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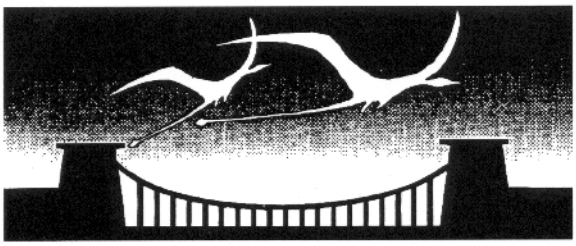

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NEOTENY AND PAEDOMORPHOSIS AS EVOLUTIONARY FACTORS IN TERTIARY AMPHIBIA .

Roček, Z. Geological Institute, Prague, Czech Republic

The Tertiary Amphibia of Europe include some forms that are related to contemporary species but in which adults are much more ossified. When various developmental stages of a single taxon are documented in the fossil record, the cranial structures of adults of contemporary species correspond to earlier developmental stages of Tertiary forms; the postcranial skeleton is not affected. The phenomenon is exemplified by a common European Tertiary anuran *Latonia* (Discoglossidae); the cranial elements of subadults of *Latonia* correspond to those in adults of contemporary *Discoglossus*. Similar relations may be found between Tertiary salamandrid *Chelotriton* and contemporary *Tylototriton* and *Echinotriton*, and even between two Tertiary forms, *Chelotriton* and the late Oligocene *Brachycormus*. Comparison revealed that the final pair differ not only in the degree of their ossification but also in that *Brachycormus* retained an ossified branchial apparatus, suggesting a shift towards neoteny. Since disappearance of heavily ossified forms and their substitution by forms ossified to a lesser degree corresponds to periods of climatic deterioration in the late Oligocene and Pleistocene, it is apparent that abbreviation of somatic development played a significant role in surviving these unfavourable periods.