

SHORT COMMUNICATION

## Two old blackberries (*Rubus* L., Rosaceae) from the region of the Chartreuses in South-East France

A. van de Beek<sup>1</sup>

### Key words

*Rubus hybridus*  
*Rubus praedatus*  
*Rubus bellardii*  
Chartreuses

**Abstract** – *Rubus hybridus* Vill. and *R. nigricans* Danthoine, both from South-East France, were described in the eighteenth century. They are typified here and their identities investigated. The former initially seemed identical with *R. praedatus* Schmidely (which is also typified here), but finally turned out to be a species that was not described by any later author. *Rubus nigricans* is identical with *R. bellardii* Weihe (= *R. pedemontanus* Pinkw.).

**Samenvatting** – Tegen het eind van de achttiende eeuw werden twee bramensoorten beschreven uit het gebied van de Chartreuses in Zuidoost-Frankrijk. De ene, *Rubus hybridus* Vill., was reeds lang bekend, maar de identiteit werd nooit kritisch onderzocht. De andere, *R. nigricans* Danthoine, werd toevallig ontdekt bij onderzoek naar andere soorten, zowel het exemplaar in het herbarium als de publicatie. Authentiek materiaal van beide soorten is beschikbaar respectievelijk in de collectie van het Muséum d'Histoire Naturelle de Grenoble (GRM) en van het Muséum National d'Histoire Naturelle in Parijs (P), zodat beide soorten konden worden getypificeerd. Door veldonderzoek op de oorspronkelijke vindplaatsen van beide kon de identiteit definitief worden vastgesteld.

Van *Rubus hybridus* werd tot nu toe aangenomen dat dit een soort uit de *Glandulosi* was en vanwege de rode bloemen werd vermoed dat het *R. praedatus* Schmidely kon zijn, die ter vergelijking getypificeerd werd. Veldonderzoek wees echter uit dat *R. hybridus* behoort tot de *Pallidi* en een soort is die later niet herkend is. *Rubus nigricans* is identiek met *R. bellardii* Weihe (= *R. pedemontanus* Pinkw.). Als oudste legitieme naam is *R. nigricans* de correcte naam voor dit taxon. De naam *R. nigricans* Rydb. voor een Amerikaanse soort is een later homoniem. De correcte naam van dat taxon is *R. setosus* Bigelow.

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### INTRODUCTION

Much research has been done regarding the European *Rubus* since the publication of the monograph *Rubi Germanici* by Weihe & Nees (1822–27). Thousands of taxa were described. A critical clarification of the chaos created by this abundance of names started in the 1970's (Weber 1973, 1986a, 1995, Van de Beek 1974). So far, however, little attention was given to publications which preceded Weihe & Nees. Therefore the author of this article started a project to clarify the names in these early publications. A first result was an article about the

validations of the names in Tournefort's *Institutiones* (Van de Beek 2016). This was followed by an article on the brambles described by F.W. Schmidt (Van de Beek 2017). The present article is the result of further investigations.

By the end of the eighteenth century, two new species of *Rubus* were described from the region of the Chartreuses, the high mountain cliffs in the South-East of France. One of these, *R. hybridus* Vill. (1779: 46), has been known for a long time, but its identity was never established. The other, *R. nigricans* Danthoine (1791: 223), was only recently rediscovered.

<sup>1</sup> Petenbos 8, 3904 BN Veenendaal, the Netherlands;  
e-mail: beekavd@xs4all.nl

corresponding author e-mail: [beekavd@xs4all.nl](mailto:beekavd@xs4all.nl)

## MATERIAL AND METHODS

Though the publication of *Rubus hybridus* was known from the very beginning of research on *Rubus*, it was obviously never critically examined. In the project to establish the identity of pre-weihean *Rubus* species, Villars' specimen in the Muséum d'Histoire Naturelle de Grenoble (GRM) was investigated and the protologue critically analyzed.

A specimen of *Rubus nigricans* was discovered by chance in the Muséum National d'Histoire Naturelle in Paris (P). Notes on the label were helpful for establishing its source. A publication was traced later, also by chance, during research in other species.

Since authentic specimens of both species were found, there is a solid base for establishing their identity. However, both specimens are only poor inflorescences. Therefore it was decided to visit the localities wherefrom they had been described, in order to collect plants which correspond with both the descriptions and the types, and if possible to designate epitypes.

