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A range extension for *Campanula moravica*

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ABSTRACT: Based on herbarium material from WU and LE, *Campanula moravica* (SPITZNER) KOVANDA is reported as new to four more provinces in Austria (Burgenland, Styria, Carinthia, Tyrol), Yugoslavia (Serbia), Bosnia and Herzegovina, Albania, Italy, the Ukraine, Byelorussia and Russia. The distinguishing characters are briefly discussed.

Keywords: *Campanula moravica*, *Campanula pinifolia*, *Campanula rotundifolia*, Austria, Balkan Peninsula, the Ukraine, Byelorussia, Russia

Since it was recognized as a distinctive member of the group Saxicolae of subsect. Heterophylla (WITAS.) FED. over thirty years ago (KOVANDA 1970, FEDOROV & KOVANDA 1976), our knowledge of *Campanula moravica* (SPITZNER) KOVANDA has made only slow progress. The species, at first considered to be only a local phenomenon, is now known to occur in the Czech Republic (from where it was described as a variety of *C. rotundifolia* L.; see SPITZNER 1893), Slovakia, Austria, Hungary, Croatia and Rumania (see FEDOROV & KOVANDA 1976).

C. moravica differs from *C. rotundifolia* especially in having a thickened rhizome, larger corollas (16-25 mm long), cauline leaves narrowly linear (at most 1.8 mm wide) and more or less crowded in the lower part of the stem, a contracted inflorescence, a papillose ovary and a slightly lignified capsule. In national floras it is usually listed as *C. rotundifolia*.

The species, though distinctive, may be quite difficult to identify both in the field and in herbarium material, particularly to the untrained eye. The reason is threefold. First, the most conspicuous feature distinguishing it from *C. rotundifolia*, the thickened rhizome, is extremely fragile and almost impossible to unearth from a tangle of subterranean organs of other herbs. Hence it is only seldom available in herbarium specimens. Second, the papillose ovary of *C. moravica* is best seen in flower buds or young flowers. But the papillae can be missing, albeit rarely, in some buds or flowers, or, exceptionally, in whole plants of a population. On the other hand, papillae can occasionally be found in *C. rotundifolia* from the more southern parts of its distribution area. Third, the slightly lignified capsule is not available at all times. *C. moravica* starts to flower rather late (in Central Europe usually not earlier than 15 July) and capsules do not normally ripe until early September when field studies of the flora and vegetation are usually over.

C. moravica includes two cytotypes, one tetraploid (2n=68), the other hexaploid (2n=102) that are impossible to distinguish safely on morphological grounds. Characters given for their recognition (diameter of rhizome, size of pollen grains) proved unreliable and apply to some plants only (KOVANDA 2000). The diploid cytotype (2n=34) is in turn distinguishable as a separate species *C. gentilis* KOVANDA but is not known to occur in the area of distribution of *C. moravica* (FEDOROV & KOVANDA 1976).

My account of subsect. Heterophylla (WITAS.) FED. in Flora Europaea (FEDOROV & KOVANDA 1976) was based primarily on my field studies in Central Europe (Czech Republic, Slovakia, Poland, Austria, Germany) and the study of herbarium material from BRA, BRNM, BRNU, PR, PRC, W[1] and especially K where I spent nine and a half months working as a Flora Europaea bursar in 1969-1970. It is the purpose of the present report to extend the knowledge of distribution of *C. moravica* by listing data that have ensued from my study of herbarium material kept in the herbaria of WU and LE which I was able to visit in 2001.

For the reasons set out above, the following list contains only specimens where I am quite sure that the plant concerned really is *C. moravica* (about one third of the material seen). It follows therefore that the species may be much more frequent than would appear from the list. Some collections from Austria, Yugoslavia and Bosnia (not from the more eastern countries) resemble *C. gentilis* (not previously reported), some are probably true *C. rotundifolia* s. str. To be absolutely sure, field studies are required.

In localities from the Ukraine, Byelorussia and Russia, names of provinces (oblasť) were completed where missing, to facilitate their location. Abbreviations and symbols used: s.d. ... sine dato (no date given), ? ... name of collector missing or illegible. Phrases in inverted commas are quotations from the labels.

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[1] Abbreviations of herbaria follow HOLMGREN P. K., HOLMGREN N. H. & BARNETT L. C.: Index Herbariorum, ed. 8, New York 1990.

Austria

Lower Austria: “Schwansdorf: zwischen lichten Gebüsch u. sparl. Graswuchs, neben einer gemähten Wiese”, Witasek 1910 WU; “unteres Kemptal, 2 Km SE von Schiltern an der Bundesstrasse nach Langenlois E der Kote 374, 370 m”, Till 1996 WU; “in ditione oppidi Wiener Neustadt”, Kerner s.d. WU; “in incultis pr. Vindobonam (Brigittenau)”, Beck 1893 WU.
Burgenland: “ober Neudörfl gegen Sauerbrunn”, Sonklar 1863 WU; “Mischwald südl. von Sauerbrunn, längst des grünmarkt. Weges nach Wien”, Leonhardt 1960 WU.
Styria: “in graminosis prope Gross-Lobming c. 640 m”, Pernhofer s.d. WU; “in graminosis silvaticis prope monasterium Geckau 850 m”, Pernhofer 1891 WU; “Judendorf, Frauenkogel”, Klammerth 1902 WU; “an Rainen bei Riez”, Korbeck s.d. WU.
Carinthia: “Grauth am Bach”, Lütkemüller 1880 WU; “Mariasaal bei Klagenfurt”, Witasek 1898 WU; “Mollbrücken”, Witasek 1898 WU; “an Felsen bei Mollbrücken”, Wibiral 1910 WU; “Rosental, Waidischbach-Gries SW Otrouza E Ferlach, Bachschotter”, Leute 1993 WU.
Tyrol: “Imst, Böschung an der Strasse nach Brennbichl”, Witasek 1900 WU.

