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JUNCUS DICHTOMUS ELLIOTT (JUNCACEAE), A NEW ALIEN SPECIES FOR THE FLORA OF UKRAINE

Key words: Juncus dichotomus, Juncaceae, Ukraine, floristic record

Abstract

Juncus dichotomus is reported for the Ukrainian flora. This is an alien species of North American origin. Now in Ukraine Juncus dichotomus is known in Zhytomyr Region and Volyn Region. Diagnostic features and data on distribution of this species are presented.

We have re-examined the collected material of the genus Juncus L. in the Herbarium of M.G. Kholodny Institute of Botany (KW, National Herbarium of Ukraine) and identified an alien species new for the Ukrainian flora, Juncus dichotomus Elliott. In this article we present diagnostic characters of J. dichotomus and data on its current distribution in Ukraine and some other countries.


Perennial herb, 25—60(—100) cm tall, caespitose, rhizomes densely branched to short-creeping. Cataphylls 1—3, leaves basal or sub-basal, (1—)2—3, leaves 10—25(—40) cm long, (0.5—)0.7—1.0(—1.2) mm wide, nearly terete, canaliculate or flat; auricles 0.2—0.5(—0.6) mm, scarious to leathery. Lower bract leaf-like, 2.5—19 cm long, usually longer than inflorescence. Inflorescences terminal, (5—)10—85(—100)-flowered, congested to somewhat loose, (1.0—)2.5—10(—13) cm long. Bracteoles broadly ovate, membranous, 1.4—2.2 mm long, apex subobtuse to acute. Tepals subequal (outer ones often slightly longer), lanceolate, acute, (3.0—)3.3—4.5(—5.5) mm, central band green, later becoming stramineuos to brown, margins indistinct, membranous. Stamens 6, filaments 0.6—1.2 mm, anthers 0.4—0.8(—1.0) mm long. Style 0.2 mm long, stigmas 1.0—2.0 mm long. Capsules shorter than or equalling perianth, tan to brown, 1-locular to pseudo-
3-locular, ellipsoid to widely so, (2.5—)2.8—3.5(—4.5) mm long. Seeds brownish to amber, ellipsoid to lunate, 0.3—0.4 mm, not tailed. 2n = ca. 80. (Brooks & Clemants, 2000; Kirschner & al., 2002).

*Juncus dichotomus* is morphologically similar to such species as *J. tenuis* Willd., *J. anthelatus* (Wiegand) R.E. Brooks & Whittem, and *J. dudleyi* Wiegand. *Juncus tenuis* and *J. anthelatus* are best distinguished by examining their auricles. In these species, the auricles are elongate, 2.0—6.0 mm long. *Juncus dichotomus* and *J. dudleyi* have short auricles, 0.2—0.5(—1.0) mm long. Those of *J. dichotomus* vary according to the texture, from scarious to coriaceous. Those of *J. dudleyi* are yellow-brown and cartilaginous. *Juncus tenuis* has seeds 0.5—0.7 mm long, anthers 0.1—0.2(—0.4) mm long, and flat to involute leaves. *Juncus dichotomus* differs in having smaller seeds 0.3—0.4 mm long, larger anthers 0.4—0.8(—1.0) mm long, and leaves commonly terete in cross-section. *Juncus dudleyi* differs in having larger anthers 0.6—1.0 mm long (Brooks, 2001; Kirschner & al., 2002).

*Juncus tenuis* is now a widespread species, both in North America and beyond its native range. *Juncus anthelatus* is native to North America, introduced in Great Britain and Belgium (Stace, 2010; Verloove, Lambinon, 2011). *Juncus dudleyi* is also native to North America, and reported as introduced from Great Britain, France, Belgium, Austria, and the Slovak Republic (Kirschner & al., 2002; Stace, 2010). *Juncus dichotomus* is widespread in the eastern and southeastern parts of the United States of America, and occurs scattered from Mexico to Argentina and Chile (Kirschner & al., 2002; Baslev, Zuluaga, 2009). *Juncus dichotomus* is introduced in Australia, New Zealand (Healy, 2000; Kirschner & al., 2002; Howell, Sawyer, 2006; Celsi, Monserrat, 2008), Belgium (Verloove, 2010; Verloove, Lambinon, 2011), Italy (Verloove, 2010; 2010a), the Russian Federation, and Belarus (Tikhomirov, 2013).

Three localities of *Juncus dichotomus* are currently known in Ukraine:

1. Ukraine, Zhytomyr Region, Olevskyi Dist., Zhubrovychi village (15.08. 2007, G.A. Chorna *KW 072063*).
2. Ukraine, Zhytomyr Region, Baranivskyi Dist., Zereflia village (31.07 2008, O.O. Orlov *KW 083022*).
3. Ukraine, Volyn Region, Lyubishiv Dist., Velyka Hlusha village (08.08. 2013, O.O. Orlov *KW 00107623*).

One of the authors of this article (O.O. Orlov) has found *Juncus dichotomus* in Zereflia Forestry (state enterprise «Baranivske Hunting Forestry»). This species grows in the forest cutting in the association *Carpinoeto-Quercetum Coryloso-Caricetum (brizoides)*. *Juncus dichotomus* occurred in one of these. Projective cover of vegetation was 15 %. Here grew *Juncus dichotomus* Elliott — 5 %, *Erechtites hieracifolia* (L.) Raf. ex DC. — 3 %, *Juncus bufonius* L. — 1—3 %, *Bidens triparta* L. — 1—3 %, *Peplis alternifolia* M. Bieb. — 1 %, *Gnaphalium uliginosum* L. — 1 %, *Potentilla erecta* (L.) Raeusch. — r.

In our opinion, *J. dichotomus* will have good prospects of further spread in Ukraine, especially its northern and central regions. Probably it already occurs in our country more widely that the known records indicate, but it is most likely overlooked by collectors because of its similarity to other taxa, especially *J. tenuis*.
REFERENCES


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JUNCUS DICHOTOMUS ELLIOTT (JUNCACEAE) — НОВЫЙ АДВЕНТИВНЫЙ ВИД ФЛОРЫ УКРАИНИ

Наведено новий для флори України кенофіт північноамериканського походження — Juncus dichotomus Elliott, знайдений у Житомирській та Волинській областях. Подано його морфологічний опис і відомості щодо поширення.

Ключові слова: Juncus dichotomus, Juncaceae, Україна, флористична знахідка.

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