

Typification of the name *Carex muricata* var. *lamprocarpa* Wallr. and its nomenclatural consequences

Typifikace jména *Carex muricata* var. *lamprocarpa* Wallr. a její nomenklatorické důsledky

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The name *Carex muricata* subsp. *lamprocarpa* “Čelak.” (1879) is frequently used in floras for *C. pairae* F. W. Schultz when it is treated as a subspecies of *C. muricata* L. However, the combination *C. muricata* var. *lamprocarpa* was published by Wallroth in 1822. The corresponding specimen in Wallroth’s collection in PR, studied by L. Čelakovský and designated here as a lectotype, is *C. muricata* as it has the characteristic shiny utricles. So the combination *C. muricata* subsp. *pairae* (F. W. Schultz) Čelak. (1870) has to be used.

Keywords: *Carex pairae*, *Cyperaceae*, D. H. Hoppe, F. W. Wallroth, history of botany, L. Čelakovský, lectotype

Nomenclatural and historical circumstances

The name *Carex muricata* subsp. *lamprocarpa* “Čelak.” was proposed by Čelakovský (1879) for one of three subspecies of *C. muricata* L. given in his flora, to replace the older combination *C. muricata* subsp. *pairae* (F. W. Schultz) Čelak. (Čelakovský 1870). According to the recent Code (Greuter et al. 2000; Art. 52.3), the name *C. muricata* subsp. *lamprocarpa* (in fact a combination based on an earlier variety name as shown below) is nomenclaturally superfluous, since Čelakovský (1879) cited “*C. Pairae* F. Schultz” as its synonym. In the fourth volume of Prodrum (Čelakovský 1881), the author returned to the combination *C. muricata* subsp. *pairae*, whereas in the second and third edition of “Analytická květena” (Čelakovský 1887, 1897) he uses again *Carex muricata* subsp. *lamprocarpa*. This combination then disappeared from botanical literature for almost a century.

The changes in L. Čelakovský’s understanding of the taxonomy and nomenclature of *Carex muricata* agg. in his major works (Čelakovský 1867, 1868, 1870, 1879, 1881, 1883, 1887, 1897) are summarized in Table 1. Generally, he recognized three taxa, which are treated as subspecies and correspond roughly to (i) *C. contigua* Hoppe, (ii) *C. muricata* (incl. *C. pairae*?¹) and (iii) the species pair *C. divulsa* Stokes and *C. chabertii* F. W. Schultz (incl. *C. leersiana* Rauschert?). This classification, accompanied by numerous nomenclatural changes, reflects the taxonomic difficulty of the group, general failure of contempo-

¹ Specimens of *C. pairae* and *C. leersiana* from that time are not present in PR, so L. Čelakovský had no opportunity to study them.

Table 1. – Čelakovský's understanding of the taxonomy and nomenclature as published in his major works; the names are cited as given by the author.

This study	Čelakovský 1867, 1868	Čelakovský 1870
<i>C. contigua</i> Hoppe	<i>C. muricata</i> b) <i>virens</i>	<i>C. muricata</i> (L. part.) Duval Jouve
<i>C. muricata</i> L.	<i>C. muricata</i> a) <i>genuina</i>	<i>C. muricata</i> b) <i>Carex Pairaei</i> F. Schultz (<i>C. divulsa</i> Duval Jouve part.)
<i>C. divulsa</i> Stokes and <i>C. chabertii</i> F. W. Schultz	<i>C. muricata</i> c) <i>divulsa</i> (<i>C. divulsa</i> Good.)	<i>C. muricata</i> c) <i>Carex divulsa</i> Good.

rary botanists to recognize taxonomically important characters² and nomenclatural confusions due to the uncertainty over the type of *C. muricata* L. (see Nelmes 1959, David 1976).

It was probably J. Holub, regional advisor to the Flora Europaea Editorial Committee, who drew A. O. Chater's attention to the combination *C. muricata* subsp. *lamprocarpa*, which was accepted in Flora Europaea (Chater 1980) as the valid name for *C. pairae*, classified there as a subspecies of *C. muricata*. At present, this name is used in some western and Central European floras (David & Kelcey 1985, Lambinon et al. 1992, Jermy et al. 1993, Sell & Murrell 1996, Stace 1997, Sebald et al. 1998). A recent taxonomic study (Řepka 2003) and the subsequent nomenclatural revision of the *C. muricata* group have revealed some nomenclatural difficulties connected with this name. The purpose of this paper is to examine whether the combination *C. muricata* subsp. *lamprocarpa* is the correct name for *C. pairae* when it is treated as a subspecies of *C. muricata*.

