

Additions to *Rubus* series *Suberecti* (P.J.Müll.) Focke (Rosaceae)

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Key words

Rubus
Rubus series *Suberecti*
Rubus lucidicaulis
Rubus polonicus
Rubus scissus f. *rubriretus*
Rubus scissoides

Abstract – The series *Suberecti* of the genus *Rubus* consists of three classic species, which are surrounded by similar but not identical forms. Some of these deserve a separate status. *Rubus transitorius* (close to *R. ammobius*) and *R. cubirianus* (close to *R. scissus*) were already described. To these two a new species, *R. lucidicaulis* (close to *R. nessensis*) is added. In addition, a form of *R. scissus* with deep red prickles from the British Islands has been described here as f. *rubriretus* to clarify that this form is not a representative of the *R. scissoides* complex but is closely related to *R. scissus*. For the old name *R. polonicus*, belonging to the *R. nessensis* group, an epitype is designated. However, its precise taxonomic position must be clarified before drawing any further nomenclatorial conclusions.

Samenvatting – De serie *Suberecti* van het genus *Rubus* bestaat uit drie clusters die gegroepeerd zijn om drie klassieke soorten: *R. ammobius*, *R. scissus* en *R. nessensis*; daarnaast is er een intermediair cluster van vormen die kenmerken van de twee laatstgenoemde soorten vertonen in wisselende combinaties.

De drie genoemde soorten worden omringd door vormen die enerzijds duidelijk relatie met deze soorten vertonen, maar anderzijds ook eigen kenmerken hebben. Hoe de precieze verhoudingen zijn vraagt nader onderzoek. Wel is nu reeds duidelijk dat er bij elk van de soorten ook duidelijk afgrensbare gerelateerde taxa zijn. Twee van deze zijn eerder beschreven: *Rubus transitorius* (gelijkend op *R. ammobius*) en *R. cubirianus* (verwant aan *R. scissus*); een derde wordt hier gepubliceerd: *Rubus lucidicaulis*, verwant aan *R. nessensis*. Verder wordt een roodstekelige vorm van *R. scissus* die op de Britse eilanden voorkomt als een afzonderlijke vorm, f. *rubriretus*, beschreven, om duidelijk te maken dat deze niet tot het complex van *R. scissoides* behoort, maar een vorm van *R. scissus* is.

Voor de zeer vroeg gepubliceerde *Rubus polonicus* wordt een epitype aangewezen. De precieze taxonomische relatie tussen deze soort en *R. nessensis* moet nader onderzocht; tot die tijd kunnen geen verdere nomenclatorische conclusies worden getrokken.

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INTRODUCTION

Van de Beek (2023) discussed the status of present knowledge of the series *Suberecti* (P.J. Müll.) Focke (1877: 103) in the genus *Rubus* L. in a website paper. Three well-defined clusters can be distinguished. These are related to three classic species names: *Rubus ammobius* Focke (1877: 118), *R. scissus* W.C.R. Watson (1937: 162), and *R. nessensis* W. Hall (1794: 21). Next to these exists a group of plants that have characteristics of both *R. nessensis* and *R. scissus*. These are usually identified as *R. scissoides* H.E. Weber (2013: 109).

The clusters are not homogeneous. All of them show more or less morphological variability, sometimes with well-defined separate taxa, while in other cases gradual transitions are

found, although different to such an extent that maybe more than one taxon should be distinguished. Much research is still ahead. In this paper, only the few taxa that are clear at the present state of research are described.

THE CLUSTER OF *RUBUS AMMOBIUS* FOCKE

Weber (1995) acknowledged two subspecies within *Rubus ammobius*: subsp. *ammobius* and subsp. *pseudoplicatus* (Frid. & Gelert) H.E. Weber (1995: 350), which was previously described by Friderichsen & Gelert (1888) as *R. sulcatus* var. *pseudoplicatus* Frid. & Gelert (1888: 58). Friderichsen & Gelert focused on the furrowed primocanes when they described it as a variety of *R. sulcatus* Vest (1821: 162), while Weber paid

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more attention to the habit of the plant and its pilose ovaries. The feature of densely pilose ovaries, which is rare in the subsection *Rubus*, as well as the habit of the plant makes Weber's approach the most rational. However, the differences with *R. ammobius* are so clear that it is better to consider it as a distinct species. Weber made already its position increasingly stronger: first as a variety (Weber in Pedersen & Weber 1978: 143), later as a subspecies (Weber 1995). However, the taxon occurs in southern Denmark, which is rather far away from the distribution area of *R. ammobius*, which is west of the River Weser. In addition, the taxon not originate from *R. ammobius* at all; a separate origin wherein *R. idaeus* L. (1753: 492) and one of the species of the subsection *Rubus* are involved seems more probable. So, Loos (2007: 142) correctly decided to describe the taxon as a new species, with a new name, *R. transitorius* G.Loos, since the epithet *pseudoplicatus* is not available on the species level because of the earlier *R. pseudoplicatus* Touss. & Gust. (1932: 191).

