

## A note on the nomenclature of *Spergularia echinosperma*

### Poznámka k nomenklatuře druhu *Spergularia echinosperma*

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The correct authorship of the species name *Spergularia echinosperma* (for the taxon described originally by ČELAKOVSKÝ as a subspecies) is determined. Problems of the definition of alternative names are discussed. The situation is compared with that of the name *Melampyrum fallax* ČELAK.

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When revising some names of interesting plants for my “Catalogue of the Czechoslovak flora” and studying subspecific names proposed by Čelakovský, I came across the name *Spergularia echinosperma*, referring to a species described from Bohemia, Czechoslovakia, which probably represents an endemic plant of Central Europe. This name (in the specific rank) has been invariably ascribed to Čelakovský; see for instance Czechoslovak flora manuals (DOMIN, PODPĚRA et POLÍVKA 1928; DOMIN 1935; DOSTÁL 1948, 1954, 1958), special papers dealing with this species (e. g. HADAČ 1977) and foreign summarizing works as HEGI III. Fl. Mitteleuropa, ed. 2, 3/2, Lief. 5 : 785, 1962; Flora Europaea 1 : 156, 1964 etc.

Before the evidence is presented that Čelakovský described the taxon concerned as a subspecies only, a neglected fact must be emphasized: Čelakovský described *Spergularia echinosperma* (abbreviated further below mostly as *S. e.*) twice in the same year and it is not quite certain which of these two descriptions has priority. In literature, the description published in the fourth volume of Čelakovský's Prodrromus (German edition, p. 867) in 1881 is invariably quoted. However, Čelakovský published a text including the description of that taxon in a paper containing results of the floristic investigation of the Bohemian flora, preceding his well-known “Resultaten” (appearing in the period 1883–1893). Likewise “Resultaten”, this paper was published in Sitzungs-Ber. Koenigl. Boehm. Ges. Wiss. Prag (abbreviated further below as Sitzungs-Ber. . . .), in volume 1881 which, in its entirety, was published in 1882. The offprint of Čelakovský's paper was certainly published as early as in the course of 1881 (perhaps in VI. or VII.). Its existence was verified in the library of PR. The correct publication dates of both texts, which are important for the purposes of priority, are unknown. Regarding the fact that Čelakovský's paper in Sitzungs-Ber. . . . is the first in the 1881 volume, that it was presented in the first session of the Society in 1881 (i.e. 14. January 1881) and that the preface to the fourth volume of the Prodrromus (German edition) is dated 24 February 1881, it

may not be excluded that the name was first validly published in Sitzungs-Ber. . . . The two descriptions are based on the same material and the contingent change of the publication place of the basionym would neither influence the selection of the type specimen and the publication year of this name, nor would it have any other nomenclatural consequences. However, the two publication places are important because they clearly indicate that Čelakovský did not intend to describe a new species and neither did he describe one; in both cases he described only a subspecies. The discovery of the description in Sitzungs-Ber. . . . confirms this without any doubt.

The description of the new taxon in Sitzungs-Ber. . . . begins as follows: "In geographischen Reihenfolge fortschreitend, erwähne ich die Aufstellung einer neuer Unterart oder Rasse der *Spergularia rubra*, die ich als b) *echinosperma* bezeichnet habe".

In his Prodrromus Fl. Böhmen 4 : 467, 1881, Čelakovský classified the plant analogically as a subspecies and listed it under the name *Spergularia rubra* PRESL b) *echinosperma* m. In the Prodrromus (and in Čelakovský's subsequent publications as well), the epithets following Latin letters designate the name of subspecies (see below). The name "*S. echinosperma* m." is quoted in brackets, thus as a synonym (in the Prodrromus synonyms are always given in this way). Following the morphological description, there is a note which reads as follows: „Jedenfalls eine gute Rasse, die fast den Eindruck einer eigenen Art macht und im Sinne mancher neueren Autoren dafür gelten könnte (etwa so wie *Arenaria leptoclados* Guss. oder *Alsine viscosa* SCHREB.)“.