A detailed study of old taxonomic literature has shown that the epithet *lamprocarpa* was used for an infraspecific taxon of *C. muricata*, *Carex muricata* γ [var.] *lamprocarpa*, by Wallroth (1822: 493). The original description reads as follows: "[...] spica subsimplici pauciflora subterminali, capsulis demum nigro-castaneis nitidis. [...] in caeduis Rosslebensibus passim. [...] Var. γ capsulis nigro-castaneis splendentibus et spicula solitaria terminali f. altera illi subjecta aucta valde singularis est." A major part of Wallroth's herbarium is now kept in the herbarium of Botanical Department of the National Museum in Prague (PR; Stafleu & Cowan 1988). A search there yielded two sheets from Wallroth's collection, numbered PR 124528 and PR 124529, with the latter probably a later duplicate of the former (produced when Wallroth's collection was sorted and mounted; B. Skočdoplová, pers. comm.). Both sheets bear slender specimens of *C. muricata* s. str., which have inflorescences consisting of one or two spikelets with fully mature and shiny utricles, as described in the protologue (Wallroth 1822). The plants, collected "In sylv. caeduis ad Roßl." (Roßleben in Thuringia, Germany) in summer 1817, were later identified as "*C. muricata* γ . *lamprocarpa* Wallr.," and there is a direct reference to page 493 of the book on the identification label. Wallroth might have sent this plant to

² The note by Döll (1857) is a good example: "Fast alle Unterscheidungsmerkmale der beiden letzterwähnten Arten habe ich unbeständig gefunden, so sehr sie auch an den ihnen entsprechenden Localitäten constant zu sein scheinen. Nur hinsichtlich der Grösse und der Gestalt der Früchte scheint mehr Beständigkeit obzuwalten; wenigstens kann ich bis jetzt in dieser Beziehung noch keine Uebergangsformen nachweisen und habe auch die Exemplare des Carlsruhers botanischen Gartens seit einer Reihe von Jahren hierin beständig gefunden..."

Čelakovský 1879	Čelakovský 1881, 1883	Čelakovský 1887, 1897
<i>C. muricata</i> a) <i>virens</i> (Lamk.) (<i>C. muricata</i> Autt. rec.)	<i>C. muricata</i> a) <i>genuina</i> (<i>C. muricata</i> Durieu et Autt. recent.)	<i>C. muricata</i> a) <i>genuina</i> (<i>C. muricata</i> Autt. rec.)
<i>C. muricata</i> b) <i>lamprocarpa</i> (<i>C. divulsa</i> Autt., <i>C. Pairaei</i> F. Schultz)	<i>C. muricata</i> b) <i>Pairaei</i> (F. Schultz sp.) (<i>C. divulsa</i> Dur. p. parte)	<i>C. muricata</i> b) <i>lamprocarpa</i> Čel. (<i>C. divulsa</i> Autt., <i>C. Pairaei</i> F. Schultz)
<i>C. muricata</i> c) <i>divulsa</i> (Good.)	<i>C. muricata</i> c) <i>divulsa</i> (Good. spec.)	<i>C. muricata</i> c) <i>divulsa</i> (Good.)

D. H. Hoppe, who added another slip of paper stating that he had not been able to find this species and it would be worth the effort to search for it again³. There is also another label on the first herbarium sheet with handwritten note “*Carex* quo qualis!!! *Carex pyrenaica*!!...”; it was probably L. Čelakovský who later ascribed it to K. B. Presl (“Scriptum videtur a K. B. Presl!”). We propose that the specimen no. PR 124528 (Fig. 1), with a long history, be a lectotype.

