

(1999): Biological response to climate change on a tropical mountain.- *Nature*, London; 398: 611-615.  
 RAXWORTHY, C. J. & PEARSON, R. G. & RABIBISOA, N. & RAKOTONDRAZAFY, A. M. & RAMANAMANJATO, J. B. & RASELIMANANA, A. P. & WU, S. & NUSSBAUM, R. A. & STONE, D. A. (2008): Extinction vulnerability of tropical montane endemism from warming and upslope displacement: a preliminary appraisal for the highest massif in Madagascar.- *Global Change Biology*, Oxford; 14 (8): 1703-1720.  
 SHI, H. (2002): Amphibian fauna and zoogeographic division of Hainan Island.- *Sichuan Journal of Zoology*, Chengdu; 21 (3): 174-176.  
 SUNG, Y. H. & KARRAKER, N. E. & HAU, B. C. H. (2012): Terrestrial herpetofaunal assemblages in secondary forests and exotic *Lophostemon confertus* plantations in South China.- *Forest Ecology and Management*, Amsterdam; 270: 71-77.  
 XIAO, Z. & LI, Z. C. & GAO, L. B. (2008): A new record of *Theloderma kwangsiensis* in Hainan Province, China.- *Chinese Journal of Zoology*, Beijing; 43 (4): 131-132.  
 YAN, J. A. (2008): The study on evolutionary history of Hainan Island's ecological environment; Beijing (Science Press), pp. 381.

KEY WORDS: Amphibia: Rhacophoridae: *Rhacophorus yinggelingsensis*, amphibians altitude, reproduction, ecology, habitat, Hainan, China

SUBMITTED: May 28, 2013

AUTHORS: Changle LIAO<sup>1, 2)</sup>; Bosco P. L. CHAN<sup>1, 3)</sup>; Yik-Hei SUNG (Corresponding author <yhsung@kfbg.org ><sup>3)</sup>; Hesheng WANG<sup>4)</sup>

<sup>1)</sup> Yinggeling Nature Reserve, Baisha County, 57800 Hainan, China;

<sup>2)</sup> Current address: Chengmai Forest Farm, Chengmai County, 571900 Hainan, China;

<sup>3)</sup> Kadoorie Conservation China, Kadoorie Farm and Botanic Garden, Tai Po, Hong Kong SAR, China;

<sup>4)</sup> Current address: Mihouling Forest Farm, Dongfang County, 572600 Hainan, China.

## New information on the distribution of *Eremias arguta* (PALLAS, 1773) in the north of its habitat in the Saratov region, Russia

*Eremias arguta* (PALLAS, 1773), the Steppe Runner, is the most frequently studied representative of the genus *Eremias* in Russia, which was mainly promoted by its inclusion into the list of animals to be described in the form of monographs. The results of the work of a large body of authors were reported in the "Steppe Runner" (ŠCERBAK et al. 1993), including a compulsory section on the distribution of the species in various parts of its range, biotope and station features, and other aspects of the spatial localization of *E. arguta*. However, some peripheral occurrences are still unknown because of this lizard's patchy distri-

bution. This applies to the northern part of the *E. arguta* habitat, in particular, the Saratov region.

Until recently, the northern border of the range of *E. arguta* in the Saratov region was considered to approximate a line marked by the towns of Uritskoe (Lysye-Gory district), and Bukatovka (Voskresensk district) and the Saratovka river mouth (Engels district) (TABACHISHIN & ZAVIALOV 1998; TABACHISHIN et al. 2006).

However, the author's 2007-2012 field surveys revealed the presence of *E. arguta* further north of the known sites in the Saratov region (TABACHISHIN et al. 2006), e.g., on open sites of afforested sand hills near the town of Vostochnyi (51°42'N / 46°52'E, Marx district, 10 August, 2007) and on sandy sites near the village of Medianikovo (51°58'N / 46°42'E, Voskresensk district, 18 August, 2007) (Fig. 1). During another field survey, local habitats of *E. arguta* were disclosed on sandy sites near the villages of Yablonovka (51°04'N / 46°03'E, Rovno district, 15 June, 2008) and Plekhany (51°58'N / 47°21'E, Balakovo district, 27 June, 2008). In the 2010 and 2012 field surveys, local populations of *E. arguta* were observed in the vicinity of the villages of Uritskoe (51° 23'N / 44°51'E, 5 May, 2010) and Sheremetievka (51°36'N / 44°39'E, 8 July, 2012), Lysye-Gory district. The population of *E. arguta* in the Voskresensk district of the Saratov region is the northernmost known population in the Cis-Volga region. Some indications of the penetration of *E. arguta* north up to the Samara Luka in the Samara Cis-Volga region (BARINOV 1982) and to southern parts of the Penza region (GARANIN 1999) are still unconfirmed by collections or recent observations.

