

Campanula* × *xiserana* (*C. rhomboidalis* × *C. rotundifolia*), a new hybrid in *Campanula

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ABSTRACT: The hybrid *Campanula xiserana* (*C. rhomboidalis* L. × *C. rotundifolia* L.) is described from near Jizerka, Jizerské hory Mts., Western Sudeten, Czech Republic. Here a small topodeme of the alien *C. rhomboidalis* L. is established, enclosed in an extensive *C. rotundifolia* L. population. The hybrid is rather variable, indicating that back-crossing with one or both parents takes place. *C. rhomboidalis* L., accompanied by *C. rotundifolia* L., occurs in two more sites in the Czech Republic but no hybrids have been found.

KEYWORDS: *Campanula rotundifolia* L., *C. rhomboidalis* L., *C. xiserana* KOVANDA, interspecific hybridization, Western Sudeten

It is a well known fact that the Western Sudeten is exceedingly poor in Campanulas. Disregarding *C. glomerata* L. and *C. cervicaria* L. that occur (or, rather, occurred) rarely and locally in the foothills, and the common weeds *C. rapunculoides* L. and *C. trachelium* L., the only species on record in the mountains proper are *C. rotundifolia* L., *C. patula* L., *C. latifolia* L., one endemic (*C. bohémica* HRUBY in POLÍVKA, DOMIN & PODPĚRA) and one subendemic (*C. rotundifolia* L. subsp. *sudetica* (HRUBY) SOÓ). The latter two are missing in the Jizerské hory Mts., essentially a western extension of the Krkonoše Mts., where this scanty list is supplemented by the alien *C. rhomboidalis* L. This native of the S.W. Alps is apparently a recent arrival in the Jizerské hory Mts., having been first recorded there by M. HUSOVÁ in 1966 and identified ten years later (KOVANDA & HUSOVÁ 1976). Plants intermediate between *C. rhomboidalis* L. and

C. rotundifolia L., obviously of hybrid origin, were also observed. At that time, considering the limited range of the hybrid, it did not seem sensible to describe it. The need for a formal description has become necessary only with the advent of the multi-volume Flora of the Czech Republic (now in its final third) which aims to include all species, subspecies and hybrids currently known to occur in this country. It is therefore described here.

***Campanula* × *iserana* KOVANDA hybr. nova
(*C. rhomboidalis* L. × *C. rotundifolia* L.)**

Differt a *C. rhomboidalis* L. radicibus paulo incrassatis, foliis caulinis anguste ellipticis usque lanceolatis, caulibus inconspicue angulatis usque teretibus, a *C. rotundifolia* L. praecipue inflorescentiis paucifloris. A *C. serrata* (KIT.) HENDRYCH quam aliquanto in mentem revocat iam caulibus circum puberulis distat.

Holotypus: Bohemia septentrionalis: in prato montano in clivo montis Bukovec prope vicum Jizerka, alt. 900-910 m. Die 2. 7. 1974 leg. M. Kovanda. In Herbario Musei Nationalis Pragae (PR) conservatur.

Etymology: iseranus, -a, -um, Latinized Indoeuropean root eis, ois = rapid, swift, torrential (Celtic ei = small, suir = river) that survives in the names of a number of European rivers in areas once inhabited by the Celts: Isère (France), Isar (Bavaria), Ijzer (Netherlands), Aire (England), Izera (Poland), Jizera (Czech Republic)¹. Cf. *Hieracium iserantum* UECHTR.

While *C. rotundifolia* L. is common in meadows and other grasslands throughout the mountains, *C. rhomboidalis* L. is local, occurring in the same small patch of meadow on the S.W. side of Mt. Bukovec near the village Jizerka, as it did a quarter of a century ago when first studied by the present author. The hybrid is found only where the populations of these species come into breeding contact (the population of *C. rhomboidalis* L. occurring within that of *C. rotundifolia* L.) and shows no propensity to expand, even though viable seed is produced. In view of the range of variation displayed by the hybrid, back-crossing with one or both parents is likely to take place.

While *C. rhomboidalis* is diploid, with $2n=34$ (e. g. FAVARGER 1949, GUTERMANN in LÖVE et LÖVE 1961, PODLECH 1965), *C. rotundifolia* L. comprises diploid ($2n=34$) and tetraploid ($2n=68$) cytodesmes of which the former is widespread throughout this country, and the latter is rare and local, found only scattered among the diploids. No tetraploids have been sampled in the Jizerské hory Mts. (KOVANDA 1977).

¹ Here the name has also been related to the mountains where the river rises (Jizerské hory Mts.), its tributary (Jizerka), the second highest peak (Mt. Jizera) and two villages (Jizerka and Jizerní Vtelno). In German Isergebirge, Iser, Kleine Iser.



Fig. 1. *Campanula* ×*iserana* KOVANDA hybr. nova (del. A. SKOUMALOVÁ)

Remarkably few hybrids are reported in subsect. *Heterophylla* and in *Campanula* in general. One reason may be that most members of this subsection (where both *C. rhomboidalis* L. and *C. rotundifolia* L. belong) are so closely related and phenotypically similar that possible hybrids may be difficult to discern. With cauline leaves much resembling the radical ones in terms of shape and size, *C. rhomboidalis* is rather aberrant in the subsection (though in other characters it tallies with the other members) and is easily recognizable at first sight, and this distinctive feature also manifests itself in the hybrid.

C. rhomboidalis L. occurs, as an alien, in two more localities in the Czech Republic: Vrchlabí, on the road to Benecko, in the foothills of the Krkonoše Mts., Western Sudeten, and the castle park at Loučná nad Desnou, in the foothills of the Hrubý Jeseník Mts., Eastern Sudeten (KOVANDA 1996). In both it is accompanied by *C. rotundifolia* L. Both localities were searched in detail but no trace of a hybrid could be found. It is interesting to note that no hybrids are reported either from the native distribution area or from other places where *C. rhomboidalis* L. is found introduced (Austria, Germany, Netherlands).

It should be pointed out that the fact that all three sites of *C. rhomboidalis* L. are in the Sudeten is purely accidental and a causal relationship is hard to find. The distance between them is considerable (from Jizerka to Vrchlabí c. 28 km, from Vrchlabí to Loučná nad Desnou c. 155 km as the crow flies), indicating that the populations originated from different sources and at different times (at Jizerka the species was discovered in 1966, at Vrchlabí in the 1970s, at Loučná nad Desnou as early as 1880, Kovanda 1996). In the first two the mode of introduction is not known, in Loučná nad Desnou it was allegedly introduced with grass seed (OBORNY 1885).

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