



HAL
open science

A Taxonomic History of the European Ribesia English

Pascal Kissling

► **To cite this version:**

| Pascal Kissling. A Taxonomic History of the European Ribesia English. 2020. hal-02532032

HAL Id: hal-02532032

<https://hal.science/hal-02532032>

Preprint submitted on 4 Apr 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

A Taxonomic History of the European *Ribesia*

Pascal Kissling¹

English translation by Rachel Fell

To Joëlle Magnin-Gonze, historian of the Botany

Acknowledgements

Professor Kirschner, of the Institute of Botany at the Czech Academy of Sciences, forced us to consider more deeply and question the use of the epithet *vulgare* in the sketch of KISSLING (2016). Thank you for urging us in this way to delve into the history of botany, at first with some reluctance and then with some emotion. Thank you also to Jitka Kissling for sharing the exploration in the land of Linnaeus and in Italy. We offer our more formal but no less genuine thanks to the very generous digital libraries, in particular the Biodiversity Heritage Library and the Gallica Library, without which this work would have proved impossible.

Summary

The literature on redcurrants (*Ribes* L. subg. *Ribesia* (Berlandier) Jancz.) has been reread since the Renaissance to understand why the taxonomy of this very small group was so laborious and ultimately to try to sort out the endless contention surrounding the epithet *rubrum*.

Introduction

It all started with a simple pomological objective: to identify the cultivated redcurrants that have survived in the ruins behind the former Iron Curtain. This aim proved presumptuous due to the lack of references, apart from some well-known cultivars. We would be halfway through the identification if we could classify the clones in a taxon or a nothotaxon following the principle of JANCZEWSKI (1909: 316): “*The best way to classify the cultivated forms of currants is to arrange them according to the botanical species from which they derive*”. A comparison between classic systematics and molecular biology began (SVOBODOVÁ & KISSLING, in press). A problem of nomenclature remained: the names of two of the four species recognised in Europe were still controversial at the end of the 20th century. We wished to understand how there could be such confusion about such familiar species.

Materials and Methods

The approach

We started with the world's current catalogues, such as GBIF (Global Biodiversity Information Facility, GBIF SECRETARIAT, 2017), GRIN-Global Taxonomy (Germplasm Resource Information System, WIERSEMA & M. SCHORI, status 2019) and PAF (Panarctic Flora, ELVEN et al., status 2019). They group together species, subspecies and varieties that classical botany has distinguished by the morphology, ecological preferences and geographical distribution. We went to see most of these types in the wild and recultivated some bushes in the Alenor Garden collection, to submit them for biometrics. For details about the material see the joint study (SVOBODOVÁ & KISSLING). This survey only confirmed the findings of classical botany.

For an overall view, Table 1 lists the taxa recognised in Europe. We have detailed measurements for only some of the types and we do not know the Arctic taxa E. So the diagnostic table is for the time being a compilation confirmed by experience (Figure 1).

¹ Alenor Conservation Garden, CZ- 384 33 Záblatí

| taxa | A | B | C | D | E | F | G | |
|---|--|--|--|----------------------|--------------------|--|---|--|
| Main morphological identifiers | | | | | | | | |
| <i>floral profile</i> | campanulate / urceolate | | pelviform | | | patelliform | reflected | |
| <i>anthocyanins on the sepals</i> | strong purple wash | weak marginal wash | cheekbones burgundy / bronze, margin greenish | | . | ~ green | | |
| <i>calycinal cilia</i> | > 100 / sepal | | 0-7 / sepal | | | none | | |
| <i>filament</i> | 12–20 mom | | 4-8 mom | | . | 3.5–5 mom | 15–20 mom | |
| <i>connective and proportions of the anther</i> | narrow connective, so anther relatively narrow; locules convergent towards the apex or parallel | | | | | wide, anther wide, locules divergent like a “butterfly“ | narrow; anther as tall as wide | |
| <i>young anther</i> | white | | pink flushes around the connective | | . | white /pink patches | white | |
| <i>dehiscence of the anther</i> | introrse | | | | | lateral | | |
| <i>relief of the disc (upper nectariferous surface of the hypanthium)</i> | "fluted cake ring": 10 discrete elongated calluses following the slope = 5 antepetalous + 5 antestaminal | | no protuberances / < 5 weak antepetalous calluses | | | pentagonal ring: 5 antepetalous calluses + 5 antestaminal ridges | like F but calluses taller and ridges very low | |
| <i>ovarian vault</i> | "Gothic" as a tall cone (4-7 mom) at the base of the style (semi-inferior ovary) | | low (1,5-3,5 mom) and wide conical glaxis at the base of the style (almost inferior ovary) | | | "Romanesque" no cone at the base of the style | low cone (2-4 mom) | |
| <i>contour of the tuft of the berry</i> | orbicular / elliptical | | | | | pentagonal angulate | pentalobed | |
| <i>cilia on the upper bracts</i> | 25–40, long, verrucose | | 20–35, long, smooth | 0–10 | . | 0 | 3–15, verrucose | |
| Ecology | | | | | | | | |
| <i>biotope</i> | clay slope or humus-bearing scree, fairly humid | humid clay slope | in general plains, banks of streams or marshes, sandy or clay soil, damp to wet, eutrophic | | | | slopes, deep cool forest soil, in margins / clearings | |
| <i>climatic region</i> | temperate, montane / subalpine zones | | northern temperate | northern | arctic | Atlantic | Mediterranean mountain level | |
| <i>phyto-sociology</i> | <i>Alnion viridis, Salicion silesiacae, Lunario-Acerion</i> | <i>Roso pendulinae-Pinetea mugo (Adenostylo-Pinetum)</i> | <i>Fraxinon excelsioris, Alnion glutinosae, humid wing of Galio odorati-Fagenion (Aro-Fagetum)</i> | | | | Beech series/ other mesophilic hardwood forest | |
| <i>distribution in Europe</i> | mountains in the Alpid belt (apart from the Balkans and eastern Carpathians) | Western and eastern Carpathians | Scotland, Southern Scandinavia Baltic countries (south of the Baltic Sea?) | Northern Scandinavia | Arctic Scandinavia | Atlantic region, and feralised all over temperate Europe | Balkans, Italy, Sardinia | |
| 1mom= 0,1mm | A | B | C | D | E | F | G | |



◀Table 1. European current taxa of *Ribesia* (Berl.) Jancz.

Generally recognised in botany since the 20th century. Morphology according to JANCZEWSKI (1907), HEDLUND (1901), KIRSCHNER (1992), WEBB (1993) and personal experience (KISSLING 2019). Ecology and phytosociology according to CLOT (1990, 539), OBERDORFER (1992: 149, 212), DELARZE et al. (1998: 232, 250, 256, 264), CHYTRÝ et al. (2001: 107), ŠIBIK et al. (2010: 175–176), BIONDI, BLASI et al. (2015) and personal experience. Phytogeography according to HEDLUND (1901), JANCZEWSKI (1907), WEBB (1993), CINOVSIS & LEKAVIČIUS (1996: 34) and GBIF SECRETARIAT (2017).

◀Figure 1. Flowers of most of the phenotypes of *Ribesia* recognised in Europe. Distinction of taxa: Table 1.

We then discarded the names of these taxa to remind ourselves that taxonomy is mainly a matter of hereditary features and to search for these names throughout history.

The botanical literature has been examined since the 15th century to find how the current systematics (taxonomy and nomenclature) were established. For an independent researcher far away from large libraries, this research would be impossible without digital libraries. Most of the works consulted were in the GALLICA (2019) collection at the National Library of France, the American Biodiversity Heritage Library (BHL 2019) and the libraries associated with them, such as the one in Madrid.

In the vast botanical literature about redcurrants, not all the work contributes to the taxonomy. Some floras simply look at what has been acquired for floristic purposes; they are not included here. In principle, this essay only contains works that have made taxonomic observations and/or nomenclatural suggestions, and so advanced - or reversed - the Systematics. This critical compilation is not exhaustive, it was ended when a general nomenclature seemed to us to be well-founded and clear.

The criteria of taxonomy: image or verb?

In the polyptych “The Adoration of the Mystic Lamb” (1432, as reported by WIETHOLD 2016: 274), the VAN EYCK brothers painted, among other various plants, a recognisable (the first?) portrait of the taxon F red currant with its hanging racemes of greenish-yellow flowers (Figure 2a).

In the beautiful engraving of the flora of LEONHART FUCHS (1542: 663), a botanist today can recognise the cordate leaves with short lobes and obtuse indentations and the patelliform flower with revolute calyx of type F (figure 2b), but the author does not mention these features and is probably unaware of them; he does not describe the species but assumes with legitimately proud humour that “*pictura ipsa abundè docet*” (the image shows it amply).

Similarly, JACOB STURM (1798: V.1), in his monumental flora-atlas, gives a perfect drawing of the berry of taxon F with its pentagonal tuft, angles corresponding to the main ribs of the receptacle, but



Figure 2. Pictures without words of taxon F.

a- detail of the lower central panel of the polyptych “The Adoration of the Mystic Lamb” (image from <https://visit.gent.be/>).

b- detail of the plate RIBES by FUCHS 1542 (BHL facsimile edition).

c- detail of the plate *Ribes rubrum* by STURM 1798 (<http://www.biolib.de/sturm/flora/high/Sturm07050.html>).

his description does not mention this feature and it was not until a century later that JANCZEWSKI (1907) was to show the strong diagnostic power of the shape of the tuft.

A caricaturist or a comic strip cartoonist probably shares the ideal of Fuchs that a good picture speaks for itself. But taxonomy implies more awareness than of the three fine pictures mentioned above. It seeks and states “what must be seen there”: *diagnostic features*. It involves the verb. Botanists of the secular taxonomic type continually add new traits to the portrait of the taxa. This is why the stories below will follow the common thread of the appearance of traits. Some traits merely confirm, others strongly discriminate. We list only the features that are known today as diagnostic and enhance the *major* features with code (MC). [Our comments on cited texts are in square brackets.] The page numbers of the references are given in the table of synonyms 2.

Systematics and nomenclature

Next, the taxonomic interpretation of blocks of features, which focuses on systematics and nomenclature, can be risky and full of misunderstandings. In particular, the F species, the one most familiar in old gardens, has received no fewer than 5 names since Linnaeus. We looked to find to which currently recognised taxon the taxa proposed by the old botanists belonged, according to their descriptions. This is a latter day interpretation of history, which makes possible a chronological table of the synonymies (Table 2). This table is placed here without justification of our identifications, which would take up a hundred pages. Our judgement comes into it in mergers of cells: a binomen written in 2-3 merged cells means that the diagnosis given by the work and the way we understand it in 2020 covers the 2-3 types concerned: the author of the work has put them, confused, together, or did not know yet how to distinguish them. Our decision brings together the era and the specialist area of the author concerned. The much-debated decisive cases (LINNAEUS, SYME, HEDLUND, JANCZEWSKI, WILMOTT, BERGER) are discussed in the text. It had to be recognised that the same taxon can change its name and that the same name can change its content over time.

