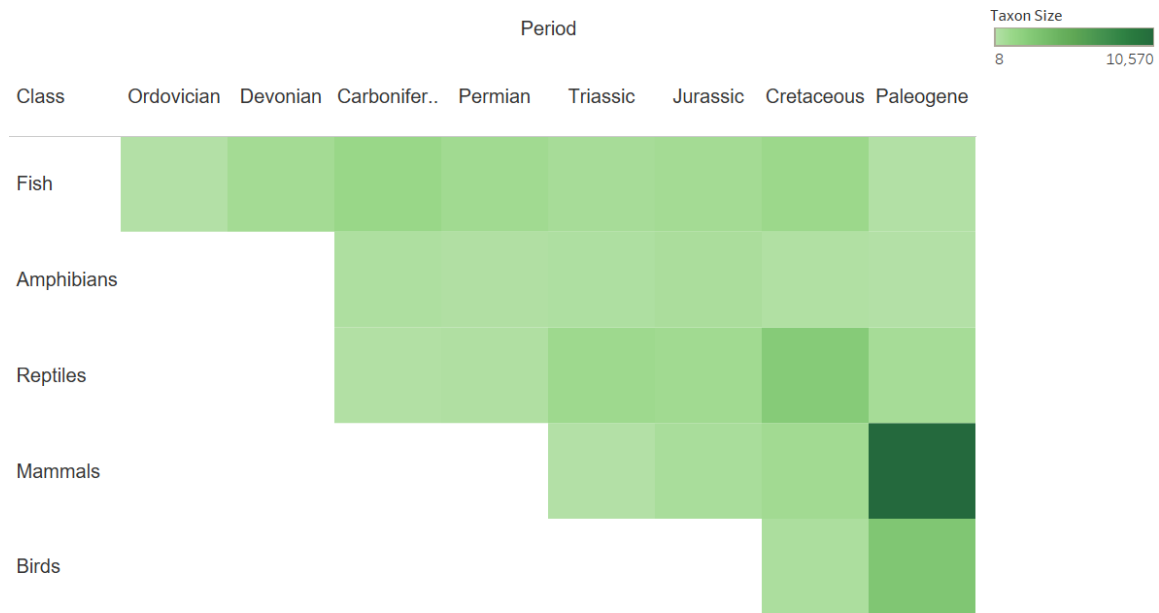
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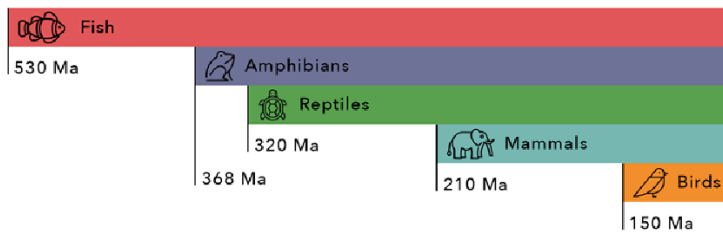
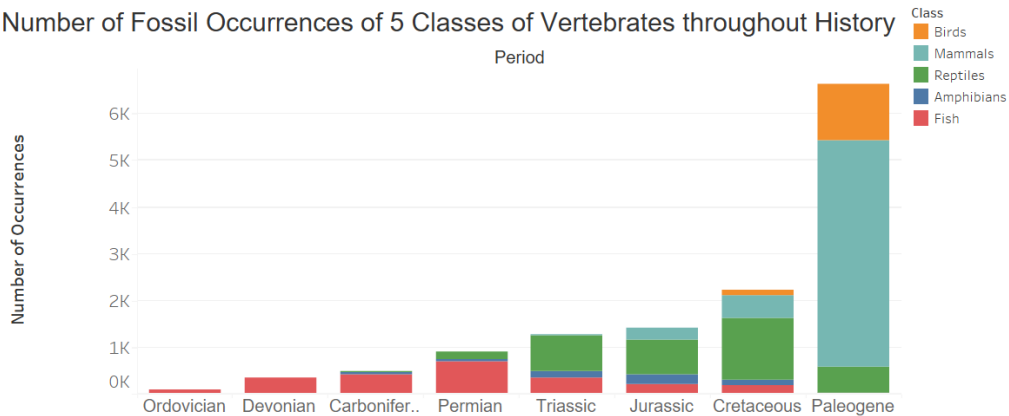
# Natan

## Biodiversity of 5 Vertebrate Classes Throughout Time Periods



Sum of Taxon Size (color) broken down by Period vs. Class. The view is filtered on Period and Class. The Period filter keeps 13 of 13 members. The Class filter keeps 6 of 6 members.

