Araschnia levana (Lepidoptera: Nymphalidae), a new species for the Turkish fauna

Thomas Baron

Abstract. *Araschnia levana* (Linnaus, 1758) is known for expanding its range within Europe, to the north as well as to the south. It has spread within Bulgaria in the last 20 years and has reached places in southern Bulgaria, near the Turkish border in recent time. The species has now been recorded from Turkey also. It was found to occur in the Istıranca Mountains in Western Thrace, close to the Bulgarian border. It was discovered in one locality only; however, here it was abundant.

Samenvatting. *Araschnia levana* (Lepidoptera: Nymphalidae), een nieuwe soort voor de Turkse fauna

Het is bekend dat *Araschnia levana* (Linnaeus, 1758) zijn areaal binnen Europa uitbreidt zowel naar het noorden als naar het zuiden. De soort heeft zich gedurende de laatste 20 jaar uitgebreid in Bulgarije en heeft enkele lokaliteiten bereikt in het zuiden van dat land, dichtbij de Turkse grens. Ze is nu ook in Turkije zelf vastgesteld, nl. in het Istıranca gebergte in West-Thracië, nabij de Bulgaarse grens. De vlinders werden talrijk in één lokaliteit waargenomen.

Résumé. *Araschnia levana* (Lepidoptera: Nymphalidae), une espèce nouvelle pour la faune turque

Araschnia levana (Linnaeus, 1758) est bien connu pour sa capacité d'étendre son aire de répartition en Europe vers le nord et le sud. En Bulgarie, cette espèce a connu une extension pendant les dernièrs 20 ans et elle se trouve maintenant dans quelques localités dans le sud de la Bulgarie, près de la frontière turque. Elle a été trouvée récemment en Turquie même, dans la montagne Istıranca en Trace occidentale, près de la frontière bulgare, où les papillons se trouvaient dans une localité seulement, mais abondants.

Keywords: *Araschnia levana* – Nymphalidae – Lepidoptera – Turkey – Faunistics

Baron, Dr. Th.: Istanbul, Turkey. thomas.baron@mail.koc.net

Distribution

Araschnia levana (Linnaues, 1758) is distributed in the temperate zones of Eurasia, from Western Europe eastwards to Japan. In Europe, the northern parts of the continent and the southern countries do not belong to the original range of distribution.

Since a long time *Araschnia levana* is, however, known to expand its area. The expansive behaviour is supported by the tendency of the usually more abundant summer form to migrate. This allows the species to pass uninhabitable biotopes in order to reach other adequate biotopes further away.

Reinhardt (1984: 6–8) noted that the species is expansive in its northern range. For the northern German state of Schleswig-Holstein he reported an average speed of expansion of 7 km per year.

Also to the south a similar expansion is taking place. For south-eastern Europe Stoyan Beshkov of the National Museum of Natural History in Sofia has verbally confirmed to the author that the species was recorded newly for Bulgaria about 30 years ago. It is now already abundant in northern Bulgaria. In

the meantime, it has spread from the north to the south of the country, first into the south-west part of the country. In 2005 it was published for the first time for the Republic of Macedonia, based on findings from the year 2000 (Micevski N. & B. 2005: 86). Only recently it has been recorded in southern Bulgaria not very far away from the Turkish town of Edirne and this has made an intrusion into Turkey likely already.

A record for Turkey, however, has been outstanding so far. The extensive work of Hesselbarth, van Oorschot & Wagener (1995) does not consider this species for the Turkish fauna. Also in Fauna Europaea, a website initiated by the EU, which contains a checklist for all countries in Europe, the species is not listed for Turkey's European part so far. The only other country in south-eastern Europe, where the species still is believed to be absent is Albania (De Prins & van Oorschot 2005).

Fig. 1. Habitat of *Araschnia levana* (Linnaeus, 1758); Turkey, Province of Kırklareli, Road Balaban to Sarpdere 7 km (Photograph: Th. Baron).

First record of *Arachnia levana* from Turkey

The author has now found the species to occur in Turkey also. *A. levana* was registered on 21st of August, 2006 in the summer form of the imago in the Istıranca Mountains (Istıranca Dağları; on newer Turkish maps called Yıldız Dağları). The record is the first for the European part of Turkey and for Turkey as a whole.

The Istıranca Mountains are located in north-western Thrace near the border facing south-eastern Bulgaria.

The vegetation of the Istıranca Mountains mainly consists of high forest. In some areas cultivated and wild meadows as well as bush vegetation exist. The dry southern slopes are covered by different species of oak trees (*Quercus* sp.), whereas the northern slopes and the high altitudes of the southern slopes present a wet forest habitat. Typical species for this flora are hornbeam (*Carpinus betulus*) and rhododendron (*Rhododendron ponticum*) for the underwood.

Araschnia levana was only observed in one place, but here it was rather abundant. The location lies north of the main ridge of the Istıranca Mountains in a valley belonging to the district of Demirköy, which is part of the province of Kırklareli. The exact locality is a wild meadow next to the road from Balaban to Sarpdere (7 km), near the Dupnisa caves. The place is about 35 km from the Black Sea and 12 km from the Bulgarian border. Only a few kilometres south of the location is the ridge of the Istıranca Mountains, which reach a maximum elevation of 1031 m and thereby represent the highest mountains in the European part of Turkey. The altitude of the locality in question reached an estimated 500 m.

The year 2006 was a very hot and dry summer also in Turkey, leaving the whole of Thrace very much dried out, including also most localities in the Istıranca Mountains. The meadow, where the species flew, however, was completely green even at the end of August. Apparently this valley was very well irrigated by ground water. The place was surrounded by high trees. The southern section of the meadow, thus, was receiving shadow for a considerable part of the day. Plenty of nettles (*Urtica* sp.) grew on this side of the meadow. The habitat was very suitable to *Araschnia levana*, whose expectation of ground humidity is the highest among closely related European Nymphalinae (Reinhardt).

Other species flying together with *Araschnia levana* on 21st of August were *Pyronia tithonus* (Linnaeus), *Maniola jurtina* (Linnaeus), *Argynnis paphia* (Linnaeus), *Lycaena tityrus* (Poda), *Polyommatus icarus* (Rottemburg), *Plebeius argus* (Linnaeus), *Leptotes pirithous* (Linnaeus), and *Celastrina argiolus* (Linnaeus).

Likelihood of further spread within Turkey

A deeper investigation in the area was not carried out. Therefore, the species very likely already occurs also in other localities in the area by now. Still, this wet type of habitat, where the species has actually been found, is not very abundant in the area.

It seems that the intensively cultivated plains of Thrace, which lie to the south and south-east of the area, are not very suited to support an expansion, but perhaps the low land forests along the Black Sea can be a stepping-stone.

If the species, however, would be able to reach the Anatolian part of Turkey, the vegetation and climate in humid and mountainous areas like Bolu and in the central and eastern Black Sea coast will likely lead to a fast and significant expansion of its range towards the east.

Literature

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