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Cladonia stellaris (Opiz) Pouz. et Vězda, the Correct Name for *Cladonia alpestris* (L.) Rabenh.

***Cladonia stellaris* (Opiz) Pouz. et Vězda, správné jméno pro *Cladonia alpestris* (L.) Rabenh.**

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Abstract — Pouzar Z. et A. Vězda (1971): *Cladonia stellaris* (Opiz) Pouz. et Vězda, the correct name for *Cladonia alpestris* (L.) Rabenh. — Preslia, Praha, 43 : 193—197. — The name *Cenomyce stellaris* Opiz (1823) was validly published by indirect reference to a previously published diagnosis and has priority over *Cladonia alpestris* (L.) Rabenh. 1860 [= *Lichen rangiferinus alpestris* L. (1753)] in the rank of species. The new combination *Cladonia stellaris* (Opiz) Pouz. et Vězda is necessary, however.

Until now it has generally been supposed that Rabenhorst (1860) was the first author to consider Linnaeus's infraspecific taxon *Lichen rangiferinus alpestris* L. to be of specific rank. *Cladonia alpestris* (L.) Rabenh. has consequently been considered as the correct name for this common lichen.

During the revision of the names proposed for lichens by F. M. Opiz* — a study to be published later in detail by the second author — we found that Opiz is the author of an older name in the rank of species for this lichen, v. *Cenomyce stellaris* Opiz (1823).

In 1823 a small 168-page book entitled "Böheims phänerogamische und cryptogamische Gewächse" was published in Prague by C. W. Enders. This book is an offprint with a separate pagination of part of the first volume of a series largely written and edited by J. E. Ponfikl and entitled "Vollständiger Umriss einer statistischen Topographie des Königreiches Böhmens". The title of Opiz's work issued in this "Topographie" is different from the one in the reprint and reads: "Aus dem Pflanzenreiche. (Regnum vegetabile)" (pp. 355—514).

This was Opiz's first work on Bohemian flora, also containing the conspectus of cryptogamic plants. The lichens are treated on pages 135—142 (on pages 487—494 of the "Topographie" respectively) as a special group under the heading "Scutellatae Hoffm." Every species name has short notes on the ecology, the locality, and the name of the collector, but the descriptions are omitted.

The cited work of Opiz represents the first published conspectus of Bohemian lichens, which were collected partly by Opiz himself and partly by his contemporaries, e.g. Jungbauer, Mann, Tausch, and others. The work was issued in a limited number of copies and so it is rare today. [Two copies of the separately printed issue are in the library of the National Museum in Prague and a set of the whole series (the "Topographie") is deposited in the University Library in Prague

* Filip Maximilian Opiz (1787—1857). On the life, work and importance of F. M. Opiz for the Bohemian botany see Maiwald (1901—1902), Němec (1932, 1958) and Kláštersky (1958); for the taxonomy of Fungi described by him see Svrček (1958), for the nomenclature and taxonomy of Phanerogamic genera see Pouzar (1964) and Holub et Pouzar (1967).

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under the number 50 D 51]. The date of the issue of this work is given on the title page of the offprint as 1823. The work most probably appeared in that year because the postscript appended by OPIZ to the last page of the original issue the "Topographie" is dated 3. XII. 1822*.

The species *Cenomyce stellaris* OPIZ appears on page 141 of the separately printed issue (on the p. 493 of the „Topographie") with the following text:

Cenomyce stellaris. Opiz. (C. rangiferina alpestris. Ach.) Auf der Hrsch. Böhmischaicha. (Tachezy.)