## THE QUEST FOR THE IDENTITY OF *RUBUS HYBRIDUS*

***Rubus hybridus* Vill. (1779: 46) — Fig. 1 & 2**

Lectotype (designated here): GRM, "*Rubus hybridus* Vill. sp. 559 Herb no 1709 ... n. des bois des montagnes a la Charreuse, Taillefer" [MHNGr 1837.29053].

Synonym: *Rubus fruticosus* var. *hybridus* (Vill.) Vill. (1789: 557).

Villars found the species in several places around Grenoble. His description is very fragmentary, and consequently many speculations about the identity of the taxon were proposed. Nineteenth century authors opted for an identification with *Rubus glandulosus* Bell. (Breiter 1817: 435, Trattinick 1823: 21, Dietrich 1837: 534), *R. hirtus* Walst. & Kit. (Kuntze 1865: XVII) – or for both (Godron 1850: 217) – or for *R. bellardii* Weihe (Lejeune & Courtois 1831: 173). Weihe & Nees von Esenbeck (1822–27: 63) identified their own *R. guentheri* with *R. hybridus*. It is only due to the preceding publication of *R. guentheri* in Bluff & Fingerh. (Weihe 1825a) that the publication of this name was deemed legitimate. Later in the same year, Weihe (1825b: 758) denied the identification of *R. guentheri* and *R. hybridus*, and identified the latter with both *R. glandulosus* Bell. and *R. bellardii* Weihe. However, he rejected the identification of *R. glandulosus*, *R. guentheri* and *R. hybridus* by Sprengel (1825: 530). It was Focke (1877: 384) who ended all these speculations by referring to the color of the flowers in Villars' later descriptions: the petals are red (Villars 1785) or at least reddish (Villars 1789). This does not correspond with any of the proposed synonyms.

All earlier interpreters of *Rubus hybridus* consider the plant to be a member of ser. *Glandulosi* (Wimm. & Grab.) Focke. The little inflorescence of the type seems to confirm this, and because of its red flowers (Villars 1785: 51: 'flore rubro', 1789: 559: 'les petales sont rougeâtres'), it would belong to what Sudre (1908–1913) considered the *R. purpuratus* complex. This complex is similar to the *R. hirtus*-complex, but differs specifically in the color of the petals.

If we compare the species of this complex, *Rubus hybridus* might be identical with *R. praedatus* Schmidely, which has been described as coming from Mont-Voirons, about 100 km north of Grenoble, France. Because this species has not yet been typified, we do so now:

***Rubus praedatus* Schmidely**, Bull. Herb. Boissier, 2<sup>e</sup> série, 3: 72 (79) (1903) — Fig. 3 & 4

Lectotype (designated here): G. Schmidely "No 1303. *Rubus praedatus* Nob. (sp. nova). M. Voirons, entre le 2<sup>e</sup> et le 3<sup>e</sup> chalets auprès les escarpements. 7 Septembre 1902/AS." With another pen, is later added: 'No. 53. Ht. Savoie' and the barcode [G00386061].

Field research was arranged in order to find plants which correspond with the protologue and the type of *Rubus hybridus*, and it was hoped that these would confirm the identification of *R. hybridus* and *R. praedatus*. The focus was on the higher levels of the mountains around Grenoble, since the *Glandulosi* in the southern regions grow mainly higher in the mountains, which seemed to correspond with Villars' remark (1789) that *R. hybridus* was found 'in silvis elatis'.

During the first investigations in 2009, only *Glandulosi* with white petals were found. A second excursion in 2017 to all the mountains around Grenoble gave the same result. All *Glandulosi* that were found had white petals and most of them red styles. A few plants, which were not yet flowering, were transferred to the garden in the Netherlands, but when flowering they displayed the same characteristics.

Because Villars (1789) writes that the species was found in all the mountain complexes around Grenoble, it cannot be an individual plant that is difficult to trace. He gives the impression that the species was rather common. Therefore a new excursion was arranged in 2018. The initial results did not differ from the previous years. There are many *Glandulosi* with white flowers and usually red styles in the higher mountains around Grenoble, but none with red, or even pink flowers. Rather, many of these have similar glands, prickles and serrature as the type. It became increasingly strange that Villars found *Glandulosi* with red flowers in many places, but did not even mention the common white-flowered plants.