The wording of the cells comes from the work and not from our judgement: "*s.l. / sensu Jancz. non L. / coll. / not Lamarck!*" is not an expression of our opinion but is the affirmation of the author.

Table 2. History of the nomenclature of the European *Ribesia* ►

Symbols & abbreviations: The typography follows the current convention, the Latin taxon in *italics* and the author's name in roman font, while in most of the old works it was the other way round / (2, 97): volume 2, page 97 / (29100756): reference No. of the taxon in an electronic database / - : the type is absent from the work / (= xxx): xxx is given as a synonym by the author of the work / pl.: plate / $\ni x + y$: for the author, the species comprises the infrataxa *x* and *y*; we only consider here those that grow in Europe / "in omnem Europam...": quote from the original text / *R. petraeum*: the author mentions the taxon without the author's name / †: author published after his death / (*sic*): typographical error in the original.

Results: history of the taxa

High Points

WIETHOLD (2016: 272) mentions as one of the first texts citing a “currant bush” a management report for a French castle in 1305.

BUNYARD (1917: 263sq) first reminds us that the red currant is “*one of the most modern of our fruits*” then in his amiable way paints a picture of the beginnings of the knowledge and cultivation of redcurrants. As he points out, the first appearance of a *Ribesia* in the scientific literature is probably in the anonymous flora-pharmacopoeia known as the Herbarius Latinus or Mainz Herbarium (SCHÖFFER ed. 1484: LXX– Figure 3).

| | C | DE | F | A | B | G |
|---|---|--|---|---|---|--|
| Fuchs (1542) | - | - | (662) <i>Ribes</i> S. Johans beerlin | - | - | - |
| Matthioli (1563) | - | - | (XLV) <i>Ribes vulgare</i> | - | - | - |
| Clusius (1583, 1601) | - | - | (119) <i>Ribes vulgare fructu dulci</i> | (119) <i>Ribes vulgare rubro flore</i> | - | - |
| Bauhin G. (1623) | - | - | (455) IX. <i>Grossularia vulgaris fructu dulci</i> + XII. <i>Grossularia hortensis fructu magaritis simili</i> | (455) VI. <i>Grossularia hortensis majore fructu rubro</i> | - | - |
| †Bauhin J., †Cherler & Chabrey (1651) | - | - | (2,97) <i>Ribes vulgare acidus</i> ÷ <i>ruber</i> + <i>albas baccas ferens</i> | (2,98) <i>Ribes flore rubente</i> | - | - |
| Linnaeus (1737a) | - | ? (cf. texte) | (65) <i>Ribes acidus ruber</i> Bauh. | - | - | - |
| Linnaeus (1737b) | - | ? (cf. texte) | (82) 2. <i>R. inerme, fl. planiusculis, racemis pendulis</i> α <i>Ribes vulgare acidum, albas baccas ferens</i> Bauh. Hist. 2,98 | β <i>Ribes flore rubente</i> Bauh. Hist. 2,98 | - | - |
| | | | | | | |
| Linnaeus (1753) | - | ? (cf. texte) | (200) <i>R. rubrum</i> | - | - | - |
| Wulfen in Jacquin (1781) | - | - | - | (5 & pl.49) <i>R. petraeum</i> | - | - |
| Lamarck (1789) | - | - | (47-48) <i>R. vulgare</i> ÷ var. <i>sylvestre</i> + <i>hortense</i> (= <i>R. rubrum</i> L.) | (48) <i>R. petraeum</i> Jacq. | - | - |
| Withering (1796) | (265) <i>R. spicatum</i> Robson | - | (264) <i>R. rubrum</i> ÷ var. <i>fructu dulci</i> Ray + var. <i>fructu parvo</i> Ray | (265) <i>R. petraeum</i> Jacquin | - | - |
| Robson (1797) | (240-1) <i>R. spicatum</i> | - | (241) <i>R. rubrum</i> | - | - | - |
| Wahlenberg (1812) | - | (65) <i>R. rubrum</i> Linn. | | - | - | - |
| | | (67) β foliis magis pubescentibus = <i>R. petraeum</i> Smith | (67) variante <i>hortense</i> | | | |
| Swartz (1814) | - | (9) <i>R. rubrum</i> | | - | - | - |
| Schultes (1814) | - | (9) β <i>pubescens</i> | | (433) <i>R. petraeum</i> Wulfen | (432) <i>R. carpathicum</i> Kitaibel | (433) <i>R. multiflorum</i> Kit. |
| | | (432) <i>R. rubrum</i> ÷ <i>R. sylvestre</i> Lam. + <i>R. hortense</i> Lam. | | | | |
| Roemer & Schultes (1819) | (494) <i>R. spicatum</i> Robson | (492) <i>R. rubrum</i> (= <i>R. vulgare</i> Lam.) "per omnem Europam ad borealem usque Sueciam, et in Sibiria" | | (493) <i>R. petraeum</i> Wulfen | (493) <i>R. carpathicum</i> Kit. | (493) <i>R. multiflorum</i> Kitaib. |
| Walroth (1822) | - | - | (106) <i>R. rubrum</i> ÷ var. <i>sylvestre</i> W. + <i>domesticum</i> W. (6 form.) | - | - | - |
| Mertens & Koch (1826) | - | - | (248) <i>R. rubrum</i> Linn. + (249) <i>R. sylvestre</i> prov. | (249) <i>R. petraeum</i> Wulfen | - | - |
| Berliandier (1828) | (59) <i>R. spicatum</i> Robs. | - | (59) <i>R. rubrum</i> L. (÷ 5 var.) | (59) <i>R. petraeum</i> Wulf. in Jacquin | - | (59) <i>R. multiflorum</i> Kit. |
| De Candolle A. P. (1828) | (481) <i>R. spicatum</i> Robs. | - | (481) <i>R. rubrum</i> L. (÷ 5 var.) | (481) <i>R. petraeum</i> Wulf. In Jacq. | (483) <i>R. carpathicum</i> Kit. In Schult. | (480) <i>R. multiflorum</i> Kit. in Roem. & Schult. |
| Reichenbach (1830) | - | - | (562) <i>R. rubrum</i> L. ÷ α. <i>sylvestre</i> + β. <i>sativum</i> | (562) <i>R. petraeum</i> Wulfen | (562) <i>R. carpathicum</i> Kit. | (562) 3636. <i>R. spicatum</i> Robson (= <i>R. vitifolium</i> Host.) |
| Spach (1838) | - | - | (165) <i>R. rubrum</i> Linn. | (161) <i>R. petraeum</i> Wulf. | - | (163) <i>R. multiflorum</i> Kit. |
| Otto & Dietrich (1842) | (268) <i>R. spicatum</i> Robson | - | (265) <i>R. rubrum</i> L. ÷ var. <i>sylvestre</i> Wallr. + <i>domesticum</i> Wallr. | (266) <i>R. petraeum</i> Wulfen - (267) <i>R. bullatum</i> nob. | (268) <i>R. carpathicum</i> Kit. | (267) <i>R. multiflorum</i> Kit. |
| Hartman (1843, 4e ed.) | - | (84) <i>R. rubrum</i> L. | | - | - | - |
| Schlechtendal (1862) | (738) <i>R. spicatum</i> Robson | - | (737) <i>R. rubrum</i> L. | (743) <i>R. petraeum</i> Wulf. | (744) <i>R. carpathicum</i> | (744) <i>R. multiflorum</i> |
| Kitaibel in Kanitz (1863) | - | - | (480) <i>R. rubrum</i> | (481) <i>R. petraeum</i> | (481) <i>R. carpathicum</i> mihi | (480) <i>R. multiflorum</i> |
| Koch (1869) | (650) <i>R. spicatum</i> Robson ("wahrscheinlich" ÷ <i>R. bullatum</i> A. Dietr.) | - | (648) <i>R. rubrum</i> L. | (653) <i>R. petraeum</i> Wulf. (= <i>R. carpathicum</i> Kit.) | | (654) <i>R. multiflorum</i> Kit. |
| Syme (first name Boswell) (1877) | (4,41) Species III. <i>R. rubrum</i> Linn. | | | | | |
| | (4,43) Sub-Species II. <i>Ribes sylvestre</i> | | (4,42) Sub-Species I. <i>Ribes sativum</i> (= <i>R. rubrum</i> var. <i>sativum</i> Reich.) | (4,45) <i>R. petraeum</i> (Wulfen) | - | - |
| | (4,44) var. " <i>spicatum</i> †" (Robson) | (4,44) diverses var. | | | | |
| Willkomm (1887) | (693) <i>R. spicatum</i> Robs. | (691) <i>R. rubrum</i> L. | | (693) <i>R. petraeum</i> Wulf. (= <i>carpathicum</i> Kit.) | | (692) <i>R. multiflorum</i> Kit. |
| | C | DE | F | A | B | G |