The infraspecific taxon to which OPIZ refers is *Cenomyce rangiferina γ alpestris* (L.) ACH. (ACHARIUS, Lichenographia Universalis, p. 564, 1810). Acharius here, however, only transferred the Linnean taxon *Lichen rangiferinus alpestris* L. to another genus, i.e. *Cenomyce* ACH. The name of Linnaeus as well as that of Acharius are therefore isonyms; they have identical epithets and are based on the same nomenclatural type. Opiz's indirect indication of the name of Acharius is really the indirect reference to the original description of Linnaeus and is sufficient according to the present Code, as it clearly corresponds to the definition of the indirect reference in the Art. 32, Note 1 of the Code (LANJOUW et al. 1966). The indirectly indicated work of Acharius serves here as the tie between Opiz and Linnaeus. The specific name *Cenomyce stellaris* OPIZ (1823) is, therefore, a validly published name. Opiz was fully justified in proposing a name for this lichen in the rank of species for no specific name was available for *Lichen rangiferinus alpestris* L. in 1823.

Opiz's treatment of *Lichen rangiferinus alpestris* L. as a species came as a result of the new species concept that he had developed then, one much more narrowly circumscribed than the Linnean one. In this way he was to some degree a pioneer, as NĚMEC (1932) pointed out, and in this respect was a predecessor of the major period of the application of narrower species concepts, a development carried to its greatest extreme perhaps by the French botanist Jordan.

The nomenclatural history of *Cladonia alpestris* (L.) RABENH. is complicated, and controversial opinions have been published on the status of this epithet in the last decade. As the nomenclature of *Cenomyce stellaris* OPIZ is closely connected with the nomenclatural status of *Lichen rangiferinus alpestris* L. — the basionym of *Cladonia alpestris* (L.) RABENH. — a comment on the later is required.

The most important publication of LINNAEUS that plays a role in the interpretation of *Lichen rangiferinus alpestris* L. is Flora suecica ed. 1 (1745 : 358). Here LINNAEUS recognized the species that he named *Lichen fruticulosus perforatus ramosissimus ramulis nutantibus* and noted: „Obs. In sylvis nostris communiter refert plantam Dill. musc. t. 16. f. 29. A. in alpibus vero praecipue Lichen rangiferinus major crescit, quem optime delineat ibidem t. 16, f. 29 F." In Species plantarum LINNAEUS (1753 : 1153) gave the species the binomial *Lichen rangiferinus* L. and distinguished two infraspecific taxa, *L. rangiferinus alpestris* L. and *L. rangiferinus β sylvaticus* L. The part of *L. rangiferinus* called "*β sylvaticus*" is evidently that element mentioned in Flora suecica ed. 1. 1745 as "In sylvis nostris communiter

* The separately printed issue "Böheims . . . Gewächse" is supplemented by a consecutively paged appendix of 6 pages (pp. 163—168) missing in the original issue, which is entitled "Erstes Verzeichnis", containing a list of plants offered for exchange or sale (*A* to *Carex*, see also DOMIN 1943 : 1). This appendix is dated 8. II. 1923.

refert plantam Dill. musc. t. 16 f. 29. A." The part of his *L. rangiferinus* called *alpestris* L. is evidently identical with that element mentioned in Flora suecica ed. 1. p. 358 as "in alpibus . . . L. rangiferinus major" and of which he said that it is best depicted in DILLENIUS' Historia muscorum tab. 16, fig. 29 F (see also SANTESSON 1966 : 64). It seems to be important that in the second edition of this book LINNAEUS (1755 : 423) treats this taxon as "Alpestris varietas duplo major . . ." The figure mentioned in DILLENIUS (1741 : 108) and called „*Coralloides montanum fructiculi species, ubique candicans* var. *retiformis*" represents very well the lichen currently known as *Cladonia alpestris* (L.) RABENH.

When revising the lichens in the Linnean Herbarium (LINN) in London, WAINIO (1886) found no specimen named "alpestris" and so as there is no specimen that can serve as a lectotype of *Lichen rangiferinus alpestris* L. in the Linnean Herbarium, we designate the figure cited by LINNAEUS (1745 : 358) i.e. DILLENIUS 1741, tab. 16, fig. 29 F as the lectotype of both *L. rangiferinus alpestris* L. and *Cenomyce stellaris* OPIZ.