Number of Fossil Occurrences of 5 Classes of Vertebrates throughout History



Sources for both images:

[https://paleobiodb.org/data1.2/occs/diversity.csv?datainfo&rowcount&base\\_name=Animalia&count=genera](https://paleobiodb.org/data1.2/occs/diversity.csv?datainfo&rowcount&base_name=Animalia&count=genera)

[https://paleobiodb.org/data1.2/occs/list.csv?datainfo&rowcount&base\\_name=Animalia](https://paleobiodb.org/data1.2/occs/list.csv?datainfo&rowcount&base_name=Animalia)

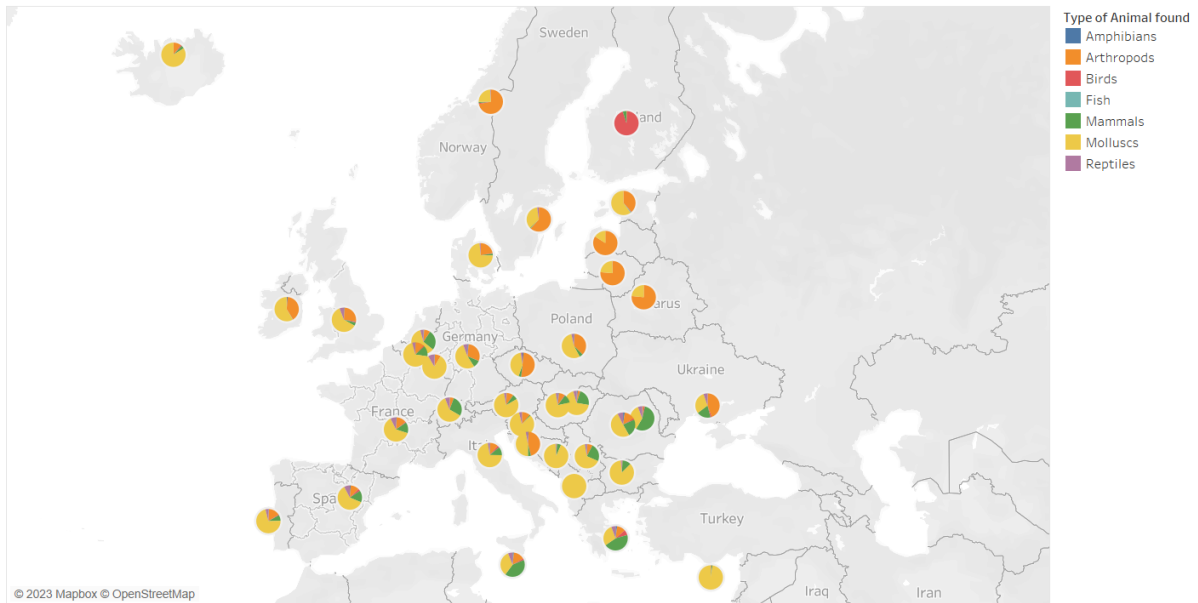
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# Denzel

Fossils found by Country and Taxa



Map based on average of Lng and average of Lat. Color shows details about Amphibians, Arthropods, Birds, Fish, Mammals, Molluscs and Reptiles. Details are shown for Name. The view is filtered on Name, which excludes San Marino.

Source:

[https://paleobiodb.org/data1.2/colls/list.csv?datainfo&rowcount&base\\_name=Animalia&taxon\\_reso=family&cc=EUR&show=loc](https://paleobiodb.org/data1.2/colls/list.csv?datainfo&rowcount&base_name=Animalia&taxon_reso=family&cc=EUR&show=loc)

[https://paleobiodb.org/data1.2/occs/list.csv?datainfo&rowcount&base\\_name=Animalia&taxon\\_reso=family&cc=EUR&show=class,aconly](https://paleobiodb.org/data1.2/occs/list.csv?datainfo&rowcount&base_name=Animalia&taxon_reso=family&cc=EUR&show=class,aconly)

