

## A new species of *Rubus* from Bavaria, Bohemia and Austria

Nový druh ostružníku z Bavorska, Čech a Rakouska

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*Rubus perpedatus* Žíla et H. E. Weber (sect. *Rubus* ser. *Radula* Focke) is described as a new species. It differs from *R. radula* Weihe in having distinctly pedate leaves, terminal leaflets with an emarginate base, longer pedicels with longer stalked glands and with many more prickles. It is distributed in the Bavarian Forest, the Bohemian Forest and in Upper Austria. An illustration, a list of herbarium specimens and a map showing the distribution of this new species are provided.

**Key words:** Austria, batology, Czech Republic, Germany, new species, *Rubus*, taxonomy

### Introduction

On the occasion of a batological meeting in September 1998 an unknown bramble of ser. *Radula* Focke was seen several times and collected in the northern part of the Bavarian Forest and the adjacent Czech Republic. The participants included, among others, the late Dr Josef Holub and both authors. Specimens of the same plant were later found over a larger distribution area down to Upper Austria. It is described here as a new species.

### *Rubus perpedatus* Žíla et H. E. Weber **spec. nova** (Fig. 1)

**Descriptio:** Turio 4–6 mm in diametro, vinosus, obtuse angulatus faciebus vulgo leviter convexus, pilosus (pilis partim fasciculatis ± patentis et adpressis usque fere 1 mm longis 5–20 per 1 cm lateris), glandulis stipitatis (saepe decapitatis) multis (5–20 per 1 cm lateris) pro maxima parte 1 mm longis obsitus, aculeis gracilibus subaequalibus reclinatis vel leviter curvatis usque 5–6 mm longis, basi usque 6 mm latis, 8–18 per 5 cm armatus, praeterea aculeolis aciculisque (saepe glanduliferis) paucis instructus.

Folia (3–) 4–perpedato 5-nata, supra (sub-)glabra, subtus pilis stellulatis (viridi-)griesea usque albescentetomentosa, pilis longioribus molliter pilosa. Foliolum terminale longe petiolulatum (longitudo petioliuli vulgo 38–45% longitudinis laminulae), e basi leviter cordata rarius rotundata ovatum apice (15–) 20 (–25) mm longe attenuatum, periodice dentibus cuspidatis 2–4 mm alte dentibus principalibus longioribus partim saepe paulo excurvatis anguste serratum. Foliola infima foliorum 5-natorum 7–12 mm petiolulata. Petiolus foliolis infimis brevior usque paulo longior, pilosus et glandulis stipitatis obsitus, 12–25 aculeis curvatis munitus. Stipulae filiformes.

Inflorescentia anguste pyramidalis, vulgo 5–8 cm infra apicem aphylla, praeterea foliis lanceolatis et 3-natis foliolis terminalibus obovatis foliolis lateralibus 8–12 mm longe petiolulatis instructa. Rachis villosa et glandulis stipitatis aculeolisque glanduliferis sat dense obsita, aculeis subulatis reclinatis et partim paulo curvatis usque 6–6.5 mm longis, 10–18 per 5 cm munita. Pedicelli pro maxima parte 20–25 mm longi, dense pilis usque 1 mm longis et glandulis stipitatis multis, pro maxima parte 0.4–0.8 mm longis instructi, (8–) 10–15 aculeis subulatis patentibus vel leviter curvatis usque 3–3.5 mm longis armati. Sepala ± reflexa, aculeata, glandulis stipitatis multis. Petala dilute rosea, obovata, vulgo 8–10 mm longa. Stamina stylos viridescentes superantia. Antherae glabrae. Ovaria pilosa. Receptaculum glabrum. Floret VI–VII.

