Ophrys reinholdii (Orchidaceae) – a new species for the Bulgarian flora

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Abstract. *Ophrys reinholdii* was found in Mt. Strandzha. It was recorded as a new species to the Bulgarian flora.

Key words: *Ophrys reinholdii*, *Orchidaceae*, plant conservation, vascular plants

During the spring of 2003–2004, while conducting field studies in the Strandzha Nature Park, a new species of orchid was discovered for the flora of Bulgaria:

***Ophrys reinholdii* Spruner ex Fleischm.,**
Österr. Bot. Z., 57: 5, 74 (1908) (Fig. 1).

A preserved specimen of the species is deposited in the herbarium at the Strandzha Nature Park Directorate, Malko Turnovo.

The species is an East-Mediterranean oriental floristic element, with a natural distribution in Albania, R Macedonia (Southern), Greece, the Aegean Islands, and Southwest Turkey, Syria (Soó 1980; Delforge 1995; Buttler 1996). Investigations yielded a total of three sites where the species occurs, all located within the boundaries of Strandzha Nature Park:

1. Southeast from Brushlyan village, Gogovo (Gogov Dol) locality, on the left side of a forestry dirt road above Mechi Dol River (Aidere), 327 m, with flowers, 13.05.2003, NG-35, 42° 01′ N 27° 51′ E (Fig. 2), SC (BB, SD, SU).

The species was found during 2003 with a very limited population of two individuals, on top of calcareous substrate and on dry terrain, under the shade of broadleaved trees and bushy patches. This population is a part of the largest known one for the species, found during 2004, which occupies the far southeastern sections of the park and represents atypical conditions. It contains 53 individuals, distributed in small groups (2–7 individuals) (Fig. 2). The flowers identified display 5 variations of coloration and form, identical to those from the other sites. The terrain faces south on a steep slope. It is exposed to direct sunlight and the soil is rocky and dry. The individuals are concentrated at an elevation between 297 and 390 m. The habitat supports a sub Mediterranean community composed primarily of *Carpinus orientalis* Mill., *Phyllirea latifolia* L., *Mespilus germanica* L., *Cistus incanus* L., *Jasminum fruticans* L., as well as *Fraxinus ornus* L., *Quercus polycarpa* Schur., *Q. pubescens* Willd., *Crataegus monogyna* Jack., *Cornus sanguinea* L., *Juniperus communis* L. Herbaceous include *Festuca vallesiaca* Gaudin, *Agrostis capillaris* L., *Chrysopogon gryllus* (L.) Trin., *Luzula luzuloides* (Lam.) Dandy & Wilmott, *Ophrys scolopax* Cav., *O. mammosa* Desf., *O. apifera* Hudson, *Orchis simia* Lam., *O. coriophora* L., *O. papilionacea* L., *O. tridentata* Scop., *Spiranthes spiralis* (L.) Chevall, *Himantoglossum caprinum* (M. Bieb.) Sprengel, *Anacamptis pyramidalis* (L.) L. C. M. Richard, *Thymus callieri* Velen., *Achillea clypeolata* Sm., *A. millefolium* L., *Satureja coerulea* Janka, *Anemone pavonina* Lam., *Iris suaveolens* Boiss & Reuter.

Dimitrov & al. (2001) recorded *O. argolica* Fleischm. from this area but during 2002–2004 investigations it

Fig. 1. *O. reinholdii* (photo S. Draleva & S. Uzunov)

was not found at the territories studied, and most probably was erroneously recorded instead of *O. reinholdii.*

2. This site was found 600 m southeast of the first: NG-35, 42° 01′ N, 27° 28′ E, 289 m, on the left bank of the Mechi Dol River (Fig. 2). A total of 32 individuals were found, localized at an elevation of between 260 and 285 m. The terrain faces south with a steep slope exposed to direct sunlight, soil is dry and rocky. The habitat represents a sub Mediterranean community composed of *C. orientalis*, *P. latifolia, J. fruticans.* Herbaceous include *T. callieri*, *A. clypeolata, Agropyron cristatum* (L.) Gaertn., together with *A. pavonina, Achillea millefolium* and *I. suaveolens*. Other representatives include *Ophrys scolopax*, *Orchis coriophora*, *O. papilionacea*, *O. tridentata*, *O. simia*, *A. pyramidalis*, *S. spiralis*, *Anthemis jordanovii* Stoj. & Acht. and *Veronica turrilliana* Stoj. & Stef.

3. This site is located 12 km southeast of the first along the main road between the towns of Malko Turnovo and Tsarevo, and around 8 km northeast of Malko Turnovo, on the left side of road in the direction of Tsarevo, 261 m, NG-45, 42° 00′ N, 27° 36′ E (Fig. 2). The population contains 20 individuals, distributed in groups of 2 to 5. The terrain faces south and is shady with average soil moisture. The habitat is of the same type as other population located in 2003. The site most likely represents a border-group of the larger population located in close proximity, and in association with conditions and community typical for the species.