A series of works have dealt with the nomenclatural situation of *Lichen rangiferinus* and its infraspecific taxa (NANNFELDT 1953, AHTI 1961, THOMSON 1965, CHATER et BRUMMITT 1966, SANTESSON 1966). The controversy centers on two matters. The first is whether LINNAEUS (1753) had in mind two taxa or three — i.e. whether there was besides *Lichen rangiferinus alpestris* and *L. rangiferinus β sylvaticus* some third infraspecific taxon that theoretically would now be designated as *L. rangiferinus* (var.) *rangiferinus* or whether var. *rangiferinus* should be the designation of one of the taxa into which *L. rangiferinus* was divided. The majority of authors believe that LINNAEUS (l.c.) described only two taxa and that no third taxon was intended (NANNFELDT 1953, AHTI 1961, CHATER et BRUMMITT 1966 and especially SANTESSON 1966). THOMSON (1965), however, claims that Linnaeus recognized three taxa under *L. rangiferinus*.

The second aspect of the controversy arises if one concludes that LINNAEUS (1753) did indeed divide *L. rangiferinus* into two rather than three taxa. What should be the typification of *L. rangiferinus* then? One of the two taxa (*L. rangiferinus alpestris* and *L. rangiferinus β sylvaticus*) must be selected as the type of *L. rangiferinus* according to the Code (LANJOUW et al. 1966). The question is which should be considered as the illegitimate name.

THOMSON (1965) followed STEARN's (1957) observation that Linnaeus most frequently appended to species varieties designated by Greek letters. THOMSON (l.c.) thus concludes that *L. rangiferinus β sylvaticus* L. — a taxon designated by Greek letter — must be considered a variety appended to *L. rangiferinus* and that *L. rangiferinus alpestris* L. must also be considered another variety but one of less than coordinate taxonomic importance.

SANTESSON (1966), analysing in detail the nomenclatural status of *Lichen rangiferinus alpestris* L. and *L. rangiferinus β sylvaticus* L., opposed Thomson's claim and concluded that Linnaeus intentionally ommited the Greek letter alpha before the epithet *alpestris*. According to him Linnaeus in Species plantarum only divided the species into varieties, when the Greek letter is ommited and so in our case he probably not recognized some third taxon (the typical one). We fully agree with him in this matter. Hence, the question arises of which one of these two subdivisional epithets must be considered as typical and consequently as illegitimate. Both names are equally eligible and CHATER et BRUMMITT (1966) prefer *Lichen rangiferinus alpestris* as the typical variety, probably because the former is first and lacks a Greek letter and *L. rangiferinus sylvaticus* is second and is designated *β*. This is contrary to the opinion of NANNFELDT (1953), AHTI (1961) and SANTESSON (1966), who consider *L. rangiferinus β sylvaticus* L. the typical variety and thus the illegitimate name.

AHTI (1961) and SANTESSON (1966) both emphasized the legitimacy of the name *L. rangiferinus alpestris* L. on the basis of the second edition of Flora suecica (Linnaeus 1755 : 423), a book written immediately after the appearance of the Species plantarum ed. 1, 1753, and consequently a book very important for this matter. In the second edition of Flora suecica Linnaeus ommited the name *L. rangiferinus β sylvaticus* L., but he did not exclude this element from his concept of *L. rangiferinus* L. SANTESSON (1966) wrote: "He [LINNAEUS, Fl. suec. ed. 2] dropped the epithet *sylvaticus* but referred to "*alpestris* varietas duplo major . . . .", and we have to consider var. *sylvaticus* as becomming typonymous with var. *rangiferinus*." Nevertheless, it is interesting that in the second edition of Species plantarum LINNAEUS (1763 : 1620—1621) insisted on the same arrangement that be published in the first edition, both the epithets *alpestris* and *sylvaticus* being mentioned.

The nomenclatural results are these: 1. The name *Lichen rangiferinus* L. 1753 must be typified by that element named by Linnaeus *L. rangiferinus β sylvaticus* L. 1753. 2. The name *Lichen rangiferinus alpestris* L. 1753 is legitimate and may serve as the nomenclatural base of the name *Cenomyce stellaris* Opiz 1823.