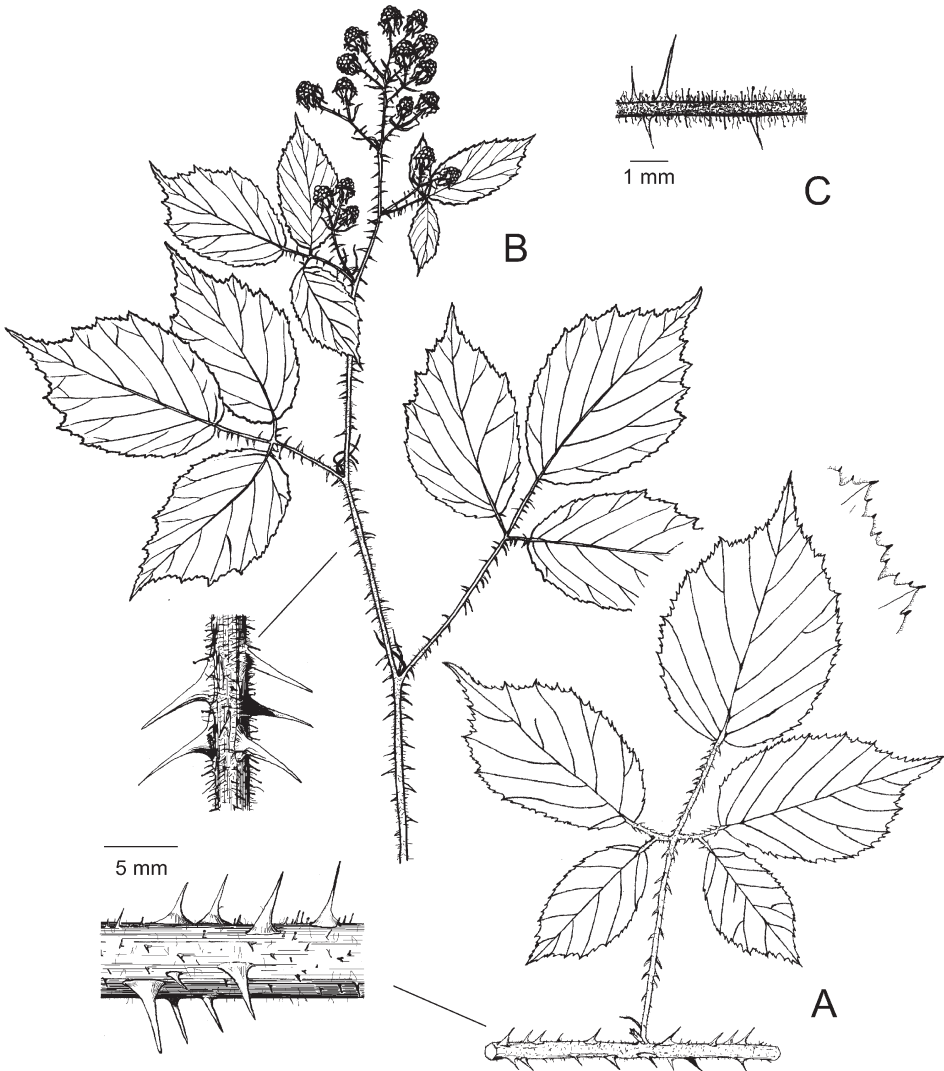


Fig. 1. – *Rubus perpedatus* Žíla et H. E. Weber. A. piece of a primocane with leaf (part of the stem and serration enlarged), B. inflorescence with part of the rachis enlarged, C. part of a pedicel.

Species *Rubi radula* paulo similis, a quo praecipue differt turio glandulis longius stipitatis aculeis brevioribus, foliis magis pedatis, foliolis terminalibus longius petiolulatis, basi vulgo cordatis, pedicellis longerioribus cum glandulis longerioribus et aculeis plurimis.

*Rubus* e sectione *Rubus* ser. *Radula* Focke. Crescit in Germania (Bavaria orientali), Bohemia australi et Austria boreo-occidentali.