| | C | DE | F | A | B | G |
|--|---|--|---|---|---|---|
| Janczewski (1900) | - | (589) <i>R. rubrum</i> L. | (589) <i>R. domesticum</i> nob. + <i>R. macrocarpum</i> nob. | (590) <i>R. petraeum</i> Wulf. | | - |
| Hedlund (1901) | (90,98) <i>R. pubescens</i> coll. | | (52,88) <i>Ribes rubrum</i> L. s.l. | | | - |
| | (100) <i>R. pubescens</i> + (101) <i>R. Smidtianum</i> (= <i>R. spicatum</i> Robson) | (99) <i>R. scandicum</i> + (98) <i>R. glabellum</i> | (89, 92) <i>R. rubrum</i> coll. (= <i>vulgare</i> Lam.) ⇒ (92) <i>R. silvestre</i> + (94) <i>R. hortense</i> | (106) <i>R. petraeum</i> coll. ⇒ <i>R. bullatum</i> Dietrich & Otto + <i>R. petraeum</i> Wulfen (= <i>R. carpaticum</i> Kitaibel) | | |
| Janczewski (1907) | (287) <i>R. rubrum</i> Linné 1753 | | (276) <i>R. vulgare</i> Lamarck 1789 | (290) <i>R. petraeum</i> Wulf. | | (273) <i>R. multiflorum</i> Kitaibel 1819 |
| | (289) var. <i>pubescens</i> Swartz | (289-290) var. <i>scandicum</i> (Hedlund) + var. <i>glabellum</i> Trautvetter & Meyer | | (293) var. <i>bullatum</i> Otto & Dietrich | (293) var. <i>carpathicum</i> Kitaibel | |
| Bunyard (1917) | (261) <i>R. rubrum</i> Linnaeus 1753 | | (260) <i>R. vulgare</i> Lamarck 1789 | (261) <i>R. petraeum</i> Wulfen 1781 | | |
| Wilmott (1918) | (22) <i>R. spicatum</i> Robson emend. mihi (= <i>rubrum</i> L. <i>solum quoad habitat</i> ; = <i>pubescens</i> coll. Hedl.) | | (22) <i>R. rubrum</i> L. <i>excl. habitat</i> (= <i>vulgare</i> Lam. <i>nomen abortivum</i>) | - | - | - |
| Berger (1924) repris par Hedrick (1925, 257-265) | (14) <i>R. rubrum</i> Linnaeus 1753 | | (7) <i>R. sativum</i> (Rchbch.) Syme (= <i>vulgare</i> Schneider 1905, "not Lamarck!") | (16) <i>R. petraeum</i> Wulfen in Jacquin | | (11) <i>R. multiflorum</i> Kitaibel in Roem. & Schult. 1819 |
| | (14) var. <i>pubescens</i> Swartz | (14) var. <i>scandicum</i> (Hedlund) Janczewski + var. <i>glabellum</i> Trautvetter & Meyer | | (16) forma <i>pyrenaica</i> + forma <i>alpina</i> | (16) forma <i>carpathica</i> (Kit.) Berger n. comb. | |
| Fournier (1931) | (201) <i>R. rubrum</i> L. | | (202) <i>R. vulgare</i> Lmk. | | | |
| Issler (1932) | (241,244) <i>R. rubrum</i> L. sp. collective | | | (245) <i>R. petraeum</i> | - | - |
| | (241-2 & 245) <i>R. Schlechtendalii</i> Lange | | (241-5) <i>R. vulgare</i> Lamarck | | | |
| Poyarkova (1939, engl. ed. 1971) | (184) <i>R. pubescens</i> Hedl. | (185) <i>R. scandicum</i> Hedl. + (183) <i>rubrum</i> L. | (180) <i>R. vulgare</i> Lam. | (186) <i>R. petraeum</i> Wulf. | | (180) <i>R. multiflorum</i> Kit. |
| Hylander (1945) | (194) Gruppe <i>Ribes rubrum</i> s. l. | | | - | - | - |
| | (195) ssp. <i>pubescens</i> (Swartz) Hylander | (196) ssp. <i>scandicum</i> (Hedlund) Hylander + ssp. <i>lapponicum</i> Hylander | (196) <i>R. silvestre</i> (Lamarck) Mertens & Koch emend. Mansfeld ⇒ ssp. <i>eu-silvestre</i> Hylander + ssp. <i>hortense</i> (Lam.) Hylander | | | |
| Rehder (1947) | (302) <i>R. rubrum</i> L. | | (303) <i>R. sativum</i> Syme | (304) <i>R. petraeum</i> Wulf. | (304) var. <i>bullatum</i> (Otto & Dietr.) Schneid. | (303) <i>R. multiflorum</i> Kit. |
| Raabe (1980) | (2) <i>R. spicatum</i> Robson | | (2) <i>R. silvestre</i> M. u. K. | - | - | - |
| Oberdorfer (1983) | (493) <i>R. rubrum</i> - Gruppe | | | (493) <i>R. petraeum</i> Wulf. | - | - |
| | (493) <i>R. spicatum</i> Robson (= <i>R. schlechtendalii</i> Lange) | | (493) <i>R. rubrum</i> L. ⇒ var. <i>silvestre</i> (Lam.) DC + var. <i>rubrum</i> | | | |
| Kirschner (1992) | (363) <i>R. rubrum</i> agg. | | | (362) <i>R. petraeum</i> Wulfen | | - |
| | (364) <i>R. spicatum</i> Robson | | (363) <i>R. rubrum</i> L. (= <i>vulgare</i> Lam. nom. illeg.) | | "[subsp. <i>carpathicum</i> (Kit.) Pawl.]" | |
| Weber (1992) | (2-3) <i>Ribes rubrum</i> Linnaeus | | | - | - | - |
| | (5) <i>R. spicatum</i> Robson 1796 | | (3) <i>R. silvestre</i> (Lam.) Mertens & Koch 1826 ⇒ var. <i>silvestre</i> + var. <i>domesticum</i> | | | |
| Weber (1993) | (4) <i>R. spicatum</i> Robson in Withering 1796 | | (4) <i>R. rubrum</i> Linnaeus 1753 ⇒ var. <i>rubrum</i> + var. <i>domesticum</i> Wallr. | - | - | - |
| Webb (1993) in Flora Europea | (461) <i>R. spicatum</i> Robson (= <i>rubrum</i> sensu Jancz., non L.) | | (461) <i>R. rubrum</i> L. (= <i>R. vulgare</i> Lam., <i>silvestre</i> Mert. & Koch, <i>sativum</i> Syme) | (462) <i>R. petraeum</i> Wulf. (= <i>R. carpathicum</i> Kit.) | | (461) <i>R. multiflorum</i> Kit. ex Roemer & Schultes |
| GBIF (en 2019) | (2986129) <i>R. spicatum</i> E. Robson | | | (2986176) <i>R. petraeum</i> Wulfen (= <i>carpathicum</i> Kit. ex Schult.) | - | (2986131) <i>R. multiflorum</i> Kit. ex Schult. |
| | (4194411) var. <i>pubescens</i> (Hartm.) R. Cinovskis | (4194425) subsp. <i>hispidulum</i> (Jancz.) Hämet-Ahti + (7427805) subsp. <i>lapponicum</i> Hyl. + (7767043) subsp. <i>scandicum</i> (Hedl.) Hyl. + (7335008) subsp. <i>spicatum</i> | (2986097) <i>R. rubrum</i> L. | | | |
| GRIN Taxonomy (USDA en 2019) | (313955) <i>R. spicatum</i> E. Robson | | | (70568) <i>R. petraeum</i> Wulfen | | (31843) <i>R. multiflorum</i> Kit. ex Schult. |
| | (466069) subsp. <i>spicatum</i> (= var. <i>pubescens</i> (Hartm.) Jancz. | (466071) subsp. <i>hispidulum</i> (Jancz.) Hämet-Ahti + (466070) subsp. <i>lapponicum</i> Hyl. (= <i>glabellum</i> (Trautv. & C. A. Mey.) Hedl.) | (31860) <i>R. rubrum</i> L. | - | (311663) var. <i>carpathicum</i> (Kit. ex Schult.) C. K. Schneid. | |
| | C | DE | F | A | B | G |

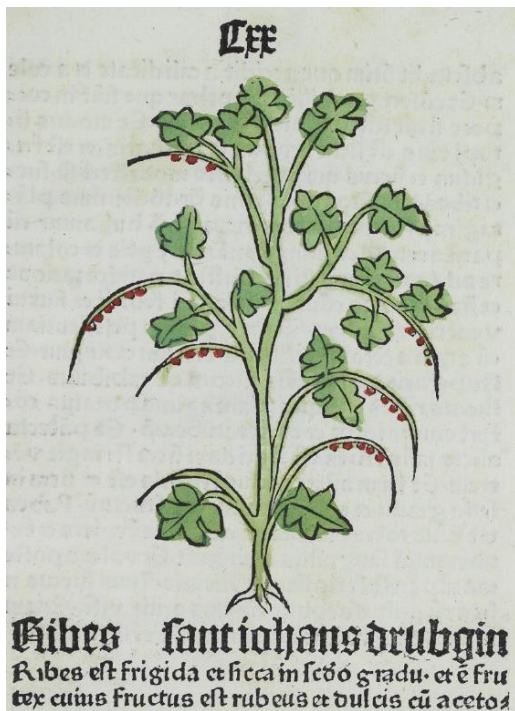


Figure 3. First scientific appearance of a *Ribesia*, Mainz Herbarium (Harald Fischer Verlag facsimile edition, ISBN 3-89131-430-2)

The two temperate European species (A and F) were distinguished since the end of the Renaissance. The descriptions of JEAN BAUHIN & CHERLER (posthumous edition augmented by CHABREY 1651) are remarkable. The one of type F is the key that will save us from the imbroglia of nomenclature.

The first volume of the *Species Plantarum* of LINNAEUS appeared on 1 May 1753 and within it was the binomen *Ribes rubrum*. This was, as we shall see, a dark day for the taxonomy of *Ribesia*.

JOHAN TEODOR HEDLUND (1861-1953) resumed the subject of the northern complex in a classic and penetrating article “Om *Ribes rubrum* L. s.l.” (1901): the great northern species was collected in its entire form for the first time.

EDOUARD DE JANCZEWSKI (1846-1918) wrote all his work in impeccable French. As director of the botanical garden in Krakow, he grew a collection of nearly 300 clones of the Genus *Ribes* received from all over the world there, which was to be vilified (KULPIŃSKI, 2009). The botanical Geneva invited him to publish a Monograph of Genus *Ribes* (1907) which is still a reference (WEIGEND et al., 2002 – WEIGEND 2007: 174).

Among his intellectual filiations are the flora of woody plants SCHNEIDER (1906 – 1912), the sunny pomologies of BUNYARD (1917 – 1920), the revision of BERGER (1924) – which is an English language adaptation of it, marking all the subsequent literature in English – and the lovely article by ANTONINA I. POYARKOVA (1939) on *Ribes* in the Flora of the USSR. His work shows him to be more interested in the biology rather than in taxonomic precision. An intelligent morphologist, he found new features while everything seemed to have already been seen in the 19th century. He was expeditious in nomenclature, barely discussed his taxonomic opinions and may seem dogmatic. His work should be taken as a panorama of morphotaxonomic inductions to stimulate phylogenetic and genetic research. In particular, he saw pairs of “twin” geographical species and regrouped old regional species into larger ones as varieties; and especially, as a pioneer, from the morphology he drew the idea that some cultivated forms of *Ribesia* must be interspecific hybrids. Despite his shortcomings, around his Everest, our mountains are only hills.

