



PLENARY LECTURES

FOSSIL RECORD AND THE ORIGIN OF THE MEDITERRANEAN LIZARD ASSEMBLAGES

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The fossil record offers the only direct evidence concerning the spatial and chronological dimensions of the evolutionary processes occurred in the past. However, completeness of the record and its knowledge does not always allow researchers to have precise enough information to provide accurate evolutionary scenarios and support the calibration of molecular phylogenies. As far as Mediterranean lizards (here considered as non-snake squamates) are concerned, the main obstacle to the study of the fossil record is the poor knowledge of the osteology of extant taxa, in particular their postcranial skeleton, combined with the apparent osteological uniformity of certain clades (e.g., *Podarcis*). Conversely, the record itself is relatively good: limiting the analysis to the Neogene and Quaternary, the time window that saw the origin and development of the Mediterranean Basin, Europe currently offers more the 2600 taxon/locality data, whereas only few dozen pertain to the rest of the area surrounding the Basin. What do all these data tell us? Are they all from extinct taxa? How many of them really pertain to Mediterranean lizards? Were the lizard assemblages of the three main European peninsulas always taxonomically diverse? What about the evolution of the insular taxa? How can we improve our knowledge of the roots of the Mediterranean lizards, and those of the non-European ones in particular?