Although the pilose ovaries correspond with *Rubus ammobius*, the abaxially scarcely pilose green leaves and the shape of the central leaflet show a close resemblance with *R. nessensis*. The pilose ovaries do not prove a direct connection with *R. ammobius*; descendents of *R. idaeus* often have such ovaries. Molecular investigations may give reveal clarity on this.

Distribution — Occurs only in the Southern Denmark, with its centre near Haderslev.

Characteristic specimens

The herbarium acronym L denotes the herbarium of Naturalis Biodiversity Center at Leiden, the Netherlands, and P the Muséum National d'Histoire Naturelle at Paris, France, see Thiers (2019+).

Denmark

Region of Southern Denmark

Friderichsen s.n., Vojens Hørløyk 17.07.1890 (L [L.1906539]) (as *R. ammobius* Focke); *Friderichsen in Boulay Assoc. Rubol. 998*, Vojens Hørløyk, 12.07 and 09.08 1891 (L [L.1906596]; L [L.1906597]; P [P06792489]) (as *R. sulcatus* var. *pseudoplicatus* Frid. & Gelert). *Friderichsen in Boulay Assoc. Rubol. 1056*, Vojens Hørløyk, 10.07 and 07.08.1892 (P [P06793115]) (as *R. sulcatus* var. *pseudoplicatus* Frid. & Gelert).

THE CLUSTER OF *RUBUS SCISSUS* W.C.R.WATSON

Rubus scissus is well-defined by its usually numerous (almost) acicular prickles, angular primocanes when young, both adaxially and abaxially pilose, usually partially 7-foliolate leaves, patent sepals, and stamens that are shorter than the styles. In the typical form the prickles are pale yellowish or ivory with a shine of green. However, sometimes the prickles are deep red with a yellow tip. This latter form is found on the British Isles, where it is even the most common (Watson 1937: 163; Edees & Newton 1988: 33).

This reddish colour of the prickles has caused much confusion in the past, because it is one of the features that are ascribed to *Rubus scissoides*. Therefore, Weber (1986) identified the British plants with red prickles incorrectly as identical with that species, but he thought later that these plants even represent the typical form of *R. scissus*. Consequently he (in co-authorship with Sennikov) described the form with pale prickles as *R. ochracanthus* Sennikov & H.E.Weber (2010: 68). Van de Beek (2011) refuted this identification, and Weber (2013) accepted this.

Because of this confusion it is better to clearly identify of the plants *Rubus scissus* with red prickles from the British Isles as forma of *R. scissus*, and hence distinguish it from the inhomogeneous group around *R. scissoides*. This forma is described here:

***Rubus scissus* W.C.R.Watson f. *rubrisetus* A.Beek, forma nova**

Holotype: United Kingdom: A. van de Beek 2010.05, Greta, along the road to Long Town, 24.06.2010 (L, 4 sheets: [L.4184947], [L.4184948], [L.4184949], [L.4184950]).

Differs from *Rubus scissus* W.C.R.Watson by having deep red prickles with a short yellow tip (van de Beek 2011: 45, Fig. 1D).

Distribution — It is the most common form of *Rubus scissus* on the British Isles.

The distribution on the British Isles at the map of *R. scissus* in Kurtto & al. (2010) refers to the joint distribution of *R. scissus* f. *scissus* and f. *rubrisetus*; the localities on the continent at this map refer to representatives of the group of *R. scissoides*. The map of *R. ochracanthus* refers to *R. scissus* on the continent.

Remark — A taxon which is more distinct from *Rubus scissus* is *R. cubirianus* (H.E.Weber) Loos (2007: 41), which has the pale prickles of the typical *R. scissus*, but also clear distinctive features (see van de Beek 2023).