Because of this impasse it was decided once again to reconsider the protologue and type very precisely. Three considerations gave a new perspective:

- Villars uses 'red' or 'reddish' in a very broad sense. He does not use 'pink' and refers to pink flowers as 'red', e.g. for *Epilobium* species.
- 'In silvis elatis' must be interpreted in the context of an eighteenth century botanist. He had to go into the mountains either on foot or maybe by donkey, if indeed there was a road. Going up to a level of 500–1000 m on foot is high.
- The glands of the type are rather long, but not so long that other series are excluded. The same can be said about the rather strong prickles.

So it was decided to continue the investigations between 500 and 1000 m altitude. Members of the *Pallidi* are dominant there and most of these have pink or red flowers. Soon plants were found with similar pilosity, glands and prickles as the type of *Rubus hybridus*. Not long thereafter, plants were found which also had the same shape of the central leaflet and the characteristic very fine serrature. A large vegetation of these plants grow along the Route de Bouloud in St.-Martin-d'Uriage.

These plants correspond exactly with the type of *Rubus hybridus*, and also with the descriptions in Villars' subsequent publications. Even characteristic details such as hirsute fruits and plicate and asymmetric petals correspond to what Villars mentions. So, there is no doubt that the plants from St.-Martin-d'Uriage



Fig. 1. *Rubus hybridus* Vill., lectotype (GRM [MHNGr 1837.29053]). Photo: Matthieu Lefebvre.





Fig. 2. *Rubus hybridus* Vill., lectotype: flowering branch and calyxes (GRM [MHNGr 1837.29053]). Photo: Matthieu Lefebvre.

belong to the same taxon as *R. hybridus*. It is a species of the *Pallidi* which, at first sight in the field, has some similarities with *R. rufescens* P.J. Müll. & Lef., but has an extremely fine serrature of the leaves.

For supporting the identification an epitype was collected with good inflorescences and primocane pieces with leaflets:

#### ***Rubus hybridus* Vill.**

Epitype (designated here): GRM, *Beek 2018.48*, France, Saint-Martin-d'Uriage, Route de Bouloud, near the waste containers, 45.08.293 N / 05.50.080 E, 02.07.2018.

Iso-epitype: L.

Because no later synonyms with descriptions exist, a full description is given:

Primocane (Fig. 5) arching, diameter 4–6 mm, angular, moderately hairy with long patent simple hairs and sometimes scattered short stellate hairs, with numerous somewhat unequal dark glands and a few acicular glands. Prickles 15–20 per 5 cm, somewhat unequal, from a narrow base almost acicular, up to 4–5 mm long, most strongly declining or sometimes with a slightly curved tip. Stipules linear. Petiole 6–11 cm long, longer than the lower leaflets, with hairs, glands and prickles

like the stem. Leaves (Fig. 6) digitate or pedate 3–5-foliolate, (almost) glabrous above, with some appressed hairs below and sometime very thinly tomentose. Serrature very fine, and shallow, mucronate. Central leaflet from a rounded or slightly emarginate base obovate or elliptical, usually rather abruptly moderate to rather long pointed; width 61–71% of the length. Length of the petiolule 26–33% of the length of the leaflet.

Flowering branch angular, densely hairy, with numerous stipitate glands and little prickles, with few transitions to the larger prickles; these 0–2 per 5 cm, declining or slightly curved, acicular or from a somewhat enlarged base slender, up to 3–5 mm long. Inflorescence (Fig. 7) pyramidal, usually truncate, with a short leafless apex. Leaves with some hairs above, with short hairs and often very thinly tomentose above. Serrature very fine, mucronate. Peduncles ascending, sometimes fasciculate. Pedicels (Fig. 8) 10–20 mm long, densely grey tomentose, short hairy with 4–7 straight prickles and numerous dark unequal stipitate glands, of which the longest ones are about as long as the diameter of the pedicel. Sepals initially loosely reflexed, later erect, grey tomentose and also short hairy, with many stipitate glands and few to many prickles. Petals pink, ovate to elliptical, often plicate and irregularly shaped (Fig. 9). Stamens shorter than the yellowish green or sometimes pink styles. Ovaries densely hairy. Receptacle hairy.

2n = 35, based on 1,87 pg weight of DNA per nucleus, measured by B. Zonneveld at the plant of the epitype.