The epithet *lamprocarpa* was used again later by Čelakovský (1879: 88). Within *C. muricata*, he recognized three subspecies: (a) *C. muricata* subsp. “*virens* (Lamk.)”, (b) *C. muricata* subsp. *lamprocarpa* (with “*C. divulsa* Autt.” and “*C. Pairaei* F. Schultz” as synonyms) and (c) *C. muricata* subsp. “*divulsa* (Good.)”. According to the descriptions, the combination *C. muricata* subsp. *virens* was used for the taxon now known as *C. spicata* Huds., whereas the name *C. muricata* subsp. *divulsa* referred to plants now classified as *C. divulsa* Stokes and/or *C. leersiana* Rauschert. So the name *C. muricata* subsp. *lamprocarpa* was probably intended to designate either *C. pairae* or more likely the much more common *C. muricata*. Apart from the shiny utricles typical of *C. muricata*, the description could be of either species. The search in PR yielded five herbarium sheets with plants that L. Čelakovský had marked as “*Carex lamprocarpa* mihi” or “*C. muricata* a) *lamprocarpa*”⁴ (PR 32414, 32415, 32416, 32417, 32424), all bearing rather slender specimens of *C. muricata* with inflorescences of a few spikelets with shiny utricles projecting in a rather long beak and falling out of spikelets when ripe. *Carex pairae*, on the other hand, was not found in the early collections. Strictly, Art. 33.2 of the Code (Greuter et al. 2000) should be applied here, and the name considered as a new combination based on *C. muricata* var. *lamprocarpa* Wallr., even though there is no reference to the basionym. However, both requirements prescribed in the Art. 33.2 are met, as (i) the combination is accompanied by a diagnosis and would be otherwise validly published as the name of a new taxon, and (ii), as shown above, the name was applied to the same taxon. The other option, to consider the name *C. muricata* subsp. *lamprocarpa* Čelak. as a later homonym of *C. muricata* var. *lamprocarpa* Wallr. (cf. Greuter et al. 2000; Art. 53.4), is in our opinion nomenclaturally incorrect.

³ “Diese, den Früchten nach, sehr ausgezeichnete Art vermag ich nicht aufzufinden und habe ich etwas Aehnliches nicht gesehen. Es wäre wohl der Mühe werth, diese Art wieder aufzusuchen und in vollständigeren Exemplaren zu beobachten.”

⁴ Čelakovský’s opinions on the taxonomical rank of species and subspecies and his practices in this respect were analysed by Holub (1979).