THE CLUSTER OF *RUBUS NESSENSIS* W.HALL

Rubus nessensis is a taxon with a wide distribution in Europe and occurs from the British Islands to Russia. When young, the most common form has green primocanes with dark purple brown conic or subulate prickles; the plant is clearly suberect, about 1,5–2 m high; the leaves are bright green; the stamens are clearly longer than the styles. However, sometimes it has tiny reddish prickles with a yellow tip and shorter stamens (hardly longer than the styles). The type, which was collected in Hall's garden of White Hall manor, is such a form. The most common form in Sweden has lower, more arching primocanes, darker green leaves and smaller flowers. Such forms are also found in Western Europe on humid poor soils, e.g., along ditches in poor woods. Plants from Poland have often few small or almost no prickles at all; this form increases to the east, and was separately described as *R. polonicus* Barrel. ex Weston (1770: 258).

Rubus polonicus was lectotypified by van de Beek (2016: 36). However, because the type is a picture, it is better to designate a specimen as epitype, so that the identity of the taxon is more solid:

***Rubus polonicus* Barrel. ex Weston (1770: 258) (epitype, designated here):** van de Beek 2023.05, Poland, Kukle near Sejny, along road from Gliniana Wioska to Jezioro Kunis, at T-crossing to the right southward, forest path after the little bridge. Cultivated in garden, Petenbos 8, Veenendaal (sunny position), 30.06.2023 (L) (Fig. 1, 2 & 3).

On instruction of the author of the present paper, a living plant was collected by Foka van de Beek and Elly Bouman



Fig. 1. A sheet of the epitype of *Rubus polonicus* Barrel. ex Weston (van de Beek 2023.05, L). Photo: Bram van de Beek, 4 september 2023.



Fig. 2. A sheet of the epitype of *Rubus polonicus* Barrel. ex Weston (van de Beek 2023.05, L). Photo: Bram van de Beek, 4 september 2023..



Fig. 3. Detail of an inflorescens with juvenile fruits of the epitype of *Rubus polonicus* Barrel. ex Weston (van de Beek 2023.05, L). Photo: Bram van de Beek, 4 september 2023..

in a forest in the very East of Poland, near the borders of Lithuania and Belarus. Poland stretched more to the east at the beginning of the eighteenth century, when Barrelier (1714: nr 1250) described the taxon, so that a locality was sought in the present eastern Poland and in a forest of a region that was relatively untouched by modern developments. The plant was transplanted to the *Rubus* garden in Veenendaal (the Netherlands). It is smaller than the form that is the most common one in West and Central Europe. When growing in a sunny place it has small prickles (Fig. 4), like the type of *R. nessensis*, but the stems are thinner, more roundish, like those of the normal Swedish plants, but in contrast to these not arched (Fig. 5); when growing in a shaded place the plant has only a few tiny pricklets and for the most part the plant is fully unarmed (Fig. 6). The inflorescences are unarmed or set with 1–2 tiny prickles (Fig. 7). The ripe fruits are black (Fig. 8), as mentioned in the species' protologue, in contrast to the dark red fruits of *R. nessensis* from Western Europe.

As mentioned above, and exposed by van de Beek (2023), the precise taxonomic position of most forms related to *Rubus nessensis* is unclear. As long as this is not clarified, especially by molecular research, the precise nomenclature must be left open, so that it is better to keep to the name *R. nessensis* for the whole cluster. If in the future it might turn out that *R. polonicus* is the same taxon as *R. nessensis*, the former name will have priority.

However, another taxon of the *Rubus nessensis* cluster is well defined, but has hitherto not been described. It has suberect primocanes with large cordate leaves, like *R. nessensis*, but its primocanes are higher and it has green and stronger, thick conic or somewhat compressed prickles. When plants belonging to this taxon are cultivated in the *Rubus* garden in Veenendaal near the 'normal' *R. nessensis*, they are stronger and the separating features are consistent. Furthermore, plants of this taxon from different localities converge in characteristics. Therefore, this taxon can be distinguished as a separate species, which is described here. Because of the shiny green stems of the plants the epithet *lucidicaulis* was given to it.

***Rubus lucidicaulis* A.Beek, spec. nov.**

Holotype: Netherlands: van de Beek 2023.1, Grebbeberg bij Rhenen, north-eastern slopes, along a forest path, 51.96137° N / 5.59387° E, 19.06.2023 (L) (Fig. 9 & 10).

