

Rediscovering *Tomares nogelii dobrogensis* Caradja, 1895 in Romania

László RÁKOSY & Cristina CRAIOVEANU

Summary: *Tomares nogelii*, one of the rarest butterfly species from Europe, was considered extinct in Romania and the European Union since 1980. The species was rediscovered in 2014 in a wooded steppe from Northern Dobrogea, area from where the subspecies *dobrogensis* Caradja was described in 1895. Several individuals, ♂♂ and ♀♀, were recorded on the flowers of *Astragalus ponticus*. A female was photographed during egg-laying on the flower buds of *Astragalus ponticus*.

Key words: Lepidoptera, Lycaenidae, *Tomares nogelii dobrogensis*, endangered, extinct species, Romanian Red List species.

Introduction

The Ponto-Mediterranean species *Tomares nogelii* (Herrich-Schäffer, [1851]) has a fragmented distribution, being reported from Anatolia (HESSELBARTH et al. 1995), Azerbaijan, Crimean Peninsula (EFETOV 1987), Ukraine (NEKRUTENKO 1985), Northern Moldova and Northern Dobrogea (RÁKOSY 2013). After TUZOV (2000) it was also reported from Lebanon and Syria where its distribution overlaps with that of *T. nesimachus* (Oberthür, 1894). In Europe it is considered to be one of the most

endangered species and in the EU even extinct (van Sway et al. 2010).

In Romania it was reported from Northern Dobrogea (Tulcea, Ciucurova) (MANN 1866) and after 1965 it was rediscovered in Galati (Garboavele Forest). In the period 1970-1980 the species was so frequent in the Garboavele Forest, that some collectors would collect 20-30 individuals in a single day (MARCUS & RÁKOSY 2002).

The flight period of the population from Garboavele Forest stretches between end of May and the middle of June. The habitats in Galati, as well as



Fig. 1. Forest steppes in Northern Dobrogea, Romania (Photo. L. Rákósy)



Fig. 2. A large population of *Astragalus ponticus* (Photo. L. Rákósy)



Fig. 3. Tall plants of *A. ponticus* (1.5-2m) form many florets with yellow flowers (Photo. L. Rákósy)

those from Northern Dobrogea, are characterized by steppe-forest glades, forest edges or grasslands in the hilly region, in the neighbourhood of wooded steppes with the host plant *Astragalus ponticus*.

In Northern Dobrogea, the species wasn't found any more since 1866, and the population from the Garboavele Forest (Galati) has completely disappeared in the period 1980-1990. In the Garboavele Forest (Galati) population, extinction was caused by habitat destruction through grazing and unregulated tourism (e.g. picnic with open fire pit) and exaggerated collecting by collectors. Although the habitat structure in the Garboavele Forest has improved due to several successful conservation measures, we haven't found any *T. nogelii dobrogensis* in the period 1991-2010.

The situation in Northern Dobrogea is different. Here the Macin Mountains, that became National Park in the year 2000, and the vast wooded steppes from Niculitel and Babadag (Fig. 1) gave us hope to rediscover this species (RÁKOSY & WIESER 2000). Thus, in the summer of 2004, in one of the research field trips in Macin Mountains, we observed, photographed and collected one male individual of *T. nogelii dobrogensis* (RÁKOSY 2013). Unfortunately, the search in subsequent days did not bring new specimens and neither the identification of the host plant *Astragalus ponticus* in the investigated area.