It follows from both the texts that Čelakovský did not want to describe a species. In the Prodrromus he only admitted that this taxon came very close to a separate species and that it could be accepted as such by other authors (but not by Čelakovský himself!). In the Prodrromus *Arenaria leptoclados* and *Alsine viscosa* are also classified only as subspecies.

Soon after the description of *S. e.* the taxonomic problems of this plant were studied in detail by ASCHERSON et GRAEBNER (1893) who found it in Germany. Based on a detailed analysis, they questioned Čelakovský's classification as follows (l.c., p. 519): „In der Werthung des taxonomischen Ranges unserer Pflanze können wir Čelakovský nicht völlig beistimmen, der es allerdings ingewiss lässt, ob man es mit ‚einer guten Rasse‘ oder mit einer eigenen Art zu thun hat und in seiner Nomenclatur auch beiden Auffassungen Rechnung getragen hat“. The authors clearly accepted specific rank for *S. e.* and ascribed the authorship of this species name to Čelakovský. However, it is not possible to assent to their opinion that Čelakovský (in Prodrromus) left the reader in vagueness about the taxonomic rank accepted and that he published (valid) names for taxonomic classifications, both in the subspecific and specific rank. This idea as well as the acceptance of Čelakovský as the author of a species name by ASCHERSON et GRAEBNER in their paper (and later in their Synopsis) has probably led later authors to give ČELAKOVSKÝ as the author to the name *Spergularia echinosperma* in the specific rank.

When discussing problems of the correct authorship of the species name *Spergularia echinosperma*, it is necessary to consider the preface of ČELAKOVSKÝ's Prodrromus. Both German and Czech edition includes a text (page VII.), which could have some bearing on these problems.

„Bedeutendere Abarten, Raçen oder Unterarten, die meist an bestimmte Oertlichkeiten gebunden sind und bei der Bestimmung nicht übergangen werden dürfen, habe ich überall (unter lateinischen Buchstaben) angeführt, daneben auch, da sie fast alle schon einmal für Arten gegolten haben, den vorhandenen Artnamen als Synonym beigelegt, welcher der Kürze halber in pflanzengeographischen Schilderungen und Verzeichnissen recht wohl gebraucht werden mag.“

„Důležitější odrůdy, poddruhy nebo plemena ustálená, která obyčejně na jisté místnosti vázány jsou a jichž při ustanovování dobře šetřiti třeba, všude jsem (za latinským písmenem) vyčetl a přidal i jméno druhové, ježto již všechny skoro za pravé druhy považovány byly a jsou. Pro krátkost možno těchto jmen užití v rostlinno-geografických popisech a seznamech“.

Following is a translation of the above Czech text into English:

“More important varieties [variants], [i.e.] subspecies or stabilized races, which are confined to certain areas and which should be taken into account in determination, are always quoted (following a Latin letter) and their species names are added, as nearly all of them have been classified as separate species. Because of their shortness, the latter names may be used in plant-geographical descriptions and lists”.

Referring to the subject-matter involved, the two texts are consistent, they differ only in unimportant details. Here, Čelakovský explained his way of listing subspecies, his method of quoting synonyms and considered the possibility of the use of species synonyms in a certain type of literature instead of subspecies names to shorten the text. His text clearly demonstrates that in the Prodromus (German edition) the taxon under consideration was published as a subspecies, that the species name *Spergularia echinosperma* m. in brackets was meant as a synonym, and that such synonymous names may be used for special purposes (as was sometimes done in analogical cases by the use of an asterisc, e.g. *Spergularia\*echinosperma*). The Czech text corresponds well to the German one, only the term “synonym” is absent. A similar text on the problem of subspecies names was published by Čelakovský in the preface of his „Květena okolí Pražského“ (Flora of the surroundings of Prague; ČELAKOVSKÝ 1870). The relevant text translated in German may be found in HENDRYCH (1958).