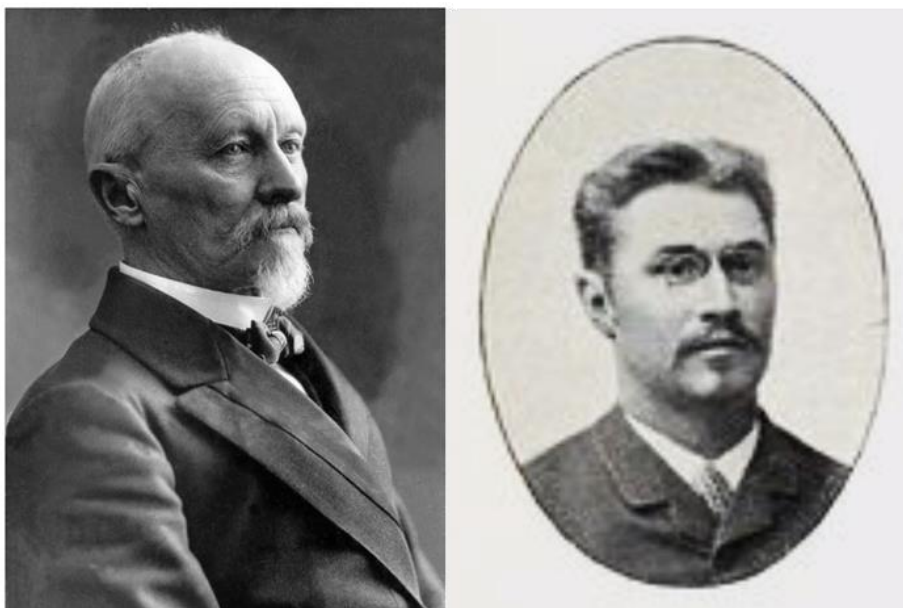


Figure 4. The fathers of the current systematics:
Janczewski (photo Dyakowska, in KULPIŃSKI 2009)
and Hedlund (photo Hildebrand, <http://runeberg.org/spg/11/0041.html>).

Ribesia

The term *Ribesia* first appears as the plural of *Ribesium* without any precise systematic definition (for example, DODONAEUS 1583: 737). LINNAEUS (1753: 200 – Fig. 6) grouped all the thornless *Ribes* under the term *Ribesia inermia* as opposed to the spiny currants including gooseberries. BERLANDIER (1828: 56) created a wide *Ribesia* Section of more than 30 mostly thornless species, including *R. alpinum* and *nigrum*. These old systematics are recalled as a matter of interest by PIKUNOVA et al. (2011: 36sq). JANCZEWSKI (1907: 233sq) made a *Ribesia* subgenus of about 15 species with hermaphrodite flowers, without spines and with scarios bud scales; incidentally, this is the group of currants with edible berries. This latter circumscription was confirmed as monophyletic by the molecular study of a wide range of species (WEIGEND et al. 2002: 170sq). In vernacular language, the natural unity of *Ribesia* can be seen in the words *Ribisell* (Austrian German), *raisinet* (Swiss French, MORET & JAQUES 2008: 104), *gadelier* (Quebec French, <https://fr.wiktionary.org/wiki/gadelier>) and partly *redcurrant*.

Taxon A

The sole European redcurrant with purple flowers could not go unnoticed for long. CHARLES DE L'ECLUSE (CLUSIUS, 1583) already described it as *Ribes rubro flore*, with larger leaves and fruit than type F (MC). Around the same time, in the garden of Ferdinand of Austria CAMERARIUS (1588: 141) noticed a *Ribes baccis rubris majoribus* on which

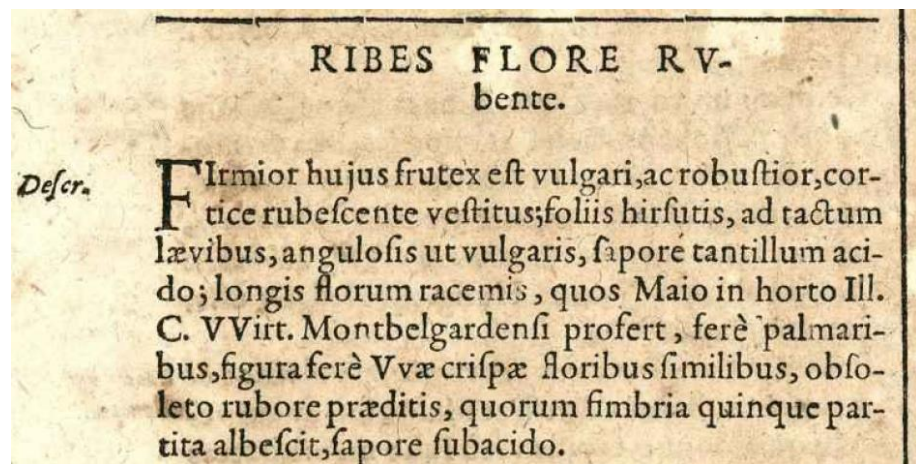


Figure 5. First description still recognisable of taxon A (currently *Ribes petraeum petraeum*) in J. BAUHIN et al. (1651– Biblioteca Digital del Real Jardín Botánico de Madrid facsimile edition)

the flowers were *aliquantum rubicundi*. The description of BAUHIN et al. (1651), under the name *Ribes flore rubente* (Fig. 5), must be by Jean Bauhin himself since he mentions the bush in the botanical garden of Montbéliard, of which he was the conservator. He distinguished this species of F by [translated from the Latin] “the stronger growth habit, the reddish-brown bark [the marcescent epidermis of the annual shoots], the hirsute leaf that is soft to the touch [the typical setae that would be described much later] and more angular than vulgaris [taxon F, Fig.8], floral racemes of almost a palm’s width [the width of a hand], flowers of a shape almost similar to those of *Ribes uva-crispa* [urceolate], washed with old rose and of which the edge, divided into 5, becomes paler [the upper surface of the sepals is paler than the outside of the floral envelopes]”. If one is familiar with the species, the concise beauty of this four hundred year old description brings tears to the eyes. In his review of Clifford’s Garden, *Hortus Cliffortianus*, LINNAEUS (1737b) mentioned it as variety β of his *Ribes* No.2, next to a variety α , which is the white-berried currant of Bauhin, so clearly the species F. This connection between two forms so different from one another suggests that LINNAEUS had not seen type A and judged it by compilation. Moreover, in the *Species Plantarum*, LINNAEUS (1753) carefully omitted this variety with purple flowers. In 1781 WULFEN drew it in the almost wordless atlas of Professor JACQUIN: the species was then given the binomen *Ribes petraeum* that it bears to this day. LAMARCK (1789) describes the sharp-lobed leaf reminiscent of a black currant leaf, slightly notched at the base, and figures out the ecology: mountain forests, skeletal soils and humidity. In Great Britain, SMITH (1800a–b) described and had drawn by SOWERBY under the name *petraeum* (taken up from Jacquin & Wulfen) a currant that he had received from Scotland: he saw that it certainly resembled the *spicatum* of Robson, but all the same, he distinguished it by mentioning its somewhat mountainous provenance. It seems clear that *petraeum* does not exist in Great Britain and

that Smith was holding type C and had never seen *petraeum*. Nevertheless, the epithet “*petraeum sensu Smith*” entered into various later registers of synonyms and was to muddle up the taxonomy of the CDE group. ROEMER & SCHULTES (1819) noted the pilosity of the axes of the raceme. MERTENS & KOCH (1826), always good observers, noted the cilia of the calyx and the conical base of the style, the absence of the protuberant ring of the disc that marked species F and the longer stamens than in type F (the MC array!). STURM (1830) noted the relative erectness of the raceme at the start of flowering. SPACH (1838) noted the shortness of the pedicels, the campanulate hypanthium and the 10 discrete calluses of the disc (MC). OTTO & DIETRICH (1842) found *Ribes petraeum* in the gardens of Berlin but also described an *R. bullatum* of unknown origin: they must have been struck by the blistered leaf, but the rest of their diagnosis suggests *R. petraeum*. This epithet would probably have been forgotten had it not been unfortunately recycled by Janczewski as we shall see. LEDEBOUR (1844), by making the connection with various forms from Russia, prepared the ground for Janczewski’s summary. SCHLECHTENDAL (1862) described the mix on the leaf of sessile glands and long glandular setae in fine detail (MC). JANCZEWSKI (1900) noted the introrse anthers (MC) and (1907) added the larger buds than in F, the basal curve of the filament (MC), the gradual transition of the disc with hydrotodes in the tall conical vault of the ovary and the orbicular shape of the tuft of the berry (MC). He grouped as varieties (pp. 293sq) 5 types previously considered as regional species in a vast *Ribes petraeum* that stretches from the Atlas Mountains in Africa to the Sea of Okhotsk! This model is provocative but heuristic. His *Ribes petraeum* is of course broader than that of Bauhin and Wulfen (our taxon A), which for Janczewski is one of the two European varieties. A name for this variety still had to be found. Janczewski then recycled the epithet *bullatum* of Otto & Dietrich: it is an unhappy muddle, as these authors themselves said that they found this bush of unknown origin in a garden, while type A is a well-known wild taxon from the mountains of Europe. Janczewski only lacked article 26 of the nomenclature code (MCNEIL et al., 2012), according to which the very fact of distinguishing other varieties in *Ribes petraeum* is enough to automatically generate the standard type corresponding to the original concept of the species of Wulfen with the autonym *R. petraeum* Wulfen var. *petraeum*. The idea of a vast Eurasian *Ribes petraeum* was adopted by PRINTZ (1921: 273) and currently the GRIN-Global Taxonomy (WIERSEMA & M. SCHORI, status 2019). A. I. POYARKOVA (1939: 186) rejected it at the species level, but she kept Janczewski’s idea by grouping related species into a Series *Petraeae*, which seems to us an elegant solution. BERGER (1924) distinguished in taxon A a *forma pyrenaica* and a *forma alpina* on the basis of the indumentum on the leaves and bracts. This at least confirms an interest in a huge study of the geographical variation of the species. In the current electronic catalogues there are no surprises (Table 2): the species is resumed, if the A/B dichotomy is not always adopted.

Taxon B

During his naturalistic travels in the Austrian Empire, the *homo universalis* Pál Kitaibel (1757-1817) enriched the redcurrants systematics with two novelties (B and G). However, it was not he who published the taxa he discovered. This taxon B appears in the flora of SCHULTES (1814), then in ROEMER & SCHULTES (1819) under the name *Ribes carpathicum* that Kitaibel gave it, but with a weak diagnosis. It is subsequently mentioned in compilation and sometimes questioned in the floras of DE CANDOLLE (1828), REICHENBACH (1830), DIETRICH (1839), OTTO & DIETRICH (1842) and SCHLECHTENDAL (1862). In the Hungarian Popular Movement KANITZ (1863) published the notes of Kitaibel: this one knew the *petraeum* of Wulfen (his No. 831), so his *carpathicum* (No.830) must be different; however, his description is not obvious, it rather suggests the resemblance to *petraeum*: ciliate sepals and leaf covered on its upper surface with “*pilis brevibus*” (short hairs) [on his observation scale these are definitely the short setae of *R. petraeum*, visible to the naked eye, rather than real hairs]. This taxon is only treated seriously by JANCZEWSKI (1907), who has it as number 118 in his plantation (KULPIŃSKI 209: 90): the flower is paler than in the western type A (CM).