On the base of established morphological characteristics in Bulgaria is distributed typical species – *O. reinholdii* subsp. *reinholdii*, but with different variations in form and coloration of its flowers. The taxon is distributed throughout Greece and Albania in association with identical habitat conditions and plant community. In Bulgaria, the flowering time is from the first ten days of April to the second ten days of May, and is distributed between 260 to 390 m.

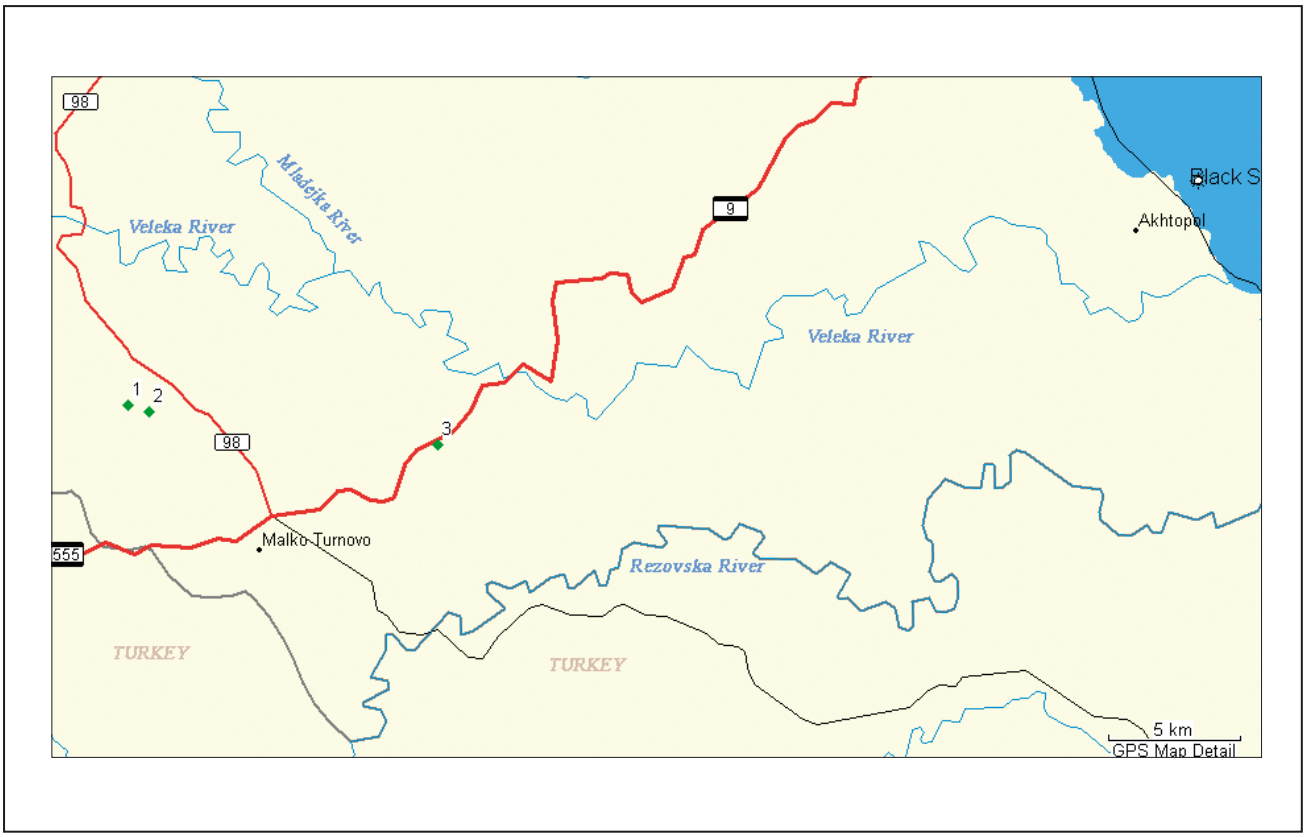

Fig. 2. Distribution map of *O. reinholdii*

In all localities, the population of *O. reinholdii* has a low abundance and density, and may be assigned as an assectator. Its growth and development continues normally in all localities and has demonstrated to be a calciphyte, xerophyte, thermophyte and heliophyte.

The species is listed in the *Annex* No II of the *Convention on International Trade in Endangered Species of wild fauna and flora* (CITES). Despite the fact that it is protected by only one Convention, *O. reinholdii* is a taxon of high conservation value. Its separation from the other populations of the species, the small size of the local population, the natural vulnerability and anthropogenic threats for all species of the *Orchidaceae*, as well as the specific threats for the habitat (intensive traffic on the forestry road) are reasons to give it the IUCN Conservation status of **Critically Endangered (CR)** and to suggest the inclusion of the species in the *Red Data Book of the PR Bulgaria* and *Annex* No 3 of the *Law on Biodiversity*. The population of the species is inside the territory of the Strandzha Nature Park, but outside the boundaries of the protected areas with a stricter regime of protection.

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