

**Ontogenetic Changes in the Properties of the Poisonous Secretion of *Vipera renardi* (Reptilia: Viperidae)**

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**Abstract.** The paper presents the results of our long-term (August 2014–October 2016) observations of changes in some properties of the poisonous secretion of eastern steppe vipers of the nominative subspecies *Vipera renardi renardi* (Christoph, 1861) during their postembryonic ontogenesis. The poisonous secretion of newborn vipers differed from the venom of adult snakes by an increased protease activity and the absence of any *L*-amino acid oxidase activity; all newborns had colorless venom. Adults produce venom either colorless, where no *L*-amino acid oxidase activity is detected, or yellow, where it is detected. It was found that the enzymatic activity of the venom of young vipers between their first and second winterings corresponded to the level of adults. After the second wintering, young vipers showed statistically insignificant seasonal changes in the activity of proteases and *L*-amino acid oxidase.

**Keywords:** *Vipera renardi*, poisonous secretion, newborn vipers, protease, *L*-amino acid oxidase, ontogenesis.

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