The search for this species in subsequent years

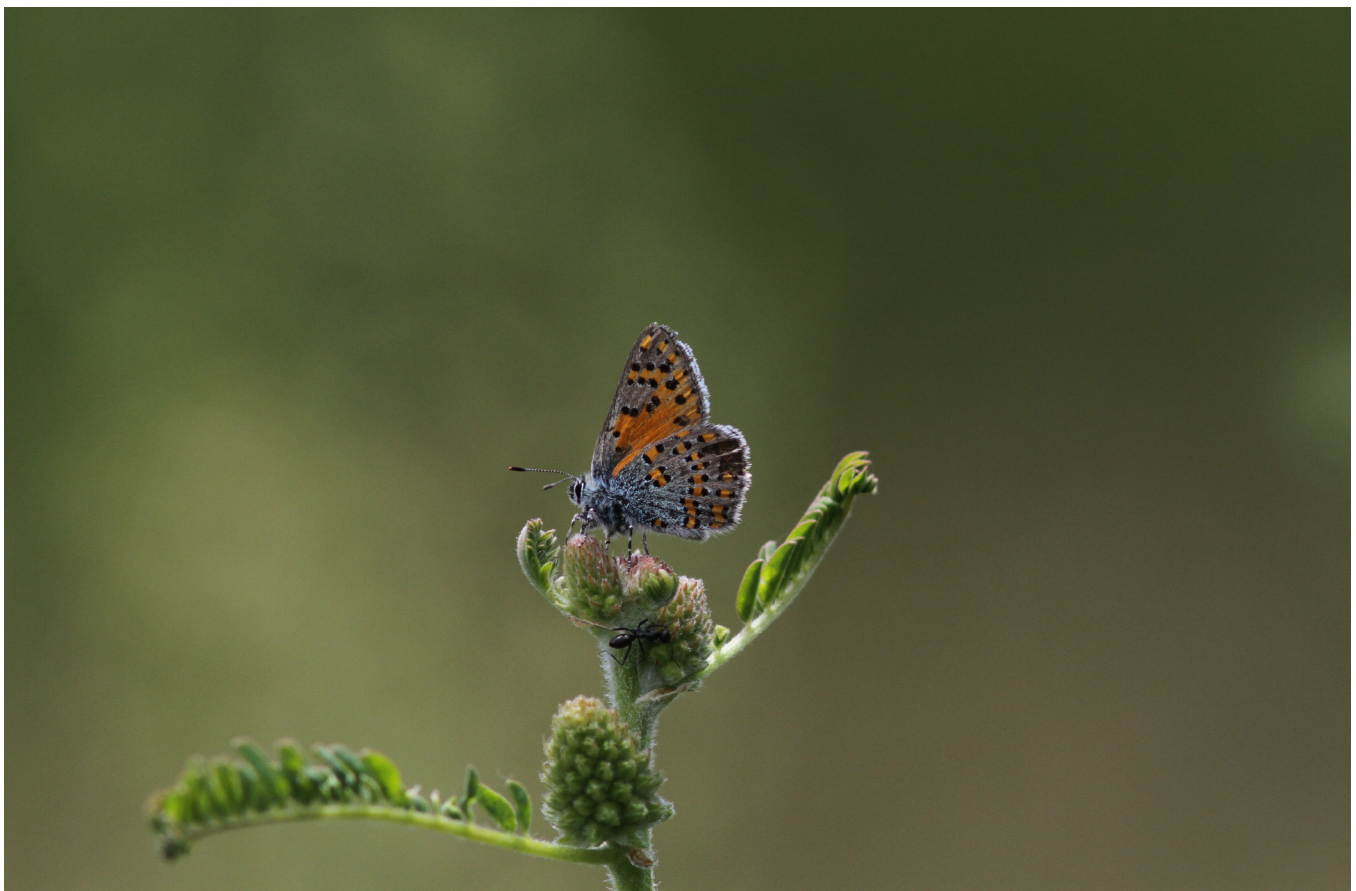


Fig. 4. Male of *Tomares nogelii dobrogensis* (Photo. L. Rákósy, June 2014).



Fig. 5. *T. nogelii dobrogensis* egg, perfectly camouflaged on the floret of *A. ponticus* (Photo. L. Rákósy, June 2014).

was unsuccessful until the summer of 2014, when we identified an important population of *Astragalus ponticus* in the wooded steppes from Tulcea County. Here we found several individuals, ♂♂ and ♀♀ of *T. nogelii dobrogensis*. The habitat is composed of glades inside the Oak-hornbeam wooded steppe, in which important *Astragalus ponticus* stands develop (Figs. 2, 3), each reaching 1.5 m in height. Butterflies land on the florets or the leaves in the proximity of the florets of *Astragalus ponticus*. Both ♂♂ and ♀♀ feed on the nectar of *Astragalus ponticus* flowers (Fig. 4). A female lays one egg at a time between the still unopened flower buds of the floret. The egg is extremely well camouflaged (Fig. 5). In 60 minutes we observed 12 individuals of *T. nogelii dobrogensis*.

In order to protect it, we do not reveal the exact location of this population. We are sure, though, that in the near future, we will be able to identify other populations of this wonderful species, considered extinct, in Northern Dobrogea.

In the Romanian Red List of Butterflies (RÁKOSY 2003), the species is listed as critically endangered and locally extinct. *T. nogelii* is also protected in Romania through the The Government emergency ordinance No. 57/2007, on the regime of protected natural areas, conservation of natural habitats, wild flora and fauna, approved with amendments by Law no. 49/2011 and subsequently modified by legislation, annex 4B.

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László RÁKOSY

Department of Taxonomy and Ecology,
Babeş-Bolyai University,
Clinicilor 5-7,
Cluj-Napoca, Romania
E-mail: laszlo.rakosy@ubbcluj.ro

Cristina CRAIOVEANU

Department of Taxonomy and Ecology,
Babeş-Bolyai University,
Clinicilor 5-7,
Cluj-Napoca, Romania
E-mail: christii_99@yahoo.com

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