While it does not feature much in the taxonomy, it is nevertheless present in Slovak and Polish phytosociology. SOKOŁOWSKI (1935: 67) named it as Janczewski did. ŠIBÍK (2010: 89), comparing the pine forests of Carpathia to those of the Alps, named it *Ribes petraeum* subsp. *carpathicum* and considered it to be a vicariant of taxon A, which he named *Ribes petraeum sensu stricto*.

Taxon G

This major taxon has the same history: discovered by Kitaibel in Croatia and then described by others. Justice is done, because the species has the binomen *Ribes multiflorum* that Kitaibel chose for it and it has become a beacon in the modern selection of redcurrants. It is a taxon without any problems, apart from a slight misadventure at the start: SCHULTES (1814) confused it at first by compilation with the diagnosis of *R. spicatum* by ROBSON (1797), but quickly rectified in ROEMER & SCHULTES (1819). The confusion was nevertheless repeated in REICHENBACH (1830), DIETRICH (1839: 851), SLOBODA (1852: 492) and SCHLECHTENDAL (1862: 731). The taxon was known before it was described. The emphasis on the “*racemis longissimis*” (very long raceme) sounds genuine and leads to one thinking that DE CANDOLLE (1828, 480) was surprised by this spectacular redcurrant growing in a Parisian botanical garden. It was SPACH (1838) who provided the first unambiguous description [we translate into current language]: remarkable among European species by the length of its dense racemes with pubescent axes, pedicels measuring 1–3 mm [so short], greenish flowers, reflected sepals (MC), stamens as long as the sepals (MC) and with a tiny anther, and “*disc with 5 fairly large humps located under the petals*” (MC). WILLKOMM (1887) noted 20–80 flowers per raceme and the unpleasant scent of the bush (MC). JANCZEWSKI (1907) added Sardinia to the known range, noted the divergent stamens (MC), the conical ovarian vault, and described the disc better: not only do the 5 spectacular antepetalous calluses reach beyond the profile of the calyx (fig. 1G), but between them antestaminal ridges form a discrete ring (MC) of which there is a nice scanning electron microscope photo published by WEIGEND (2007: 171). ARRIGONI (1968) discovered that the Sardinian populations are an endemic form (see also FENU et al. 2011), subsp. *sandalioticum*, which is particularly distinguishable by its purple washed sepals and the hairs underneath the leaf largely replaced by glandular trichomes.

Taxa CDEF: What is *Ribes rubrum*?

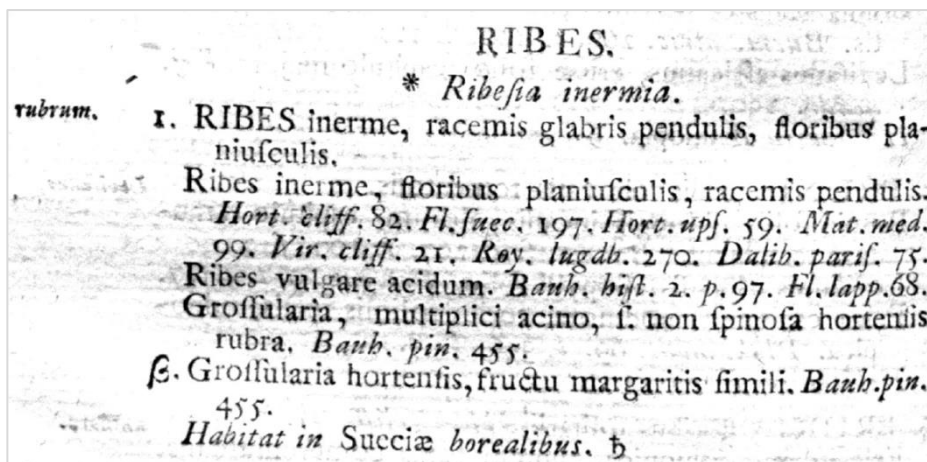


Figure 6.
 Protologue of
Ribes rubrum L.
 in the Species
 Plantarum (BHL
 facsimile edition)

Let us remember firstly that this *Ribes rubrum* is the only species of *Ribesia* in the Species Plantarum (LINNAEUS 1753). Let us detail its protologue: (Fig. 6):

- “*racemis glabris pendulis*” corresponds to taxon F. It does not seem much, but let us not underestimate the importance of each word in the floras of the time (J. MAGNIN-GONZE, 2009: 140): it is an old plurinomen that serves as a diagnostic key in relation to neighbouring species. However, in the Species Plantarum, the partner concerned with erect racemes is not another *Ribesia* but *Ribes alpinum*: this reduces the impact of this assertion for the taxonomy of *Ribesia*. There is still “*glabris*”, which corresponds to F (MC).
- “*floribus planiusculis*” [sub-planes] may correspond to the patelliform flower of F and to the pelviform flower of C&D. According to the numerous cases where we read it in old floras, this term is vague and only means that the floral envelope has a spreading apical portion. This feature is therefore not decisive.
- “*Ribes vulgare acidum* Bauh. hist. 2, p.97””: this reference to Jean Bauhin’s *Historia Plantarum*, constantly repeated by Linnaeus, clearly indicates type F (as we shall see, Fig. 8).

- “*β- Grossularia hortensis, fructu margaritis simili*” also indicates F, the only cultivar that existed at the time with white berries (unless an error).
- “*Habitat in Sueciae borealibus*” corresponds on the other hand to the distribution of the DE group. The assertion is detailed in the previous works: “*In Lapponiae Umensis desertis ad Alpium latera; omnium copiosissime autem prope Tornoam occurit*” (LINNAEUS, 1737a: 65, No.98) and “*Crescit in Lapponiae, utriusque Bothniae adjacentis nemoribus, juxta fluvios cum antecedenti [which is *R. nigrum*]*” (LINNAEUS, 1737b: 82, No.2).

The reference to J. Bauhin and the restricted morphology therefore points to one species (F), the phytogeography to another (DE), from our current point of view.

Half a century later some Scandinavian botanists observed that the currants in Lapland are different. But it was not until JANCZEWSKI (1900) and HEDLUND (1901) that the idea of two species was to emerge. The 19th century wallowed in an astonishing systematic and nomenclatural slump for such a small systematic group, the consequences of which are still felt today. If we only consider the works that contributed to the taxonomy, they each had their own perspective regarding the same syllogism:

- All the wild *Ribesias* from northern Scandinavia seem to be an original type DE
- Linnaeus mentions his *Ribes "rubrum"* in Lapland and does not know of any other *Ribesia*
- So *Ribes rubrum* Linnaeus includes DE, whence 3 logical possibilities:
 - X**– *Ribes rubrum* = a broad species of which DE and F are infra-specific taxa
 - Y**– *Ribes rubrum* = the aggregate of two species, DE and F
 - Z**– *Ribes rubrum* = DE

Option X was the first of the Scandinavian researchers. WAHLENBERG (1812) described for Lapland in *R. rubrum* Linn. a variety *β foliis magis pubescentibus* with [from the Latin] “*flowers more or less speckled with red*”. SWARTZ (1814) called this variety *pubescens*, followed by HARTMAN (1843).

Option X takes another form in the influential English Botany of SYME (1877). This author attempted to completely revise the concept of Linnaeus and that of the German flora of REICHENBACH (1830), whose epithets he moved to a different rank (Table 2). A broad *Ribes rubrum* L. covers the types C, D and F. A systematic in three stages separates 2 subspecies including varieties. The subspecies *sativum* is type F, the CD couple becomes the “Subsp. *Ribes sylvestre*”. Note the nomenclatural contradiction: a subspecies should have a trinomen and Syme gives his subspecies binomens, which opens the door to their subsequent recycling to the rank of species. If we then take a look at the abyss of old systematics, it is that all the epithets that appeared there found favour with some 20th century author in an impressive mix-up.

Option Y. ISSLER (1932) corresponded with Professor Hedlund, who took on his 1901 classic in an unpublished manuscript. It is under this reference that Issler considered *Ribes rubrum* as a collective species, grouping together CDE = *R. schlechtendalii* Lange and F = *R. vulgare* Lamarck.

Professor WEBER (1992) took up the thorny problem of *rubrum*. In particular, he examined in photographs the invaluable parts of Linnaeus’s herbarium. He began by noting that the presence of herbarium samples of the two types D and F meant a mixed content of Linnaeus’s taxon. His first taxonomical option was to treat Linnaeus’s *Ribes rubrum* as a collective CDF, the CD pair being *R. spicatum* Robson and F *R. sylvestre* Mertens & Koch according to Germanic tradition. He then changed his mind (WEBER 1993) and adjusted the epithet *rubrum* for the F species, legitimising it by choosing a lectotype of species F in the herbarium of the Linnean Society of London. The reason for this step was not explicit, but we believe that we can guess it in the article of 1992 (p.3): keeping the name *Ribes rubrum* for species F despite its ambiguity could be legitimate because of the economic importance of this species, which most of the worldwide catalogues call *Ribes rubrum*, rightly or wrongly: this would be the application of the *nomen conservandum* in the case of cultivated species according to Article 14.2 of the old Code of Nomenclature of Berlin, 1998.

KISSLING (2016: 28sq) also understands the *rubrum* of Linnaeus as the collective CDF, comprising *Ribes spicatum* Robson (CD) and *vulgare* Lamarck (F).

Finally, let us remember that in some floras the epithet *rubrum* occurs at two levels, as a group of species and as one of the species in the group (HYLANDER, 1945; OBERDORFER, 1983; KIRSCHNER, 1992: 359 & 363).

A concept even wider than Y: HEDLUND (1901) writes of “*Ribes rubrum* L. *sensu lato*”, in which he refers to the brief episode in Clifford’s Garden, when LINNAEUS (1737b) even includes the *Ribesia* with pink flowers (*R. petraeum*) in the same chapter as the others: i.e. the whole subgenus *Ribesia* (ADF) in a single species. If this expanded meaning of *Ribes rubrum* as “European *Ribesia*” is long outdated, it is nevertheless practical as a linguistic shortcut in applied science (e.g. LANHAM & BRENNAN, 1998 – DALTON 2009: 27 – and code “riru” in garden Alenor), since this hybridogenetic group is the parental basis of all the classic cultivated redcurrants.

