

Abstract

Ectothermic animals are traditionally regarded as organisms with rather limited ability and need to care for their offspring compared with endothermic animals. This is related to their lower metabolic demands, higher rate of offspring development, greater tendency towards the r-strategy, physiologic adaptations, and poorer social life. One exception, however, is the group of Crocodylia, where we see increasing evidence of rich parental life. This bachelor thesis focuses on summarizing available literature on parental care in crocodiles. Besides the widely popular nest construction, its attendance and defense, crocodilians are also known for active assistance during the hatching of their offspring. Young crocodiles produce acoustic signals from inside their eggs towards their parents, and this vocalization often plays a crucial role in the successful completion of incubation in the form of hatching. Crocodilian parental care does not end there. Many crocodilian species actively guard their offspring in so-called nurseries. Acoustic communication between parents and their young continues. Calls from the parents towards their offspring usually have a warning or a summoning function, while signals from young crocodiles are emergency calls in imminent danger. This bachelor thesis aimed to gather all information on parental care of all described crocodilian species to subsequently map out different types of parental care on a phylogenetic tree. This enables us to monitor crocodilian parental care distribution within specific families and consider the evolution of such behavior in the entire order. I added my own observations from the Protivín Crocodile Zoo. Thus, the thesis contains entirely new, unpublished data. In addition, my years-long work with crocodiles helped me critically assess disputable observations and interpretations found in both crocodile farming literature and scientific literature. The results show that most types of parental care are present across the entire taxon and appear to have been present in the ancestor itself, i.e., they are present ancestrally in the very basis of crocodiles. Regarding the crocodilian phylogenetic position as a sister group to birds, it corresponds with the broader phylogenetic context of parental care evolution in Archosauria.

Key words: parental care, crocodilians, Crocodylia, acoustic communication, parents, offspring, ancestral state