

## ***Campanula Tatrae*, the correct name for *Campanula polymorpha***

*Campanula Tatrae*, správné jméno pro *Campanula polymorpha*

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KOVANDA M. (1975): *Campanula Tatrae*, the correct name for *Campanula polymorpha*. — Preslia, Praha, 47 : 26—30.

The name *Campanula polymorpha* WITAS., usually treated as a specific one, is shown to have been published in the rank of subspecies. At the species level it is preceded by *Campanula Tatrae* BORBÁS.

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Of the few *Campanulas* native in the Tatra Mountains, perhaps the most controversial is *Campanula polymorpha* WITAS. A perusal of the pertinent literature reveals that little agreement has been reached as to its taxonomic rank, origin, relationships and, last but not least, nomenclature. Early explorers of the Tatra flora, misled by an overall resemblance, referred to it erroneously as *Campanula linifolia* "JACQ." (see for instance WAHLENBERG 1814) or as *C. Scheuchzeri* VILL. (see SLOBODA 1852, REUSS 1853, KOTULA 1889, SAGORSKI et SCHNEIDER 1891, and PAX 1898). In her comprehensive monographic study of 1902, WITASEK convincingly demonstrated that the Tatra plant is not identical with the Alpine *C. Scheuchzeri* VILL. (of which *C. linifolia* "JACQ." seems to be a synonym) and reclassified it as belonging to a newly established species *Campanula kladniana* (SCHUR) WITAS. This is a weak point of her fine monograph because *C. kladniana*, as broadly circumscribed by WITASEK, is misunderstood from both the taxonomic and the nomenclatural point of view. The epithet *kladniana*, honouring the Sibiu druggist and botanist Friedrich Kladni, was first used for a variety of *C. Scheuchzeri* VILL. by SCHUR in 1866. It is based on a saxicolous *Campanula* of the Romanian Carpathians (defined by its caespitose growth, cordate basal leaves, pendent stems, narrowly linear to setaceous cauline leaves and long, deflexed calyx teeth) which is in all likelihood identical with what was described as *C. carnica* SCHIEDE from the SE. Alps (see PODLECH 1965).

WITASEK seriously misinterpreted SCHUR's concept, applying his varietal epithet *kladniana* to *C. Scheuchzeri* VILL. from the Tatra as well and even to plants of this name from the Sudeten Mountains; these plants are taxonomically distinct from the Alpine *C. Scheuchzeri* VILL. as well as from each other. The author seems to have been aware of this shortcoming of her concept of *C. kladniana* and, having received additional material from Dr. Degen of Budapest a few years later, carried out a substantial revision. In her subsequent paper (WITASEK 1906) which is essentially a supplement to her lengthy study of 1902, *C. kladniana* (SCHUR) WITAS. is found subdivided into four major segments: *C. kladniana* (SCHUR) WITAS. s. str. (Romania, Bihorului Mts.), *C. stenophylla* (SCHUR) WITAS. (Romania, Făgăra-

sului and Rodnei Mts.), *C. polymorpha* WITAS. (Czechoslovakia, Tatra Mts.) and *C. mentiense* WITAS. (Czechoslovakia, Babia hora Mts.). This treatment is important because it is here that the Tatra plant is separated from both *C. kladniana* (SCHUR) WITAS. and *C. Scheuchzeri* auct. and is unambiguously treated as a distinct taxon. Also, SCHUR's original circumscription of the variety *kladniana* is restored. Nomenclaturally, the binomials *C. kladniana* (SCHUR) WITAS. s. str., *C. stenophylla* (SCHUR) WITAS., *C. polymorpha* WITAS. and *C. mentiense* WITAS. are of particular interest inasmuch as all four were applied to taxa referred to as subspecies of *C. kladniana* (SCHUR) WITAS. s. l. The subspecific status of these taxa is clearly indicated ("4 Typen, welche ich als Subspecies der *C. Kladniana* auffassen möchte", WITASEK 1906 : 237), so that the respective names cannot possibly be considered alternatives, as proposed by TACIK (1971a, 1971b); for a discussion see also SHETLER (1963). Under the provisions of the International Code of Botanical Nomenclature (Article 24), names like these may be altered to the proper form without any change of authorship. Thus the above names are available at subspecific level and should be cited as *C. kladniana* (SCHUR) WITAS. subsp. *kladniana*, *C. kladniana* (SCHUR) WITAS. subsp. *stenophylla* (SCHUR) WITAS., *C. kladniana* (SCHUR) WITAS. subsp. *polymorpha* WITAS. and *C. kladniana* (SCHUR) WITAS. subsp. *mentiense* WITAS. Combinations at specific level were first made — perhaps unintentionally — in the Index Kewensis (Supplement IV, 1913) where these subspecies are automatically treated as species, making the compilers of the Index responsible for the combination. Therefore the names of WITASEK's taxa at the rank of species are as follows: *C. stenophylla* (SCHUR) PRAIN et al., *C. polymorpha* (WITAS.) PRAIN et al., and *C. mentiense* (WITAS.) PRAIN et al.