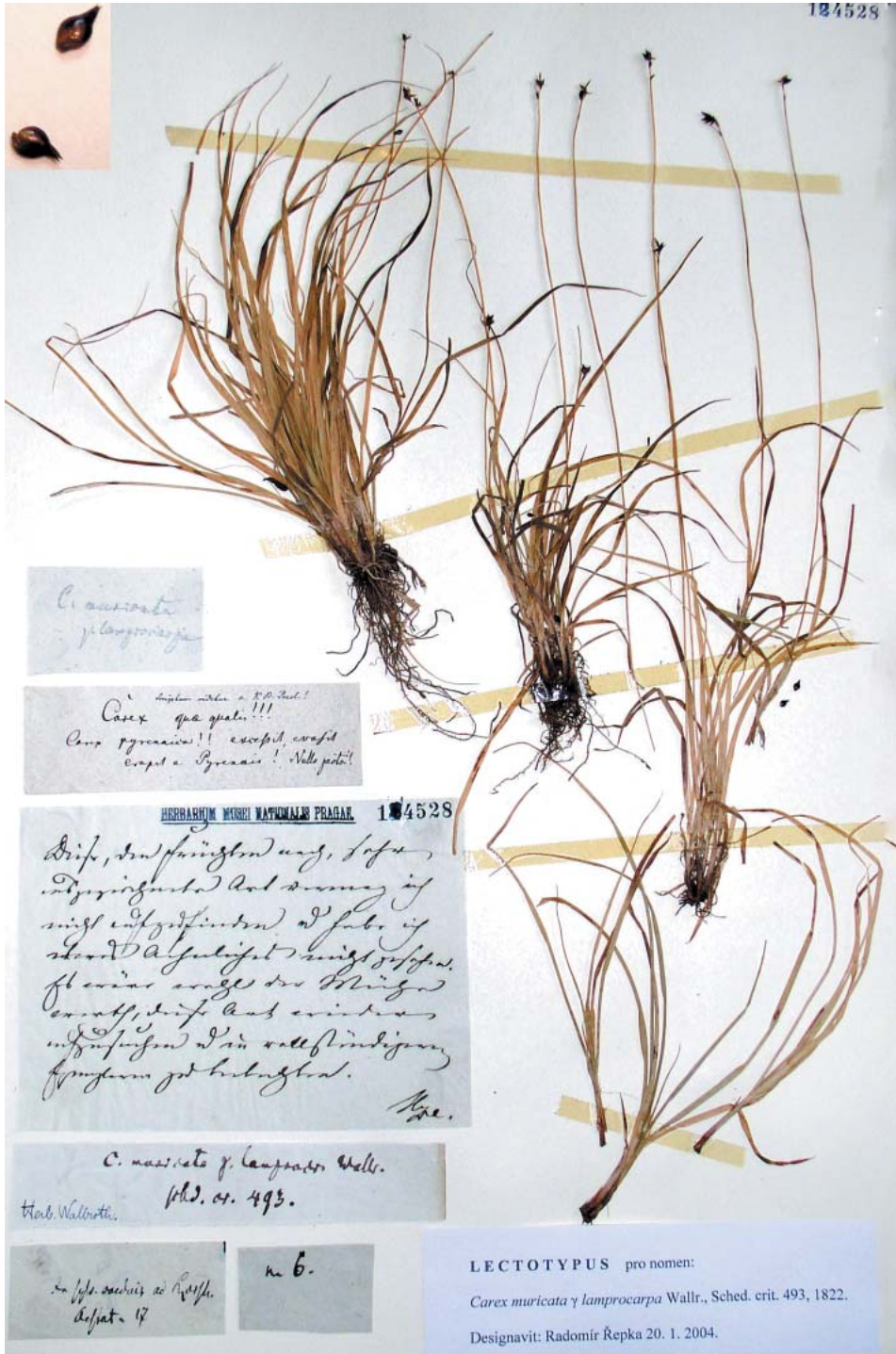


Fig. 1. – Lectotype of *Carex muricata* var. *lamprocarpa* (PR 124528)

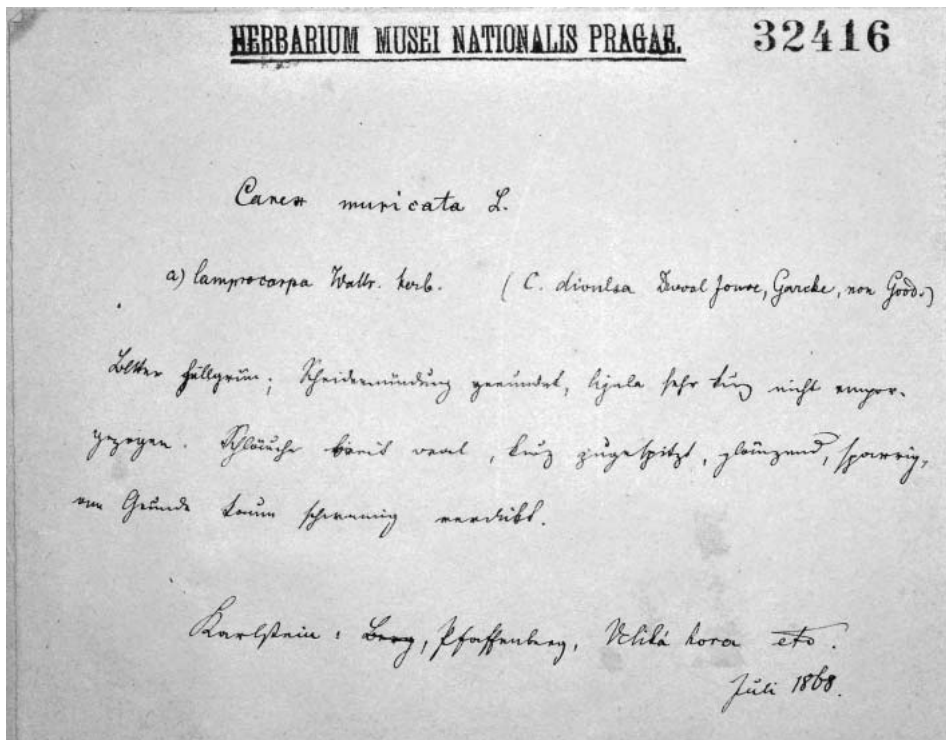


Fig 2. – The label of specimen PR 32416 with the diagnosis of *C. muricata* subsp. *lamprocarpa* written by L. Čelakovský