Option Z is that of JANCZEWSKI (1900: 589 – 1907: 289): “*The name [rubrum] of Linnaeus refers to this species [CD], as no other species is found in Northern Sweden (habitat in Sueciae borealibus)*”. This was to ignore the morphological third of Linnaeus’s protologue. It also meant underestimating the referential third: Linnaeus’s constant reference to the *Ribes vulgaris acidus* of J. Bauhin and his inclusion of white currants, about which Janczewski knew better than anyone that they did not exist in species D. But if Janczewski’s labels and systematic references are erroneous, his taxonomical structure and descriptions are excellent. Maybe his errors in nomenclature are due to the fact that he did not know the work of Robson (see C): unless I am mistaken, this important author is not mentioned anywhere in Janczewski’s work. Be that as it may, his unfortunate allocation of Linnaeus’s *rubrum* to the species CDE was continued in American applied fruit science: THAYER (1923), the revision of BERGER (1924), then HEDRICK (1925), DARROW (1937) and finally REHDER (1947). From America it crossed over to Great Britain in the important cytogenetic and agronomic synthesis of Elizabeth KEEP (1975) and the tradition continued until BRENNAN (1996 – 2008).

Janczewski’s interpretation had a second unfortunate consequence: he had to find another name for species F and kept the first good diagnosis that appeared after Linnaeus: the *Ribes vulgare* of LAMARCK (1789). Which means two incorrect names in regard to the current nomenclature in his monograph.

A century ago a small voice warned us – cited by HYLANDER (1945) and then KIRSCHNER (1992: 363) – that all was in vain and that Linnaeus’s *Ribes rubrum* was none other than species F: WILMOTT (1918). However, his reasoning does not convince us

- when he states that Linnaeus’s mention of habitat is “merely incidental” (p. 20) in relation to the weight of systematic references and morphological features cited in the protologue: what would the study of speciation be if we did not consider the provenance of plants as part of their identity?
- when he refers to the logical error of the “middle term not attributed” in another article (1916: 260). The syllogism that established options X, Y and Z is equally fair as the classic *All men are mortal, Socrates is a man, so Socrates is mortal*.

On the other hand his humour – “*I am disposed to agree in separating our British plants into two species*” – forced us to visit the relevant passages of Linnaeus until the day when a *fusion of the horizons* (GRONDIN 2005) made us see that logic is not everything. “*Let us be sure of the fact, before we worry about the cause*”, said Mr. BERNARD DE FONTENELLE (1687: chap. IV). The **XYZ** approaches are logical but “jump to conclusions” without ensuring that the premises are right. The second premise is false: Linnaeus never saw HIS *Ribes rubrum* in Lapland!

In order to be clear in our own minds about it, we went at flowering time into his *Lapponia Umensis*, where the collection of georeferenced sites GBIF mentions “*spicatum*” and “*rubrum*”. In five riparian forests a kilometre or more from any habitation, all the flowers were of type D (Fig. 1). In twenty or so gardens *R. x pallidum* reigned almost absolutely supreme, especially ‘Prince Albert’, and a single *R. x houghtonianum* showed a very discrete discal ring. In two natural suburban forests, all kinds of recombinations of *x pallidum* were dominant, accompanied by some rare clones of type D. On a good fifty bushes in flower, there was not one flower of type F, the *Ribes* of Jean Bauhin which Linnaeus referred to as his *Ribes rubrum*.

On 19 September 1732 near Storkyrro (LINNAEUS, 1732 [translated from the Latin by SMITH 1811] 2: 212). Carl Linnaeus attended worship, drew an illustration of the local sledges, talked to the local people about the poisoning of their cattle by water hemlock and noted: “Redcurrants grew all the way by the road, as well as *Lenticula* [...], and the *Lichenoides* of which powder is made was observable on the trees”. To understand what he was seeing at the time, let us try to put ourselves in his place (DE WIT 1994: 66–86; J. MAGNIN-GONZE 2009: 132–140). He was not yet an 18th century “Nobel prize winner” in botany, the father of systematics who sits above our work with his wig at the age of 60 years. He was a young man aged 25 who agreed to pursue medicine but whose passion was botany. From the start of his studies, his mind was searching for a natural order in the plant kingdom and towards a macrotaxonomic method that would make it understandable, and he had already begun to write epistemological aphorisms. Intellectual effervescence that was no doubt activated by the euphoria of walking: he walked a good many of the 4,000 kilometres that he travelled in Lapland. He came from southern Sweden, to travel across Lapland like Rudbeck: perhaps for him it was like entering the orders of Botany, like a guild building a new cathedral? On that day (and certainly many others), these currants seen between a ditch full of duckweed and trees covered in lichens were only one of the thousands of species that interested him in the world: so they were not the first thing on his mind. What were these currants, then? Well, the ONLY currant that he knew: the *Ribes vulgaris acidus* of JEAN BAUHIN et al. (1651: 97–98; Fig.8). Nothing in his references or fragments of morphology of his subsequent floras suggests that he had realised the originality of a northern currant. The currant bushes of type DE in Lapland brushed against Linnaeus’s boots, caught his eye, were seen growing next to *Ribes nigrum* in riparian forests, were carried clandestinely in his knapsack and remained for three hundred years in his herbarium, but their original identity did not enter his thoughts, and that is what counts in taxonomy. He simply made the mistake of a young forest phytosociologist who noted *Carex montana* in his first plant inventories, until the day that he saw *Carex halleriana* flowering in the sunlight and he felt a doubt. Types F and D are not so easy to distinguish along a shady path where they hardly flower, at a time when only one species is known. The day of doubt was simply not to come for Linnaeus. His floristic error did not affect his taxonomic model: the species that he passed on to us twenty years later in his Species Plantarum under the binomen *Ribes rubrum* is that of Jean Bauhin (type F), simply unchanged!

Unfortunately, if his systematics emerge unscathed, the taxonomy of subsequent generations was to be troubled by the master’s error: his “*Habitat in Sueciae borealis*” was to make life difficult for *Ribesia* taxonomists for two centuries. We can now close our study bags of anachronisms with a smile.

So WILMOTT (1918) was right. It is likely that HEDLUND (1901: 88–89, 93) understood it before anyone else, but we have not yet deciphered half of his argument in Swedish. At least he limits his use of the epithet *rubrum* to species F and with an excellent diagnostic key.

Moreover, the majority of floras and compilatory electronic registers also apply the epithet *rubrum* to type F. And even if they were correct in the same way that Molière’s *Bourgeois Gentilhomme* spoke prose, they were still right.

Species F

Nomenclature

This species must therefore be named *Ribes rubrum* L. 1753, but because of the above misadventure, type F had the most controversial nomenclature of all the *Ribesia*. It was given four other names during the binominal era (since 1753), that *should no longer be used*:

LAMARCK (1778: III, 472) first mentioned the species as *Ribes rubrum* Lin. He then (1789) described it again in detail under the name *vulgare* by putting its cultivated form in synonymy with Linnaeus's *rubrum*: he must have felt that Linnaeus's taxon was not clear enough. Finally, the simplified version of (1793: 137) merely gives the *vulgare* as synonymous with *rubrum* L.: therefore *vulgare* fell into illegal synonymy. The main connections who started using the epithet *vulgare* again were JANCZEWSKI (1907) and those who followed him in Europe as well as America, and the French-speaking botanists around the great Abbot FOURNIER (1931).

MERTENS & KOCH (1826) provisionally describe in the margin of *R. rubrum* L. a form called *sylvestre* (Lam.) Mertens & Koch. The epithet *sylvestre* is from Lamarck but it was to be recycled with three different contents (e.g. very different in SYME 1877). Then from its subtle initial meaning (see later in the text) the epithet came to refer to the entire species F in German-speaking botany (MANSFELD, 1939 quoted by WEBER, 1993 – HYLANDER, 1945 – RAABE, 1980 – WEBER, 1992).

The epithet *sativum* was introduced by REICHENBACH (1830) as the cultivated variety of *Ribes rubrum* L. But he was also to change geometry. With SYME (1877) he covered the whole of taxon F at subspecies level. It ended by being raised to the level of species in the historically important review of BERGER (1924). Starting with this author species F was called *Ribes sativum* throughout the English-speaking world of applied fruit science, through HEDRICK, DARROW, REHDER, KEEP and BRENNAN (*op. cit.*) to BARNEY & HUMMER (2005, 204) and it continues to this day in the great Encyclopedia of Life database (<https://eol.org/pages/489743>).

At first JANCZEWSKI (1900) used briefly the epithet *domesticum*.



Figure 7. First still recognisable description of *Ribes rubrum* in MATTHIOLI (1563) (BHL facsimilé edition)

History of the description

The species was already recognisable by FUCHS (1542), as we have seen. According to him the vernacular name in German “Sankt Johans Beerlin” means that the fruit reaches maturity on the feast of St. John (24 June); only *Ribes rubrum* is as early (MC). The edition from Lyon of the Commentaries of MATTHIOLI (1562: 135) emphasises the slenderness of the branches, calls the berry [from the Latin] “the size of a peppercorn, with a flavour that is sharp but mixed with sweetness”. The German edition (MATTHIOLI 1563: 55) adds “*bleichgelbes gestirntes blümlin*” (MC), which is enough to make its description valid today (Fig. 7). It was JEAN BAUHIN et al. (1561: 97) who gave the best old description (Fig. 8): [extracts from the Latin] “thin shoots 2-3 cubits high, leaf glabrous on the upper surface [so without the characteristic setae of *R. petraeum*], raceme measures 1–1.5 inches [2.5–4cm; compare it to A], all flowers with 5 pale green leaves [sepals] with revolute tips (MC), with 6 [lapses already noticed by Hedlund] small white sessile stamens surrounding a faintly coloured central umbilicus that hollows out into a cavity with a short bifid style”. It is a fine observation of the sophisticated disc, in which one can guess at the ring in the word *umbilicum* and the internal furrow surrounding the style (Fig. 1F).



Figure 8. Description of *Ribes acidus vulgaris* in J. BAUHIN et al. (1651–Biblioteca Digital del Real Jardin Botánico de Madrid facsimile edition): this is THE *Ribes rubrum* of Linnaeus!

