

Nomenclatural notes on *Juncus welwitschii* (Juncaceae)

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Nomenclatural notes for *Juncus welwitschii* Hochst. ex Steud. are provided and the name is synonymized with *Juncus bulbosus* L. subsp. *bulbosus*. Welwitsch's exsiccate No. 324 is discussed.

Key words: historical collections, Juncaceae, *Juncus bulbosus*, *Juncus welwitschii*, nomenclature, typification

The ‘*Juncus bulbosus* Synonyms Typification Project’ arose during studies on taxonomic variation of the bulbous rush *Juncus bulbosus* L. (e.g. Proćków 2002, 2006). It was found that in his herbarium sheet No. 324 Welwitsch used the name *Juncus tricephalus*. However, *J. tricephalus* Welw. ex Nyman is a *nomen nudum*, since it was published by Nyman (1882) without a diagnosis. The name has never been validly published, because it was merely cited as a synonym of *Juncus welwitschii* (Greuter *et al.* 2000: Art. 34.1.c), and as such is illegitimate as superfluous when published, including the type (Greuter *et al.* 2000: Art. 52.1). Thus the name *Juncus welwitschii* Hochst. ex Steud. has to be regarded as the validly published and legitimate name (Greuter *et al.* 2000: Art. 6.5).

ORIGINAL MATERIAL EXAMINED: *Welwitsch 324* (Hb. Steudel ex Hb. E. Drake – *Welwitschii iter Lusitanicum. U[nio] ifitinere*] 1841): P s. n.!; *Welwitsch 324* (Hb. Hochstetteri. *Welwitschii iter Lusitanicum. U. i. 1841*): TUB 11144!, G 12606! (Hb. Delessert) & FI 185300 (Hb. Webbianum, photo!) & *Welwitsch 324* (*Unio itin. Essling. 1841, Herb. luso-extrem. No. 324*): LISU P7749! (Fig. 1) & *Welwitsch 324* (*Welwitschii iter Lusitanicum. U. i. 1841*): K s. n.! (Hb. J. Gay, presented by Dr. Hooker, February 1868).

The labels of the sheets from P, TUB, K, G and FI contain the following information: ‘*Juncus welwitschii* Hochst. = *J. tricephalus* Wellw. in litt. non Gay’, and the TUB label additionally: ‘*Juncus tricephalus (nobis)*’ and notes in German (see Acknowledgements) and Latin: “If it does not belong to *J. supinus* M. it seems to me absolutely different from all types, which are known. In the wet sand from the left Tajo bank. June 1840. leg. Welwitsch” and “*Juncus welwitschii* Hochst. intermedius inter *J. pygmaeum* Thuill. et *J. uliginosum* Roth (*supinum* Mönch); (*J. tricephalus* J. Gay *longcalius*)”.

The herbarium sheet from LISU (Fig. 1) bears Welwitsch's handwritten note: “*Juncus tricephalus* Welw. Flor. Extrem. mnpt. (Est probabilitae = *Junci uliginosi* forma. Welw.) Affinis *Junc. pygmaeo* Thuill., sed diversus.”. “*Unio itin. Essling. 1841. Herb. luso-extrem. No. 324*”.

Juncus bulbosus* L., Sp. Pl.: 327. 1 May 1753. subsp. *bulbosus

Juncus welwitschii Hochst. ex Steud., Syn. Pl. Glumac. 2: 304. 1855, syn. nov. — *Juncus supinus* Moench, Enum. Pl.

