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New record of *Eranthis bulgarica* (Stef.) Stef. (Ranunculaceae) for the flora of Serbia

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Abstract. The article provides information on the new finding of *Eranthis bulgarica* (Stef.) Stef. for Serbia (Vrashka Chuka Peak), previously considered as endemic species for Bulgaria.

Key words: floristic findings, Serbia, *Eranthis*.

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The genus *Eranthis* L. (Ranunculaceae) includes 8–10 species distributed in Southern Europe and Temperate Asia (Lee et al., 2012; Park et al., 2019). Most species have narrow distributions and only one European species, *E. hyemalis* (L.) Salisb. has been widely cultivated in gardens and became naturalised in Britain (Boens, 2014) and North America (Parfitt, 1997). The type section *Eranthis* is characterised by plants with tubers, yellow sepals and emarginate or slightly bilobate upper petal margins without swellings (nectaries) (Tamura, 1995). Section *Eranthis* in Europe includes *E. hyemalis*, *E. bulgarica* (Stef.) Stef., in Southwest and West Asia – *E. cilicica* Schott et Kotschy, *E. longistipitata* Regel, and *E. iranica* Rukšāns et Zetterl. (Erst et al., 2020).

During the fieldwork in Bulgaria and Serbia in the summer of 2019 and 2020, a new location of *E. bulgarica* was revealed. This species was previously known from one location in Bulgaria. *Eranthis bulgarica* is a protected species under the national Biodiversity Act (Critically Endangered [B1ab(iii,v)+2ab(iii,v)]. BDA. Balkan endemic). The known locality is included in the Vrashka Chuka Protected Area (Vladimirov, 2015).

V. Budak (1999) indicated that North-East Serbian specimens look like *E. hyemalis* var. *bulgarica* Stef. V. Vladimirov (2015) indicates that the species is distributed in Serbia, but the locations of this species in Serbia are not indicated. According to latest data, *E. hyemalis* has been registered at eight locations in Serbia (Sombor-Bački Monoštor, Kozara forest; Bačka Palanka, Bagremara forest; Ruma, Donji Tovarnik, Lošinci forest; Valjevo; Knjaževac,

Novi Han; Vrška Čuka; Zaječar, Koprivnica; Niš, Koritnik, Banjsko Brdo) (Budak, 1999), only a few findings have been confirmed (Petrović, Lakušić, 2017). Vrashka Chuka is the most northwestern peak of 692 m (2,270 ft) alt. in the Stara Planina chain on the border between Bulgaria and Serbia, situated in the geographical subregion Predbalkan (Kopravev et al., 2002). There is a border checkpoint between Bulgaria and Serbia in the pass. The closest towns to the peak are Kula toward the northeast and Zaječar toward the northwest. Plants from the Bulgarian and Serbian locations of this mountain form the one population. We did not see the herbarium specimens indicated by I. Petrović and D. Lakušić (2017), but probably all specimens from the locations in the east of Serbia belong to *E. bulgarica*. *Eranthis bulgarica* is characterized by erect, glabrous and simple stems 7–13 cm high; involucre leaves up to 2 cm long, arranged in a whorl close to the solitary terminal flower, deeply palmate divided on linear lobes; yellow flowers, with numerous stamens and 4–6 free carpels; follicles in number 4–6 with curved styloidium (Vladimirov, 2015). This species is distinguished from *E. hyemalis* by dissected to the base involucre leaves, narrowly lanceolate (not widely-linear) leaf blade segments, which are shorter than sepals during flowering time, golden yellow sepals and orange-yellow petals (rather than pale-yellow) (Stefanoff, 1941, 1943).



Fig. 1. Flower of *Eranthis bulgarica* (A) and its habitat in Vrashka Chuka Peak (B).
Photos by A. Tashev

The species grows on karst and lithosol, well-developed humus-calcimorphic soil, in the xerothermal belt of oak forests, at about 680–690 m above sea level. It grows on stony habitats in sparse shrubs and trees of *Syringa vulgaris* L., *Carpinus orientalis* Mill., *Acer monspessulanum* L., *Quercus cerris* L., *Fraxinus ornus* L., etc.

New record: Serbia, Babin Nos Mountain, Vrashka Chuka Peak, N 43°50'01.6", E 22°22'15.4", 645 m alt., 12.03.2020. A. Tashev, S. Bancheva (SOM 177029).

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Новая для флоры Сербии находка *Eranthis bulgarica* (Stef.) Stef. (Ranunculaceae)

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Аннотация. В статье приведены сведения о новом для флоры Сербии виде – *Eranthis bulgarica* (Stef.) Stef., ранее считавшимся эндемичным для Болгарии: Сербия, гора Бабин Нос, пик Врашка Чука, 43°50'01.6" с.ш., 22°22'15.4" в.д., 645 м над ур. м. 12.03.2020. А. Ташев, С. Банчева (SOM 177029).

Ключевые слова: флористические находки, Сербия, *Eranthis*.

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