Two other epithets are grafted on to this trinomen: *ruber* for the form with red berries and *albas baccas ferens* for the white currants. This nomenclature implies that the two colours of berries are close relatives, which is not obvious and corresponds to the biological reality that we know today. This concept of *Ribes vulgaris acidus* is a pillar of *Ribesia* systematics, since it is the absolute reference for Linnaeus (see above). The practical pomology of DUHAMEL DU MONCEAU (1768: 263sq) adds to the species portrait “the linen-grey epidermis” of the annual shoot in autumn (MC), the cup of the flared hypanthium that is about 1 mm tall and the petals that are so small that they are barely visible to the naked eye (MC). LAMARCK (1789) observed the 2 very distinct locules of the anther (MC). SMITH (1800a: 263) reports the species as wild in the riparian forests and accidental in hedgerows [feral]. MERTENS & KOCH (1826) noted the absence of calycinal cilia and the protuberant ring of the disc (2 MC). REICHENBACH (1830) classed the ovary as inferior. SPACH (1838) called the bracts usually non-ciliated (MC). KOCH (1869) saw that the style is not thickened at the

base, SYME (1877) noted the connivent stamens. JANCZEWSKI (1900: 589) noted the broad connective, the “butterfly-shaped” anther with lateral dehiscence and the loosely pentagonal contour of the ring of the disc (2MC), HEDLUND (1901) specified that the anther is twice as wide than tall, that the filament measures 0.4–0.7 mm, that the angles of the ring are antepetalous and that the vault of the ovarian locule is horizontal (2 MC). JANCZEWSKI (1907) added the pedicels measuring 3–5 mm [so, long], the sublobed hypanthium and the pentagonal contour of the berry tuft (MC).

1st infraspecific axis: wild/cultivated

LAMARCK (1789: 47–48) began a dichotomy on wild/cultivated: the wild variety *sylvestre* would have more pubescent petioles, lamina and rachis than the cultivated variety *hortense*, with a leaf lobe shorter and more obtusely dentate, and a more acid berry. Our observations do not support these features. For example, cultivars which are clearly *rubrum* by their flower, berry, bud and bark may bear coronal leaves worthy of two different species (Fig. 9): the ‘Caucase’ with its leaf that botanical tradition recognises as

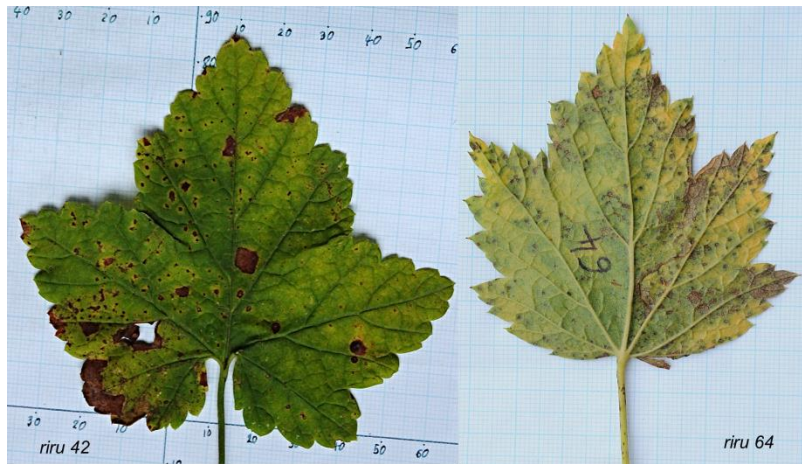


Figure 9. Coronal leaves (from shoots above the flowers) of two old cultivars of *Ribes rubrum*: ‘Caucase’ and ‘White Transparent’.

Ribes rubrum and that FUCHS certainly drew (Fig. 2b), while the leaf of ‘White Transparent’ recalls the silhouette of *Ribes petraeum*. This means that any infra-specific taxonomy of *Ribes rubrum* faces serious difficulties if the shape of the leaves is to be considered.

In regard to the same dichotomy, WALLROTH (1822: 106) mentions the smaller berries for his wild variety *Ribes rubrum* L. *sylvestre* W., followed in this respect by DE CANDOLLE (1828), OBERDORFER (1983: 493), WEBER (1992: 4) and KIRSCHNER (1992: 364). Our material confirms this: even recultivated under good conditions, clones of wild origin continue to produce tiny berries (≤ 9 mm).

For OBERDORFER, WEBER and KIRSCHNER (*op.cit.*), the wild variety would have spontaneous creeping layers and the cultivated variety none. Our experience does not support this feature, which is environmental: cuttings taken from a forest in Schleswig-Holstein where the soil is literally covered in layers, once cultivated in sunlight, has bushes that grow upright without any layers. In the forest, the shoots are etiolated and a heavy snowfall or the weight of fallen leaves from trees is probably enough to lay them on the ground.

We would add, on the basis of several dozens of wild/feral and selected clones, that the berry of the wild ones has an unpleasant aftertaste of the berries of *Sambucus racemosa*, which do not have any cultivars (with exceptions). This recalls the note of MATTHIOLI (1563: 55), for whom the wild berries have a flavour “*nicht so lieblich / sondern kerber und strenger*”.

2nd infraspecific axis: the colour of the disc

MERTENS & KOCH (1826: 248sq) make an interesting distinction. After having described the typical totally green flower of *Ribes rubrum* L., they report a *rubrum* in their area in which the lower surface of the hypanthium is bronze and the disc washed or speckled in burgundy and with vegetative differences. They specify that their two taxa were found growing both in the wild and in gardens. It seems that KOCH (1836, 265) noted the distinction under the epithet *sylvestre*. HEDLUND (1901: 89, 92sq) adopts this dichotomy and makes two small species out of it, *R. hortense* and *R. sylvestre*, in a collective species *Ribes rubrum coll.* The purple disc commonly termed “red eye” has long been used in pomology, with or without any taxonomic perspective (JANCZEWSKI 1909: 317sq – BUNYARD 1920: 41sq – BLATTNÝ et al. 1971: 335, 349 – KISSLING 2016: 64). At any rate, the question of a dichotomy relating to disc colouration remains a heuristic pathway.

3rd infraspecific axis: the colour of the berries

White currants were known from the 16th century onwards (MATTHIOLI 1596: 50). A currant with pink berries appears in DUHAMEL DU MONCEAU (1768: 267). WALLROTH (1822: 106) wrote the review of berry colours and the Prodrôme of DE CANDOLLE (1828: 481) gives them their pedigree in Latin. However, these colours probably correspond to degrees of albinism without any great phylogenetic significance. (KISSLING 2016: 37). Nevertheless, some gene banks separate the berry colours under old Latin names.

4th infraspecific axis: feralisation

The origin of the species is shrouded in mystery. Its European origin was even in doubt (FOURNIER 1931: 203). Flora Europea (WEBB 1993: 461) and especially WEBER (1992: 4–5) sum up the majority opinion: *Ribes rubrum* L. must be indigenous to Atlantic Europe from France to Schleswig-Holstein, with a doubt regarding Great Britain, but its cultivation spread it across temperate Europe where it would reseed from gardens into the wild. ISSLER (1932: 245) placed the continental limit of the wild range in the Rhine valley, and OBERDORFER (1992: 149) acknowledged the presence of a sub-Atlantic riparian association *Ribes sylvestris*-*Fraxinetum* somewhat further east of the Rhine (Neckar, Main, Tauber).

WEBER (1992: 4) is of the opinion that the feralisation might reach the point of producing gradually from seed individuals similar to the wild species. Sorting out the feral from the wild remains a vast field for multidisciplinary study.

Let us add some items to the file. The posthumous edition in Czech of the herbarium of MATTHIOLI (1596: 50) – produced by CAMERARIUS, which proved that he did not confuse *Ribes petraeum* with its large berries and *rubrum* (1588: 141) – said of the latter [translated from the Czech]: “Two types of *Rybes* can be found, the domestic and the wild/forest type. The domestic type is planted in gardens for pleasure. Among these domestic bushes one has large berries. Moreover, a second one bears berries that are all white”. This means that in the 16th century horticulture had already achieved two important categories of cultivars of *Ribes rubrum*, the cultivation of which was already well-established. For the 14th century, the factory of seedless red currant jams from Bar-Le-Duc (<https://www.groseille.com/>) can pride itself on using a recipe dating back to 1344. Archaeobotany found many macroremains of berries of *Ribesia* dating back to the 14th century in urban archaeological sites at least in France, in North Germany and in Poland (WIETHOLD 2016, 278sq – BADURA & LATAŁOWA 2018). Wiethold’s photograph (p. 261: Fig. 6c) shows that in good conditions the tuft of the berry can be preserved. From that point its taxonomic significance (Table 1) became valuable: in the illustrated example the pentagonal form reveals *Ribes rubrum*. And so we can assume seven centuries of feralisation.

Taxon C

EDWARD ROBSON (1763–1813, a textile merchant in Darlington, a Quaker, and renowned botanist) noticed in riparian forests in Scotland, in addition to *Ribes rubrum*, a currant that he named *spicatum* because of its flowers in the form of an upright spike (MC). He explicitly distinguished it from *R. rubrum* by the tomentum of the lower surface of the leaves and the upright/spreading, russet sepals surrounded by a greenish margin (2 MC). He also reported tiny petals (MC) (communication to the Linnean Society of 1795, published in 1797). SMITH (1800b: 705) introduced some short-lived confusion with *Ribes petraeum* (see A): the problem is that its illusory taxon would have a history (see Syme and Hedlund below!). The taxon *spicatum* is mentioned as such for Scotland by ROEMER & SCHULTES (1819), DE CANDOLLE (1828), Dietrich (1839), SCHLECHTENDAL (1862, according to which the species would have disappeared from its typical stations). BENTHAM (1865) presented it as a variety of the *R. rubrum* of Linnaeus. SYME (1877) took it as it was for Scotland, as an extinct variety of its subspecies *sylvestre* in his very large *Ribes rubrum*, alongside a new *smithianum* variety which was none other than the false *petraeum* of SMITH (1800b)! Unfortunately, this fanciful variety *smithianum* was to be raised to the level of small species by HEDLUND (1901) with another spelling variation: *R. smidtianum*. And this author places the *spicatum* of Robson as a *lusus naturae* (an anomaly with no taxonomic validity) of his *Ribes smidtianum*, which is moreover a *lusus* found only

once or twice and then disappeared. All these vicissitudes show that the 19th century considered Robson's *spicatum* as a minor, even negligible, Scottish speciality.

Fortunately, WILMOTT (1918: 21sq) took up the story and was familiar with the parts of Robson's herbariums. He showed that if Robson had found rather exceptional bushes with smaller pedicels (whence the name *spicatum*), on the one hand one of his samples had longer pedicels and on the other his description also included the upright position of the inflorescence and the tomentum on the leaves. He rehabilitated *Ribes spicatum* Robs., by adding *emend. mihi*.