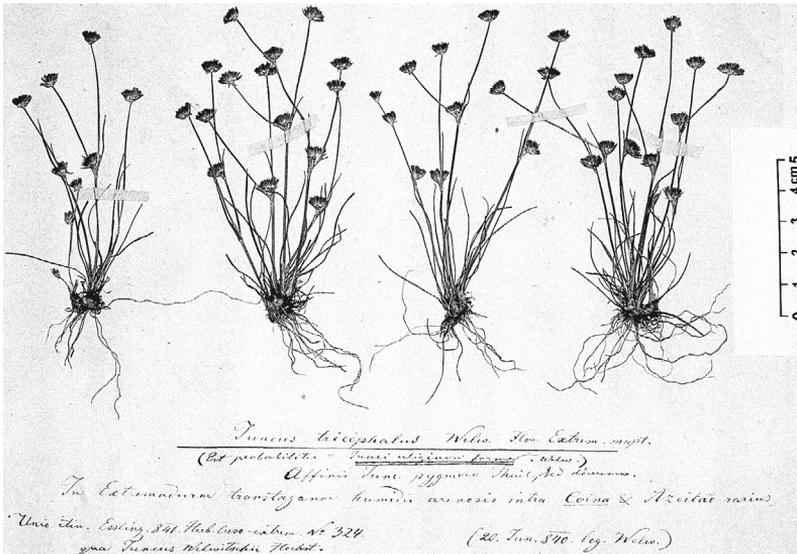


Fig. 1. Isosyntype of *Juncus welwitschii* with Welwitsch's handwritten notes. Herbarium sheet LISU P7749 (photo by the author).

Hass. 1: 167. 1777. var. [*infra litt.* 'β.'] *welwitschii* (Hochst. ex Steud.) Cout., *Bol. Soc. Brot.* 8: 106. 1890. — *Juncus supinus* Moench, 1777. subsp. [*infra litt.* 'f.'] *welwitschii* (Hochst. ex Steud.) K. Richt. *Pl. Eur.* 1: 180. 1890. — *Juncus bulbosus* L. f. *welwitschii* (Hochst. ex Steud.) Soó, *Acta Bot. Acad. Sci. Hung.* 16(3–4): 366. 1971 [dated as 1970, but published in 1971; after Brenan 1981]. — HOLOTYPE: Portugal. "In arena humida ad ripam Tagi sinistram. June 1840" Welwitsch 324 (P *s.n.*!). — ISOTYPES: TUB 11144!, K *s.n.*!, FI 185300. — ISOSYNTYPE: SW Portugal. Prov. Setúbal, "In Extremadurae transtagarae humidis arenosis intra Coina & Azeitão rarius. [38°32'N, 9°1'W], 20 June 1840" Welwitsch 324 (LISU P7749!; Fig. 1). — ISOTYPE OR ISOSYNTYPE: W.

Juncus welwitschii is synonymized here with *Juncus bulbosus* L. subsp. *bulbosus* (as generally understood at present), excl. specimen G 12606! Kirschner (2002: 162) synonymized it with *Juncus bulbosus* L., and Buchenau (1890: 292) with *Juncus supinus* Moench.

All the examined specimens agree to a considerable extent with the diagnosis of *Juncus welwitschii* Hochst. ex Steud. Most of them belong to *Juncus bulbosus* subsp. *bulbosus* as at present generally understood, but the specimen G 12606 belongs to *Juncus bulbosus* subsp. *kochii* (F.W. Schultz) Reichg. which has been lectotypified recently (Proćków 2006). So the G 12606 sheet is excluded from the type material of the nominal subspecies.

It was also found that Welwitsch's exsiccate sheets No. 324 give two 'different' localities: most of them give 'in arena humida ad ripam Tagi

sinistram' (P holotype as well!; there was only one P sheet, never annotated with any type-label earlier) but the LISU sheet gives 'In Extremadurae transtagarae humidis arenosis intra Coina & Azeitão rarius'. The latter locality was also stated 'erroneously' as the type (for the P sheet) by Kirschner (2002): 'inter Coina et Azeitão' (LISU sheet is not mentioned therein). However, for the P holotype it should be in fact: 'in arena humida ad ripam Tagi sinistram'. On the other hand, based on the literature (e.g. Coutinho 1890) I found that the precise locality for exsiccate No. 324 is between Coina and Azeitão (Extremadura, prov. Setúbal) indeed. The better part of No. 324-exsiccate was not studied by Steudel personally but it should be also accepted as representing original material (Greuter *et al.* 2000: Art. 9.2, Note 2a). I consider that e.g. the sheet LISU P7749 should be regarded as isosyntype, since it bears the same exsiccate number (Welwitsch, No. 324), but not an exactly identical collecting locality. So it is a multiple preparation (Greuter *et al.* 2000: Art. 8.3), and the material from LISU is a separate sheet (not being part of a single specimen), which, depending on the interpretation, may or may not represent a 'single gathering' No. 324 (because of the 'slightly different' collecting locality). Furthermore, the sheet from W is regarded as isotype or isosyntype at present because there is no possibility to find from which locality it was collected.

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