Apart from the strict interpretation of the code, we believe that our nomenclatural solution corresponds with Čelakovský's taxonomic opinion, which is supported by indirect evidence. (1) The specimen of *C. muricata* PR 32416, collected by L. Čelakovský near Karlštejn in Central Bohemia in July 1868 ("Karlstein: Pfaffenberg, Veliká hora etc.") was identified by him as "*C. muricata* L. a) *lamprocarpa* Wallr. herb. (*C. divulsa* Duval Jouve, Garcke, non Good.)". The label (Fig. 2) contains a diagnosis⁵ similar to that he published later (Čelakovský 1879: 88). (2) Ladislav Čelakovský was appointed as curator of the botanical collections of the National Museum in Prague in 1861, where he worked on Wallroth's herbarium, which was purchased in 1860 (B. Skočdoplová, pers. comm.). This assumption is supported by the note on the label attached to sheet PR 124528, ascribed to L. Čelakovský, by the reference to this specimen on the label attached to sheet PR 32416 described above and by at least another two references to Wallroth's herbarium found in the second volume of *Prodromus* (Čelakovský 1871⁶). (3) It could be argued that Wallroth's *Schedulae criticae* (Wallroth 1822) is not mentioned in the prefaces of *Prodromus* (1867) and "Analytická květena..." (Čelakovský 1879), which is taxonomi-

⁵ „Blätter hellgrün, Scheidemündung gerundet, Ligula sehr kurz, nicht emporgezogen. Schläuche breit oval, kurz zugespitzt, glänzend, sparrig, am Grunde kaum schwammig verdickt.“

⁶ "*Polygonum aviculare* L. [...] β) *nervosum* (Wallr. in herb. ! spec.)..." (o. c., p. 166); "*Aster frutetorum* Wimm. [...] manche unserer Exempl. des letzteren, besonders aus dem Wallroth'schen Herbar, sind sicher mit unserer Pflanze identisch, auch in den Beschreibungen ist kein Unterschied ersichtlich (o. c., p. 222)".

cally derived from the former⁷, and Wallroth is not cited in the text as the author of the basionym, *C. muricata* var. *lamprocarpa*. Although L. Čelakovský was very consistent in citing nomenclatural authorities in the way correct at that time, we found some exceptions when comparing varietal names in floras by Neilreich (1859) and Döll (1843), both cited in the preface of Prodrusus as the source of some diagnoses (Čelakovský 1867: vii; “Die beigefügten Diagnosen sind stets nach der Natur mit Zugrundelegung der besten Quellen, namentlich von Koch’s, Döll’s, Neilreich’s, Grenier’s u. A. Florenwerken gegeben worden.”) used in the first and second volume of Prodrusus (Čelakovský 1867, 1871)⁸. So the fact that Wallroth is not cited as the author of the original name does not exclude that Čelakovský (1879: 88) was inspired directly by *Schedulae criticae*⁹ (Walroth 1822).

Some doubts exist about the place of publication of the name *C. pairae* Schultz, which was published twice in the same year (Schultz 1868a, b). According to Stafleu & Cowan (1985) the booklet *Étude sur quelques Carex* (Schultz 1868b) appeared in October 1868, presumably later than July issue of the journal *Flora* (David 1976). David (1976), however, considers the first publication, announcing the description of a new species, invalid for two reasons: (i) it lacks a description and (ii) the diagnostic quality of the plate in Schkuhr (1801: plate Ee) Schultz (1868a: 302) refers to is unsatisfactory. In our opinion, some parts of the text can be interpreted as a very brief diagnosis¹⁰ of the most important morphological differences from similar species as required by the Code (Greuter et al. 2000; Art. 32.1 and 32.2). Also the objection that the illustration is inaccurate and the origin of Schkuhr’s plants unknown does not exclude the application of Art. 44 (Greuter 2000) as Schultz unambiguously identified his *Carex pairae* using this illustration. For this reason, the name was validly published even if the diagnosis is unsatisfactory. In both cases, the choice of no. 1160 of Schultz’s exsiccate series *Herbarium normale* (David 1976) as a lectotype should be retained because the plants are mentioned in the protologue (Schultz 1868a).