A question arises, whether the name “*S. echinosperma* m.” given by Čelakovský in brackets should not be considered — with regard to the above texts — as an alternative name (see Code 1972, Art. 34; STAFLEU et al. 1972) which would make it possible to give Čelakovský also as the author of the species name. In the Code, the category of alternative names is not at all defined. In the opinion of the present author alternative names have to be always names of the same value let they originate for instance by the subordination of the same epithet under various generic names at the same taxonomic level (“*Spergularia echinosperma* vel *Spergula echinosperma*”) or by the simultaneous use of various classification ranks for the same taxon (*Spergularia echinosperma* vel *Spergularia rubra* subsp. *echinosperma*). The postulate of the same value of alternative names is important therefore, as otherwise the second (or the third etc.) name would represent a „nomen provisorium“ which would be nomenclaturally invalid. The same value of alternative names has to follow either from the type of their quotation (e.g. X vel Y), from the text or by a direct use of special designations such as

„nomen alternativum“; „comb. alt.“ etc. In the latter case the valid publication of an alternative name may also be taken from the synonymy; for a series of examples — valid combinations with *Tithymalus* proposed by J. PROCHANOV — see Flora SSSR 14 : 336—479, 1949.

It follows that the name *Spergularia echinosperma* ČELAK. cannot be considered alternative as Čelakovský clearly distinguished between his own taxonomic concepts and those of other authors who could accept his taxon as a species. To decide on the validity of the name *Spergularia echinosperma* ČELAK. 1881, one way refer to Art. 34 of the Code (STAFLEU et al. 1972), of which the following provisions are obligatory:

“A name is not validly published (1) when it is not accepted by the author in the original publication; . . . (4) when it is merely cited as a synonym.”

As it is evident from his publications mentioned above and also from the preface in his Prodrómus, Čelakovský very clearly and consciously advocated the broad circumscription of the species unit and his classification of *S. e.* as a subspecies of *S. rubra* corresponds to this opinion. The fact that he admitted the possibility of mentioning of subspecies under their synonymous species names in a certain type of publications for practical purposes (shorter text) does not mean that he accepted the latter names as alternative ones. It is only a technical modification of the name, similar as “*Spergularia*” abbreviated to “*S.*”.

When studying Čelakovský's Prodrómus, it can be found that he did not always give corresponding species names as synonyms for his subspecies; e.g. in *Senecio paludosus* subsp. *tomentosus* or *Pisum sativum* subsp. *hortense* such names are absent. The study of Čelakovský's herbarium material shows that in these cases species names were not used by him on herbarium labels. On the contrary, in the case of *S. e.* the species name was used by Čelakovský on the labels of the original material and might also be found in the herbarium material sent possibly by him to other botanists. It may be assumed therefore that this name got into the literature virtually as a synonym from herbarium labels. The original material of *S. e.* (deposited in the type collection PR, no 2288 — lectotype; no 2289 — paratype) indicates that the author used the species name (“*Spergularia echinosperma* n. sp.”) in the both cases (in the sheet no 2288 after some doubt and changes). The synonym given in Čelakovský's Prodrómus should therefore be referred to this name from herbarium labels.

The only somewhat analogical case in Čelakovský's Prodrómus (p. 832) is *Melampyrum nemorosum* b) *fallax* m. (*M. fallax* m.). Here also the name not previously published is quoted as a synonym. The correct species name of this taxon is *M. bohemicum* KERN., published validly in the same year as the synonymous *M. fallax* ČELAK. 1881. The determination of the correct dates of publication of the names by KERNER and ČELAKOVSKÝ is very difficult; with regard to the acceptance of the invalidity of Čelakovský's name (published as a synonym) by various authors (incl. the present author), KERNER's *M. bohemicum* has a distinct priority. It has been accepted by HADAČ (1966) in his special paper on this species and in Flora Europaea (3 : 255, 1972).

