GEOL 204 The Fossil Record

Spring 2020 Section 0101

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Fossils

This Lagerstätten site has exceptionally preserved fossils. Some of these fossils include structures that are rarely found in the fossil record, such as soft tissues, patterns of coloring, nerviation, and gut tracts (Buscalioni, A.D.). Below are some of the other animals that researchers have found fossils of.





Fig. 1: Tamura, N. (Albanerpeton); Venczel, M.

Europejara (pterosaur)





Fig. 2: "Euro"



Importance

The Las Hoyas site has recorded a wide array of species of diverse plant and animal taxa. At present, the biodiversity count comprises 118 families and 201 species. A fossil of an early type of mammal was found in sediments in Las Hoyas that date from 125 million years ago (Early Cretaceous), demonstrates that mammals had effectively evolved the same type of fur seen in extant mammals today. The fossil was excavated from the limestone lake bed sediments at Las Hoyas in the Iberian mountains of Cuenca Province in 2012. The fossil was identified as a member of the Eutriconodonta, a diverse Order of primitive mammals which probably evolved in the Jurassic.

The paleontological heritage of the Las Hoyas site in Cuenca, Spain has also become a relevant part of the socio-cultural identity of Castilla-La Mancha autonomous community in general, and of Cuenca province in particular.



The prepared holotype specimen – *S. xenarthrosus "Las Hoyas..." 2015.*



An Illustration of *Spinolestes* xenarthrosus "Las Hoyas..." 2015.

Las Hoyas

Crusafontia (mammal)

Microbial mats: responsible for the preservation of soft tissue in many fossils The iron carbonate depositions, as a result from bacterial metabolism which covered the dinosaur's crest increased the preservation of those soft tissues. Evidence of these mats comes from the studies on microfacies and the fossils themselves. **Abruption:** Notable in the formation, due to the presence of complex specimens. From studies on several different organisms it can be estimated that the burial of most entities was quick. Stagnation: Millions of years with the lack of external forces on the site created an untouched site of easily accessible fossils.



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Geological Layout



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