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ROSA × *BRAUNII*, A NEW ROSE HYBRID IN SLOVAKIA

V. KERÉNYI-NAGY[1] and M. VALACHOVIČ[2]

[1]*Institute of Botany and Nature Protection, Faculty of Forestry, University of West-Hungary*
H-9400 Sopron, Ady E. u. 5, Hungary; E-mail: kenavi1@gmail.com
[2]*Institut of Botany, Slovak Academy of Sciences*
SK-845 23 Bratislava, Dúbravská cesta 9, Slovakia; E-mail: milan.valachovic@savba.sk

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A new rose hybrid was found in Slovakia, Malé Karpaty Mts, close to the Plavecký Peter on the hill Ježovka. This rose taxon called *Rosa* × *braunii* was described by Jenő B. Keller from the Bruck an der Leitha (Austro-Hungarian Empire) in 1882. It is a hybrid of *R. tomentosa* Sm. and *R. spinosissima* L. Its morphology, diagnostic features, chorology and conservational status are discussed. Legal protection of this taxon is highly recommended, because this is its second population in the world, the only currently known locality, and it is a unique taxon, not an introgressive hybrid.

Key words: distribution, hybridisation, Malé Karpaty Mts, Plavecký Peter, rhodology, *Rosa tomentosa*, *Rosa spinosissima*, Rosaceae, taxonomy

INTRODUCTION

The roses have in general many special reproduction mechanism (e.g. apomictic reproduction, unbalanced-meiosis, cleistogamy), and this reproduction biology results high infra- and interspecific diversity. Hybridisation is very frequent in and between some groups (e.g. Sect. Caninae DC., Sect. Rubiginosae DC.), and it may be many times introgressive. On the other hand it is very rare between other groups, like Sect. Cinnamomeae DC. × Sect. Tomentosae DC., Sect. Cinnamomeae DC. × Sect. Pimpinellifoliae DC. and Sect. Synstylae DC. × Sect. Gallicanae DC., where the hybrids are very rare and unique. This unique hybrid was discovered in the Malé Karpaty Mts (the Little Carpathians) in SW part of Slovakia.

The second author of this paper collected a vegetative branch from this taxon on 24 May 2008, and he determined the plants as *Rosa pimpinellifolia* L. The first author made a revision on the *Rosa* and *Crataegus* specimens in the Herbarium of Institute of Botany in Bratislava (SAV) and the Herbarium of Comenius University (SLO) and Valachovič's herbarium in March 2010, where he recognised that specimen as *Rosa* × *braunii* J. B. Keller.

MATERIAL AND METHODS

The new locality in Slovakia was visited after the revision, and than the newly collected material was compared to the type specimen deposited in the Herbarium of the Hungarian Natural History Museum (BP). Some root suckers were collected from the population of Plavecký Peter village (Detrekőszentpéter; Blasenstein-Sankt-Peter) for our living collection and gene bank. The determination keys of Degen (1924), Keller (1882*a*, *b*) and the drawing of Jávorka and Csapody (1975) were used for identification. No any information was found about this taxon in the Vetvička and Bertová (1992) and Marhold and Hindák (1998). At the locality a phytocoenological relevé was made in accordance to the traditional Zürich–Montpellier School (Braun-Blanquet 1964).

RESULTS AND DISCUSSION

This rose taxon was described by Jenő B. Keller (1841–1897), by a Hungarian botanist in 1882 from the territory of the Austro-Hungarian Empire, from Haglersberg (Hackelsberg), Leitha Mts, close to the village of Brück an der Leitha (Keller 1882*a*, *b*); he named it after the famous Austrian rhodologist, Heinrich Braun (1851–1920). We do not have any information about the original population in the locus classicus since of the discovery of this taxon. Its morphological features are summarised below for the easy determination.

Diagnostic features
Rosa × *braunii* J. B. Keller

Basionym: *Rosa braunii* J. B. Keller (pro species), Österr. Bot. Zeitschr. 32: 39. (Keller 1882*a*)

The shrub is usually 120–150 cm tall, incompact polycormon. The branches are slim, rigid, straight, the collateral-branches are splayed. The cortex is purple-brown. The prickles are rigid, slim, price-shaped, different sized, less

Table 1
Diagnostic features between the parents (*R. spinosissima* and *R. tomentosa*) and the hybrid (*R. × braunii*)