The fact that Chater (1980) and subsequently other western European authors preferred *C. muricata* subsp. *lamprocarpa* to *C. muricata* subsp. *pairae* is because the latter was cited as published in the fourth volume of Prodrusus (Čelakovský 1881; cf. David 1976, David & Kelcey 1985), as stated also by Domin (1947). It is generally omitted that the combination *C. muricata* subsp. *pairae* appeared in the *Flora of Prague’s environs* (Čelakovský 1870). However, probably by mistake, it is not in the list of subspecies names published in this work (see Hendrych 1958), which this might have been the reason why J. Holub recommended the use of an apparently earlier but illegitimate name.

⁷ “This was written on the strength of Prodrusus of the Czech flora [“Prodrusus květeny české”]... (Čelakovský 1879: VIII).

⁸ All three varieties recognized in *Potamogeton pusillus* (Čelakovský 1867: 23) were adopted from Neilreich (1859: 218). *Poa annua* β *supina* (Čelakovský 1867: 46) is based on *P. supina* Schrader; *Juncus lamprocarpus* α *adscendens* (Čelakovský 1867: 80) on *J. lamprocarpus* γ *adscendens* (Neilreich 1859: 146); and *Polycnemum arvense* a) [subsp.] *minus* (Čelakovský 1871: 156, 1879: 156) on *P. arvense* var. *minus* (Döll 1843: 287).

⁹ The copy in the library of the Botanical department of the National Museum in Prague was donated by C. Sternberg in 1823–1829. He kept his books probably until his death in 1838, but after that, they were placed in the department’s library (B. Skočdoplová, in litt.).

¹⁰ “Ich erkannte sogleich, dass dieselbe [*C. pairae*] nur mit *C. muricata* L. [= *C. contigua*] und *C. divulsa* Good. [= *C. divulsa*, *C. leersiana*] verglichen werden könne... [...] Die darin, Tafel Ee, No. 91 [Schkuhr 1801: plate Ee], als *C. loliacea* abgebildete Pflanze entspricht vollkommen der von Hrn. Paira erhaltenen *Carex*, nur ist die vergrößerte Frucht fast ungeschnäbelt abgebildet, während sie an der lebenden Pflanze allerdings geschnäbelt ist, nur viel kürzer als bei *C. muricata* und *C. divulsa*.”

Brief nomenclature of the species concerned

For the reasons presented above we suggest that the name *C. muricata* subsp. *lamprocarpa* cannot be used for *C. pairae* when it is treated as a subspecies of *C. muricata* and has to be replaced by the combination *C. muricata* subsp. *pairae*.

Carex muricata L., Sp. Plant.: 974. 1753. Lectotypus: LINN no. 1100.26, see Nelmes 1959: 74.

= *Carex muricata* γ [var.] *lamprocarpa* Wallr., Sched. Crit.: 493. 1822. Lectotypus (**hoc loco designatus**): “*Carex muricata* γ [var.] *lamprocarpa* Wallr. Schd. cr. 493. In sylv. caeduis ad Roßl. Aestat. 17”, Wallroth, PR 124528; isolectotypus: PR 124529.

≡ *Carex muricata* b) [subsp.] *lamprocarpa* (Wallr.) Čelak., Anal. Květ. Česká: 88. 1879.

≡ *Vignea muricata* subsp. *lamprocarpa* (Wallr.) Soják in Čas. Nár. Muz., ser. sci. natur., 148: 196. 1980 ut “(Čelak.) Soják”.

– *Carex muricata* a) [subsp.] *genuina* Čelak., Prodr. Fl. Böhm. 1: 60. 1867, nom. inval. (Greuter et al. 2000, Art. 24.3).