T y p u s : 6542.44: Domažlice, pagus Chodov, ad marginem silvae apud viam, ca 1 km situ merid.-occid. a pago Chodov, vicum Výchledy versus, 570 m s.m. (49°24'44.2"N, 12°49'08.2"E), 27. 8. 2004 Žíla (PR, holotypus; LI, herb. Weber, herb. Žíla, isotypi).

N o m e n c l a t u r e : The epithet *perpedatus* refers to the distinctly pedate leaves.

**Main diagnostic characters:** Stem wine-coloured, bluntly angled with flat or convex sides, each with 5–20 partly tufted hairs up to 1 mm long per 1 cm and with the same number of up to 1 mm stalked glands (or their stumps). Stem prickles 8–18 per 5 cm, subequal, slender, declining or slightly curved, up to 5–6 mm long with a 5–6 mm broad base. In addition there are some much smaller prickles and (glandular) acicles. The leaves are distinctly pedate with (3–) 4–5 leaflets, (almost) glabrous above, greyish-green- to greyish-white-felted beneath and with soft longer hairs. Terminal leaflet ovate with a slightly cordate (rarely rounded) base, an acuminate 15–20 (–25) mm long apex and a petiolule 38–45% as long as the lamina. Serration sharp, up to 2–4 mm deep, with acuminate teeth and longer (often partly slightly recurved) main teeth. Basal leaflets of 5-nate leaves 5–12 mm stalked. Petiole longer or somewhat shorter than the basal leaflets, densely hairy above, with many stalked glands and 12–25 curved prickles. The panicle is narrowly pyramidal, the upper 5–6 cm without leaves. The lateral leaflets of 3nate leaves are 8–12 mm stalked. The rachis is almost shaggy with hairs up to 1 mm long, with dense stalked glands and (glandular) acicles. It has 10–18 prickles per 5 cm length, which are very slender to subulate, slightly declining or a little curved and up to 4.5–6.5 mm long. Pedicels mostly 20–25 mm long, with dense hairs up to 1 mm long and many stalked glands mostly about 0.4–0.8 mm long, prickles 3–7, unequal, patent, a little declining or slightly curved, up to 3–3.5 mm long. Sepals greyish-felted, prickly, reflexed, old ones somewhat elongated. Petals pinkish, obovate. Stamens exceeding the greenish styles. Anthers glabrous, ovaries hairy, receptacle glabrous.

*Rubus perpedatus* is a member of subgen. *Rubus* sect. *Rubus* ser. *Radula* Focke and is similar to *R. radula* Weihe, but differs in having longer-stalked glands and shorter prickles on the stem, many more pedate leaves with cordate-based terminal leaflets, much longer stalked lateral leaflet of 3nate leaves on the inflorescence, and longer pedicels with longer stalked glands and more prickles. *Rubus epipsilos* Focke and *R. muhelicus* Danner are less similar to *R. perpedatus* and quite distinct in having much broader to roundish terminal leaflets and shorter-stalked (0.3–0.6 mm) glands on the pedicels. *Rubus indusiatius* Focke is markedly different in having usually broader terminal leaflets with a very fine and only 1–2 mm deep serration and pedicels with an average length of only 10–15 mm.

The most characteristic feature of *R. perpedatus* are the pronounced pedate leaves bearing basal leaflets that arise up to 12 mm above the base of the petioles of the lateral leaflets. The lateral leaflets of the 3nate leaves of the inflorescence are also remarkably long-stalked. At first it was assumed, that this bramble was already named by Progel (1882, 1889), who worked on the *Rubus* flora of the Bavarian Forest. But none of his taxa matches *R. perpedatus*.

### Ecology and geographical distribution (Fig. 2)

*Rubus perpedatus* grows alongside paths or roads in forests, at forest margins, in clearings and also outside of forests among shrubs, mostly on soils somewhat rich in alkaline, mainly 400–700 m a.s.l. *Rubus perpedatus* has been found in Germany (Bavaria), Czech Republic (Bohemia), and Upper Austria. In Bavaria it occurs in the northern Bavarian Forest, in Bohemia mainly in the south-eastern part of the Bohemian Forest (Český les) up to Krchleby – Bavorovské Svobodné Hory – Větrná u Rožmberka nad Vltavou – Pivoň. In Upper Austria it was found at a site near Walding.

