The first steps on land of tadpoles after metamorphosis, the first flight of the chick, the first breath of an infant is one of the many challenges that life puts before juveniles. However, before they can respond to these challenges they must leave the mother's body, or get out into the world from often hard egg shells. Hatching, is common in the animal world. Different, however, can be the time and mechanism of hatching. In the course of evolution Nature attempted to answer how to solve the problem of "coming into the world" several times. Widest range of ways to escape from the egg shells is used by invertebrate animals. One of the easiest ways to get out of the egg was to use the phenomenon of osmosis and thereby increase the osmotic pressure of the fluid in the extra-embryonic coelom, which is causing mechanical disruption of egg membranes. This method of hatching is used by copepods and true bugs. In copepods secretion of specific substances produced by the cells of the developing embryo increases the osmotic pressure in the extra-embryonic coelom, resulting in active flow of water into the egg and increases the pressure on the egg membranes facilitating their mechanical rupture. A similar mechanism of leaving egg shells is employed by representatives of heteroptera, except that they do not utilize osmotic pressure to break the eggs membranes. Breaking of the eggs in these animals is associated with the pressure on the egg membryanes made by embryo. This effect can be achieved by bug embryos through swallowing of amniotic fluid or air from aeropyle. In the course of evolution many species of invertebrates has developed a special sharp cuticular appendages (egg-bursters or hatching spines) which allow slicing of the egg membranes and leaving the eggs. Another important mechanism facilitating hatching is biochemical mechanism involving secretion of enzymes digesting egg membranes. Egg covers digestive enzymes are synthesized and secreted by the embryos of both invertebrates and vertebrates. For example, prior to implantation mammalian embryos hatch from the zona pellucida using a special enzyme - ovostacin capable of digesting this cover. Embryos of egg-laying amniotes outside the secretion of enzymes digesting egg membranes have developed special structures ("egg teeth") to assist hatching. These structures can be divided into two types: keratin appendages of the epidermis present in embryos of turtles, crocodiles, birds and monotremes and special rostral teeth located on the central portion of the premaxilla embryos of squamate reptiles and monotremes. Both horny appendage (caruncle) and egg tooth are transient structures. They are present only in the embryonic development of the animal and after hatching they are discarded. Egg tooth in addition to its significance during hatching, can be an interesting subject of research for scientists studying phylogeny and embryonic development of egg-laying amniote. A review of the literature indicates that these issues are poorly understood. Egg tooth can occur in two forms - unpaired or paired. The science tries to answer, which form of egg tooth is evolutionarily older. So far, egg tooth was taken into account mainly in the molecular analyses where the presence of the unpaired or paired form was one of the features that supported obtained phylogenetic relations. The results of these studies led to the separation of Unidentata clade within Squamata, whose representatives have an unpaired egg tooth. This clade does not include basal taxa of squamates such as gekkota and dibamidae characterized by the presence of paired egg tooth. The planned project involves careful examination of morphogenesis, structure and ultrastructure of the egg teeth in six phylogenetically distant species of squamates (brown anole - *Anolis sagrei*, leopard gecko - *Eublepharis macularius*, mourning gecko - *Lepidactylus lugubris*, sand lizard - *Lacerta agilis*, rainbow mabuya - *Trachylepsis quinquetaeniata* and grass snake - *Natrix natrix*) in the comparative aspect. Evolutionary history of squamates is complicated, and the data derived from the analyses of morphological and molecular traits are often mutually exclusive. For example, from the point of view of morphological analysis basal taxon within squamates is clade Iguania (represented in the project by brown anole, rainbow mabuya and sand lizard), while molecular analyzes indicate that basal taxon is Gekkota (represented in the project by the leopard and mourning geckos). In fulfillment of the project techniques of bright field, fluorescent and electron microscopy will be used at key developmental stages of the tested species. Bright field and electron microscopy will allow to obtain information about the structure of the egg tooth at the level of structure and ultrastructure during embryonic development. Fluorescent microscopy techniques will enable identification of processes occuring in egg tooth cells such as cell death or cell divisions.