Yugoslavia

Serbia: “auf Felsen prope Pirot”, ? 1889 WU; “Pirot, in m. Basara”, Adamović 1898 WU; “in pascuis alp. m. Metina”, Adamović 1895 WU; “in pascuis subalp. m. Stara Planina”, Adamović 1896 WU.

Bosnia and Herzegovina

Bosnia: “Vlašic”, Brandis 1886 WU; “auf dem Udrč bei Drinjača”, ? 1890 WU; “Crvene stijene bei Srebrenica”, Wettstein 1890 WU; “Radkoviči bei Granovo, am steinigen Hange des Jedovnica”, Handel-Mazzetti 1904 WU; “Mt. Ilica, Felsen gegen Westen”, Handel-Mazzetti & Janchen 1904 WU; “im Graben unter der Ogujavica vrelo an der Plaženica bei Bugojno”, Handel-Mazzetti & Janchen 1904 WU; “Podkraj südöstlich von Livno”, Faltis & Wibiral 1907 WU.

Albania

“distr. Hasi: Pastrik, Gipfelregion, grasige, felsige Hänge, 1800 m”, Dörfler 1918 WU.

Italy

“in rupestribus montis Resegone di Lecco”, Degen 1894 WU.

The Ukraine

Zakarpatska o.: “selo Jasiča, lug na Čornoj Tisse”, Popov 1946 LE.
Ľvivska o.: “Umgebung von Lemberg [Ľviv], Sammler unbekannt”, c. 1860, WU.
Žitomirska o.: “Olevsk, distr. Ovruč”, Paczoski 1894 LE; “Ovručskij rajon, okolo sela Gladkoviči”, Charkievič 1947 LE.
Černigovska o.: “distr. Krolovec, circa Budiča”, Borčen 1897 LE; “luga bl. Konjatina”, ? 1913 LE.
Kyjivska o.: “Kyjiv”, ? 1849; “Borodjanskij rajon”, Charkievič 1969 LE.
Dnipropetrovska o.: “praesertim circa urbem Mogiliv”, Dovnar 1862 LE.

Byelorussia

Minskaja o.: “Drozdy”, Ostankov 1863 LE.
Gomelskaja o.: “Rogačevskij ujezd, dolina r. Dniepra”, Poliansky 1923 LE.

Russia

Tambovskaja o.: “Tambovskij rajon, pos. Goldši”, Buchalo 1974 LE.

Discussion

In Austria, *C. moravica* has so far been reliably known only from Lower Austria (KOVANDA 1970, FEDOROV & KOVANDA 1976, ADLER & al. 1994). The present data extend its range to four more provinces (Bundesländer), Burgenland, Styria, Carinthia and Tyrol. So far, no records are available for Upper Austria, Salzburg and Vorarlberg.

The presence of *C. moravica* in much of the Balkan Peninsula could have been anticipated. Some collections from Serbia and Bosnia were seen and named *C. pinifolia* UECHTRITZ by the monographer WITASEK. Unfortunately, this is a nomen seminudum having been published in a footnote to *C. rotundifolia* in PANČIĆ (1874) and diagnosed only vaguely with three words (in Serbian): "leaves narrow, numerous". WITASEK (1902) could have validated the name had she clearly indicated what she had in mind. But her description of *C. pinifolia* UECHTRITZ confuses at least two different species belonging to two different series: series Vulgares ("rhizoma tenue, ... receptaculum glabrum, ...") and series Saxicolae ("folia ... caulina linearia, inferne conferta, contracta"). Moreover, she failed to indicate the taxonomic rank clearly and unambigously, having treated her *C. pinifolia* UECHTRITZ first as a species but then as a subspecies of *C. rotundifolia* (though using a binom) in a synopsis of her work (WITASEK 1902).

It will be seen from the above list that by far the largest area extension for *C. moravica* is the Ukraine, Byelorussia and the western part of European Russia. One may perhaps wonder why these data were not included in Flora Europaea

where the chief author of *Campanula* was Professor A. A. FEDOROV (1908-1987), then a staff member at the V. L. Komarov Institute of Botany, Academy of Sciences, St. Petersburg. The reason is simple. We worked quite independently, we never met, and only exchanged a couple of formal letters. He did not interfere with my part (subsect. Heterophylla), never showing any interest in my work, and I in turn, thirty years his junior, never found courage to meddle with his. My impression was that he was fully involved in his part of *Campanula* and was not inclined to extend his commitment. Nonetheless, our accounts were finally both accepted, edited and amalgamated by the editors and published. Neither has ever met with any serious criticism.

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