Morphology	***Rosa spinosissima*** L. (syn. *R. pimpinellifolia* L.)	***Rosa × braunii*** J. B. Keller	***Rosa tomentosa*** Sm.
Height	50–100 cm	100–150 cm	120–200(–300) cm
Branch	rigid, straight		curved
Prickle	straight, different sized		curved or slightly curved
	the branches are full of the prickles	the branches are more or less of the prickles	very rare
Leaflet	7–9–11 ps	5–7 ps	
	hairless	downy, full of hair	
	small, rounded-oval shaped	middle-sized, rounded-oval shaped	big, oval shaped
	1× serrated edges	2× serrated edges	
	fragrance free	slightly fragrant	strongly fragrant
Pedicel	without or with glandules	with glandules	
Hypanthium	without glandules	with glandules	
Sepal	scot-free	pennatifids	
	short	middle-sized	long
	without glandules	with glandules	
	erected, residual	splayed, falling	leaning back, reflected falling
Petal	white	porcelain pink	light pink
Rosehip	globose	pitcher-shaped	oval-shaped
	black	purple	red
	every year can be prolific	sometimes	every year can be prolific

densely. The number of leaflets is 5–7, the leaflets are 2–3 cm long, rounded-oval-shaped, smooth, doubly serrated edges, slightly fragrant turpentine. The stipules petiole and the lower surface of leaflets are fully covered by white hairs; the upper surface of the leaflets greyish green by sparse hairs. The pedicels and the hypanthium have glandules and prickle-glandules. The petals have porcelain pink colour. The sepals are pennatifids, middle-sized-short, and glandular on the outer surface. The ripen rosehip is pitcher-shaped, purple colour, the sepals on the fruit are splayed (Figs 1–5). The shrub can yield fruit only sometimes. It is the primer hybrid of *Rosa spinosissima* L. × *R. tomentosa* Sm. (Table 1).

Fig. 1. Rosa × *braunii* habitat in Plavecký Peter: hill Ježovka (photo: V. Kerényi-Nagy)

Fig. 2. Vegetative branch of *Rosa* × *braunii* (photo: V. Kerényi-Nagy)

Fig. 3. Rosa × *braunii* with rosehip (cultivated specimen) (photo: V. Kerényi-Nagy)

Fig. 4. Vegetative branches: *R. spinosissima* L. (left), *R.* × *braunii* J. B. Keller (in the middle), *R. tomentosa* Sm. (right) (photo: V. Kerényi-Nagy)

Habitat

The currently discovered population of *R.* × *braunii* is located in the Malé Karpaty Mts, near the village Plavecký Peter, NR Kamenec nad Bukovou, slope of the hill Ježovka, alt. *ca* 400 m a.s.l.; N 48° 32′ 02″; E 17° 20′ 55″ (rel. MV2817, 24 August 2008). *R.* × *braunii* occurs here in an open warm slope of southern exposure, on shallow rendzina soils formed on Leitha-limestone (Fig. 1). The surrounding shrubs and woodlands are classified as Pannonian thermophilous oak wood with *Quercus pubescens* (alliance Quercion pubescenti-petreae Br.-Bl. 1932) and Pannonian wooded thickets with temperate shrubs (Berberidion Br.-Bl. 1950). *R.* × *braunii* is growing together with *Berberis vulgaris* L., *Clematis recta* L., *Cornus mas* L., *C. sanguinea* L., *Coronilla coronata* Nath., *Corylus avellana* L., *Cotoneaster integerrimus* Medic., *Dictamnus albus* L., *Euphorbia polychroma* L., *E. cyparissias* L., *Festuca pallens* Host, *Galium glaucum*

Fig. 5. Flowers and rosehips: *R. spinosissima* L. (left), *R.* × *braunii* J. B. Keller (in the middle), *R. tomentosa* Sm. (right) (photo: V. Kerényi-Nagy)

L., *Genista tinctoria* L., *Lilium martagon* L., *Polygonatum officinale* (Mill.) Druce, *Quercus cerris* L., *Q. pubescens* Willd., *Rhamnus catharticus* L., *Salvia pratensis* L., *Sedum sexangulare* L., *S. telephium* L. subsp. *maximum* (L.) Krocker, *Sorbus aria* (L.) Cr. (with some apomictic microspecies), *Stipa pulcherrima* C. Koch, *Thalictrum minus* L. subsp. *pseudominus* (Borbás) Soó and *Vincetoxicum officinale* Moench; and there is also a rich population of *Limodorum abortivum* (L.) Sw. in the forest close to this locality. The size of the *Rosa* × *braunii*'s polycormon is *ca* 30 m × 20 m, most probably the whole shrub belongs to the same individual only.

Conservational status

Unfortunately, the height of the *Rosa* × *braunii* individuals is rather low, only 5–25 cm, most probably because of the considerable grazing of the big games (moufflon, deer). The other small shrubs showed similar damages. These shrubs cannot produce adequately flowers and ripen fruits, so they are threatened considerably. We tried to found more populations of *Rosa* × *braunii* in similar habitats on this hill, but we could not found any. The locality itself is protected by law belonging to the Nature reserve Kamenec nad Bukovou. In our opinion it is necessary to exclude the big games by fences to secure for the shrubs and other rare plants enough time and space suitable for flowering and producing ripen fruits. *Rosa* × *braunii* is highly recommended for legal protection, since it has only one, currently known locality worldwide (the second locality), and it is a unique taxon, not an introgressive hybrid. In addition, its recent habitat is too small and narrow, threatened by grazing and trampling. *Rosa* × *braunii* was also proposed for red-listed status as critically endangered (Kerényi-Nagy 2010).

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