

## Lectotypification of *Carex buckii* (Cyperaceae)

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*Carex buckii* Wimmer (1852: 83) is the name currently applied to a species belonging to *Carex* sect. *Phacocystis* Dumortier (1827:146) (Cyperaceae) that occurs throughout Central-Eastern Europe to SW Asia (Chater 1980, Egorova 1999, Jiménez-Mejías & Luceño 2011a, 2011b, Koopman 2011).

*Carex buckii* was formally described in 1852 by Wimmer in a communication in the botanical section of the annual report of the Silesian Patriotic Society (Wimmer 1852). Several years later, it was published again as a new species (“*nova spec.*”) in the 3<sup>rd</sup> edition of the Flora von Schlesien (Wimmer 1857). Despite Ascherson & Graebner (1902) already noticing the correct publication date as 1852, most recent authors have considered the Flora von Schlesien text as the original protologue (e.g., Chater 1980, Egorova 1999, Jiménez-Mejías & Luceño 2011a). Recently, Soldano (2012) noted this mistake and advised that 1852 was the effective publication date for *C. buckii*.

The *indicatio locotypica* included in the 1852 original publication (Wimmer 1852) is located in what is now Polish Silesia: “An Flussufern. An der Ohlau vor Zedliz, hinter Zedliz und zwischen Pirscham und Tschansch. Im Walde bei Tschechniz. In Fürstenwalde bei Ohlau (Bartsch). Juni” [On river banks. At Ohlau (*Olawa*) before Zedliz (*Zedlitz*), behind Zedliz (*Zedlitz*) and between Pirscham (*Bierdzany*) and Tschansch. In the forest at Tschechniz. In Fürstenwalde near Ohlau (*Olawa*) (Bartsch). June] (from herein, current names of the places are given in italics between brackets). This partly differs from the *indicatio locotypica* published in 1857 (“Um Br. an den Ufern des Ohlau bei Zimpel, Zedlitz und Pirscham. In Walde bei Tschechnitz. Im Fürstenwalde bei Ohlau” [Near Br. (Breslau?, *Wrocław*) along the banks of Ohlau (*Olawa*) at Zimpel (*Sepolno*), Zedlitz, and Pirscham (*Bierdzany*). In the woods near Tschechniz (*Siechnice*). In Fürstenwalde at Ohlau (*Olawa*)]) as this latter explicitly includes Zimpel as an additional location.

A typification of *C. buckii* has not been proposed previously due to the absence of known vouchers that could be considered unequivocally as Wimmer’s original material. A specimen in the Berlin Botanical Garden and Museum (B; see Thiers (2014, continuously updated) for herbarium acronyms herein), tagged as “*Carex buckii* Wimmer, 1857, von Wimmer” (B 10 0218383), was considered by Schultze-Motel (author of *Carex* for the “Illustrierte Flora von Mitteleuropa”, see Schultze-Motel 1968) as original material in a revision label. Similar material belonging to Wimmer is found also in the herbarium of the Royal Botanic Gardens Kew (K) “Boeck. n 231; Zimpel bei Breslau, 1857, Wimmer leg.” [Boeck. (Boeckeler) n. 231; Zimpel (*Sepolno*) in Breslau (*Wrocław*), 1857, collected by Wimmer], probably belonging to Boeckeler’s herbarium, and in the University of Heidelberg herbarium (HEID) (“Silesia, Breslau (*Wrocław*), Zimpel (*Sepolno*), Wimmer”, without date). However, Soldano’s (2012) finding invalidates such specimens as original material and, therefore, possible lectotypes, since 1852 is now understood as the effective date of publication for *C. buckii*, and Zimpel was not cited in the original protologue but in the later Wimmer’s 1857 publication.