WITASEK's concept, though quite clear and consistent, has often been misunderstood. Students of the Tatra flora have adhered to her 1902 study rather than to the 1906 supplement, or tried to compromise between them. *C. kladniana* (SCHUR) WITAS. has repeatedly been reported from the Tatra Mts. (see PAWŁOWSKI 1923, SZAFER, KULCZYŃSKI et PAWŁOWSKI 1924, JÁVORKA 1925, DOMIN 1935, TACIK 1971a, 1971b). Those accepting *C. polymorpha* WITAS. have usually treated it as a species, attributing its authorship to WITASEK, apparently unaware of her true intention (see SZAFER, KULCZYŃSKI et PAWŁOWSKI 1953, PODLECH 1965). It is interesting to note that HRUBY (1930), in his otherwise unsuccessful and highly confusing monographic attempt, clearly demonstrated that *C. kladniana* (SCHUR) WITAS. is absent from the Tatra Mts.

This nomenclatural and taxonomic mess may be rectified if the oldest valid name is taken into account. This is *Campanula Tatrae* BORBÁS, first published (as a nomen nudum) in a Hungarian floristic report of the Tatra Mts. in June, 1902 (BORBÁS 1902). A Latin diagnosis is provided in a German extract of that paper which appeared in an editorial section of the Magyar Botanikai Lapok titled "Hazai botanikai dolgozatok ismertetése. Referate über ungarische botanische Arbeiten" in October, 1902. The extract is initialled by Degen and the diagnosis of *Campanula Tatrae* runs as follows:

*Campanula Tatrae* "sive *C. rotundifolia* var. *Tatrae* BORB. *Campanulae Kitaibelianae* R. et SCHULT. (*C. microphylla* KIT., non CAV.) proxima, sed laxe racemosa. Caulis usque ad apicem sat aequaliter foliosus, glaber, foliis inferioribus lanceolato-linearibus, ceteris angustissime linearibus, alabastris nutantibus, corolla sat magna *C. Kitaibelianae*, tubuloso campanulata.

Solo et calcareo et granitico Tatrae.

N. B. Loco, ubi *C. Kitaibeliana* crescere dicitur (in Tatra maiore) forma *Campanularum* affinium uniflora praeter *C. Kladniana* SCHUR nulla, quare utramque conjunxi." Borb. in litt.

Admittedly, BORBÁS' Latin was somewhat peculiar, but these words indicate beyond any doubt that the plant he was describing "en passant" as a new species was *C. Scheuchzeri* of earlier students of the Tatra flora, which was to be named *C. polymorpha* WITAS. only four years later. [*C. kitaibeliana* ROEM. et SCHULT., alluded to in the diagnosis, is a dwarf form of *C. serrata* (KIT. ex SCHULT.) HENDRYCH]. This is also evident from BORBÁS' authentic material of his *Campanula Tatrae*, now deposited in the Herbarium of the Eötvös Loránd University in Budapest. (The major part of his collections was destroyed in World War II). The surviving material consists of four sheets, of which three came from the vicinity of Tatranská Kotlina ("Barlangliget") and one from near Starý Smokovec ("Tátra-Füred"). The localities of the collections are as follows:

1. "In alpinis calcareis Tatrae ad Barlangliget, 3000—4000' alt. s. m., 24. VII. 1892" (No. 183770);
2. "Katzberg ad Barlangliget, 23. VIII. 1899" (No. 183771);
3. "In herbis montis Katzberg ad Barlangliget, 23. VIII. 1899" (No. 183732);
4. "In saxosis ad ostium vallis Tarpatak (Kohlbach) Tatrae ad Tátra-Füred, 16. VII. 1890" (No. 183769).