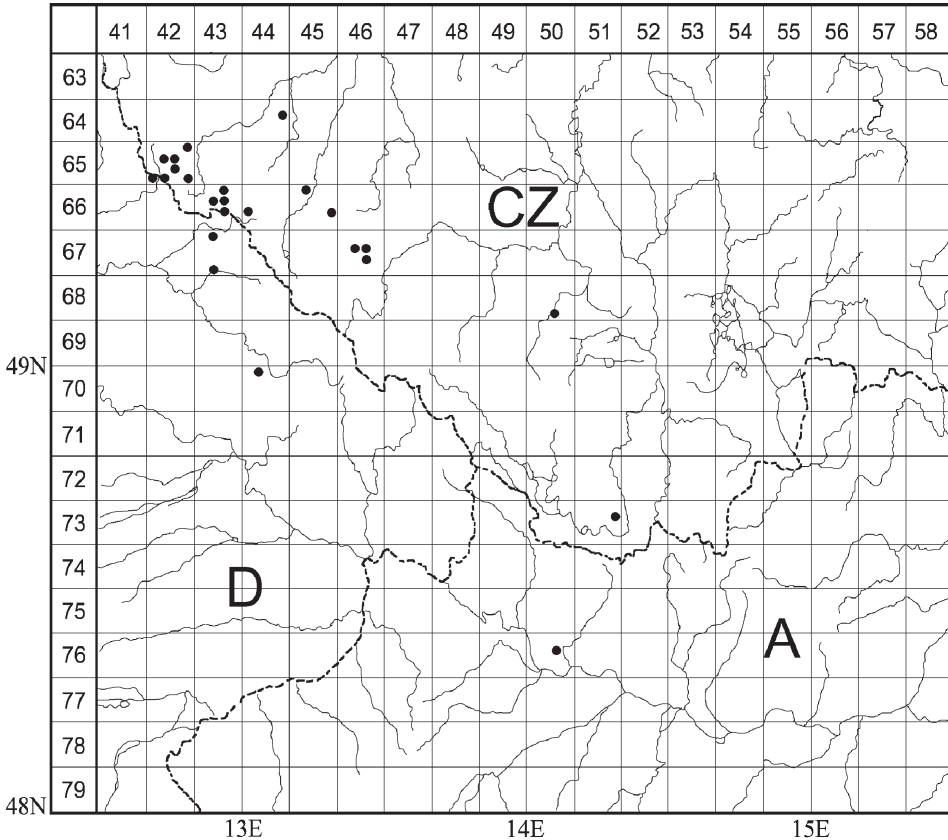


Fig. 2. – Distribution of *Rubus perpedatus* Žíla et H. E. Weber.

#### Herbarium specimens

The localities are arranged according to the grid system of the German and Austrian topographic map 1 : 25 000, which was also used for localities recorded in the Czech Republic.

