Geophysical Research Abstracts
Vol. 19, EGU2017-15264, 2017
EGU General Assembly 2017

Recent advances on the knowledge of the Eocene primates from the Pyrenean Basins (NE Spain)

Raef Minwer-Barakat (1), Judit Marigó (1), Joan Femenias-Gual (1), Salvador Moyà-Solà (1,2,3)

(1) Institut Català de Paleontologia Miquel Crusafont, Universitat Autònoma de Barcelona, 08193 Cerdanyola del Vallès, Barcelona, Spain, (2) Unit of Anthropology, BABVE Department, Universitat Autònoma de Barcelona, 08193 Cerdanyola del Vallès, Barcelona, Spain, (3) ICREA, Pg. Lluís Companys 23, 08010 Barcelona, Spain

The Eocene was one of the warmest epochs of the Cenozoic and documented the first occurrence of several orders of modern mammals. Among them, Euprimates underwent a very important radiation favored by the development of dense forests throughout the Northern Hemisphere. Two main groups reached a great abundance and diversity during the Eocene, Adapiformes and Omomyiformes, which are related to the main clades of living primates (strepsirrhines and haplorhines, respectively).

In the Iberian Peninsula, Eocene primates have been known since the 1960s, when several fossil sites containing prosimian remains were discovered. Nevertheless, it was not until 2010 that the research on Eocene primates from Spain has increased strikingly, and the results achieved in this last stage have surpassed those of the whole past century in terms of number of publications.

Besides some interesting findings in the Ebro, Almazán and Miranda-Trebiño basins, the Pyrenees have yielded the most abundant record of Eocene primates from the Iberian Peninsula, constituting therefore an excellent region for evaluating the evolution of primates through this epoch. In the early Eocene continental deposits of the Àger area, adapiforms are well represented, with three species of the genus *Agerinia*. Besides, the only record of Plesiadapiformes (archaic primates) from Spain has been documented in this zone.

The middle Eocene is particularly well represented in the Eastern Pyrenees. In the section of Sant Jaume de Frontanyà, three primate species have been described in the last years. The adapiform *Anchomomys frontanyensis* and the omomyiform *Pseudoloris pyrenaicus*, found in the oldest levels of the section, and the omomyiform *Necrolemur anadoni*, identified in the youngest levels, have allowed reconstructing the relationships of these taxa with their correlatives found in other parts of Europe.

Late Eocene deposits with mammal remains crop out in the area of La Pobla de Segur. The most relevant fossil site of this age is Sossís, with remains of four different primates. Although this locality was discovered during the 1940s, the detailed study of these primates was made in the last four years, including the description of the abundant sample of *Pseudoloris parvulus*, as well as the erection of two species: the adapiform *Nievesia sossisensis* and the omomyiform *Microchoerus hookeri*. Moreover, new fieldwork is in progress in all the above mentioned areas, and the material from some new localities is currently under study, so the knowledge about the Eocene primates from the Pyrenees will be likely improved in the next years.

Therefore, the Pyrenean Basins represent an exceptional area for studying the evolution of the first primates that inhabited Europe, since their occurrence in the early Eocene to their nearly complete disappearance from the continent at the end of the Eocene. Moreover, some of the species lately described in the Pyrenees have also been identified in Central Europe, evidencing a similar, forested environment occupying a great part of the continent in this epoch.