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# *Rubus gayeri* and *Rubus slavonicus*, two new species of *Rubus* ser. *Micantes* (Rosaceae) from Central and South-Eastern Europe

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## Abstract

Two new apomictic species of bramble occurring in Hungary and adjacent regions, *Rubus gayeri* and *R. slavonicus*, section *Rubus*, subsection *Hiemales* E. H. L. Krause, series *Micantes* Sudre, are described. Diagnostic features, pen drawings and photographs of both new species are presented; moreover, distribution maps, list of revised specimens and habitat characteristics are included as well. *R. gayeri* is a regional bramble species occurring on the eastern foothills of the Alps (W Hungary, SE Austria and N Slovenia); its range is of approximately 120 km diameter. Originally, it was connected with acidophilous oak-hornbeam and beech forests and forest fringes, expanding later (due to anthropogenic influences) to secondary coniferous woods of base-poor soils. *R. slavonicus* has a specific long-drawn range from the northwestern Balkans (Bosnia & Herzegovina) to the centre of the Pannonian Basin (Hungary) of approximately 250 km diameter. Throughout its range it typically occurs in pedunculate oak-hornbeam forests of lower altitudes with several sub-Mediterranean elements. In the northernmost isolated part of the range (N of Lake Balaton) it is found in extrazonal beech forests on basalt bedrock.

**Keywords:** *Rubus*, ser. *Micantes*, taxonomy, biogeography, apomixis, Central & SE Europe

## Introduction

The European representatives of blackberries (*Rubus* Linnaeus 1753: 492 subgen. Rubus) form a complex of a few sexual diploid species and numerous agamospermic polyploids (Holub 1992, Weber 1995, 1999). Based on regional studies (Weber 1973, 1985, Matzke-Hajek 1997), the taxonomy of the subgenus is well known in central and north-western Europe, whereas first modern insights on the blackberries of south-eastern Europe (e.g. Trávníček & Zázvorka 2005, Kurtto *et al.* 2010) have only been published recently.

*Rubus* subsect. *Hiemales* E. H. L. Krause (in Prahl *et al.* 1890: 57) ser. *Micantes* Sudre (1908: 16) is a somewhat heterogeneous, possible polyphyletic group, including species created as a result of hybridization between biotypes with and without stalked glands (Holub 1992, Weber 1995, Tomaszewski *et al.* 2013). The number of species in the series is approximately 60; the centre of their distribution is in central and north-western Europe (Kurtto *et al.* 2010). A recent revision of ser. *Micantes* in Hungary (Király *et al.* 2013) reconfirmed the occurrence of three widely distributed species (*R. clusii* Borbás 1885: 40, *R. styriacus* Halácsy 1890: 432, and *R. tabanimontanus* Figert 1905: 178), and one endemic regional species (*R. balatonicus* Borbás 1900: 414). In neighboring territories of eastern Austria and Slovenia two species of the series were recorded (*R. clusii* and *R. styriacus*); occurrences of both species in adjacent territories of Croatia were considered as doubtful (Weber & Maurer 1991, Maurer & Drescher 2000). Other parts of south-eastern Europe are practically unexplored from the point of view of modern batology (Kurtto *et al.* 2010), thus, although several taxa of ser. *Micantes* have been reported e.g. from Romania (Nyárády 1956), they are, due to the use of obsolete perspective of Sudre (1908–1913), unreliable.

In the course of field studies on brambles in central and south-eastern Europe (Austria, Croatia, Hungary and Slovenia) we repeatedly observed two biotypes of *Rubus* ser. *Micantes* differing in several important features from the formerly described species of the series. Further assessments indicated that they represent hitherto unexplored and

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**FIGURE 6.** (a) Typical habitat of *Rubus gayeri*: Scots pine plantation with monodominant carpet-like occurrence of the species (loc.: W Hungary, Szentpéterfa, locus classicus); (b) Typical habitat of *Rubus slavonicus*: Lowland pedunculate oak wood (loc.: S Hungary, Kaszó, locus classicus).

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## Appendix 1: Distribution data of *Rubus gayeri*

Specimens seen:
AUSTRIA: (1) Deutsch Ehrensdorf, 0.4 km N of the village (N47.106861°; E16.410894°); 298 m (16.9.2013, coll. G. Király: herb. G. Király); (2) Moschendorf, 0.9 km of "Bergen Häuser" settlement (N47.051389°; E16.441667°); 235