**Germany** (E Bavaria): 6542.33: Waldmünchen, in proximitate pagi Höll ad marginem silvae ad viam., 550 m s.m. (49°25'13.1"N, 12°42'09.7"E), 5. 9. 2004 Žíla (herb. Weber, Žíla). – 6542.33: Osthang des Kapellenbergs südlich Hammer, Waldrand (49°24'N, 12°42'E), 4. 9. 1998 Holub, Weber, Žíla et al. (herb. Holub, Weber, Žíla et al.). – 6542.34: Landkreis Cham, Dürrnberg südöstlich Höll, 680 m. ü. M. (49°24.52'N, 12°43.66'E), 4. 9. 1998 Holub, Weber, Žíla et al. – 6643.41: Furth im Wald, vicus Gaishof ad marginem silvae, ca 0,5 km situ merid.-merid.-occid. a vico, 490 m s.m. (49°19'46.5"N, 12°55'12.9"E), 29. 7. 2002 Žíla (LI, herb. Žíla). – 6743.12: Furth im Wald, pagus Eschlkam, ad marginem silvae ad viam, ca 1.2 km situ occid. a pago, 458 m s.m (49°17'39.6"N, 12°53'56.9"E), 29. 7. 2002 Žíla (herb. Žíla). – 6743.12: Furth im Wald, pagus Hartlhof: ad marginem silvae ad viam haud procul a pago, 424 m s.m. (49°16'58.2"N, 12°51'57.8"E), 30. 7. 2002 Žíla (LI, herb. Žíla). – 6743.34: Kötzing, pagus Rimbach, ad marginem silvae ad viam, ca 2 km situ merid. a pago, 460 m s.m. (49°12'42.3"N, 12°53'14.1"E), 30. 7. 2002 Žíla (herb. Žíla). – 7044.12: Regen, pagus Sallitz, ad marginem silvae ad viam inter oppida Regen et Deggendorf, ca 6 km ab oppido Regen (48°59'07.5"N, 13°04'10.1"E), 17. 10. 1999 Žíla (LI, herb. Weber, herb. Žíla). – 7044.12: Regen, vicus Arnetsried, ad marginem silvae apud viam, inter opp. Regen et

pag. Patersdorf, ca 6 km situ occid.-bor.-occid. ab opp. Regen, 665 m s.m. (48°59'16.8"N, 13°03'55.0"E), 27. 9. 2003 Žíla (herb. Žíla).