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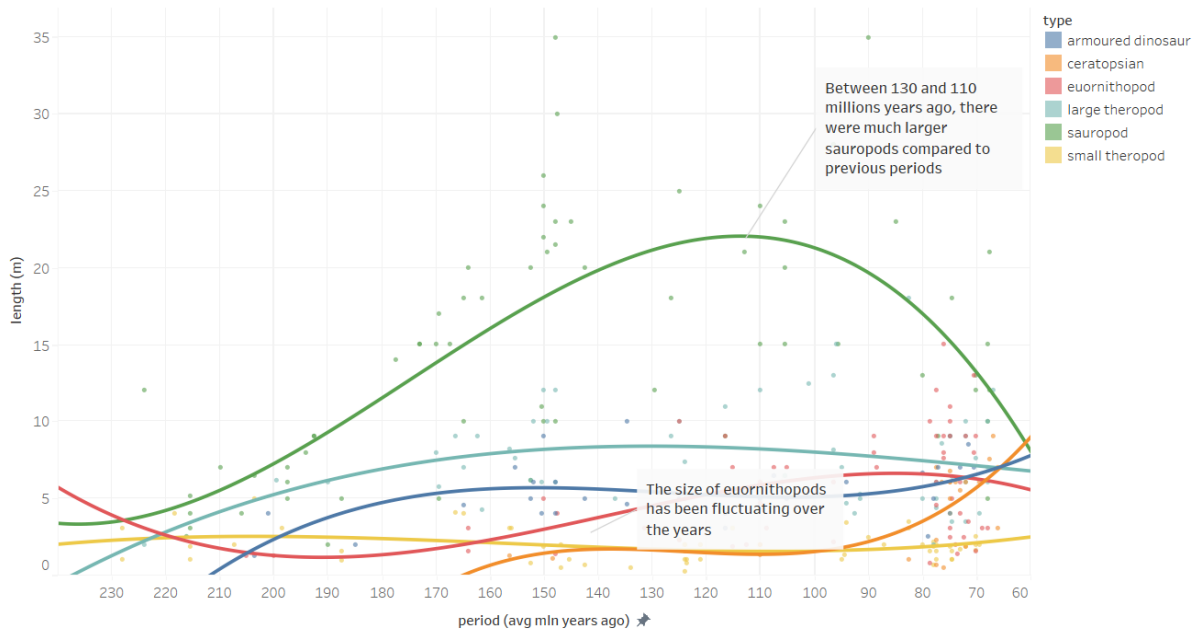
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# Wieger

Size of multiple dinosaurs from different time periods and types, polynomial



Period (avg mln years ago) vs. length (m). Color shows details about type. The data is filtered on length (m) and period (avg mln years ago). The length (m) filter keeps non-Null values only. The period (avg mln years ago) filter keeps non-Null values only. The view is filtered on type, which excludes NULL.

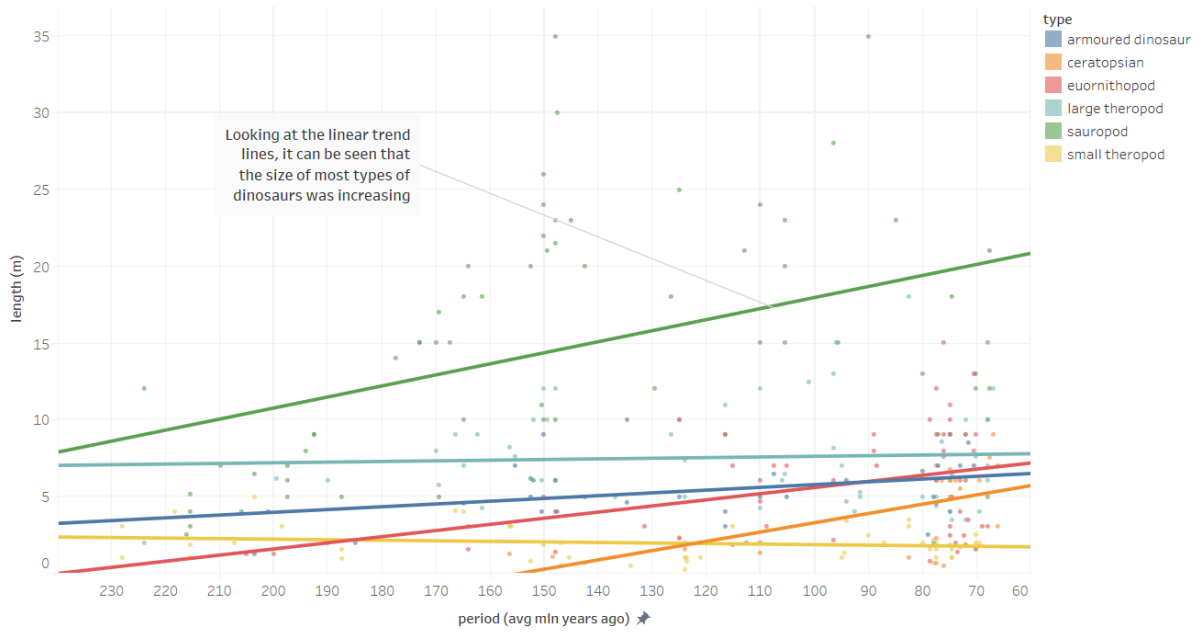
Source:

<https://www.kaggle.com/datasets/kjanjua/jurassic-park-the-exhaustive-dinosaur-dataset?resource=download>

Modified:

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### Size of multiple dinosaurs from different time periods and types, linear



Period (avg mln years ago) vs. length (m). Color shows details about type. The data is filtered on length (m) and period (avg mln years ago). The length (m) filter keeps non-Null values only. The period (avg mln years ago) filter keeps non-Null values only. The view is filtered on type, which excludes Null.

