



INTRODUCTION

Zdeněk V. Špinar published his first paper on fossil frogs in 1952, shortly after he completed his papers on the genus *Melanerpeton* and dissertation on Moravian Discosauriscidae. At that time, he was more of a field geologist than a paleontologist. Lacking thorough paleontological training, which currently mandates an understanding of the anatomy of recent vertebrates, Špinar's investigation necessitated that he teach himself about the anatomy of fossil amphibians. In the early 1950s, studies of fossil frogs in Europe were still heavily influenced by works published in the previous century by Meyer (1860) and Wolterstorff (1886, 1887). Those classical, descriptive treatments were focused largely on palaeobatrachids, with other taxa reported only occasionally. One of those other taxa was the pelobatid *Eopelobates anthracinus*, described in 1929 by Parker on the basis of an imperfectly preserved imprint of a skeleton in dorsal aspect (another fossil pelobatid had been described earlier as *Zaphryssa eurypelis*). Most of the articulated frog fossils that Špinar studied from the Oligocene locality of Bechlejovice were palaeobatrachids. However, the sample also contained a single skeleton that he correctly assigned to *Eopelobates*, even though he initially was not able to examine Parker's original specimen of *Eopelobates* in London, due to travel restrictions imposed on citizens of the former Czechoslovakia. Instead, his only source for comparisons and for establishing a new species was Parker's not particularly accurate illustration and description. Only later, when Špinar was allowed to travel to London in 1965, he was able to check and refine his original comparisons.

It is interesting to compare the level of knowledge about fossil frogs in Europe seventy years ago, when Špinar began his investigations at Bechlejovice, against today's state of affairs. We now have a better understanding of taxonomic diversities thanks, in part, to descriptions of new fossils and taxa and, in part, to studies of previously reported fossils and taxa (e.g., over a century after it was described in 1866, the above-mentioned *Zaphryssa* was recognized as a member of *Pelobates*). Ongoing field collections and more precise documentation of fossil localities means we are now much better informed about paleogeographic, stratigraphic, and temporal distributions of fossil anurans. Knowledge of the comparative anatomy of extant and fossil anurans also has greatly improved. Samples for some fossil anurans are so rich that it is possible to investigate both individual and developmental variation. In such cases, it is often possible to synonymize taxa that had been erected on developmental stages of other taxa. Large collections of fossil tadpoles, especially of pipoids, pelobatids and ranoids provide

valuable insights into the development of fossil frogs. As a result of all this new material and information, frog fossils have become increasingly central to studies on the evolution of frogs. For example, they are critical for refining phylogenetic relationships, calibrating times of origins for groups, and documenting the sequence and timing in which hallmark features were acquired. Taken together, the whole scene has changed dramatically since Špinar began his frog research – paleontology is no longer just a descriptive discipline, the main task of which was just to enlarge lists of taxa, but it is now an integral part of biology, which deals with animals and plants of the geological past, and strives to place them into their proper evolutionary context.

For obvious reasons, the above-mentioned aspects of contemporary research on fossil anurans cannot all be accommodated in this volume commemorating the 100th anniversary of the birth of Zdeněk Špinar. Instead, the papers presented herein deal with a selection of topics most closely related to his interests. This volume also is an opportunity to remind younger generations of paleontologists, to whom the name Špinar is just one of many contained in lists of references, about the early days of fossil frog research, and how far we have come, and how far we still have to go, in deciphering the evolutionary history of anurans.

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