Fig. 3. *Rubus praedatus* Schmidely, lectotype (G [G00386061]): leaves. Photo: Laurence Loze.





1303 *R. purpuratus* Led  
 Murr. *R. praedatus* Schmidt  
 Se trouve dans le Bassin, avec qq. différences légères  
 Ledeb.



**TYPUS**

N°1303 SCHMIDELY  
*Rubus praedatus* N. & B. (Sp. Nova),  
 Bull. Herb. Boiss. 2<sup>e</sup> série 1903, 72: 79.  
 Mt Versoud, entre le 2<sup>e</sup> et le 3<sup>e</sup> Chablé  
 au pied des escarpements,  
 Hôpital Savoie 7 Septembre 1902.  
 A. L.

64. *Rubus purpuratus* Ledeb in  
 Rub. de l'Ariège p. 82.  
 Var. *praedatus* Schmidt, *Flora*  
 Bassin du Léman p. 92.

AUGUSTE SCHMIDELY  
 HERBIER DES RONCES DU BASSIN DU LÉMAN  
 Donné par l'auteur en mai 1913 au Conservatoire botanique  
 de Genève et inséré la même année dans la collection d'Eu-  
 rope de l'Herbier Delessert. Série type de la monographie  
 d'Aug. Schmidely, parue dans l'Ann. du Conserv. et du Jard.  
 bot. de Genève, XV-XVI, p. 1-140 (1914).  
 Vide op. cit. p. 92.



Fig. 4. *Rubus praedatus* Schmidely, lectotype: inflorescence (G [G00386061]). Photo: Laurence Loze.





Fig. 5. *Rubus hybridus* Vill.: primocane. Photo: Abraham van de Beek.

Now that *Rubus hybridus* was found back in the field and a better insight could be gained of its characteristics it may be concluded that it is not identical with *R. praedatus*. The latter lacks the very fine serrature, the central leaflets have a larger base, and the ovaries are glabrous.

#### THE QUEST FOR THE IDENTITY OF *RUBUS NIGRICANS*

##### *Rubus nigricans* Danthoine (1791: 223) — Fig. 10

Lectotype (designated here): P, “*Rubus nigricans foliis ternatis caulibus reptantibus identidem ramos erectos fructiferos emittentibus aculeis confertis fere innocuis, fructibus levibus. Dant*” [P03134111].

When I visited the herbarium of the Muséum National d’Histoire Naturelle in Paris (P) in 1999, I found a specimen in the collection made by Pourret, which at the time was called *Rubus pedemontanus* Pinkw. (1898) (= *R. bellardii* Weihe 1825a). It is only an inflorescence as most collections of *Rubus* before the time of Weihe & Nees von Esenbeck (1822–27) are. On the label was written: “*Rubus nigricans foliis ternatis caulibus reptantibus identidem ramos erectos fructiferos emittentibus aculeis confertis fere innocuis, fructibus levibus. Dant. cette espèce me parait absolument neuve. je vous prie de m’en dire vôtre avis*”.

The name *R. nigricans* was unknown to me and even IPNI gave no hits for such an old *R. nigricans*. So it seemed to be just a herbarium name on a label without any nomenclatorial value.

It happened that I later came across a publication by Danthoine (1791) in which this species was described. Obviously, the advice of Pourret was positive, or Danthoine decided to publish it of his own accord. The description mentions precisely the characteristic details of the primocane leaves which the specimen lacks and which confirm its identity to *Rubus bellardii*. Danthoine adds to the characteristics on the label after “foliis ternatis”: “acuminato-caudatis”. In the more extensive description in French he writes: ‘Les feuilles sont plus larges que dans nos ronces d’Europe [i.e. *R. ulmifolius* Schott], plus arrondies & terminées par une espèce de queue en lanie, elles sont ternées, finement serrulées, entières et nullement lobées, leur couleur est d’un vert obscure tant en dessus qu’en dessous’.

However, for such an old name based on a little inflorescence only further corroborative information would be instructive. Therefore, an excursion was made to the location that Danthoine mentioned. Despite intensive investigations, apart from raspberries and dewberries, no other *Rubus* species were found except *Rubus bellardii* (Fig. 11, 12 & 13). So if the type should raise any doubts, these can be refuted by the results of the field research. An epitype was collected so that a specimen, collected according to present standards, can support the identification.