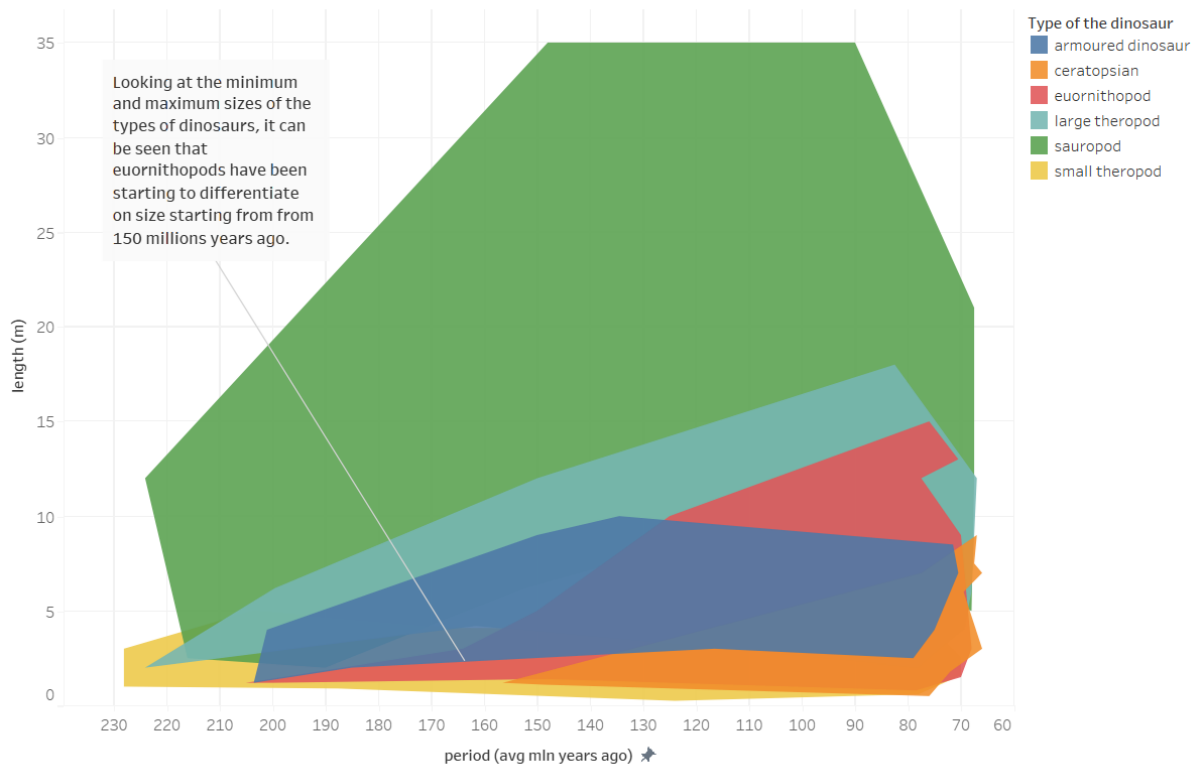
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## The minimum and maximum size of multiple types from different time periods



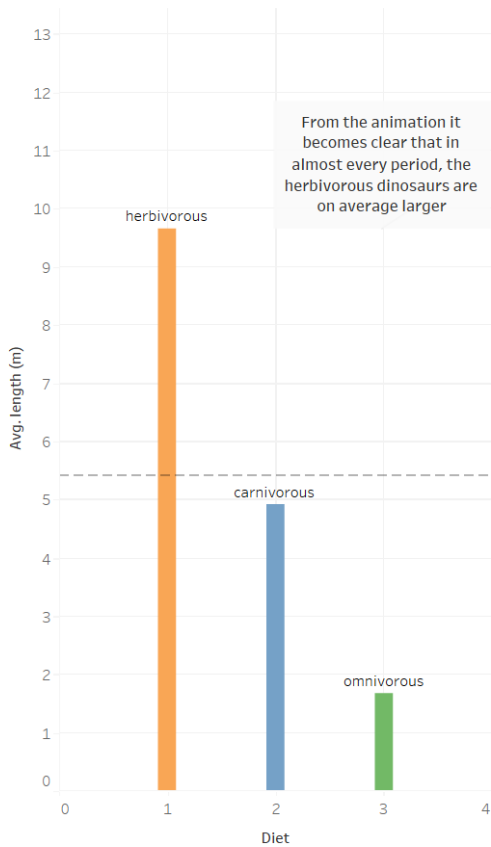
Period (avg mln years ago) (data1) vs. length (m) (data1). Color shows details about type (data1).