Opiz used the name *Cenomyce stellaris* together with the citation of *Cenomyce rangiferina γ alpestris* Ach. as early as 1819 in his exsiccati "Flora cryptogamica Boëmiae". As the whole collection, eight volumes in all, is provided with labels written by hand in pencil and with no printed labels, the name *Cenomyce stellaris* Opiz was not effectively published then. So far as we know, a complete set of these exsiccati is preserved, with the original cover, only in the Moravian Museum in Brno. (The photograph of the first page of the volume IV, containing the species *Cladonia stellaris* = *Cenomyce stellaris* is published here on the plate XIX).

As the generic name *Cenomyce* Ach. is considered today a synonym of the genus *Cladonia* Wiggers, we propose the new combination:

Cladonia stellaris (Opiz) Pouzar et Vězda comb. n.

Bas.: *Cenomyce stellaris* Opiz Vollständiger Umriss einer statistischen Topographie des Königreiches Böhmen [red. J. E. Ponfikl], 493, 1823, Prag (p. 141 in Böheims phänerogamische und cryptogamische Gewächse).

Syn.: *Lichen rangiferinus alpestris* Linné Spec. plant. ed. 1, 1153, 1753. — *Lichen rangiferinus* subsp. *alpestris* (L.) Ehrhardt Hannoverisches Magazin 1780 : 239. — *Cladonia alpestris* (L.) Rabenhorst Clad. Europ., 11, 1860. For other synonyms see Vainio (1887).

Acknowledgements

We are deeply indebted to Dr. William Louis Culberson (Durham, N. C.) for his kind help with this manuscript.

Souhrn

Při studiu jmen, která uveřejnil pro různé druhy lišejníků F. M. Opiz se ukázalo, že jméno význačného druhu *Cladonia alpestris* (L.) Rabenh. 1860 [= *Lichen rangiferinus alpestris* L. 1753] je v hodnotě druhu pozdějším synonymem jména *Cenomyce stellaris* Opiz 1823, které bylo platně publikováno nepřímým odkazem na dříve uveřejněné jméno *Lichen rangiferinus alpestris* L. Autoři proto navrhují novou kombinaci *Cladonia stellaris* (Opiz) Pouz. et Vězda a doporučují, aby se toto jméno používalo jako správné, jestliže uvedený druh klademe do rodu *Cladonia* Wiggers.

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Recensent: J. Holub

See also plates XVII.—XX. in the appendix.

F. K. Hartmann et F. Schnelle:

Klimagrundlagen natürlicher Waldstufen und ihrer Waldgesellschaften in deutschen Mittelgebirgen

G. Fischer Verlag, Stuttgart 1970, 176 str., 106 obr., cena váz. 62,— DM. (Kniha je v knihovně ČSBS.)

Kniha vznikla spoluprací mezi lesnickými ekology a meteorology. Pojednává o klimatických poměrech v různých lesních společenstvech a v různých výškových stupních německých středohor. Dílo je zajímavé již po metodické stránce, protože v rámci současných technických a vědeckých možností úspěšně vyřešilo, jak využít údajů z relativně řídké sítě meteorologických stanic v horách, jak tyto údaje vhodně doplnit pomocnými stanicemi a jak matematicko-statisticky zpracovat výsledky pozorování.

Větší část materiálu se týká pohoří Harz, Rhön, Schwarzwald a Pfälzer Wald. V těchto pohořích autoři získali pomocí doplňkové sítě stanic v rámci lesních porostů i na volném terénu tolik měření, že mohli v četných tabulkách a grafech charakterizovat zevrubně klimatické zvláštnosti porostů různého složení a různých terénních poloh. Většina charakteristik se týká průměrných denních teplot a denních výkyvů teplot, ale je též přihlédnuto ke vzdušné vlhkosti a srážkám.