The case of *M. fallax* is, however, somewhat more difficult. ČELAKOVSKÝ (1881b) in his Prodrómus did not describe it as a new taxon under the name

*M. nemorosum* subsp. *fallax* for the first time. He had given its description earlier in various places several names, using the epithets “*subalpinum*”, “*angustifolium*” and “*stenophyllum*” for it (for the list of corresponding synonyms, see HADAČ 1966 : 404). In the material of PR (where original herbarium sheets of ČELAKOVSKÝ are deposited) no sheet of *Melampyrum* exists on which the epithet “*fallax*” was used in specific or subspecific rank. The sheet which could be considered as the type of *M. nemorosum* subsp. *fallax* ČELAK. (the type has not yet been selected) — „Trpín u Poličky“, 1875 FLEISCHER — is designated as *Melampyrum nemorosum* b) *stenophyllum* by ČELAKOVSKÝ. Therefore the explanation which may be used in *S. e.* (a synonym from herbarium labels) does not apply to *M. fallax*. The existence of a (dubious) alternative name cannot therefore be excluded, but as the name is clearly given as a synonym and at the same time not distinctly designated as an alternative name, it is invalid for nomenclatural reasons. In fact, HADAČ (1966 : 404) considered that species name as an alternative name. He did not discuss its relationship to *M. bohemicum* KERNER 1881 as he erroneously supposed that according to the Code alternative names were invalid (their illegitimity begins, however, as late as in 1953). Regarding the fact that the names are not of the same value and were not designated as alternative names by the original author, *M. fallax* ČELAK. 1881 cannot be accepted as a „nomen alternativum“. Another problem is that ČELAKOVSKÝ might have used this species name in some other herbarium material not available to us at present.

Returning to the case of *S. e.*, it should be mentioned that ČELAKOVSKÝ (1897) later accepted the specific rank for this taxon most probably in view of the convincing evidence and a detailed analysis made by ASCHERSON et GRAEBNER (1893).

In determining the correct place of the valid publication of this species name the question of the publication place of its basionym should also be considered. Because it is not possible to determine which of the two ČELAKOVSKÝ's descriptions of *S. e.* published in 1881 has priority, the present author proposes to give both publication places in the quotation of the basionym, in the first place Sitzungs-Ber. . . . which might be published earlier than the fourth volume of Prodrusus. As a species name the combination *Spergularia echinosperma* was first published by ASCHERSON et GRAEBNER in 1893 (though with authorship ascribed to ČELAKOVSKÝ). During the period 1881 (first description of the taxon by ČELAKOVSKÝ) — 1893 (its elevation to the specific rank) no publication is known to the present author, in which the taxon is mentioned at all. Therefore the correct name of this species and the quotation of its basionym are as follows:

*Spergularia echinosperma* (ČELAK.) ASCHERS. et GRAEBN., Ber. Deutsch. Bot. Ges. 11 : 517, 519, 1893.

Bas.: *Spergularia rubra* subsp. *echinosperma* ČELAKOVSKÝ, Sitzungs-Ber. Koenigl. Boehm. Ges. Wiss. Prag 1881/1 : 8 (separ. 1881), Prag 1882; ČELAKOVSKÝ Prodr. Fl. Böhmen 4 : 867, Prag 1881.

## SUMMARY

While revising the name *Spergularia echinosperma* ČELAK. some nomenclatural inconsistencies have been found. ČELAKOVSKÝ published that name for a subspecies in two places in 1881. From both publications it is clear that ČELAKOVSKÝ did not intend to classify this taxon as a sep-

arate species. He accepted such a classification 16 years later (in 1897) most probably on the basis of a critical analysis made by ASCHERSON et GRAEBNER in 1893.

During the nomenclatural revision, it had to be decided whether the species name given by Čelakovský in his Prodrromus as a synonym to this subspecies could not be considered as an alternative name and therefore as a valid species name. The analysis of Čelakovský's texts on his taxon, his general approach to the use of taxonomic categories and the relevant provisions of the Code (Art. 34) do not render it possible to accept that synonym as an alternative name. On the contrary, the study of original herbarium material has shown that the synonym may be accepted as a reference to the name used by Čelakovský preliminarily on herbarium labels.

