

# OLLI Age of Reptiles

Fall 2022 with Nicole Myers

Week 5

| Geologic Time Scale |             |               |               |             |            |       |
|---------------------|-------------|---------------|---------------|-------------|------------|-------|
| EON ERA             | PERIOD      | EPOCH         |               |             |            |       |
| Phanerozoic         | Cenozoic    | Quaternary    | Holocene      | Present     |            |       |
|                     |             | Tertiary      | Neogene       | Pleistocene | 0.01       |       |
|                     |             |               |               | Pliocene    | 2.6        |       |
|                     |             |               |               | Miocene     | 5.3        |       |
|                     |             |               | Paleogene     | Oligocene   | 23.0       |       |
|                     |             |               |               | Eocene      | 33.9       |       |
|                     |             |               |               | Paleocene   | 55.8       |       |
|                     |             |               |               | Mesozoic    | Cretaceous | 65.5  |
|                     |             |               |               |             | Jurassic   | 145.5 |
|                     |             |               |               |             | Triassic   | 199.6 |
|                     | Paleozoic   | Permian       | 251           |             |            |       |
|                     |             | Carboniferous | Pennsylvanian |             | 299        |       |
|                     |             |               | Mississippian |             | 318        |       |
|                     |             | Devonian      | 359.2         |             |            |       |
|                     |             | Silurian      | 416           |             |            |       |
|                     | Ordovician  | 443.7         |               |             |            |       |
|                     | Cambrian    | 488.3         |               |             |            |       |
|                     | Precambrian | Proterozoic   | 542           |             |            |       |
|                     |             | Archean       | 2500          |             |            |       |
| Hadean              |             | 4000          |               |             |            |       |

Digital presentations associated with the course & handouts will be available at: <https://www.appreciatingearth.com/olli>

**Simplified Geologic Time Scale**, this week we will focus on the diversification of dinosaur during the Cretaceous Period of the Mesozoic Era, the Age of Reptiles.

Simplified Geologic Time Scale from: Spooner, Alecia M. "The Geologic Timescale." *Dummies*. A Wiley Brand. <https://www.dummies.com/education/science/the-geologic-timescale/>

**Cladograms:** We focus on the reptilian survivors of the Triassic & Jurassic periods that diversified as various ecosystems evolved on separated landmasses. The week 3 handout has a great dinosaur cladogram, the week 4 handout cladogram source (Open Geology) is a great way to delve deeper into the 2 Dinosaur Orders (Ornithischians & Saurischians), divided into 5 Suborders (Theropoda, Sauropoda, Ornithopoda, Marginocephalia, Thyreophora)

Brusatte, S.L., O'Connor, J.K., Jarvis, E.D. (2015). The origin and diversification of birds. *Current Biology* 25, R888–R898. The relationships of birds and the evolution of key traits. *Solid black lines* indicate the span of time each lineage is known from the fossil record.

<https://www.sciencedirect.com/topics/earth-and-planetary-sciences/pterosaur>