Botanika a ekologa zaujme také pátá kapitola knihy „Geographische und höhenzonale phänologische Vergleiche der untersuchten Gebirge", v níž je proveden úspěšný pokus využít fenologických pozorování pro makro-, resp. mezoklimatickou charakteristiku pohoří. Ve velkém měřítku byly zpracovány tzv. fenologické profily, které zachycují průběh důležitých fenofází v různých nadmořských výškách. Jednotlivá pohoří pak byla srovnána ve větší podrobnosti pomocí tzv. fenologických snímků pořizovaných simultánně ve vybraných pozorovacích dnech na různých místech. Metodika tohoto fenologického snímkování byla vypracována F. K. Hartmannem a přinesla pozoruhodná data o tom, jak vývoj lesních porostů a vegetace vůbec závisí na reliéfu a chodu povětrnosti příslušného roku.

Velmi zhuštěná forma, s jakou jsou výsledky podány v textu a v grafech, vede někde až k nepřehlednosti, avšak kdo trpělivě knihu prostuduje, objeví v ní zdroj údajů, které z jiných zeměpisných oblastí zatím nejsou známy. **J. Jeník**

Böheims

phänerogamische und cryptogamische

Gewächse.

Verzeichnet

von

Philipp Maximilian Opiz!

Nebst Angabe ihrer gebräuchlichsten Provinzialnamen, ihres Vorkommens, ihrer Verbreitung, Anführung der Fundorte der Seltenern, nebst ihren Findern und Andeutung des landesüblichen Gebrauchs, ihres Nutzens und ihrer Schädlichkeit.

Prag, 1823.

Bei Carl Wilhelm Enders.

Title page of the "Böheims phänerogamische und cryptogamische Gewächse" of F. M. Opiz.

Cenomyce extensa. Opiz. Bei Krummau. (Jungbauer.)

Cenomyce Coccifera. Ach. In trockenen Waldungen.

Cenomyce Coccifera asotea. Ach. (Jirasek.)

Genomyce Coccifera cornucopioides Ach. In trockenen Waldungen.

Cenomyce deformis digitata. Ach. Ebend.

Cenomyce baccillaris macilenta. Ach. Ebend.

Cenomyce cornuta. Ach. Ebend.

Cenomyce furcata spadicea. Ach. Ebend.

Cenomyce furcata stricta. Ach. Ebend.

Cenomyce furcata recurva. Ach. Ebend.

Cenomyce furcata pungens. Ach. Ebend.

Cenomyce rangiferina. Ach. Ebend.

Cenomyce rangiferina sylvatica. Ach. In Gebirgswäldern.

Cenomyce stellaris. Opiz. (C. rangiferina alpestris. Ach.) Auf der Hrsch. Böhmischaicha. (Tachezy.)

Cenomyce vermicularis. Achar. Auf den Sudeten. (v. Uechtriz.)

Cenomyse papillaria. Achar. Auf dem Žižkaberg. (Opiz.)

Cenomyce papillaria molariformis. Ach. Auf dem Žižkaberg. (Opiz.)

Sphaerophoron fragile. Achar. Auf hohen Gebirgsfelsen: Sudeten, Isergebirge. (Opiz.)

Sphaerophoron coralloides. Ach. An Buchen: Geschken. (Opiz.)

