



Notes on the *Paleophilotes (Inderskia) panope* (Eversmann, 1851) (Lepidoptera: Lycaenidae), a rare and little known lycaenid taxon for Europe

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Paleophilotes panope (Eversmann, 1851) is a poorly known species of Lycaenidae that was found in 1848 by A.M. Butlerov in the Inder Lake vicinities (West Kazakhstan). For one and a half centuries, until the beginning of 2000s this taxon had been known only by the two samples of the type series preserved in the Zoological Institute of Saint Petersburg (Russia) and thought to be extinct. The second mention on the species was in the second volume of “Butterflies of Russia and adjacent territories” (Tuzov *et al.* 2000), where photos of three new specimens were published. This material was collected by A.V. Dantchenko (Moscow, Russia) and his colleagues in the chalky Aktolagai plateau in the Western Kazakhstan, not far from the type locality. Unfortunately, these researchers did not provide any material to museums and therefore this taxon remained unknown for most specialists. In other publications only some pictures of this species were provided (Lukhtanov, Lukhtanov 1994; Tshikolovets 2003).

During the last decades of the XX century and afterwards *P. panope* was mentioned as possibly occurring in the South Ural and semideserts of the Lower Volga Region in several papers (Korshunov 2002), but our investigations of these regions in several years gave no results.

Distribution and biotopes of *P. panope* in Europe and Asia

In early May, 2004, a new population of *P. panope* in the European part of Kazakhstan (Atyrau Region) was found. Soon after, *c.a.* five new localities for the species were also discovered in the Trans-Urals—in the eastern districts of Atyrau Region. The presence of *P. panope* in the chalky plateau of Aktolagai (Aktobe Region) and in the Iman-Kara Mountain was confirmed after the mentions on A.V. Dantchenko collecting the species in this territory (Tuzov *et al.* 2000). The first data on European populations of this species were apparently published by the author in the book Lvovsky, A.L., Morgun, D.V. (2007). The species distribution showed that it is extremely local and represented by a single known European micropopulation near Zhaltyr Lake in the Atyrau Region of Kazakhstan (about 170 km from the type locality, which is situated at the other bank of the Ural river), and about 7–8 isolated Asiatic micropopulations near Inder Lake (type locality in Uralsk Region), 20–25 km NE of Atyrau (near the eastern districts of Atyrau Region) and Aktolagai chalky plateau. The micropopulation discovered in Aktolagai covers the largest square (approximately 12 km²). The obvious gaps in the distribution of the species could be explained by two main interdependent factors—biotic and anthropogenic. The species is extremely stenotopic because of its trophic relationship with *Astragalus lasiophyllus* Ledeb., the typical species of the steppes and semideserts of the Aral and Caspian Region. In the Western Kazakhstan this plant is mainly preserved in the refugia of the saline grass-wormwood steppes and semideserts not disturbed by agricultural activity. In the European locality of the species it is found in the depressed grass-wormwood saline semidesert with sparse xerophytic vegetation at 20–25 m below sea level—these places about 500 years ago could be the Caspian Sea bed. The biotope of the species covers 0.4–0.5 km² here and represents the typical Western Kazakhstan landscape called “takyr”—the saline land with a distinct micro-relief and covered by sparse halophytes, mainly perennial plants and early spring bloomed ephemerals. All micro-populations biotopes are surrounded by great pastures of small cattle (mainly sheep) that graze on vast areas throughout the warm season. The other indicator of the *P. panope* biotopes was rhubarb (*Rheum sp.*) found in all localities among the *Artemisia* and *Astragalus* associations.

In Aktolagai plateau the species was found in other habitats. There it inhabits the chalky slopes and their foundations, and might also be found among the sparse xerophytic vegetation of labiate plants, grasses, sagebrush and *Astragalus*.