The purpose of this work is to shed light on the original material on which the binomen *Carex buckii* was based, and to propose an accurate lectotypification. We have found J. N. Buek’s exsiccatae in the herbaria of the Botanical Garden and Museum of Berlin (B), the Botanische Staatssammlung München (Munich, M) and the Friedrich Schiller University of Jena (JE) (see, e.g., Fig. 1). These all lack a collection date, but explicitly indicate “*Carex buckii* Wimmer! Spec. nova (...) pr. [prope] Wratislau (...)" [near “Wratislau” (*Wrocław*, a spelling probably derived from Vratislav, the Czech name of the city)]. The labels of the exsiccatae also provide a short description of the plant in Latin, distinguishing the taxon from *C. acuta* Linnaeus (1753: 978) and *C. stricta* Goodenough (1794: 196), *nom. illeg.* (= *C. elata* Allioni 1785: 272). There is an additional voucher at JE whose label partly matches the original *indicatio*

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## References

- Allioni, C. (1785) *Flora Pedemontana* 2. Joannes Michael Briolus, Turin, 366 pp.
- Ascherson, P. & Graebner, P. (1902) *Synopsis der Mitteleuropäischen Flora* 2. Wilhelm Engelmann, Leipzig, 795 pp.  
<http://dx.doi.org/10.5962/bhl.title.32166>
- Chater, A.O. (1980) *Carex*. In: Tutin, T.G., Heywood, V.H., Burges, N.A., Valentine, D.H., Walters, S.M. & Webb, D.A. (Eds.) *Flora Europaea* 5. Cambridge University Press, Cambridge, pp. 290–323.
- Dumortier, B.C. (1827) *Florula Belgica, operis majoris prodromus*. J. Casterman, Tournay, 172 pp.
- Egorova, T.V. (1999) *Sedges (Carex L.) of Russia and Adjacent States within the limits of the Former USSR*. Missouri Botanical Garden, St. Louis, 772 pp.
- Goodenough, S. (1794) Observations on the British species of *Carex*. *Transactions of the Linnean Society of London* 2: 126–211.  
<http://dx.doi.org/10.1111/j.1096-3642.1794.tb00250.x>
- Jiménez-Mejías, P. & Luceño, M. (2011a) Cyperaceae. In: *Euro+Med Plantbase—the information resource for Euro-Mediterranean plant diversity*. Available from: <http://www.emplantbase.org/home.html> (accessed 15 May 2014).
- Jiménez-Mejías, P. & Luceño, M. (2011b) *Carex bukii* Wimm. In: Greuter, W. & Raus, T. (Eds.) *Med-Checklist Notulae* 30. *Willdenowia* 41: 324.
- Koopman, J. (2011) *Carex Europaea* 1. Margraf Publishers, Weikersheim, 726 pp.
- Linnaeus, C. (1753) *Species plantarum*. L. Salvius, Stockholm, 1200 pp.
- McNeill, J.N., Barrie, F.R., Buck, W.R., Demoulin, V., Greuter, W., Hawksworth, D.L., Herendeen, P.S., Knapp, S., Marhold, K., Prado, J., Prud'Homme van Reine, W.F., Smith, G.F., Wiersema, J.H. & Turland, N.J. (2012) *International Code of Nomenclature for algae, fungi, and plants (Melbourne Code)*. Regnum Vegetabile 154. Koeltz Scientific Books, Koenigstein, 208 pp.
- Röpert, D. (Ed.) (2014) *Digital specimen images at the Herbarium Berolinense*. Botanischer Garten und Botanisches Museum Berlin-Dahlem. Available from <http://ww2.bgbm.org/herbarium/> (accessed 19 November 2014).
- Schultze-Motel, W. (1968) *Carex*. In: Hegi, A. (Ed.) *Illustrierte Flora von Mitteleuropa* 1/II. Dritte, völlig neu bearbeitete Auflage. P. Parey, Berlin, Hamburg, pp. 96–274.
- Soldano, A. (2012) Alcuni spunti di interesse su *Carex bukii*. *Informatore Botanico Italiano* 44(suppl. 2): 70–71.
- Stafleu, F.A. & Cowan, R.S. (1976) *Taxonomic literature*, ed. 2, 1. Regnum Vegetabile 94. Bohn, Scheltema & Holkema, Utrecht, 1136 pp.
- Thiers, B. (2014) *Index Herbariorum: A global directory of public herbaria and associated staff*. New York Botanical Garden's Virtual Herbarium. Available from <http://sweetgum.nybg.org/ih/> (accessed 1 August 2014)
- Wimmer, C.F.H. (1852) *Carex Buekii* nova species. *Jahresbericht der schlesischen Gesellschaft für vaterländische Cultur, Breslau* 29: 83–84.
- Wimmer, C.F.H. (1857) *Flora von Schlesien*, ed. 3. Ferdinand Hirt's Verlag, Breslau, 695 pp.