In the course of route counts, the population density of *E. arguta* within isolated sand hills near the town of Vostochnyi and the village of Plekhany on sites with rare wormwood-cereal and bush vegetation was estimated as 363 and 212 individuals/ha, respectively. These values are characteristic of *E. arguta* in similar stations near the villages of Medianikovo and Sheremetievka. There, on the open sandy sites near *Pinus* sp. plantations, 47 and 39 individuals per one route kilometer were counted on the

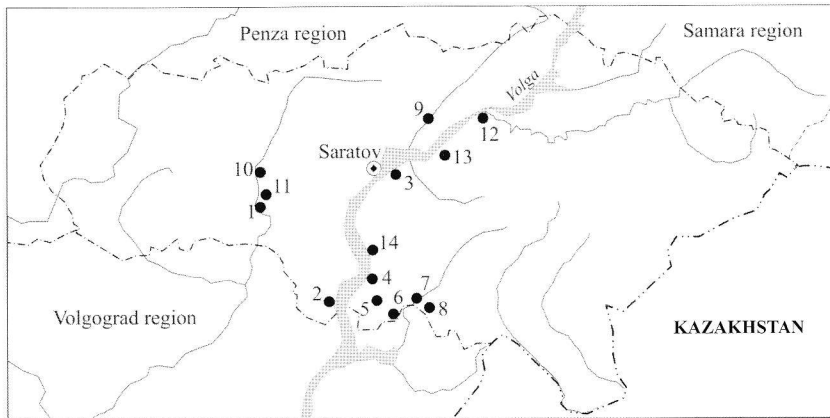


Fig. 1: Distribution of *Eremias arguta* (PALLAS, 1773) in the Saratov region.

Record localities 1-8 are taken from TABACHISHIN et al. (2006); 9-14 are new records.

- 1 – Lysye-Gory district, near v. Novye Peski; 2 – Krasnoarmeysk district, near v. Nizhnaya Bannovka; 3 – Engels district, near v. Pribrezhnyi; 4 – Rovno district, near v. Kochetnoe; 5 – Rovno district, near v. Alexandrovka; 6 – Rovno district, near town Rechnoi; 7 – Krasnyi-Kut district, near v. Diakovka; 8 – Krasnyi-Kut district, near v. Lepekhnika; 9 – Voskresensk district, near v. Medianikovo; 10 – Lysye-Gory district, near v. Sheremetievka; 11 – Lysye-Gory district, near v. Uritskoe; 12 – Balakovo district, near v. Plekhany; 13 – Marx district, near town Vostochnyi; 14 – Rovno district, near v. Yablonovka.

average. For the habitats of *E. arguta* near the villages of Uritskoe and Yablonovka, lower abundance values (73 and 98 individuals/ha, respectively) are characteristic.

The data available reveals the distribution of *E. arguta* to be wide but patchy across an extensive territory of the Saratov region. All the known occurrences of *E. arguta* in the north of its Saratov region habitat are connected mainly to sandy sites of valleys of the Don and Volga river basins along which the lizard has obviously migrated north. In view of the separate character of outlying populations in the Saratov region, *E. arguta* has been enlisted into the second edition of the regional Red Book (TABACHISHINA et al. 2006) and is recommended for inclusion into the third edition of the Red Book of the Saratov region.

REFERENCES: BARINOV, V. G. (1982): Исследование герпетофауны Самарской Луки [Studies of the herpetofauna of the Samara Luka].- Экология и охрана животных [Ecology and protection of animals]. Kuibyshev (Kuibyshev State University Press); pp. 116-129. GARANIN, V. I. (1999): О возможностях сохранения заурофауны [On the opportunities of saurofauna preservation].- Актуальные проблемы герпетологии и токсикологии [Modern problems of Herpetology and Toxicology], Tol'jatti; 3: 40-52. ŠCERBAK, N. N. & KOTENKO, T. I. & TERTYSHNIKOV, M. F. & KOTOK, V. S. & VASILEVSKAYA, G. I. &

VESELOVSKI, M. V. & YORDANSKI, N. N. & L'VOVA, S. P. & NERUCHEV, V. V. & OKULOVA, N. M. & ORLOVA, V. F. & GOROVAYA, V. I. & SHARPILO, V. P. & SHARYGIN, S. A. & GERBIL'SKI, L. V. & USENKO, V. S. (1993): Разноцветная ящурка [Steppe Runner]. Kiev (Naukova Dumka), pp. 240. TABACHISHIN, V. G. & ZAVIALOV, E. V. (1998): Распространение и таксономический статус разноцветной ящурки (*Eremias arguta*) в северной части Нижнего Поволжья [Spreading and taxonomic status of Stepperunner (*Eremias arguta*) in north part of Low Povolzhye].- Vestnik zoologii, Kiev; 32 (4): 51-59. TABACHISHIN, V. G. & ZAVIALOV, E. V. & TABACHISHINA, I. E. (2006): Пространственное размещение разноцветной ящурки – *Eremias arguta* (PALLAS, 1773) на севере ареала в Поволжье [Spatial distribution of *Eremias arguta* (PALLAS, 1773) in north of its Volga habitat].- Современная герпетология [Modern Herpetology], Saratov; 5/6: 117-124. TABACHISHINA, I. E. & TABACHISHIN, V. G. & ZAVIALOV, E. V. (2006): Разноцветная ящурка – *Eremias arguta* (PALLAS, 1773) [Steppe Runner – *Eremias arguta* (PALLAS, 1773)]; pp. 365-366. In: SHLYAKHTIN, G. V. (Ed.): Красная книга Саратовской области: Грибы. Лишайники. Растения. Животные [Red Book of the Saratov region: Mushrooms. Lichens. Plants. Animals]. Saratov (Committee on Environment Protection and Nature Usage, Saratov region).

KEY WORDS: Reptilia: Squamata: Lacertidae; *Eremias arguta*, distribution, Saratov region, Russia

SUBMITTED: May 28, 2013

AUTHOR: Vasily G. TABACHISHIN - A. N. Severtsov Institute for Ecology and Evolution RAS, Saratov branch 24, Rabochaya str., Saratov 410028, Russia. <tabachishinvg@sevin.ru >