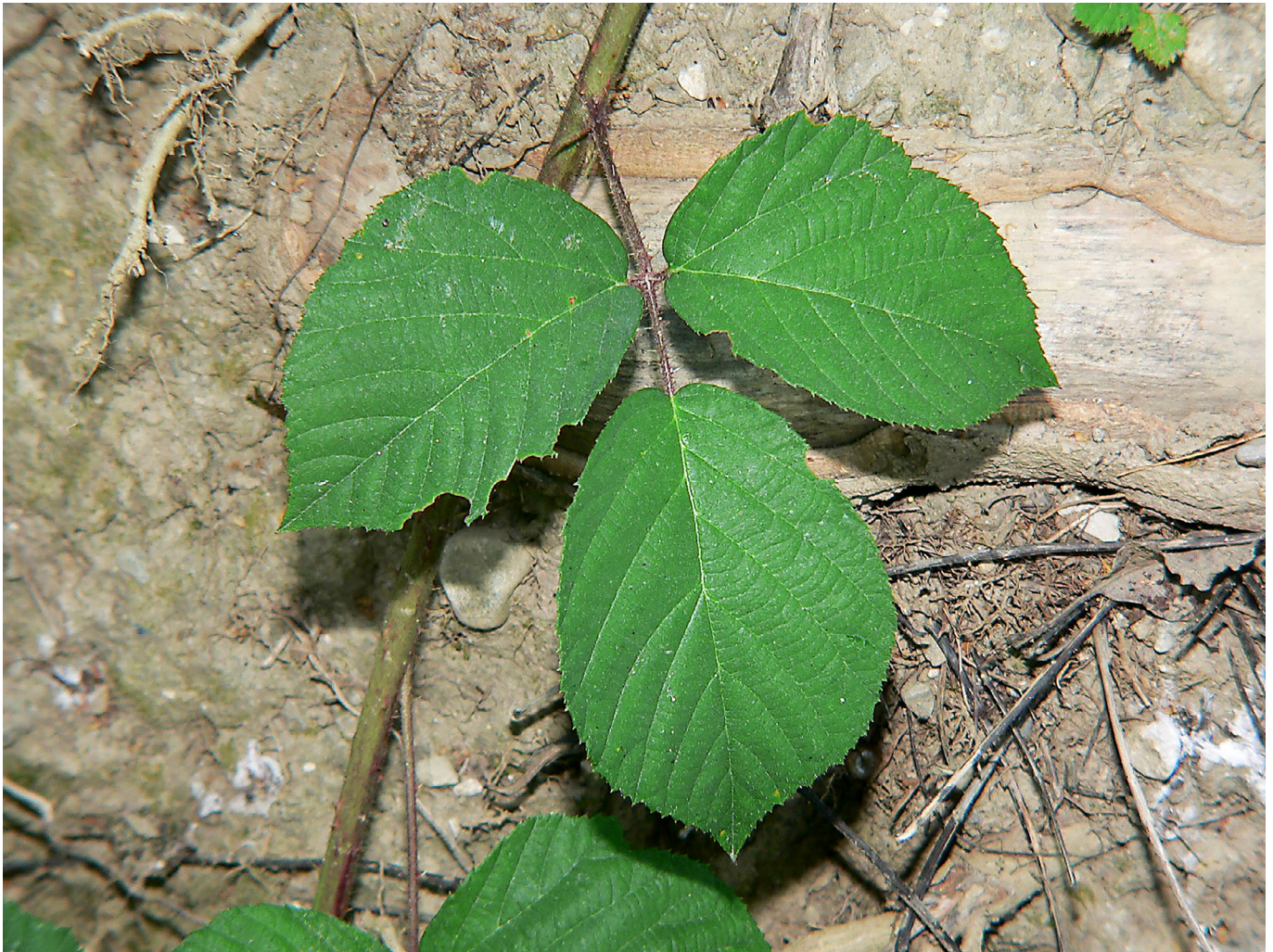


Fig. 6. *Rubus hybridus* Vill.: leaf. Photo: Abraham van de Beek.

### ***Rubus nigricans* Danthoine**

Epitype (designated here): P, *Beek 2018.45*, France, Chartreuse de Durbon, along the road to the former monastery, 44.37.816 N/05.43.879 E, 29.06.2018.

Iso-epitype: L.

