

# New data on a population of *Lampides boeticus* (Lepidoptera: Lycaenidae) in the river Don delta (Russia)

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**Abstract.** During the summer and autumn of 2007 two habitats of *Lampides boeticus* populations were discovered in the delta of the river Don (Rostov-on-Don region, Russia). One population was found in the industrial zone of the town Azov on a transformed meadow plot of 450 m<sup>2</sup>. An enclave of this population was found in the delta meadows, 10 km north. Both habitats are subject to anthropogenous influences. The Long-tailed Blue populations are determined as Critically Endangered.

**Samenvatting.** Nieuwe gegevens betreffende een populatie van *Lampides boeticus* (Lepidoptera: Lycaenidae) in de Don-delta (Rusland)

Tijdens de zomer en herfst van 2007 werd een populatie *Lampides boeticus* (Linnaeus, 1767) aangetroffen in de Don-delta (gebied van Rostov-aan-de-Don, Rusland). Een tweede populatie werd gevonden in de industriezone van Azov in een omgevormde wei van nauwelijks 450 m<sup>2</sup> en een klein gebied 10 km ten noorden ervan. Beide gebieden staan onder antropogene invloed en de populaties van *L. boeticus* zijn zeer bedreigd.

**Résumé.** Nouvelles données concernant une population de *Lampides boeticus* (Lepidoptera: Lycaenidae) dans le delta du fleuve Don (Russie)

Pendant l'été et l'automne de 2007, une population de *Lampides boeticus* (Linnaeus, 1767) fut trouvée dans le delta du fleuve Don (région de Rostov-sur-Don, Russie). Une seconde population est présente dans une prairie de 450 m<sup>2</sup> dans la zone industrielle de la ville d'Azov, avec une petite enclave à 10 km plus au nord. Les deux régions souffrent sévèrement de la présence humaine et les deux populations de *L. boeticus* sont très vulnérables.

**Key words:** *Lampides boeticus* – Azov-city – delta of the river Don – relic refuge.

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*Lampides boeticus* (Linnaeus, 1767), the Long-tailed Blue, is known as a fast-flying, migratory butterfly with a very widespread global distribution. The first specimens of *L. boeticus* (9 ex.) were caught by the first author near the Azov-city river port on 25.08–02.09.2000 (Poltavsky & Artohin 2000). Representatives of another regional population were collected in the town Salsk (170 km SE from Azov) by school-boys: Y. Nechitajlo, 10.09.1998 (1♂) and I. Ustinov, 12.09–21.10.2002 (2♂).

New researches were undertaken to find out the exact localization of Azov's population of *L. boeticus*. During the six subsequent years the species was not found. Only some transit flights of single Long-tailed Blues along the city's river-side were observed every year during the early autumn period of 2001–2006. In 2007 the searches were successful. On the territory of the industrial zone of Azov-city (along river Don), which closely adjoining to inhabited suburb, was found a small plot of transformed meadow vegetation with participation of some synanthrop herbs. Among them were meadow plants:

*Phragmites australis* (Gav.) Trin. ex Steudel., *Inula britannica* L., *Elytrigia repens* (L.) Nevski, with participation of family Fabaceae: *Amorpha fruticosa* L., *Lotus corniculatus* L., *Trifolium fragiferum* L., *Glycyrrhiza glabra* L. The total area of this plot is about 450 m<sup>2</sup> (fig. 1).

During 01–20.10.2007 18 specimens (both sexes) of *L. boeticus* were caught and an additional 40 specimens were observed just on this small plot. Long-tailed Blues quickly migrated from this local refuge to the nearby industrial territories, but invariably came back. We suppose that this habitat of this subtropical butterfly, which is rare in the Rostov-on-Don region, is actually a relict refuge, kept on a place of natural grassy meadows of the river Don wetlands. It is possible, that the warmer and milder city's microclimate (as well in the town Salsk) allows the thermophyllous *L. boeticus* to survive in the otherwise continental climate of the Rostov-on-Don region.

