

Löwenborg K., Shine R., Hagman M. 2011. Fitness disadvantages to disrupted embryogenesis impose selection against suboptimal nest-site choice by female grass snakes, *Natrix natrix* (Colubridae) // J. of Evolutionary Biology. Vol. 24. P. 177 – 183.

Lynn W. G., Ullrich M. C. 1950. Experimental production of shell abnormalities in turtles // Copeia. № 4. P. 253 – 262.

McKnight D. T., Ligon D. B. 2014. Shell and pattern abnormalities in a population of western chicken turtles (*Deirochelys reticularia miaria*) // Herpetology Notes. Vol. 7. P. 89 – 91.

Osgood D. W. 1978. Effects of temperature on the development of meristic characters in *Natrix fasciata* // Copeia. № 1. P. 33 – 47.

Shine C., Shine N., Shine R., Slip D. 1988. Use of subcaudal scale anomalies as an aid in recognizing individual snakes // Herpetological Review. Vol. 19, № 4. P. 79.

Schwaner T. D. 1990. Geographic variation in scale and skeletal anomalies of tiger snakes (Elapidae : *Notechis scutatus-ater* complex) in Southern Australia // Copeia. № 4. P. 1168 – 1173.

Telemeko R. S., Warner A. D., Reida M. K., Janzen F. G. 2013. Extreme developmental temperatures result in morphological abnormalities in painted turtles (*Chrysemys picta*) : a climate change perspective // Integrative Zoology. Vol. 8, iss. 2. P. 197 – 208.

Tuniyev S. B., Tuniev B. S. 2008. Intraspecific variation of the sand lizard (*Lacerta agilis*) from the Western Caucasus and description of a new subspecies *Lacerta agilis mzymtensis* ssp. nov. (Reptilia : Sauria) // Russ. J. of Herpetology. Vol. 15, № 1. P. 55 – 66.

Velo-Anton G., Becker C. G., Cordero-Rivera A. 2011. Turtle carapace anomalies: the roles of genetic diversity and environment // PLoS ONE. Vol. 6, iss. 4. P. e18714.

Voipio P. 1992. On pileus anomalies in the common lizard *Lacerta vivipara* in Finland – a morphogenetic problem revisited // Annales Zoologici Fennici. Vol. 28. P. 83 – 94.

Zangerl R., Johnson R. G. 1957. The nature of shield abnormalities in the turtle shell // Fieldiana. Ser. Geology. Vol. 10, № 29. P. 341 – 362.

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PHOLIDOSIS VARIATIONS OF THE SAND LIZARD *LACERTA AGILIS* (LINNAEUS, 1758) AND COMMON LIZARD *ZOOTOCA VIVIPARA* (LICHENSTEIN, 1823) FROM THE WESTERN PART OF THE TATARSTAN REPUBLIC

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The paper considers qualitative and quantitative characteristics of pholidosis variations in two lizard species, comparative analysis of these indices at both intraspecific and interspecific level is carried out. 45 and 19 types of deviations were observed in the sand lizard and common lizard respectively. Variations of the labial, supraocular and supraciliar, frontonasal, parietal, occipital and ventral scales are more common in both species. The sand lizards from the Spassky region differ from the others by some indices. Some common regularities in the deviation topography were noted for both species; they are perhaps characteristic of the genus *Lacerta* as a whole.

Key words: morphology, pholidosis, variability, *Lacerta agilis*, *Zootoca vivipara*.

REFERENCES

Galitsyn D. I. Sand lizard (*Lacerta agilis* Linnaeus, 1758) Pholidosis Deviations in the Urals Populations. In: *Proc. of the Intern. School-Conference “Am-*

phibian and Reptiles Anomalies and Pathology: Methodology, Evolutionary Significance, the Possibility of Environment Health Evaluation”. Ekaterinburg, Ural University Press, 2014, pp. 52–58 (in Russian).