Source: <https://www.kaggle.com/datasets/kjanjua/jurassic-park-the-exhaustive-dinosaur-dataset?resource=download>

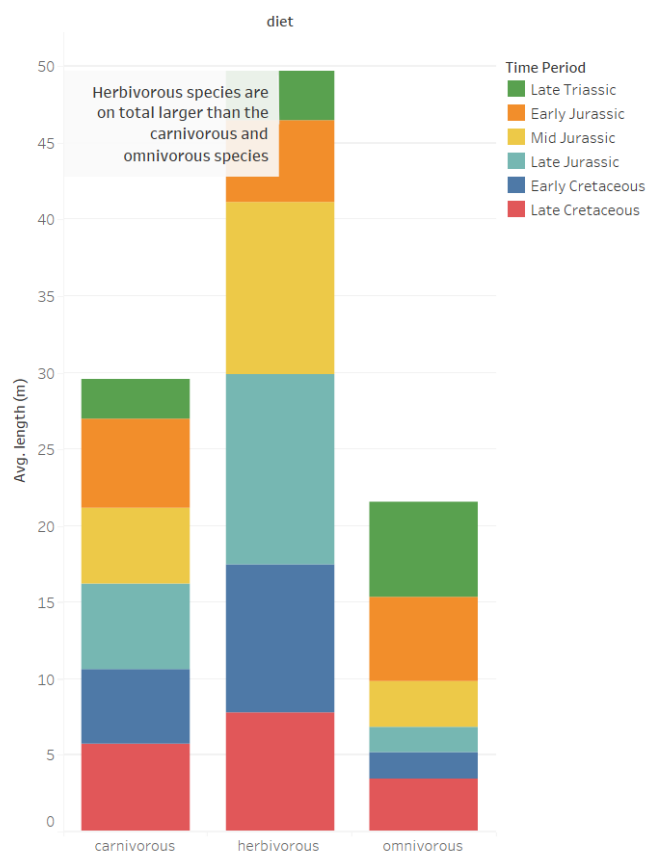
Modified:

<https://docs.google.com/spreadsheets/d/1NJ-4WUcgNgQega7FLSPw6J0sDMPeti22/edit?usp=sharing&ouid=115957461474822407499&rtpof=true&sd=true>

Average size of dinosaurs based on their diet - Early Cretaceous



Average size per diet per time period in total

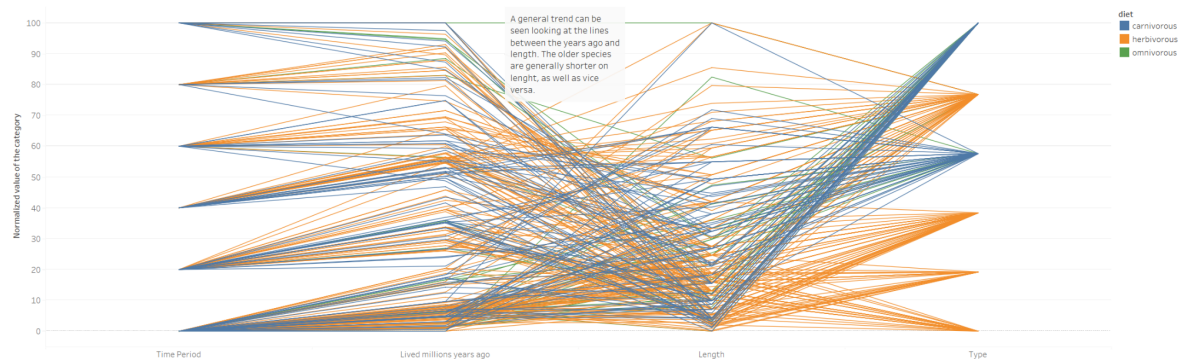


Source: <https://www.kaggle.com/datasets/kjanjua/jurassic-park-the-exhaustive-dinosaur-dataset?resource=download>

Modified:

<https://docs.google.com/spreadsheets/d/1NJ-4WUcgNgQega7FLSPw6J0sDMPeti2/edit?usp=sharing&ouid=115957461474822407499&rtpof=true&sd=true>

Time period, years ago, size and type of multiple dinosaurs



Time Period, Lived millions years ago, Length and Type. Color shows details about diet. Details are shown for name. The data is filtered on sum of period (avg mln years ago) and type. The sum of period (avg mln years ago) filter keeps non-Null values only. The type filter excludes Null. The view is filtered on diet, sum of length (m), Normalized period, Normalized length and Exclusions (diet.name). The diet filter excludes unknown. The sum of length (m) filter ranges from 0.25 to 35.00. The Normalized period filter keeps non-Null values only. The Normalized length filter keeps non-Null values only. The Exclusions (diet.name) filter keeps 386 members.