**Czech Republic** (Bohemia): 6444.24: Staňkov, pagus Krchleby, vicus Lhota: in silva situ occid. a vico (49°33'06.3"N, 13°08'27.1"E), 8. 10. 2000 Žíla (LI, herb. Weber, herb. Žíla). – 6542.14: Forstweg 1 km südsüdöstlich St. Herštein, 600 m ü. M. (49°27.47"N, 12°43.35"E), 5. 9. 1998 Holub, Weber, Žíla et al. (herb. Fűrrohr, Holub, Weber, Žíla, etc.). – 6542.22: Domažlice, pagus Nový Kramolín, in silva ad vicum publicam, ca 1 km situ occid. a pago, 512 m s.m. (49°28'30.4"N, 12°48'01.8"E), 13. 8. 2001 Žíla (LI, herb. Weber). – 6542.23: Domažlice, pagus Nový Kramolín, vicus Valtřov, ad marginem silvae apud viam, situ occid. a vico, 680 m s.m. (49°28'14.9"N, 12°45'30.3"E), 27. 8. 2004 Žíla (herb. Žíla). – 6542.34: Domažlice, pagus Nemanice, ad marginem silvae apud viam in proximitate vici Lísková, 550 m s.m. (49°25'24.3"N, 12°43'40.3"E), 24. 9. 2004 Žíla (B, herb. Žíla). – 6542.41: Domažlice, pagus Klenčí pod Čerchovem, ad marginem silvae ad viam, ca 1 km situ occid. a pago (49°26'20.7"N, 12°47'17.7"E), 3. 8. 1999 Trávníček & Žíla (OL, herb. Žíla). – 6542.44: Domažlice, pagus Chodov ad viam pagum Výhledy versus, alt. 584 m s.m. (49°24'45.1"N, 12°49'09.8"E), 6. 9. 1998 Žíla (LI, herb. Žíla). – 6542.44: locus typicus (see above). – 6542.44: Domažlice, pagus Chodov, ad marginem silvae, ad viam ca 1.5 km situ occid.-merid.-occid. a pago (49°24'47.3"N, 12°49'11.7"E), 3. 8. 1999 Trávníček & Žíla (OL, herb. Žíla). – 6643.14: Domažlice, pagus Česká Kubice, vicus Spálenec ad marginem silvae in clivo merid.-orient. collis "Spálený vrch", haud procul a vico, 580 m s.m. (49°22'05.0"N, 12°53'09.0"E), 8. 8. 2004 Žíla (herb. Weber, herb. Žíla). – 6643.21: Domažlice, pagus Pelechy in silva ad viam, ca 0,5 km situ orient. a pago (49°23'20.6"N, 12°55'03.9"E), 3. 8. 1999 Trávníček & Žíla (OL, herb. Žíla). – 6643.23: Domažlice, pagus Všeruby, vicus Maxov: in silva ad viam, ca 1 km situ bor. occid. a vico (49°21'50"N, 12°55'30"E), 6. 9. 1998 Žíla (herb. Žíla). – 6644.31: Nýrsko, pagus Všeruby, vicus Pomezí ad marginem silvae apud viam, ca 1 km situ bor.-occid. a vico Pomezí, 485 m s.m. (49°20'00.9"N, 13°00'13.8"E), 28. 8. 2004 Žíla (herb. Weber, herb. Žíla). – 6645.12: Klatovy, pagus Koryta, ad viam silvestrem, ca 1 km situ orient.-bor.-orient. a pago, 434 m s.m. (49°23'23.3"N, 13°13'44.5"E), 7. 8. 2004 Žíla (herb. Weber, herb. Žíla). – 6645.42: Klatovy, pagus Vrhavěc: ad marginem silvae, ca 1,2 km situ merid.-merid.-occid. a pago (49°20'10.8"N, 13°17'39.9"E), 29. 8. 2000 Žíla (B, LI, herb. Žíla). – 6746.14: Sušice, pagus Velhartice: ad viam silvestrem in clivo collis Borek, situ merid.-orient. a pago (49°15'30.0"N, 13°24'00.0"E), 13. 10. 2002 Žíla (LI). – 6746.23: Sušice, pagus Hory Matky Boží: in silva in vicinitate aediculae ad marginem pagi (49°16'17.0"N, 13°25'59.0"E), 31.10.1999 Žíla (LI, herb. Weber, herb. Žíla). – 6746.41: Sušice, pagus Svojshe, vicus Cihelna: ad marginem silvae ad viam, ca 1 km situ merid.-merid.-orient. vici (49°14'49.0"N, 13°26'04.0"E), 31. 10. 1999 Žíla (LI, herb. Weber, herb. Žíla). – 6850.43: Jižní Čechy, Vodňany, Bavorské Svobodné Hory, při silnici v lese ca 0,95 km SZ vrchu Holíčka, 540 m s.m. (49°07'00.5"N, 14°07'28.8"E), 3. 9. 2002 M. Lepší (CB, herb. Žíla). – 7351.24: Rožmberk nad Vltavou, pagus Větrná: ad marginem silvae ad viam, ca 1 km situ occid. a pago, 736 m s.m. (48°40'24.7"N, 14°17'53.8"E), 14. 10. 2001 Žíla (LI, herb. Weber, herb. Žíla).

**Upper Austria:** 7650.23: Walding, ad marginem silvae apud viam, inter oppida Walding et Neufelden, ca 1 km situ merid.-merid.-occid. a pago Eschelberg, 355 m s.m. (48°22'21.7"N, 14°06'59.4"E), 5. 9. 2004 Žíla (herb. Žíla).

## Souhrn

Práce přináší popis nového druhu ostružiníku, *Rubus perpedatus* Žíla et H. E. Weber, náležejícího do sect. *Rubus* ser. *Radula* Focke. Od podobného druhu *R. radula* Weihe se liší zejména výrazně znoženými listy, koncovým lístkem listů na sterilních prýtech se slabě srdčitou bází, delšími květními stopkami se zřetelně delšími stopkatými žlázkami a početnějšími ostny na prýtech. Tento druh byl zjištěn jak v Bavorsku (Bavorský les), tak v Čechách (převážně Český les) a v Horním Rakousku.

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