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Rubus gizellae (Rosaceae), a bramble species from southeastern Europe—identification history, neotypification, and taxonomic notes

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The genus *Rubus* Linnaeus (1753: 492) with nearly 700 species in Europe (Kurtto *et al.* 2010) constitutes an extraordinarily taxonomically critical group within the Rosaceae (Rosoideae). The richness of morphotypes combined with a poor understanding of the breeding system of apomictic brambles has resulted in the description of thousands of entities. Lack of taxonomic standards and an overwhelming number of scientific names has caused nomenclatorial chaos, which mainly has been resolved by the modern species concept developed in Europe in the late 1900s ("Weberian reform", Weber 1999; Haveman & de Ronde 2012). However, the review of older names is an extended process and re-evaluation of names has often failed due to lack of type material.

Rubus gizellae Borbás (1887: 327) was described by Vince Borbás from Croatia without a specified locality in the protologue; subsequently it was reported from a total of three sites in central Croatia (Borbás 1891, 1892). As is the case with several of the other bramble species described by Borbás, none of the original specimens remain (his herbarium being destroyed at the end of World War II). At present, only two of the *Rubus* species he described are accepted (see Király *et al.* 2013). The protologue of *R. gizellae* is rather short, referring to only a few morphological characters (elliptic terminal leaflets, narrowly pyramidal inflorescence, bright pink petals), all inadequate per se for separation from similar species.

Gáyer (1921: 19, 1925: 494) in reporting a new (Hungarian) locality of Borbás' *Rubus gizellae*, presented a more detailed description and outlined a series of diagnostic characters (scattered stalked glands in the inflorescence, short prickles on first year stem, long bracts in the inflorescence, long pink pistils) useful for its identification. Thus, according to McNeill *et al.* (2012) Art. 47.1, the taxon can be cited as *Rubus gizellae* Borbás emend. Gáyer if one so wished.

Due to the lack of batological research in southeastern Europe from the 1930s onward, *Rubus gizellae* was consigned to oblivion and considered by various authors (Soó 1980: 296; Euro+Med 2006–; Kurtto *et al.* 2010: 23) as a "valueless or doubtful" taxon (i.e. a supposed singular biotype).

During a systematic survey of brambles in southeastern Europe in 2012–2013 we collected a uniform *Rubus* morphotype at approximately 35 localities in Croatia, Hungary and Slovenia which was later prepared for description as a new species. Based on our observations, we established that the range of this taxon is approximately 200 km diameter, thus (according to Kurtto *et al.* 2010) a regional bramble species with some tendency for a wide distribution. In the course of a simultaneous comprehensive herbarium review (BP, BPU, DE, GJO, GZU, JPU, LJU, OL, PECS, SAMU, W, ZA and ZAHO) we found a sheet collected and determined by Gáyer as *R. gizellae* at BP that proved to be identical with our "new" morphotype, and fit the descriptions of *R. gizellae* as circumscribed by both Borbás and Gáyer. The single voucher of Gáyer (BP 84731) was collected in Dávidháza (SW Hungary), where subsequently we reconfirmed its occurrence. We also ascertained that the only known illustration of *R. gizellae* (Jávorka & Csapody 1934: 240) was based on Gáyer's voucher.

Since Gáyer (an outstanding batologist) reviewed the *Rubus* collection of Borbás (see Gáyer 1921: 2) we assume that he knew the original voucher(s) of *R. gizellae* collected by Borbás and that he would have compared them with his own collection.

As *Rubus gizellae* has never been typified, and none of the original material is extant, we therefore propose the designation of the only well preserved specimen with an indirect relation to the prologue as a neotype:

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Rubus gizellae Borbás (1887: 327)

Type:—HUNGARY. Vas County: Dávidháza, 4 Jul 1920, *Gáyer*, (neotype, designated here, BP 84731!)

Notes:—*Rubus gizellae* Borbás has been treated, until recently, as a presumed single morphotype without taxonomic value. Gáyer studied the type material before it was destroyed, presented a voucher collected by him, and a detailed emendation for the taxon. This specimen is designated here as the neotype for *R. gizellae*. Based on the description and emendation of the species, together with study of the neotype specimen and field examinations, we conclude that *R. gizellae* is a regional bramble species distributed in Croatia, Hungary and Slovenia. Borbás (1887) and Gáyer (1921, 1925) assigned its position in subgen. *Rubus*, ser. *Vestiti* (Chaboiss.) Focke (1877: 285), which is characterized by densely hairy first year stem, silky hairy leaves beneath and the presence of stalked glands in the inflorescence. *Rubus gizellae* was erroneously considered by Heslop-Harrison (1968: 19) to be a "related species to *R. radula* Weihe" as stalked glands on first year stem of *R. gizellae* are lacking, while the presence of stalked glands on the primocane is an important feature of ser. *Radula* (Hook. & Arn.) Focke (1877: 317). Our recent studies support the conclusion that *R. gizellae* is a typical representative of ser. *Vestiti*.

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