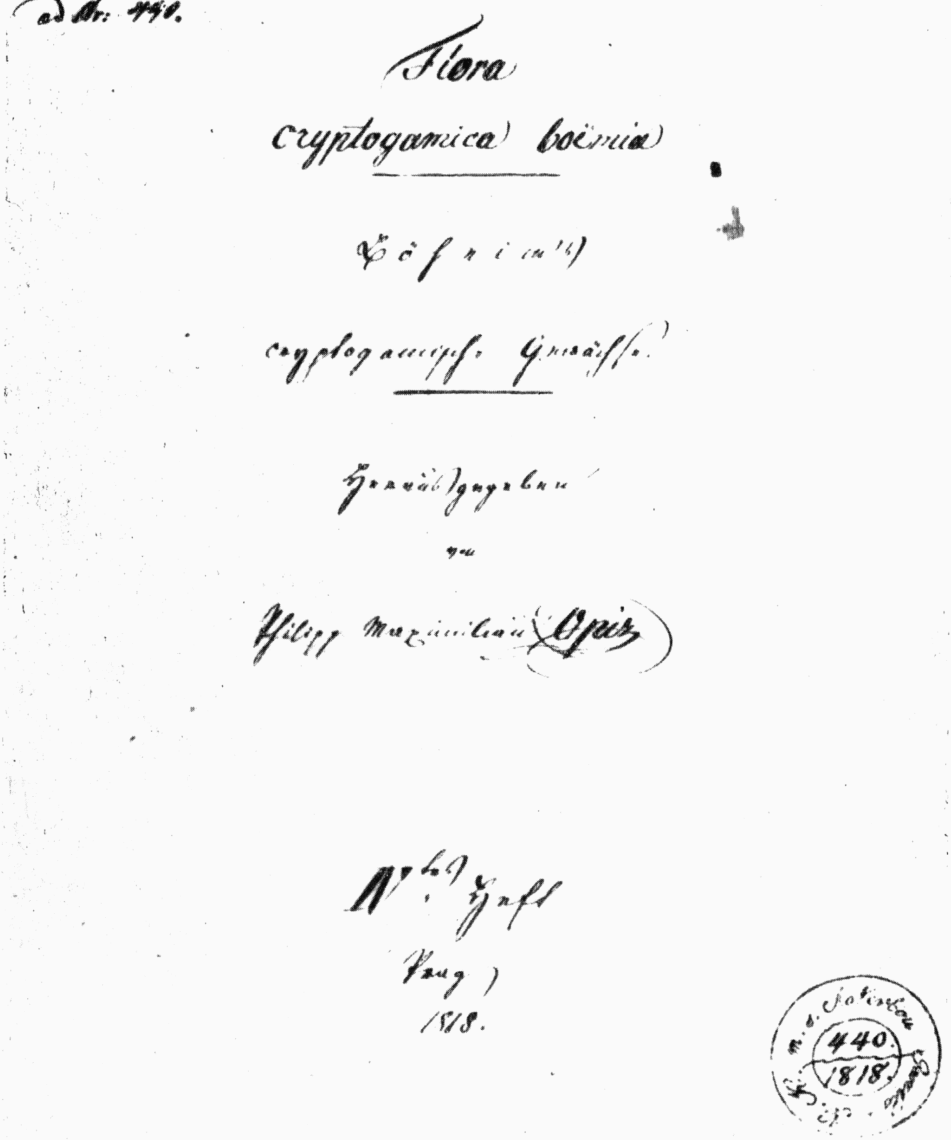
Sphaerophoron compressum. Ach. Auf der Hrsch. Krummau. (Jungbauer.)

Baeomyces roseus. Achar. Auf lettigem Waldboden.

Baeomyces rupestris rufus. Achar. Auf Sandfelsen.

Stereocaulon paschale. Hoffm. Auf Heideböden: Kuttenberg, Liebwerda. (Opiz.)

The page from "Böheims . . . Gewächse" with the name *Cenomyce stellaris* Opiz = *Cladonia stellaris* (Opiz) Pouz. et Vězda.



The title page of the collection of exsiccati F. M. Opiz: Flora cryptogamica Boëmiæ from 1818.

Z. Pouzar and A. Vězda: *Cladonia stellaris* (Opiz) Pouz. et Vězda, the Correct Name for *Cladonia alpestris* (L.) Rabenh.



The specimens of *Cladonia siellaris* (OPIZ) POUZ. et VĚZDA (= *Cenomyce stellaris* OPIZ) distributed in Flora cryptogamica Boëmiae as no. 91.

Z. Pouzar and A. Vězda : *Cladonia stellaris* (OPIZ) POUZ. et VĚZDA, the Correct Name for *Cladonia alpestris* (L.) RABENH.