The name *Rubus pedemontanus* was only recently introduced as the correct name of the species. For a century and a half, it was called *R. bellardii* Weihe until Weber (1983) claimed this name to be illegitimate. This claim was refuted by [Van de Beek \(2014\)](#).

Some other observations must be added to this topic. The publication of *Rubus bellardii* Weihe in Bluff & Fingerhut ([Weihe 1825a](#)) precedes the one in [Weihe & Nees von Esenbeck \(1827\)](#). Though Weihe is the author of both ([Weber 1986b](#)), there are slight differences. Obviously Weihe made some corrections after the publication of [Weihe \(1825a\)](#). Consequently, the type must be selected from samples which correspond with the diagnosis of [Weihe \(1825a\)](#). No type was selected until now, because Weber thought the name to be homotypic with *R. glandulosus* Bellardi. Also [Van de Beek \(2014\)](#) did not select a type. One of the characteristics that Weihe ([1825a](#)) mentions is two simple leaves in the inflorescence. His initial description was obviously based on such a sample, while he later ([1827](#)) enlarged it to 'one or two leaves'. All specimens with a label of Weihe with

'*Rubus bellardii*' that could be traced have only one leaf in the inflorescence. In KIEL is a specimen of the species with two simple leaves collected by Weihe. It is also the only sample with a piece of the primocane and a primocane leaf. Unfortunately, the label of this specimen is mistaken; it runs '*Rubus dumetorum* Weihe/flore semipleno' ([Fig. 14](#)). Certainly Weihe will not have identified the specimen as *R. dumetorum*, so that there must be confusion with the label. This makes the sample not preferable for selecting it as a type. It is, therefore, better to leave open the typification. This is not a major problem because it is clear what Weihe meant with his *R. bellardii*.

The other observation is the presence of a specimen of *Rubus bellardii* collected by Kaltenbach in the Museum of Natural History in Vienna (W). It is only a primocane piece with leaf, but this is for this characteristic species sufficient for identification.

[Foerster \(1878\)](#) published a *Rubus aquisgranensis*, with his own description, but he included *R. bellardii* Kalt. Though no specimens collected by Foerster were found, the type can be selected from Kaltenbach's samples of his publications because of the inclusion of *R. bellardii* Kalt. in the protologue.

### ***Rubus aquisgranensis* Foerster (1878: 147) — Fig. 15**

Lectotype (designated here): W, Herb. Zool.-botan. Gesellsch. Wien. "38/*Rubus bellardii* Weihe / J.H. Kaltenbach" [[W-ZooBot 1930-0004500A](#)]. — The label was copied without the epithet





Fig. 7. *Rubus hybridus* Vill.: inflorescence. Photo: Abraham van de Beek.

because two leaves of different species were mounted on the original sheet; I saw it in 1979, but it could not be found back in 2019.

According to the rules, *Rubus nigricans* Danthoine must be the correct name. It has a solid type and there is no doubt about its identity. Danthoine's (1791) publication is so early that it is improbable that older synonyms will be discovered. Thus by accepting this name as the correct one, stability is served best, so that the names *R. bellardii*, with ambiguities about its typification, and *R. pedemontanus*, which is later than the older legitimate names and has come in use only recently, can be dropped.

*Rubus nigricans* Danthoine is an earlier homonym of *R. nigricans* Rydb. (1901: 498) (= *R. hispidus* var. *suberectus* Peck 1892: 31). Mr Mark Widrechner (Department of Horticulture, Iowa State University) informed me that American colleagues generally consider the latter as a heterotypic synonym of *R. setosus* Bigelow (1824: 198), so that no new name is required for *R. nigricans* Rydb.

## CONCLUSION

Based on the lectotypification of both species, *Rubus hybridus* Vill. is a taxon which is new for present botany, and *R. nigricans* Danthoine is the correct name for *R. bellardii* Weihe = *R. pedemontanus* Pinkw.