Carex pairae F. W. Schultz in Flora (Jena) 51: 303, 1868 [“*Pairaei*”]; cf. etiam F. W. Schultz, Étude Carex: 9, 1868. Lectotypus: “Schultz Herb. Norm., no 1160, Dans les fôrets Brumath (Bas-Rhin, France), 1868, Paira”, K, see David 1976: 61; isolectotypi: BRNM, BRNU 123789, PR, PRC.

≡ *Carex muricata* subsp. *pairae* (F. W. Schultz) Čelak., Květ. Okolí Praž.: 43. 1870 [“*Pairaei*”].

– *Carex muricata* subsp. *lamprocarpa* sensu Chater, Fl. Eur. 5: 298. 1980; Stace, New Fl. Brit. Isles, ed. 2, p. 811. 1997 et auct. al., non (Wallr.) Čelak., Anal. Květ. Česká: 88. 1879.

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Souhrn

Jméno *Carex muricata* subsp. *lamprocarpa* „Čelak.“ (1879) se používá zejména v západoevropských květenách a klíčích pro druh *C. pairae* F. W. Schultz, pokud se tento taxon považuje za subspecii druhu *C. muricata* L. Rostliny v herbáři PR, které přicházejí v úvahu pro výběr lektotypu, patří všechny k druhu *C. muricata* (s. str.). Kombinaci s tímž epitetem na úrovni variety, *C. muricata* var. *lamprocarpa*, však uveřejnil F. W. Wallroth již v roce 1822. Příslušný doklad z Wallrothova herbáře, který zde ustanovujeme jako lektotyp jména, se nachází v PR: rostlina s lesklými mošničkami a delšími zobánky je *C. muricata* (s. str.) a od typických exemplářů druhu se liší pouze chudými květenstvími, tvořenými pouze jedním nebo dvěma klásky. Vzhledem k tomu, že se obě jména vztahují k téměř taxonu, je třeba podle Kódu považovat Čelakovského jméno za kombinaci staršího jména Wallrothova. Hodnotíme-li druh *C. pairae* jako subspecii druhu *C. muricata*, je jak z důvodu nomenklatorických (priorita), tak z důvodů taxonomických nutno použít kombinaci *C. muricata* subsp. *pairae* (F. W. Schultz) Čelak. (1870).

References

- Chater A. O. (1980): *Carex*. – In: Tutin T. G., Heywood V. H., Burges N. A., Moore D. H., Valentine D. H., Walters S. H. & Webb D. A. (eds.), Flora Europaea 5: 290–323, Cambridge University Press, Cambridge.
- Čelakovský L. (1867): Prodrum der Flora von Böhmen. Vol. 1. – Arch. Naturwiss. Landesdurchforsch. Böhm., sect. 3a, fasc. 1: 1–112, Prag.
- Čelakovský L. (1868): Prodrum der Flora von Böhmen. Vol. 1. – Arch. Naturwiss. Landesdurchforsch. Böhm., sect. 3a, fasc. 1: 1–112, v Praze.
- Čelakovský L. (1870): Květena okolí pražského. – Praha.
- Čelakovský L. (1871): Prodrum der Flora von Böhmen. Vol. 2. – Arch. Naturwiss. Landesdurchforsch. Böhm., sect. 3a, fasc. 2: 113–388, Prag.

