

A Blue-tongued skink (*Tiliqua gigas*) is a rare exotic species which is very popular between breeders. Nevertheless, the social structure of this charismatic skink remains almost unknown. Because of its high aggressiveness and difficulties connected with study in its natural habitat, experiments based on the odor discrimination looks like a good alternative for its better understanding. Our results revealed that the reaction on the odor is generally poor and is very individual. We observed the highest response of interest on odors produced through dorsal parts of skin. The reaction on conspecific's odor did not lead to escape behavior.

Behavioral analysis was complemented by morphological analysis of heads in *T. gigas* and *T. scincoides*. These species are divided into separate subspecies, which are formed by geographically distinct populations. We wondered whether it is possible to separate these populations by geometric morphometrics and whether this separation is consistent with phylogenetic studies. We found out that if the populations are united in bigger groups based on their congeniality they seem to be distinct according to the head shape. Our results also revealed the monomorphy in head shape. Unfortunately, it is very difficult to distinguish between sexes due to the absence of sexual dimorphism. Here we propose a new method for sex discrimination based on the collection of hemipenis sloughs. The identification of slough leads to the certain identification of male sex and it can help many breeders and scientists to prevent the aggressive fights of this species in the future.