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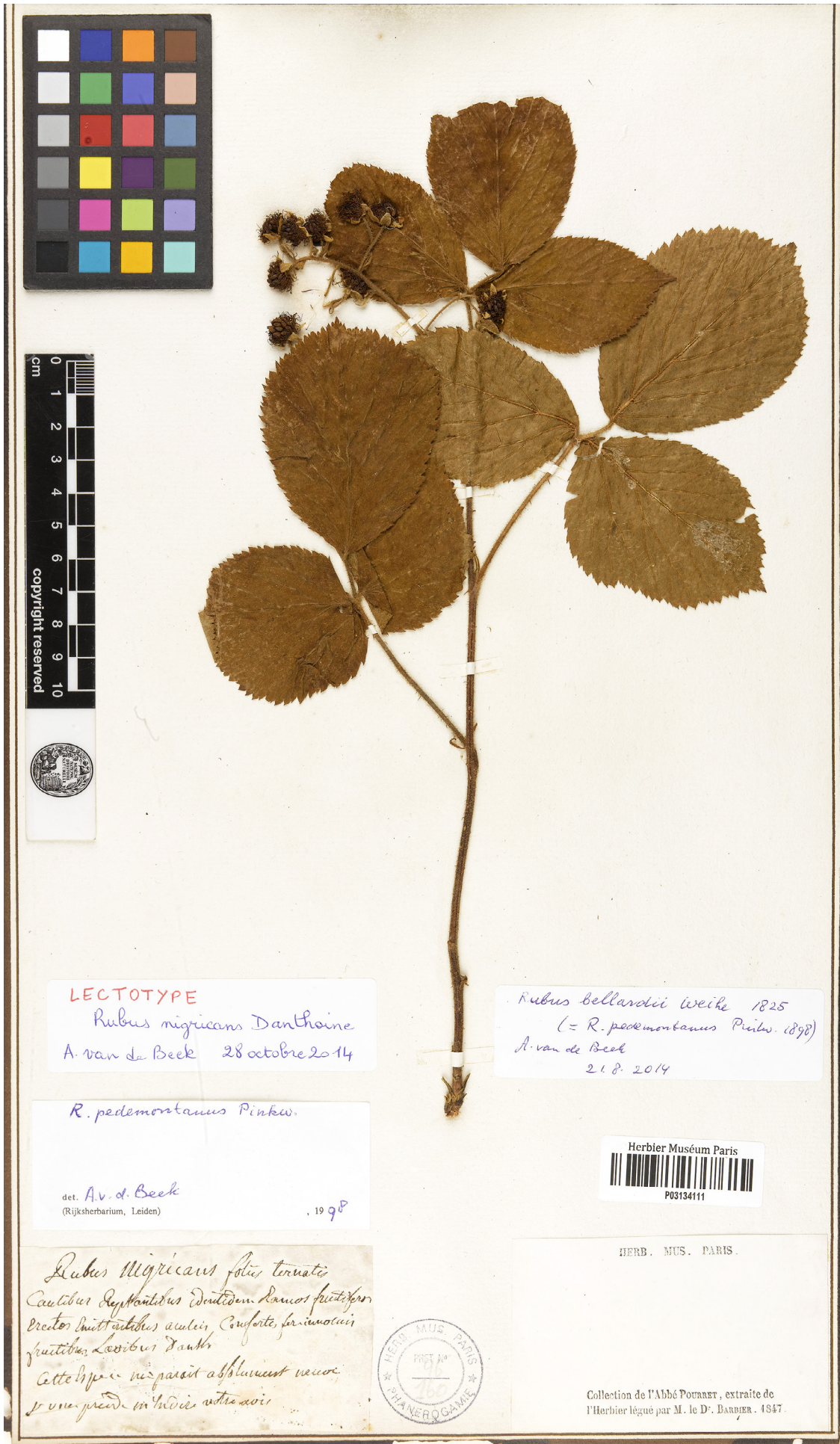


Fig. 8. *Rubus hybridus* Vill.: pedicels. Photo: Abraham van de Beek.



Fig. 9. *Rubus hybridus* Vill.: flowers. Photo: Abraham van de Beek.





**LECTOTYPE**  
*Rubus nigricans* Danthoine  
 A. van de Beek 28 octobre 2014

*Rubus bellardii* Weike 1825  
 (= *R. pedemontanus* Pinkw. (1898))  
 A. van de Beek  
 21.8.2014

*R. pedemontanus* Pinkw.  
 det. A. v. de Beek  
 (Rijksherbarium, Leiden) . 19 98

Herbier Muséum Paris  
  
 P03134111

*Rubus nigricans* foliis ternatis  
 caulibus septemlobis dentatis. Ramis fruticosis  
 erectis multicaulis aculeis. Conferte, per involucris  
 fructibus. Laxibus Danth.  
 Cette espèce me paraît absolument nouvelle  
 & une grande nouveauté pour moi

HERB. MUS. PARIS  
 PRET. N°  
 760  
 PHANEROGAME

HERB. MUS. PARIS.  
 Collection de l'Abbé Poiranet, extraite de  
 l'Herbier légué par M. le Dr. DANBERG. 1847.