The correct species name, albeit with an ascribed authorship, was proposed by ASCHERSON et GRAEBNER in 1893; until the question of priority is solved, its basionym should include quotations of both Čelakovský's publications of 1881 in which this taxon was validly published.

The only somewhat analogical case in Čelakovský's Prodrromus is the name *Melampyrum fallax* ČELAK. 1881. It differs in that it was used by Čelakovský in various places under several names within a short period and that the species name was not at all used by him in the known herbarium material. As the name *M. fallax* is explicitly given as a synonym, it cannot be considered as validly published.

Problems of alternative names (published validly before 1953) are also discussed in the paper. The present author proposes to accept as such names only those which were treated as equal by their author in the original publication place or which bear a direct designation as such a kind of names.

## SOUHRN

Při revizi některých jmen zajímavých taxonů pro shraující příručky o čsl. květeně byla studována otázka autorství druhového jména *Spergularia echinosperma*. Bez výjimky se jako jeho autor uvádí Čelakovský. Tento autor popsal zmíněný taxon v r. 1881 na dvou místech, a to v Sitzungs-Berichte Koenigl. Boehm. Ges. Wiss. (= Věstník Král. České Spol. Nauk) a ve 4. svazku svého Prodrromu (německé vydání), v obou případech zcela jasně jako subspecii druhu *Spergularia rubra*. V Prodrromu připojil jako synonymum nikde dříve nepublikované jméno *Spergularia echinosperma* m. a odtud je toto jméno přebíráno jako správné jméno druhu. Z obou publikací uveřejněných v r. 1881 je zřetelné, že Čelakovský nechtěl popsat tento taxon jako samostatný druh. Teprve o 16 let později jej přijal ve 3. vydání své Analytické květeny jako druh, s největší pravděpodobností na základě kritické analýzy provedené Aschersonem a Graebnerem v r. 1893.

Při revizi této nomenklatorické problematiky je nutno analyzovat též námět, zda příslušné druhové jméno uvedené Čelakovským v Prodrromu jako synonymum by nemohlo být chápáno jako alternativní jméno a tudíž jako jméno validně publikované. Rozbor textu Čelakovského pojednání vztahujícího se k této problematice, jeho obecný přístup k taxonomickým jednotkám i užití příslušných předpisů Mezinárodního kódu botanické nomenklatury (čl. 34) neumožňují však přijmout zmíněné synonymum jako alternativní jméno. Naopak studium originálního herbářového materiálu ukazuje, že zmíněné synonymum lze pokládat za odkaz na jméno užitě Čelakovským předběžně ve schedách.

Správné druhové jméno, i když s askribovaným autorstvím, navrhli Ascherson et Graebner; v basionymu je vhodné uvádět obě Čelakovského práce z r. 1881, v nichž byl tento taxon validně publikován, dokud nebude zcela spolehlivě zjištěna priorita některé z nich.

Jediným poněkud obdobným případem je jméno *Melampyrum fallax*, které však vzhledem k tomu, že Čelakovský tento taxon pojmenoval v průběhu krátké doby několika jmény, není v herbáři Čelakovského zastoupeno (položka, jež by mohla být vybrána jako typ — Trpín u Poličky, 1888 FLEISCHER, PR — je vedena Čelakovským jako *M. nemorosum* b [= subsp.] *stenophyllum*). Jméno *M. fallax* je však zřetelně zveřejněno jako synonymum a nemůže proto být pokládáno za validně publikované.

V článku je probírána okrajově také otázka alternativních jmen (platně zveřejněných v období před r. 1953), pro něž je autorem žádána buď úplná stejnocennost, vyplývající jasně jako názor jejich autora v místě jejich původního zveřejnění nebo jejich označení přímo jako takových.

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