In midsummer 2007 the first author also found out a presumable exclave of the Azov's population of *L. boeticus* in the territory of river Don's delta, 10 km North from Azov (fig. 2). During 14–15.07.2007 in a local association of *Glycyrrhiza glabra* L. in an area of 100 m<sup>2</sup> 2♂ and 1♀ of *L. boeticus* were collected (fig. 3). The female just oviposited on the leaves of *Glycyrrhiza glabra* L. This herb is very common in the Rostov-on-Don region, growing in wet meadows. In the vast territory of the river Don's delta (about 360 km<sup>2</sup>) *Glycyrrhiza glabra* is a mass herb. However, the Long-tailed Blue was found for the first time during a long period of studying Rhopalocera in this area (since 1999). Revealed tendency of *L. boeticus* for colonization of small areas, despite the wide presence of fodder plants and its abilities of the fastest flight among the Lycaenidae family, makes it especially vulnerable. In particular, in the second half of July 2007 all association of *Glycyrrhiza glabra* (fig. 4), on which the Long-tailed Blue females laid their eggs, was mowed for fodder. Moreover, in September–October this spot of vegetation was completely burned together with the adjoining reeds.

Since 2005 the nature park "Donskoj" was founded in the river Don's delta with the purpose to protect the unique wetland ecosystems. Unfortunately, the exclave of the Azov's population of *L. boeticus* is situated outside the park's territory, on the border of its buffer zone.

The Azov's population refuge of *L. boeticus* also could be destroyed any moment because of building expansion or occupied by car parking lots or any other object of the city's infrastructure, or transformed into a dump of industrial scrap metal.

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Fig. 1. Habitat of *Lampides boeticus* population near Azov-city river port.

Fig. 3a–b. Male of *Lampides boeticus* in the river Don delta (15.07.2007).

Fig. 4. Association of *Glycyrrhiza glabra* L. in the river Don delta - habitat of *Lampides boeticus*.



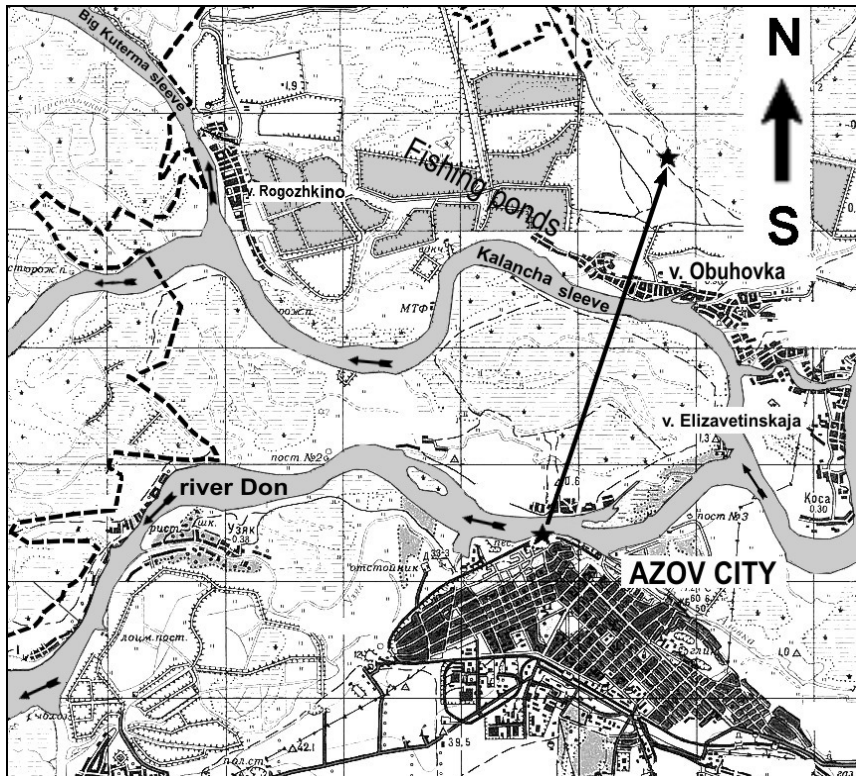


Fig. 2. Southern part of the river Don delta with habitats of *Lampides boeticus* L. Symbols: two asterisk - the localities; dashed line – east border of the nature park "Donskoj".

Our researches show, that in the Rostov-on-Don region the Long-tailed Blue has two annual generations: one in summer and the other in autumn. We found that environment conditions of its known populations can be determined as Critically Endangered (IUCN). New searches for *L. boeticus* populations must be undertaken in the territory of the Natural park "Donskoj". There it is possible to provide a due conditions for Long-tailed Blue protection. Example of this butterfly gives more understanding to our concept of Lepidoptera biodiversity preservation in the areas of the hard anthropogenous transformation of natural landscapes (Poltavsky 2005).

### References

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