Primocane suberect, 1–4 m high (Fig. 11), diameter 6–10 mm, with ± flat or slightly furrowed sides, shiny green, with scattered to rather numerous sessile glands, glabrous. Prickles (Fig. 12 & 13) 0–8 per 5 cm, green, somewhat unequal, from a 3–6 mm wide



Fig. 4. Primocane of the *Rubus polonicus* plant of which the epitype is made in the experimental bramble garden in Veenendaal (Province of Utrecht, the Netherlands) on 19 May 2019. The plant has been transplanted from Kukle (Poland).



Fig. 5. Primocane with leaves of the *Rubus polonicus* plant of which the epitype is made in the experimental bramble garden in Veenendaal (Province of Utrecht, the Netherlands) on 18 September 2023. The plant has been transplanted from Kukle (Poland).



Fig. 6. Detail of the primocane of the *Rubus polonicus* plant of which the epitype is made in the experimental bramble garden in Veenendaal (Province of Utrecht, the Netherlands) on 26 June 2020. The plant has been transplanted from Kukle (Poland).

base abruptly or sometimes gradually attenuated, compressed, patent or reflexed, sometimes with a curved tip, the longest ones 4–6 mm long. Stipules linear(-lanceolate), 7–13 mm long. Petiole 7–12, 13 cm long, almost glabrous, with 7–13 unequal, compressed curved prickles. Leaves (Fig. 14) 5-foliolate, adaxially (almost) glabrous (0–1 hairs per cm²), abaxially with only some hairs on the veins, later almost glabrescent. Serrature with triangular teeth, 2–4 mm deep, rather regular or a little double, not or hardly periodical. Petiolule of the lower leaflets 0–5 mm. Central leaflet 124–181 mm long, with a deep cordate base, broad ovate to suborbicular, usually gradually attenuated into a (rather) long (1.5–3 cm) apex, width-length index 0.68–0.86. Length of the petiolule 35–54% of the length of the leaflet.

Flowering branch angular, almost glabrous or with moderately dense long hairs. Prickles 0–7 per internodium, somewhat unequal, from a 2–3 mm wide base curved, up to 2–4 mm long. Inflorescence (Fig. 15) racemose, usually leafy, unarmed or with very scattered curved prickles. Peduncles ascendent, the longest ones with 1–2 flowers. Pedicels thin, 8–50 mm long, green, almost glabrous to moderately pilose, with long hairs, with 0–5 little prickles and with sessile glands. Sepals patent, without or with a short to moderately elongated tip. Petals white, ovate to elliptic, subacute to rounded, elliptical or obovate, 7.5–12 mm broad, 10–18 mm long; average index 0.63. Stamens hardly as long as the greenish styles. Anthers, ovaries, and receptacle glabrous.

Differs from *Rubus nessensis* W.Hall especially by the stronger, green prickles, higher primocanes, which remain green also in autumn, and patent sepals.

Distribution — Very common on the Grebbeberg near Rheden (Province of Gelderland), in the Netherlands; further in the Ulvenhoutse Bos near Breda (Province of Noord-Brabant). Probably the taxon has a wider distribution.

Remark — *Rubus nessensis* f. *chloracanthus* (Holzfluss 1916: 118) H.E.Weber (1995: 347) has also green prickles. Because no original material of this forma has been found until now, its identity is not certain. However, even if it might be proven to be identical with *R. lucidicaulis* in the future, the epithet *chloracanthus* is not available on species level in *Rubus*, because of the earlier *Rubus chloracanthos* Boul. & Gillet (Boulay 1874: nr. 103).



Fig. 7. Inflorescence of the *Rubus polonicus* plant of which the epitype is made in the experimental bramble garden in Veenendaal (Province of Utrecht, the Netherlands) on 18 September 2023. The plant has been transplanted from Kukle (Poland).

