

Strange tadpoles from the lower Miocene of Turkey: Is paedogenesis possible in anurans?

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Fossil material from the lower Miocene collected in the basin lake of Beşkonak (Turkey) included 19 slabs showing 19 amphibian anuran tadpoles of rather large size, at Gosner stages 36–38. These well preserved specimens show many morphological and skeletal characters. They are here tentatively referred to the genus *Pelobates*. Two of these tadpoles show an unusual group of black roundish spots in the abdominal region, and a third similar group of spots is present in another slab but we were unable to state if it was associated with a tadpole or not. Several hypotheses can be proposed to account for these structures: artefacts; intestinal content (seeds; inert, bacterial or fungal aggregations; eggs); internal or external parasites; diseases; eggs produced by the tadpole. The latter hypothesis is discussed in detail and is shown to be unlikely for several reasons. However, in the improbable case where these spots would correspond to eggs, this would be the first reported case of natural paedogenesis in anurans, a phenomenon which has been so far considered impossible mostly for anatomical reasons (e.g., absence of space in the abdominal cavity).

Key words: Amphibia, Anura, egg, fossil, paedogenesis, tadpole, Miocene, Turkey.

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