ВАРИАЦИИ ФОЛИДОЗА ПРЫТКОЙ *LACERTA AGILIS*

- Zhukov V. P. Pholidosis Variability of Dione Snake (*Elaphe dione*) on Samarskaya Luka. *Samarskaya Luka Bulletin*, 1992, no. 3. pp. 191–193 (in Russian).
- Zakharov V. M. Influence of Incubation Temperature on Phenotypic Variability of Sand Lizard (*Lacerta agilis*). *Abstracts of Fifth Herpetological Conference "The Problems of Herpetology"*. Leningrad, Nauka, 1981, pp. 56–57 (in Russian).
- Korzhov M. V., Klimov A. S., Khitsova L. N., Novoselov E. V. Peculiarities of Skin Pattern and Scutellation of Head Dorsal Cavity of Slow Worm (*Anguis fragilis*) from the Southwestern part of the Usmanskij Wood (Voronezh Region). *Topical Problems in Herpetology and Toxicology*, Togliatti, 2006, iss. 9, pp. 81–87 (in Russian).
- Korneychuk V. P., Chirikova M. A. On Discrete Variations of Sand Lizard (*Lacerta agilis exigua* Eichwald, 1831) Pholidosis in Kazakhstan. *Current Studies in Herpetology*, 2005, vol. 3 – 4, pp. 60–70 (in Russian).
- Roitberg E. S. Horny Scutes Mosaic Variability in the head of *Lacerta lizards*: Tendencies and Limits. *Zoologicheskii zhurnal*, 1991, vol. 70, iss. 4, pp. 85–96 (in Russian).
- Simonov E. P. Comparative Morphological Analysis of Forest-steppe's and Steppe's Populations of Sand Lizard *Lacerta agilis* in Novosibirsk Region. *Samarskaya Luka: Problems of Regional and Global Ecology*, 2009, vol. 18, no. 1, pp. 127–133 (in Russian).
- Tabachishin V. G., Zavialov E. V., Shlyakhtin G. V. Ecological and Morphological Features of Viviparous Lizard (*Lacerta vivipara*, Lacertidae) Populations from South of European part of Russia. *Topical Problems in Herpetology and Toxicology*, Togliatti, 2000, iss. 4, pp. 34–49 (in Russian).
- Cherepanov G. O. Variability of the Scutes of the Turtle Shell: Mechanisms of Morphogenesis and the Nature of Anomalies. *Vestnik of Saint Petersburg University. Ser. 3. Biology*, 2016, iss. 3, pp. 170–174 (in Russian). DOI: 10.21638/11701/spbu03.2016.328.
- Chirikova M. A. Variability of Pholidosis of Head, anal Area and Limbs in Three Species of the Genus *Eremias* (Reptilia, Lacertidae) from Kazakhstan and Adjacent Regions. *Proc. of the 1th Conference of the Ukrainian Herpetological Societ.* Kyiv, 2005, pp. 186–189 (in Russian).
- Khabibullin V. F. *Presmykaiushchesia Respublik Bashkortostan. Avtoref. kand. dis. biol. nauk* [Reptiles of the Bashkortostan Republic. Abstract biol. sci. diss.]. Ufa, 1999. 18 p. (in Russian).
- Khabibullin V. F. Some Scute Features in Sand Lizard, *Lacerta agilis* L., 1758. *Bulletin of Bashkir University*, 2003, vol. 8, no. 1, pp. 36–37 (in Russian).
- Arribas O. J. Morphological Variability of the Cantabro-Pyrenean Populations of *Zootoca vivipara* (Jaqquin, 1787) With Description of a New Subspecies. *Herpetozoa*, 2009, vol. 21, no. 3 – 4, pp. 123–146.
- Gautschi B., Widmer A., Joshi J., Koella J. C. Increased Frequency of Scale Anomalies and Loss of Genetic Variation in Serially Bottlenecked Populations of the Dice Snake, *Natrix tessellata*. *Conservation Genetics*, 2002, vol. 3, pp. 235–245.
- Löwenborg K., Shine R., Hagman M. Fitness Disadvantages to Disrupted Embryogenesis Impose Selection Against Suboptimal nest-site Choice by Female Grass Snakes, *Natrix natrix* (Colubridae). *J. of Evolutionary Biology*, 2011, vol. 24, pp. 177–183.
- Lynn W. G., Ullrich M. C. Experimental Production of Shell Abnormalities in Turtles. *Copeia*, 1950, no. 4, pp. 253–262.
- McKnight D. T., Ligon D. B. Shell and Pattern Abnormalities in a Population of Western Chicken Turtles (*Deirochelys reticularia miaria*). *Herpetology Notes*, 2014, vol. 7, pp. 89–91.
- Osgood D. W. Effects of Temperature on the Development of Meristic Characters in *Natrix fasciata*. *Copeia*, 1978, no. 1, pp. 33–47.
- Shine C., Shine N., Shine R., Slip D. Use of Subcaudal Scale Anomalies as an Aid in Recognizing Individual Snakes. *Herpetological Review*, 1988, vol. 19, no. 4, p. 79.
- Schwaner T. D. Geographic Variation in Scale and Skeletal Anomalies of Tiger Snakes (Elaphidae: *Notechis scutatus-ater* complex) in Southern Australia. *Copeia*, 1990, no. 4, pp. 1168–1173.
- Telemeko R. S., Warner A. D., Reida M. K., Janzen F. G. Extreme Developmental Temperatures Result in Morphological Abnormalities in Painted Turtles (*Chrysemys picta*): a Climate Change Perspective. *Integrative Zoology*, 2013, vol. 8, iss. 2, pp. 197–208.
- Tuniyev S. B., Tuniev B. S. Intraspecific Variation of the Sand Lizard (*Lacerta agilis*) from the Western Caucasus and Description of a New Subspecies *Lacerta agilis mzymtensis* ssp. nov. (Reptilia: Sauria). *Russ. J. of Herpetology*, 2008, vol. 15, no. 1, pp. 55–66.
- Velo-Anton G., Becker C. G., Cordero-Rivera A. Turtle Carapace Anomalies: the Roles of Genetic Diversity and Environment. *PLoS ONE*, 2011, vol. 6, iss. 4, p. e18714.
- Voipio P. On Pileus Anomalies in the Common Lizard *Lacerta vivipara* in Finland – a Morphogenetic Problem Revisited. *Ann. Zool. Fennici*, 1992, vol. 28, pp. 83–94.
- Zangerl R., Johnson R. G. The Nature of Shield Abnormalities in the Turtle Shell. *Fieldiana. Ser. Geology*, 1957, vol. 10, no. 29, pp. 341–362.

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