All this material was collected by BORBÁS. No specimen is labelled as *Campanula Tatrae* in his own hand, but each label is provided with a stamped note "In Herb. Borb. apud" to which "*Campanula Tatrae* BORB." is added in ink by another hand. This note also appears on two other sheets containing material collected in Transsylvania, one by Haynald and one by Richter.

Surprisingly enough, BORBÁS' name, though published in the first volume of what was to become a leading Hungarian botanical periodical, has been almost completely ignored and is seldom cited in botanical literature, even as a synonym. Exceptions include DOMIN (1925) who suggested that *C. Tatrae* BORBÁS might be the correct name for the Tatra plant, and NOVÁK (1937) who made use of the name to denote a superb plant portrait by Svolinský; in the accompanying text, however (p. XV), the name *C. Tatrae* is listed as a synonym of *C. kladniana* subsp. *polymorpha* WITAS. and so it is in the last edition of the book (NOVÁK 1963). JÁVORKA (1925) applied this name (at the level of forma) to few-flowered plants of *C. kladniana* (SCHUR) WITAS. and DOMIN (1935) cites *C. Tatrae* BORBÁS as a synonym of *C. kladniana* (SCHUR) WITAS. There is no *C. Tatrae* in the Index Kewensis. Paradoxically, even WITASEK, publishing her "*C. polymorpha*" in the same journal only four years later, was apparently unconscious of BORBÁS' specific name. A Viennese school teacher may perhaps be pardoned for being unfamiliar with botanical development in the other part of the dual monarchy. It is tempting, however, to speculate why the Editor of Magyar Botanikai Lapok (that is, Dr. Degen who collected all the material on which *C. polymorpha* WITAS. was based and prepared the German extract of BORBÁS' floristic report) did not intervene and why all the Central European botanical community preferred *C. polymorpha* WITAS. [or *C. kladniana* (SCHUR) WITAS.] to the earlier correct name *C. Tatrae* BORBÁS. One reason may be that the names *C. polymorpha* WITAS. and *C. kladniana* (SCHUR) WITAS. were coined by a reputable *Campanula* specialist who provided a careful analysis and a direct reference to *C. Scheuchzeri* VILL. which was familiar to both Austrian and Hungarian botanists. BORBÁS, on the other hand, was a versatile florist, with interests ranging from algae to monocotyledons and including many difficult genera of phanerogams such as *Dianthus*, *Mentha*, *Hieracium*, *Potentilla*, *Rosa* and *Rubus*. He was often criticized — already in his lifetime — for his taxonomic

concepts (or for the lack of them) and a great many of the names proposed by him (of which there are perhaps several hundreds) have been dropped into synonymy. It is not to be wondered, therefore, that BORBÁS' *Campanula Tatrae*, published shortly before his untimely death in 1905, failed to gain any appreciable recognition by his contemporaries. Also, the reference to *C. kitaibeliana* ROEM. et SCHULT. provided no clue to the identity of his new species, and the principle of priority had not been firmly established at that time.

The correct specific name of the plant under discussion is therefore as follows:

*Campanula Tatrae* BORBÁS Magy. Bot. Lap. 1 : 319, 1902

Syn.: *C. kladniana* (SCHUR) WITAS. sensu WITAS. Abh. Zool. Bot. Ges. Wien 1 : 39, 1902 (p. p. min., non sensu orig. SCHUR). — *C. kladniana* (SCHUR) WITAS. subsp. *polymorpha* WITAS. Magy. Bot. Lap. 5 : 239, 1906. — *C. polymorpha* (WITAS.) PRAIN et al. Index Kewensis Suppl. 4 : 35, 1913. — *C. kladniana* (SCHUR) WITAS. var. *polymorpha* (WITAS.) PAWL. Acta Soc. Bot. Polon. 1 : 5, 1923. — *C. rotundifolia* L. subsp. *polymorpha* (WITAS.) TACIK in JASIEWICZ Monogr. Bot. 20 : 254, 1965. — *C. linifolia* auct. non JACQ., e.g.: WAHLENB. Fl. Carp. 59, 1814. — *C. Scheuchzeri* auct. non VILL., e.g.: REUSS Května Slovenska 278, 1853; SAGORSKI et SCHNEIDER Fl. Centralkarp. 369, 1891.

