

## ABSTRACT

The aim of this study was to summarize all what is known about the karyotype and about sex chromosomes in the lizard clade Laterata and to analyze this two gained datasets by means of a phylogeny. Karyotype represents a whole number of chromosomes in a cell and it is an important source of informations on how the genetic information in nucleus is organized and how it works along with the evolution. The Laterata clade consists of four big groups of squamate reptiles: Teiidae, Gymnophthalmidae, Amphisbaenia and Lacertidae. All the groups have a genotypic sex determination system (GSD) and some species within these clades posses sex chromosomes. If they are present, in Teiidae and Gymnophthalmidae it is the XY sex chromosome system which determines the sex of a specimen. On the other hand, in Amphisbaenia and Lacertidae it is the ZW system of sex determination. Sometimes the  $X_1X_1X_2X_2:X_1X_2Y$  or  $Z_1Z_1Z_2Z_2:Z_1Z_2W$  sex chromosome system occurs in Teiidae / Gymnophthalmidae or in Lacertidae, respectively.

The phylogenetical analysis was performed in Mesquite programme and the output from the analysis is a phylogenetical tree with two characters (number of chromosomes and the sex determination system) and the maximum parsimony counted for each of them. Then the interpretation was on the order and it is the main part of this study.

Key words: karyotype, sex chromosomes, phylogeny, reptiles, lizards