

Abstract

Recently are known several different navigational systems in reptiles, mainly large scale navigational abilities based on sun and magnetic compass. The turtles are frequently used species in studies of spatial cognition, however, informations about spatial cognitive abilities in snakes and lizards (order Squamata) are only a few. Current knowledge concerning mechanism of small scale navigation based on allothetic orientation in snakes and lizards is only poorly understood. Aim of this thesis is review the literature about the mechanisms of reptile spatial orientation focused on allothetic navigation (using of external landmarks). As extension of this thesis is review of the principles of testing allothetic orientation in other groups (e. g. mammals) that were frequently used as a subject for testing allothetic orientation). The design of tests of allothetic orientation in model species of lizards (*Eublepharis macularius*) is one of the results of this thesis.

Keywords: reptiles, spatial orientation, allothetic navigation