Fig. 10. *Rubus nigricans* Danthoine, lectotype (P [P03134111]). Photo: Corinne Sarthou.





Fig. 11. *Rubus nigricans* Danthoine (= *R. bellardii* Weihe): primocane. Photo: Abraham van de Beek.



Fig. 12. *Rubus nigricans* Danthoine (= *R. bellardii* Weihe): leaf. Photo: Abraham van de Beek.





Fig. 13. *Rubus nigricans* Danthoine (= *R. bellardii* Weihe): inflorescence. Photo: Abraham van de Beek.

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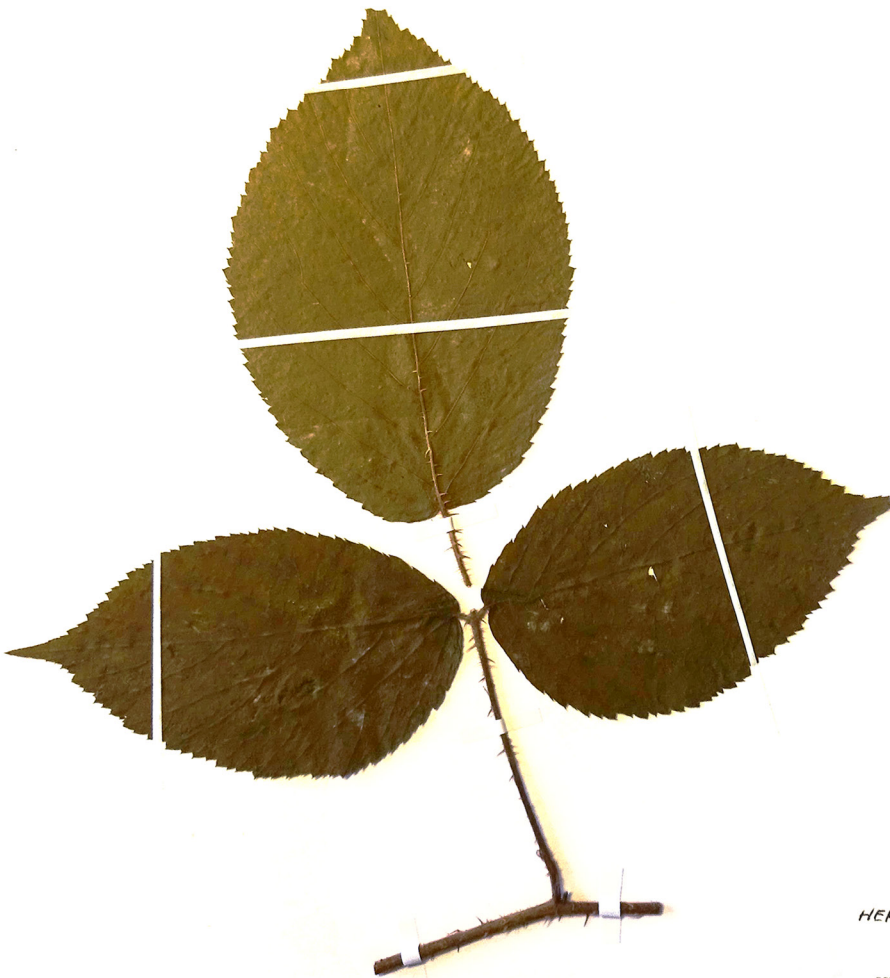




Fig. 14. Specimen of *Rubus bellardii* Weihe in Bluff & Fingerhut in KIEL (see text for further explanation). Photo: Dietrich Ober.



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RUBUS

FLORA von Aachen

1855

S. H. KALTENBACH

**Typus**

Rechtes Schöplingblatt:  
*R. aquisgranensis* Foerster (= *R. bellardii* W & N). Lectotypus  
det. (Rijksherbarium, Leiden) A. v. d. BEEK 10 XI 1979

*aquisgranensis*

Fig. 15. *Rubus aquisgranensis* Foerster, lectotype (W [W-ZooBot 1930-0004500A]). Photo: Rainer Heimo.