Source: <https://www.kaggle.com/datasets/kjanjua/jurassic-park-the-exhaustive-dinosaur-dataset?resource=download>

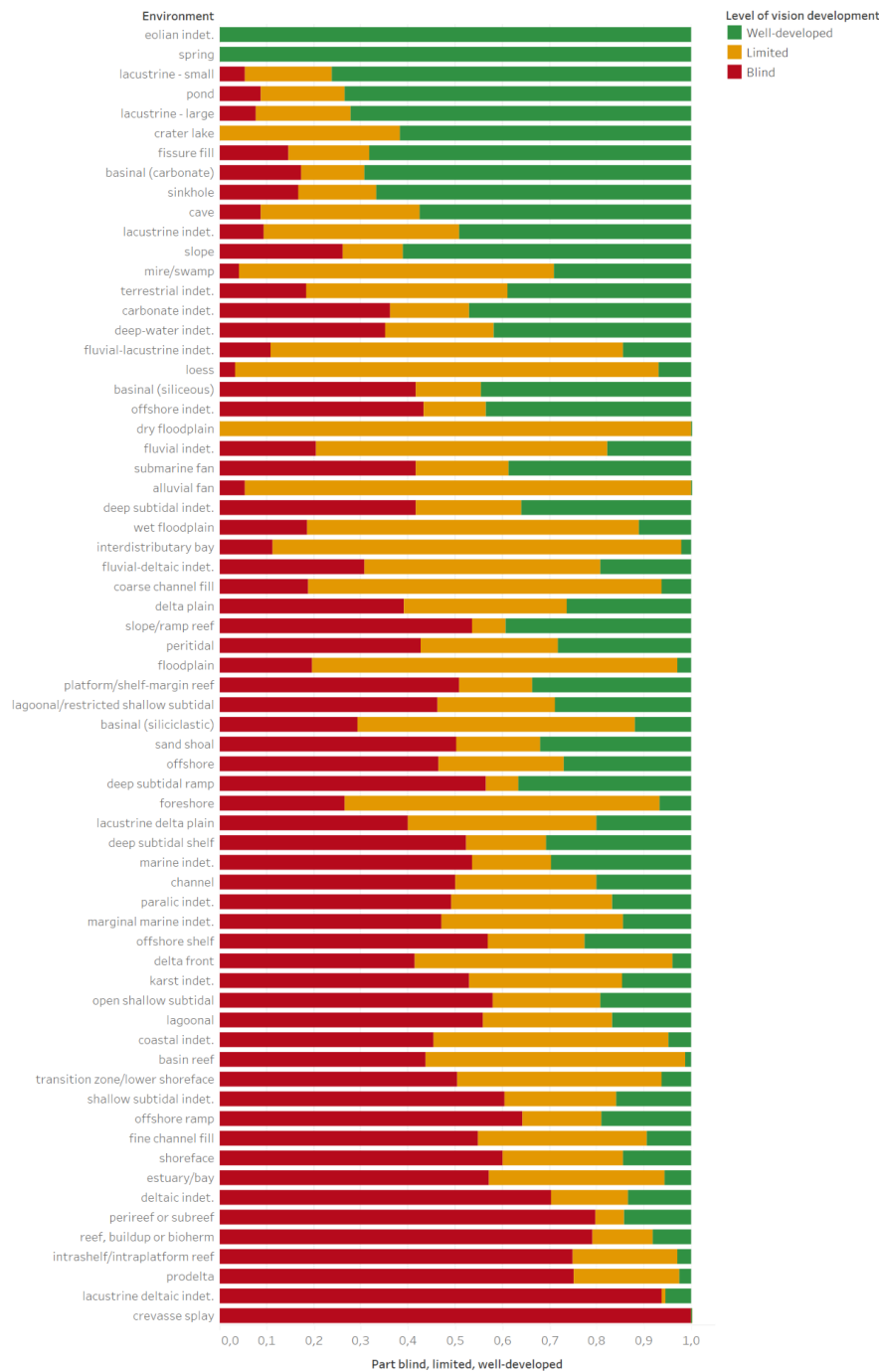
Modified:

<https://docs.google.com/spreadsheets/d/1NJ-4WUcgNgQega7FLSPw6J0sDMPeti2/edit?usp=sharing&ouid=115957461474822407499&rtpof=true&sd=true>



# Marinus

Level of vision development per environment



Well-developed, Limited and Blind for each Environment. Color shows details about Well-developed, Limited and Blind.