A taxonomic study of *Campanula Tatrae* BORBÁS and related taxa will be published elsewhere.

#### Acknowledgements

I am grateful to Dr Julia Szujkó-Lacza (Department of Botany, Natural History Museum, Budapest) and Professor T. Simon (Department of Plant Taxonomy and Ecology, Eötvös Loránd University, Budapest) for information on Borbás' herbarium and for the loan of specimens.

#### SOUHRN

V článku se poukazuje na skutečnost, že jméno tatranského zvonku *Campanula polymorpha* WITAS., běžně považované za jméno druhové, bylo ve skutečnosti publikováno v hodnotě subspecie jako *C. kladniana* (SCHUR) WITAS. subsp. *polymorpha* WITAS. Na úrovni druhu má přednost starší, dosud přehlížená jméno *C. Tatrae* BORBÁS.

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Received April 18, 1974

Reviewed by Z. Pouzar

T. E. Weier, C. R. Stocking et M. G. Barbour:

### Botany

An Introduction to Plant Biology. Fifth Edition. — John Wiley & Sons, New York—London—Sydney—Toronto 1974, (10) + 693 str., 582 obr. + 18 barev. tab., 36 čísl. tabulek, cena váz. £ 7.95. (Kniha je v knihovně ČSBS.)

Publikace je úvodní vysokoškolskou učebnicí, která si klade za cíl seznámit studenta se všemi obory moderní botaniky, včetně systematiky. O jejím druhém a třetím vydání přinesl náš časopis již dříve recenze (*Preslia* 30 : 94, 1958 et vol. 37 : 114—115, 1965). Ve srovnání se zmíněnými vydáními se nové vydání liší už v autorském kolektivu a v podtitulu (rostlinná biologie), ale také ve větším stránkovém rozsahu, ve zvětšeném počtu obrázků, jež jsou zčásti na barevných tabulích, a zejména v přepracovaném textu.

Počet kapitol je stejný jako ve 3. vydání, avšak některé kapitoly jsou jinak vymezeny. Nově je zařazena tabulka metrických ekvivalentů a místo původně jediného rejstříku jsou na konci knihy indexy dva, a to věcný a rodový. Značně nebo zcela přepracovány jsou zejména kapitoly o dělení se buňce, o fotosyntéze a dýchání, o růstu a vývinu rostlin, o ekologii, o bakteriích, virech a houbách a konečně závěrečná kapitola o evoluci rostlin. Částečně přepracované jsou i jiné partie knihy. Přepracováním se autorům za pomoci dalších odborníků podařilo přiblížit text současnému stavu poznání v jednotlivých botanických oborech. Text provázejí opravdu vybrané, instruktivní obrázky (vedle starých mnoho nových ilustrací), z nichž čtenáře zvláště upoutávají snímky z elektronového mikroskopu, včetně rastrovacího (prostorové pohledy). Pozornost vyvolávají i perokresby a různá schémata, v nichž se běžně používá — podobně jako při grafické úpravě knihy — zelené barvy v jednom nebo ve dvou odstínech (+ ev. šedá v jednom nebo dvou tónech). Tato zeleň sice pomáhá zdůraznit některé struktury nebo jevy, popř. rozdíly mezi nimi, ale mnohdy (hlavně v morfologických obrázcích) může u studenta vyvolat chybnou představu, že je zeleně zobrazená struktura vždy zelená také ve skutečnosti.

Drobná nedopatření, na něž podepsaný upozornil v recenzi 3. vydání, odstranili autoři v nové knize téměř všechna. Zbývá nadále např. na str. 17 *species novum* (místo správn. *species nova*) a v obr. 5.10 na str. 63 chybí opět ve strukturální formuli chlorofylu *a* u IV. pyrolového jádra jeden atom H. Tiskové chyby, pokud jsem mohl zjistit, jsou nečetné.

Je to zdařilé didaktické dílo, na jehož nejnovější vydání rád čtenáře Preslie upozorňuji.

Zd. Černohorský