

## **Abstract**

Monitor lizards (Varanidae) are morphologically very uniform in body shape, but much diversified in body size along both phylogenetic and ontogenetic axes. A striking sexual size dimorphism exists in monitor lizards; they are capable of fast growth, metabolism and sexual maturation. I collected the data concerning body size of particular species and verified the validity of Rensch's rule, which said that there is bigger difference in body size of a conspecific male and females growing with larger body size of the species. Males are markedly bigger than females. In the next step, I focused on the model species of monitor lizards, *Varanus indicus*. I monitored its ontogeny very carefully. I found that this monitor lizard has pronounced sexual size dimorphism, but there are only small differences in body shape. It is capable of rapid growth and sexual maturation. The sexual dimorphism in body shape is only poor, but still measurable right in those places where the selection pressures were expected. Blood sampling monitored biochemical and haematological parameters. The concentrations of the biochemical parameters revealed the economy of resources of particular sexes partially, the costs of body growth and reproduction. Although both sexes produce the same amount of biomass (the body growth of males vs. the reproduction of females), it seems that the investment to the reproduction is qualitatively more expensive. The evaluation of haematological parameters revealed the size dependency of red blood cells on the body size. By the detailed study of one species of monitor lizard this work aimed to explain the general rules and interconnection of the biological processes in the life of a whole group of monitor lizards.