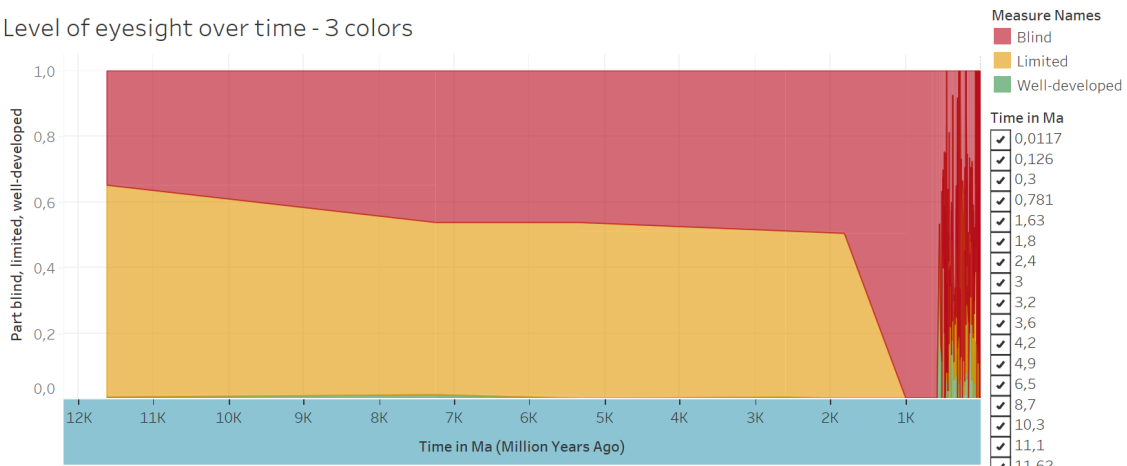
Source: <https://paleobiodb.org/data1.2/occs/list.csv?cc=EUR&show=ecospace>

Modified data:

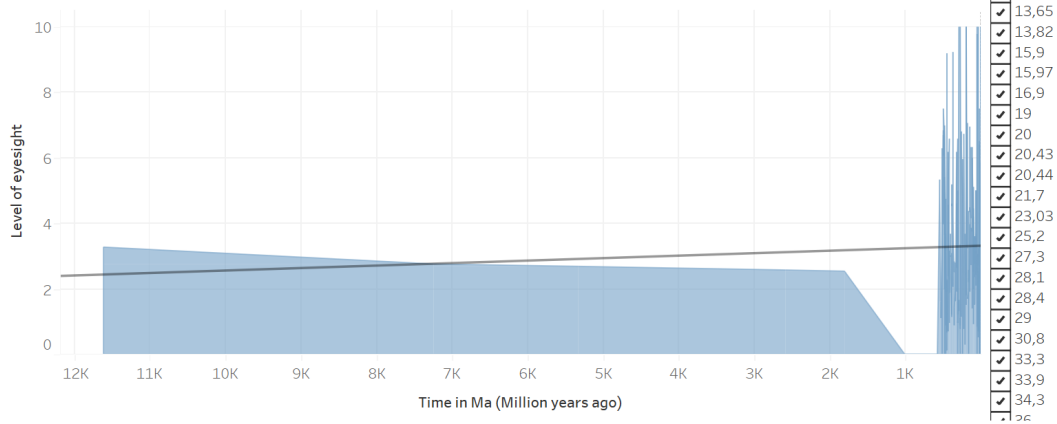
[https://drive.google.com/file/d/16GRdwLJj9vhVMY-9RRfuRYi9Wo2E-rna/view?usp=drive\\_link](https://drive.google.com/file/d/16GRdwLJj9vhVMY-9RRfuRYi9Wo2E-rna/view?usp=drive_link)

Formula used for sorting in tableau:  $[Well\text{-developed}] * 1 + [Limited] * 0.5 + [Blind] * 0$

Level of eyesight over time - 3 colors



Level of eyesight over time - tendline



Source: <https://paleobiodb.org/data1.2/occs/list.csv?cc=EUR&show=ecospace>

Modified data:

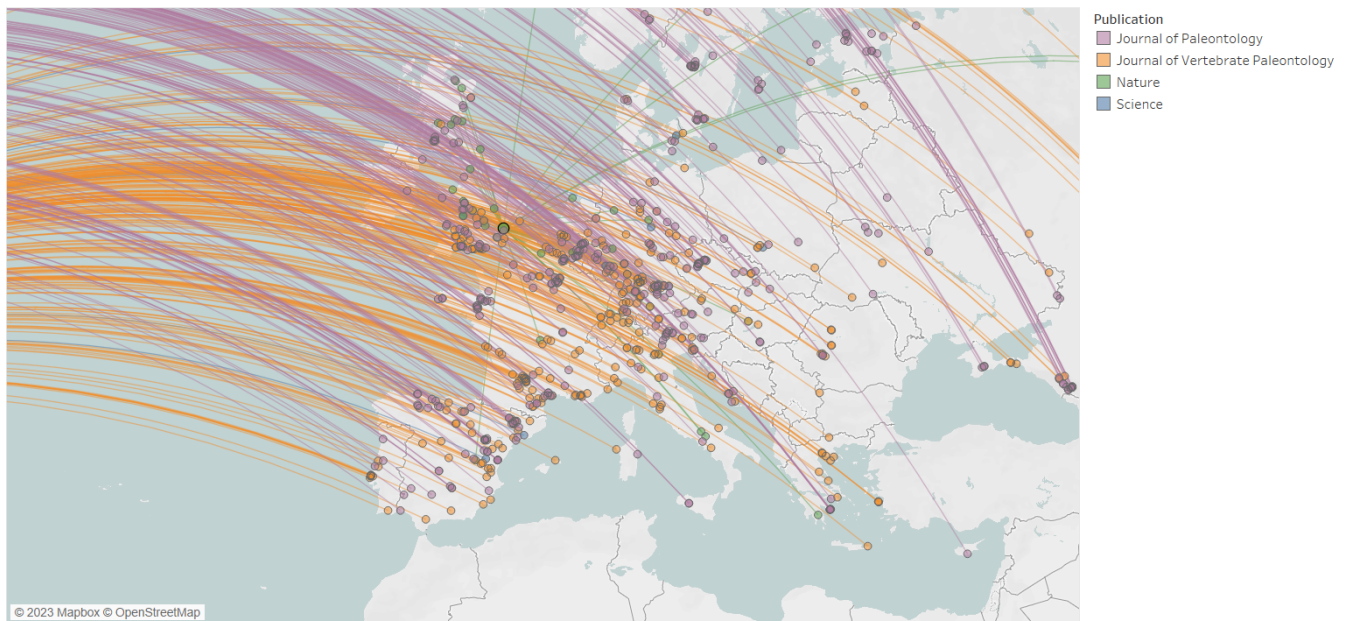
[https://drive.google.com/file/d/1Maz1LRJxDrduheO5AMPUKKfXHG4-3ij/view?usp=drive\\_link](https://drive.google.com/file/d/1Maz1LRJxDrduheO5AMPUKKfXHG4-3ij/view?usp=drive_link)

Formula used to calculate Level of eyesight in Tableau:

$[Blind]*0+[Limited]*5+[Well-developed]*10$

# Jort

## Fossils in Europe Mentioned in Scientific Journals



Map based on Longitude (generated) and Latitude (generated). The data is filtered on Year, which includes values less than or equal to 2023. The view is filtered on Publication, which keeps Journal of Paleontology, Journal of Vertebrate Paleontology, Nature and Science.

### Sources:

[https://paleobiodb.org/data1.2/occs/byref.csv?base\\_name=Animalia&taxon\\_reso=species&ident=all&idqual=certain&cc=EUR&pub\\_title=Nature&show=coords,resgroup,ref,refattr&all\\_records](https://paleobiodb.org/data1.2/occs/byref.csv?base_name=Animalia&taxon_reso=species&ident=all&idqual=certain&cc=EUR&pub_title=Nature&show=coords,resgroup,ref,refattr&all_records)

[https://paleobiodb.org/data1.2/occs/byref.csv?base\\_name=Animalia&taxon\\_reso=species&ident=all&idqual=certain&cc=EUR&pub\\_title=Science&show=coords,resgroup,ref,refattr&all\\_records](https://paleobiodb.org/data1.2/occs/byref.csv?base_name=Animalia&taxon_reso=species&ident=all&idqual=certain&cc=EUR&pub_title=Science&show=coords,resgroup,ref,refattr&all_records)

[https://paleobiodb.org/data1.2/occs/byref.csv?base\\_name=Animalia&taxon\\_reso=species&ident=all&idqual=certain&cc=EUR&pub\\_title=JournalofPaleontology&show=coords,resgroup,ref,refattr&all\\_records](https://paleobiodb.org/data1.2/occs/byref.csv?base_name=Animalia&taxon_reso=species&ident=all&idqual=certain&cc=EUR&pub_title=JournalofPaleontology&show=coords,resgroup,ref,refattr&all_records)

[https://paleobiodb.org/data1.2/occs/byref.csv?base\\_name=Animalia&taxon\\_reso=species&ident=all&idqual=certain&cc=EUR&pub\\_title=JournalofVertebratePaleontology&show=coords,resgroup,ref,refattr&all\\_records](https://paleobiodb.org/data1.2/occs/byref.csv?base_name=Animalia&taxon_reso=species&ident=all&idqual=certain&cc=EUR&pub_title=JournalofVertebratePaleontology&show=coords,resgroup,ref,refattr&all_records)

### Modified Table

[https://drive.google.com/file/d/1MnJSwDshELXOzAvEYWd7PvEJq1wmtCw7/view?usp=drive\\_link](https://drive.google.com/file/d/1MnJSwDshELXOzAvEYWd7PvEJq1wmtCw7/view?usp=drive_link)