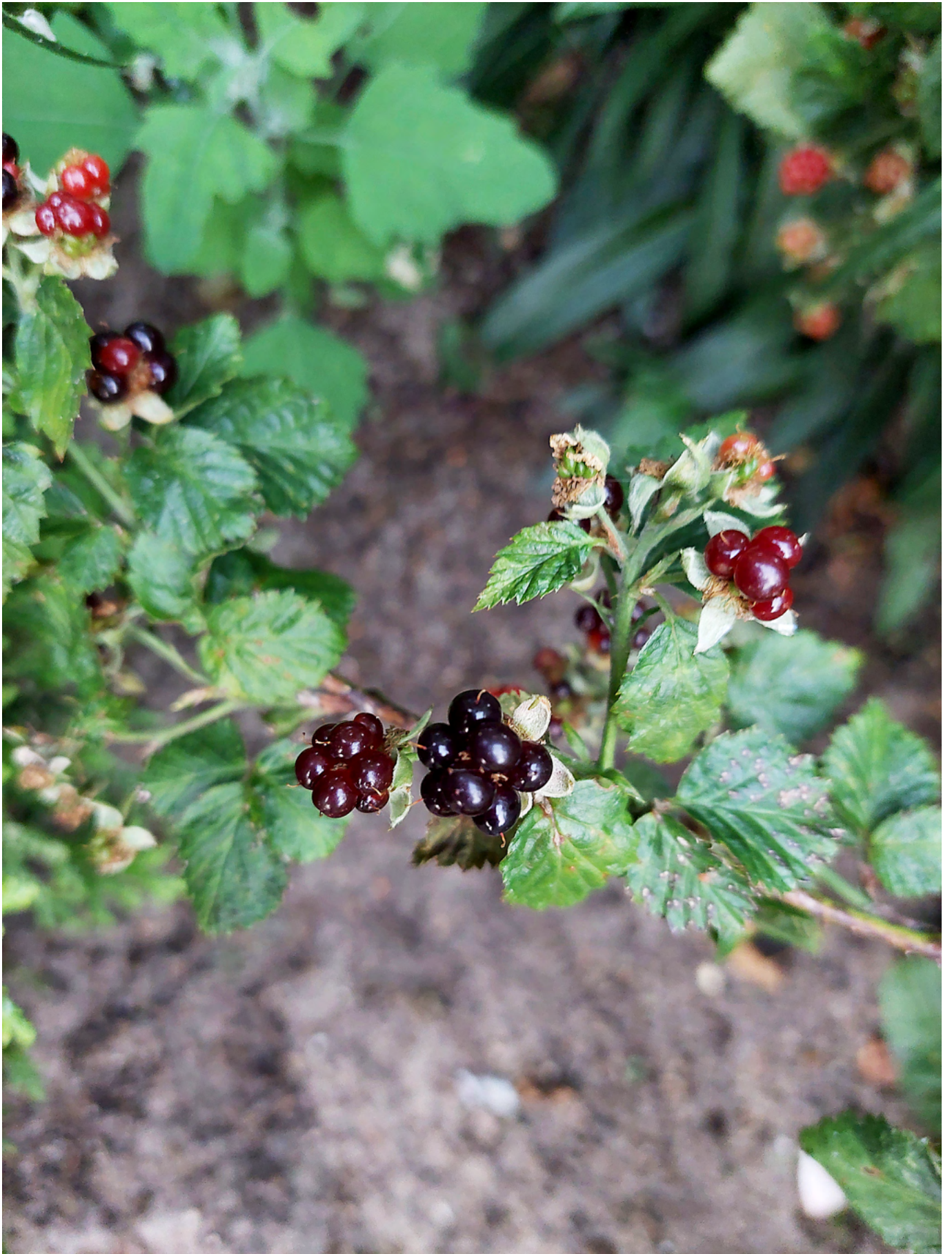


Fig. 8. Fruits of the *Rubus polonicus* plant of which the epitype is made in the experimental bramble garden in Veenendaal (Province of Utrecht, the Netherlands) on 11 July 2022. The plant has been transplanted from Kukle (Poland).



Fig. 9. A sheet of the holotype of *Rubus lucidicaulis* A. Beek (van de Beek 2023.1, L). Photo: Bram van de Beek, 4 september 2023.



Fig. 10. A sheet of the holotype of *Rubus lucidicaulis* A. Beek (van de Beek 2023.1, L). Photo: Bram van de Beek, 4 september 2023.



Fig. 11. The habit of *Rubus lucidicaulis* A.Beek, here illustrated by a plant growing on the Grebbeberg near Rhenen (Province of Gelderland, the Netherlands). Photo: Bram van de Beek, 23 June 2023.



Fig. 12. A primocane of *Rubus lucidicaulis* A.Beek from a plant growing on the Grebbeberg near Rhenen (Province of Gelderland, the Netherlands). Photo: Bram van de Beek, 23 June 2023.