- Čelakovský L. (1879): Analytická květena česká. – Praha.
- Čelakovský L. (1881): Prodrómus der Flora von Böhmen. Vol. 4. – Arch. Naturwiss. Landesdurchforsch. Böhm., sect. 3a, fasc. 4: 693–955, Prag.
- Čelakovský L. (1883): Prodrómus květeny české. Vol. 4. – Arch. Přírod. Výzk. Čech, sect. 3a, fasc. 4: 677–944, Praha.
- Čelakovský L. (1887): Analytická květena Čech, Moravy a rak. Slézska. Ed. 2. – Praha.
- Čelakovský L. (1897): Analytická květena Čech, Moravy a rak. Slézska. Ed. 3. – Praha, Vídeň.
- David R. W. (1976): Nomenclature of the British taxa of the *Carex muricata* L. aggregate. – *Watsonia* 11: 59–65.
- David R. W. & Kelcey J. G. (1985): Biological Flora of the British Isles. No. 159. *Carex muricata* L. aggregate. – *J. Ecol.* 73: 1021–1093.
- Döll J. C. (1843): Rheinische Flora. – Frankfurt a. M. [Non vidimus; cited from Stafleu & Cowan 1976.]
- Döll J. C. (1857): Flora des Grossherzogthums Baden. Vol. 1. – Carlsruhe.
- Domin K. (1947): Subspecie české flory, rozlišené Lad. Čelakovským v jeho „Prodrómu“ (1867–1883). – *Věstn. Král. Čes. Společ. Nauk, cl. math.-natur.*, 1947/2: 1–38.
- Hendrych R. (1958): Unterarten in der „Flora der Umgebung von Prag“ von Ladislav Čelakovský (1870). – *Preslia* 30: 146–149.
- Holub J. (1979): A note on the nomenclature of *Spergularia echinosperma*. – *Preslia* 51: 239–245.
- Jermy A. C., Chater A. O. & David R. W. (1993): Sedges of the British Isles. Ed. 3. – In: BSBI Handbook no. 1: 1–268, Botanical Society of the British Isles, London.
- Greuter W., McNeill J., Barrie F. R., Burdet H. M., Demoulin V., Filgueiras T. S., Nicolson D. H., Silva P. C., Skog J. E., Trehane P., Turland N. J. & Hawksworth D. L. (eds.) (2000): International code of botanical nomenclature (Saint Louis Code) adopted by the Sixteenth International Botanical Congress, St. Louis, Missouri, July–August 1999. – In: *Regnum Veg.* 138: 1–474, Königstein.
- Lambinon J., de Langhe J.-E., Delvosalle L. & Duval J. (1992): Nouvelle flore de la Belgique, du Grand-Duché de Luxembourg, du nord de la France et des régions voisines (ptéridophytes et spermatophytes). Ed. 4. – Jardin Botanique National de Belgique, Meise.
- Neilreich A. (1859): Flora von Nieder-Oesterreich. – Wien.
- Nelmes E. (1959): Zаметки о британских осоках IX. – *Bot. Mater. Gerb. Bot. Inst. AN SSSR* 19: 74–78.
- Řepka R. (2003): The *Carex muricata* aggregate in the Czech Republic: multivariate analysis of quantitative morphological characters. – *Preslia* 75: 233–248.
- Schkuhr C. (1801): Beschreibung und Abbildung der theils bekannten, theils noch nicht beschriebenen Arten von Riedgräsern nach eigenen Beobachtungen und vergrößerter Darstellung der kleinsten Theile, ... – Wittenberg.
- Schultz F. W. (1868a): *Carex muricata* var. β Schkuhr (*C. loliacea* Schk., non Linné) als gute Art aufgestellt. – *Flora* 51: 302–303.
- Schultz F. W. (1868b): Étude sur quelques *Carex*. – Hagenau.
- Sebald O., Seybold S., Philippi G. & Wörz A. (eds.) (1998): Die Farn- und Blütenpflanzen Baden-Württembergs. Vol. 8. Spezieller Teil. (*Spermatophyta*, Unterklassen *Commelinidae* Teil 2, *Arecidae*, *Liliidae* Teil 2), *Juncaceae* bis *Orchidaceae*. – E. Ulmer, Stuttgart.
- Sell P. D. & Murrell G. (1996): Flora of Great Britain and Ireland. Vol. 5. *Butomaceae* – *Orchidaceae*. – Cambridge University Press, Cambridge.
- Stace C. (1997): New flora of the British Isles. Ed. 2. – Cambridge University Press, Cambridge.
- Stafleu F. A. & Cowan R. S. (1976): Taxonomic literature. Ed. 2. Vol. 1. A–G. – In: *Regn. Veg.* 94: 1–1136, Utrecht.
- Stafleu F. A. & Cowan R. S. (1985): Taxonomic literature. Ed. 2. Vol. 5. Sal–Ste. – In: *Regn. Veg.* 112: 1–1066, Utrecht, etc.
- Stafleu F. A. & Cowan R. S. (1988): Taxonomic literature. Ed. 2. Vol. 7. W–Z. – In: *Regn. Veg.* 116: LVI pp. & 1–653, Utrecht, etc.
- Wallroth F. G. (1822): *Schedulae criticae de plantis florum Halensis selectis... I. Phanerogamia*. – Halae.

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