

204-14 - THE FOSSIL SNAKES FROM RANCHO LA BREA AND THEIR PALEOBIOGEOGRAPHICAL IMPLICATIONS

 Tuesday, September 24, 2024

 5:15 PM - 5:30 PM

 207D (Anaheim Convention Center)

Abstract

Snakes are one of the favorite groups among herpetologists. The fossil record of snakes is dominated by the presence of vertebrae and several publications about the morphology of the snake's vertebrae have facilitated identification in the fossil record. Rancho La Brea (RLB) in Los Angeles, California, is a paleontological site where naturally-occurring seeps of asphalt have trapped and preserved hundreds of species over the past 60,000 years. The fossil snakes are the best-studied herpetofauna at RLB, since 1950's three studies have been conducted, identifying 2 families, 10 genus and 11 species. In this study, we analyzed the RLB fossil collection from the La Brea Tar Pits Museum (LBTPM) and the University of California Museum of Paleontology (UCMP) to develop a complete snake taxonomic list for this site. We compared the fossil material with recent skeletal material from the Herpetological Collection of the Natural History Museum of Los Angeles County (LACM), the Museum of Vertebrate Zoology (MVZ) at U.C. Berkeley, and the UCMP. We add the presence of the threadsnake (*Rena*), shovel-nosed snake (*Chionactis*), leaf-nosed snake (*Phyllorhynchus*), and patch-nosed snake (*Salvadora*) to the list of identified snake species from RLB. Four of the fossil snakes identified from RLB are no present in the Los Angeles area today, indicating distribution changes during the Pleistocene, possibly resulting from vegetation and/or climate change. The genus *Chionactis*, *Phyllorhynchus*, *Rhinocheilus*, and *Salvadora* are currently ranged in the Mojave and Sonoran Desert regions, indicating a relationship with the Southwestern California region (where is the RLB located) during the Pleistocene. More morphological studies are necessary to be able to separate between different species of fossil snakes, because the species have restricted ecological characteristic that will allows us to obtain more information to understand the Quaternary climate change of southern California.

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