

Abstract

Sex determination among reptiles is a very variable matter across its taxa. We meet there temperature sex determination and genotypic sex determination with many independent transitions between them. It is a group suitable to study evolution of sex determination, sex chromosomes and sex determination genes.

Rare cases of sex reversal caused by extreme incubation temperature or exogenous hormones have been reported in recent years. In case of Acrodont lizard, *Pogona vitticeps*, was reported sex reversal caused by high incubation temperatures. Our purpose was to repeat the experiment, mainly due to insufficient conclusiveness of used methods. We wanted to expand the experiment by hormonal reversal, studying persistence of sex reversal to maturity and fertility of reversed individuals.

We managed successfully to demonstrate sex reversal in both treatments by histological examination. Individuals with discordant phenotypic and genotypic sex were breed till one year of life, which demonstrate persistence of reversal. Our outcomes are concordant with most recent work on this species and show full functional phenomenon of sex reversal with reptiles, which studying could contribute to our understanding of evolution of sex determination.