International Seminar on Paleontology, Evolution, Paleoecosystems and Paleoprimatology Videoconference

Thursday 6 January 2022 – 13h00

Reptile Body Size Histories in climatic and community contexts:

Across the Cenozoic and in the Shungura Formation

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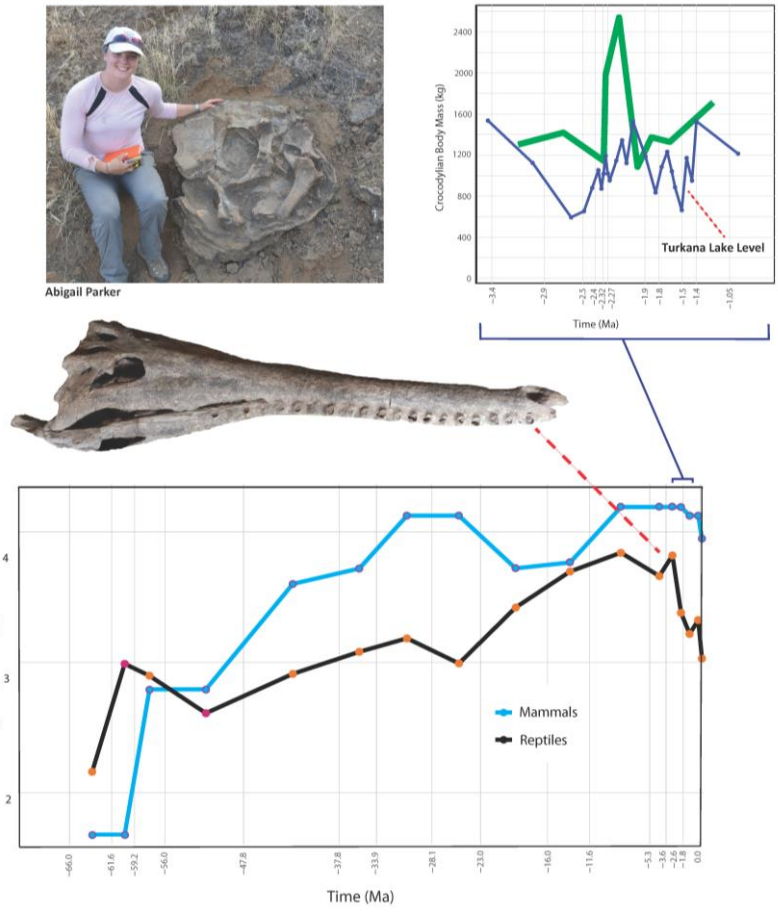
My PhD research has focused on the evolution of maximum body size across extant reptiles. I characterized maximum body size trends of crocodylians, turtles, lizards, snakes, and birds across all terrestrial continents through the Cenozoic. These histories reveal coordinated trends in maximum size change between reptiles and mammals across the Cenozoic. Size increase across groups is associated with global cooling, but temperature is not supported as a causal driver of reptile size evolution. I further consider the relationship between paleoenvironment and reptile size through a case study of the reptile faunas of the Shungura Formation. East Africa is home to the largest crocodylian (*Euthecodon*), snake (*Python*), and terrestrial tortoise known from the Plio-Pleistocene. The high-resolution records from the Shungura Formation allowed me to identify that aquatic reptile body size is linked to regional hydrological regimes, while terrestrial tortoise size is linked to the presence of open grassland habitats.



Abigail Parker *is currently completing her PhD under the direction of Jason Head at Cambridge University. She has been participating to the field campaigns of the Omo Group Research Expedition in the Shungura Formation (Ethiopia) since 2018.*