Characteristic specimens

The herbarium acronym L denotes the herbarium of Naturalis Biodiversity Center at Leiden, the Netherlands, see [Thiers \(2019+\)](#).

Netherlands

Province of Gelderland

Van de Beek 2018.70, Rhenen, Levendaalseweg, begin van het bos, langs de weg, links, 14.08.2018 (L); *van de Beek 2019.46*, Rhenen, Levendaalseweg, kort na begin van het bos, langs de weg, links, verder gekweekt in tuin, Petenbos 8, Veenendaal, 08.06.2019 (L); *van de Beek 2019.68*, same locality, 30.06.2019 (L); *van de Beek 2019.105*, same locality, 02.10.2019 (L); *van de Beek 2020.23*, Rhenen, Levendaalseweg, kort na begin van het bos, langs de weg, links, verder gekweekt in tuin, Haspel 11, Veenendaal, 08.06.2020 (L); *van de Beek 2020.54*, same locality, 18.07.2020 (L); *van de Beek 2022.10*, Rhenen, Grebbeberg, 51.96137N / 5.59387E, 17.06.2022 (L).

Province of Noord-Brabant

Van Soest 34207, Ulvenhoutse Bos, 19.06.1954 (L [[L.3275233](#)]) (as *R. sulcatus*); *van de Beek A 1084* (coll. van de Beek & Vannerom), Ulvenhoutse Bos, 07.1979 (L, 2 sheets: [[L.3275250](#)], [[L.3275251](#)]) (as *R. sulcatus*); *van de Beek 2018.78*, Ulvenhout, Rouppe van der Voortlaan, bospad naar rechts bij einde bebouwde kom, 114.338/396.408, 07.09.2018 (L); *van de Beek 2019.45*, Ulvenhout, Rouppe van der Voortlaan, bospad naar rechts bij einde bebouwde kom, 114.338/396.408, verder gekweekt in tuin, Petenbos 8, Veenendaal, 08.06.2019 (L); *van de Beek 2019.67*, same locality, 30.06.2019 (L); *van de*

Beek 2019.104, same locality, 02.10.2019 (L); *van de Beek 2020.22*, Ulvenhout, Rouppe van der Voortlaan, bospad naar rechts bij einde bebouwde kom, 114.338 / 396.408, verder gekweekt in tuin, Haspel 11, Veenendaal, 08.06.2020 (L); *van de Beek 2020.53*, same locality, 18.07.2020 (L); *van de Beek 2022.17*, same locality, 18.06.2022 (L).

THE CLUSTER OF *RUBUS SCISSOIDES* H.E.WEBER

Specimens that were identified as *Rubus scissoides* appeared to be an inhomogeneous catch of plants that share features of *R. scissus* and *R. nessensis* in variable compositions. In one and the same population different forms can be found and even the same plant can change in morphology by time (see van de Beek 2023). In some regions, homogenous populations seem to grow in a wider area, e.g. in North East France and in Poland, but these are not identical with *R. scissoides* as it is typified. Even plants of the population of the type change and rechange by the years. Much research is still to be done, preferably by using molecular data, both about the taxonomic position of the instable forms and about the circumscription and status of taxa, including possible homogeneous populations with a (rather) wide distribution that may turn out to be well defined taxa.



Fig. 13. A primocane of *Rubus lucidicaulis* A.Beek from a plant growing on the Grebbeberg near Rhenen (Province of Gelderland, the Netherlands). Photo: Bram van de Beek, 23 June 2023.



Fig. 14. A leaf of *Rubus lucidicaulis* A.Beek from a plant growing on the Grebbeberg near Rhenen (Province of Gelderland, the Netherlands). Photo: Bram van de Beek, 23 June 2023.



Fig. 15. An inflorescence of *Rubus lucidicaulis* A.Beek from a plant growing on the Grebbeberg near Rhenen (Province of Gelderland, the Netherlands). Photo: Bram van de Beek, 23 June 2023.

CONCLUSIONS

The taxonomic position of two taxa of the *Rubus* series *Suberecti* could be clarified. These are *R. scissus* f. *rubriretus* and *R. lucidicaulis*.

Especially the systematics of the clusters of *Rubus nessensis* and *R. scissoides* require much further research. By the designation of an epitype of *R. polonicus* the identity of the taxon is made clear. However, its taxonomic relation to the described and undescribed forms of the complex is still unclear, just like all relations of the other forms.

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