JANCZEWSKI (1907), taken up by BERGER (1924), followed by HEDRICK (1925), named this Scottish currant *R. rubrum* L. *pubescens* Swartz. The British currently call it the Downy Currant (RICHARDS 2015), which helpfully places the accent on the tomentose leaf, the feature generally most easily observed in the field (not many flowers in the forest!). ARMATHWAITE et al. (2016), from a Scottish website for enlightened amateurs, provide a clear diagnostic table and the best photos we knew of the flowers of C and F.

Taxa DE

Towards a northern species CDE

We have seen (option X) that the Scandinavian botanists WAHLENBERG (1812) and SWARTZ (1814) distinguished as the *pubescens* variety of *R. rubrum* L. a wild currant with a calyx tinged with russet (MC). HARTMAN (1843) added to the description the deeper flower (MC) and the pubescent raceme. JANCZEWSKI (1900) was mistaken in calling the Scandinavian species *rubrum* L. (see above, option Z) but he advanced the description: an introrse anther with narrow connective, bowl-shaped disc with no protuberances (3MC).

Up until 1900 there was no systematic link between the two similar forms C and DE of Scotland and Scandinavia. This essential link was established by HEDLUND (1901): his *R. pubescens* coll. brings together 4 small species (Table 2) of which the Scottish *Ribes spicatum* of Robson is one of the forms; one of the small species occurs in both Scotland and Scandinavia, the others are separate in the two regions. Whatever one may think of this complicated systematics, it has the merit of affirming for the first time the existence of a vast subboreal taxon stretching from Scotland to Russia and encompassing the Baltic Sea. The monograph of JANCZEWSKI (1907) reaffirms the same morphological complex for the same range in a different systematic framework: varieties in a *Ribes* "*rubrum*" reinterpreted by him.

If one attaches too much importance to nomenclature, these two systematics plus that of SYME (1877) multiply a host of small taxa from which no impression of unity emerges. But if one goes beyond the nomenclature to examine the diagnostic features, one finds a remarkably constant group in the northern forms (the entire CDE group, see the two flowers, Figs. 1C&D). Following the essential diagnosis of Robson (see C) the two competing authors from the north share the scoop. We have seen the introduction of JANCZEWSKI (1900). HEDLUND (1901) added the glabrous or not very ciliate sepals, the wedge-shaped petals less than 1 mm wide, the filament 1.2 mm long, the anther hardly any wider than tall and the style at least 1.4 mm (MC group). JANCZEWSKI (1907) added the glandular rachis, the low conical ovarian vault which forms a wide glacis around the style (MC), the orbicular contour of the tuft of the berry (MC) and the pink testa of the pips. This set of features is sufficient to distinguish one original CDE species from the three other European ones (AB, F and G). Once its existence was established it remained to know what to call it, since neither Hedlund's nomenclature nor that of Janczewski were convincing, and it was the article by WILMOTT (1918 *op. cit.*) that clarified the matter: the taxon of ROBSON (1797) was the first description of one form of the species. So the original currant glimpsed growing alongside some Scottish rivers, which remained largely ignored for over a century, became the type for the species of all northern Europe and part of Russia, and its name *R. spicatum* has been adopted unanimously in global databases.

Infraspecific taxonomy

HEDLUND (1901) describes for northern Scandinavia down to the north of Stockholm an *R. scandicum*, which JANCZEWSKI (1907: 289) adopted as var. α *scandicum* Hedlund, just as HYLANDER (1945) as *R. spicatum* subsp. *scandicum* (Hedlund) Hyl. This subspecies does not appear in all the current databases but in our opinion it makes sense – see the description of the material from the Umeå region for the molecular examination (SVOBODOVÁ & KISSLING in process).

Then there is a variety *glabellum* Trautvetter & Meyer described in 1856 in Siberia, which HEDLUND (1901: 98) thought he had recognised in Arctic Scandinavia (on average further north than *scandicum*) and named *Ribes glabellum*. JANCZEWSKI (1907: 289) conserved it as a variety in its initial status and from herbarium samples considered that it must exist in the north of Scandinavia. HYLANDER (1945: 196) thought that the Scandinavian form should be distinguished from the Siberian one and named it *R. spicatum* subsp. *lapponicum* Hylander, an epithet that has been used ever since (GBIF SECRETARIAT 2017).

Note that in accordance with Article 26.3 of the Melbourne Code (MCNEILL et al. 2012), the definition of these subspecies automatically makes of the tomentose type of ROBSON (1797) the autonym *R. spicatum* Robson subsp. *spicatum*.

Then LEENA HÄMET-AHTI & KUKKONEN (1984: 209) recognised in Finland the *Ribes rubrum* var. δ *hispidulum* described for Siberia by JANCZEWSKI (1907: 290) and amended the name to *R. spicatum* subsp. *hispidulum* (Jancz.) Hämet-Ahti. This taxon now forms part of the European flora. It is extensively inventoried in Arctic Finland, while the Norwegian floristics do not yet list it in the neighbouring Finnmark (GBIF SECRETARIAT 2017). For convenience we put under E the subspecies *lapponicum* and *hispidulum*, unknown to us and which together with *scandicum*, offer a great field for research.

Lastly, we must discuss the avatars of the epithet *pubescens*. It comes from SWARTZ (1814, see above).

- We have seen it used by Hedlund as his *Ribes pubescens collectivum* which corresponded to the entire taxonomic content of the northern species CDE: this meaning falls into synonymy with the whole species of *R. spicatum* Robson.
- JANCZEWSKI (1907) reuses the epithet as *R. rubrum* variety β *pubescens* Swartz comprising the Scottish currants (our type C): this meaning falls into synonymy with *R. spicatum* Robson subsp. *spicatum*.
- HYLANDER (1945) revived it as ssp. *pubescens* (Swartz) Hylander with the content of the *R. Smidtianum* of Hedlund, i.e. the western Scandinavian and Scottish taxon that contains explicitly the Robson type lowered to the status of *lusus*. This work does not provide any morphological features, only nomenclatural conjectures. This content falls nonetheless into synonymy with *R. spicatum* Robson subsp. *spicatum*.
- CINOVSIS & LEKAVIČIUS (1996: 33) define in the flora of the Baltic countries an *R. spicatum* Robs. var. *pubescens* (C. Hartm.) Cin. with a long line of references leading back to Swartz. They distinguish this var. *pubescens* by the “leaves persistently pubescent or tomentose beneath” of the autonym var. *spicatum* (so the *Ribes* of Robson, taxon C) which would be characterised by “leaves glabrous or nearly glabrous beneath”. We regret to say that there is an error: the description by ROBSON (1797: 240) mentions precisely the “folia... subtus tomentosa” (see Fig. 1C) and the English vernacular “Downy Currant” recalls this. As no other feature is mentioned in Cinovskis’s analysis, his Baltic *pubescens* variety is none other than the type *Ribes spicatum* Robson subsp. *spicatum* – which does not mean that there could be no subsequent phylogeographic-genetic variation to be found around the Baltic Sea.

All in all and including its various contents, the epithet *pubescens* should simply be abandoned.

Discussion

The four European species of *Ribesia* can easily be distinguished by their flowers (Fig. 1). However, the history of their systematics has been laborious. In our opinion this was because of the difficulty in harmonising the taxonomy and nomenclature. In each work, one prevails:

- While in JEAN BAUHIN'S *Historia Plantarum* (†1651) there is the exciting issue of morphological observation, which is the substance of taxonomy, in his brother GASPARD'S (1623) equally famous *Pinax Theatri Botanici* there is the inventory of the synonymies, in intimidating lists, almost without descriptions. In this type of work, the reader receives no argument and has to trust the experience and culture of the author – which, in the case of Gaspard Bauhin is immense and justifies his authority (MAGNIN-GONZE 2009, 85sq).
- Four centuries later, the monograph of JANCZEWSKI (1907) has poor nomenclature, two European species out of four are incorrectly named, but his descriptions and taxonomical structure are of unparalleled clarity and richness for the time and are still valid today, in the spirit of the *Historia Plantarum*. At the other extreme, the nomenclatural studies of HYLANDER (1945) provide a fabric of systematic estimations with no morphological argument: a catalogue of authority in line with the *Pinax*. However, owing to the rules of nomenclature, two subspecies of *Ribes* bear the author's name of Hylander (Table 3) ever since that work, versus a single one with that of Janczewski: it is out of all proportion to the respective taxonomical contribution of these authors.

We have seen the deleterious role that the *Species Plantarum* played in the taxonomy of *Ribesia*. It is not a question of laying the blame on Linnaeus: it is not a crime not to have known of the *Ribes* with purple flowers in the 18th century and not see that the *Ribes* of Lapland is different from the one he knew, otherwise we would all appear to be wrong. The problem seems to us to derive rather from the excessive authority that the *Species Plantarum* gained in a short time. And this because of our fondness of catalogues, even more so for well-produced catalogues. A friend buys an encyclopaedia on World War 2 aircraft, a small boy the bible on stamp collecting, my neighbour is waiting for the colour catalogue from the seed merchant and the botanist delights in the directories that flourish in the digital world. The *Species Plantarum* provided an innovative binominal nomenclature that would simplify the work, with simple classification and the conciseness that brings the whole plant kingdom together in two volumes. A well-compiled catalogue gives us the illusion of owning the world and that the world is in order – two great pleasures.

Catalogues are useful. But their centre of gravity is closer to nomenclature than to taxonomy. And if an authoritative catalogue gains precedence over the opinions of the scientific community, it risks lending credit to a diagnosis named by the book and of tainting with doubt a bad named one. This is why we must somewhat defy the allegation of “illegality” – a very moralistic term printed in black and white in the floras and catalogues, and sometimes emphasised by an exclamation mark – regarding the epithet *vulgare*, to be able to simply go and read the description of *Ribes vulgare* by LAMARCK (1789): we will be rewarded because it is worthy of its author. And then, by exaggerating a little: Janczewski? two faults, he writes in French and his nomenclature is “all false”: could we not possibly just ignore Him?

The balance between taxonomy and nomenclature is difficult to maintain. That is why the first two columns of Table 3 strive to render unto Caesar what is Caesar's by respecting the rules of nomenclature. The last column seeks to render unto God what belongs to Him, and God is taxonomy.

Conclusion

This historic review ends at the systematic Table 3: 4 European species and 8 infra-specific taxa for now. This framework is basically in agreement with those of the world's current most scientifically serious catalogues, such as GBIF (Global Biodiversity Information Facility, GBIF SECRETARIAT 2017), GRIN-Global Taxonomy (Germplasm Resource Information System, WIERSEMA & M. SCHORI, status 2019) and PAF (Panarctic Flora, ELVEN et al., status 2019). The infra-specific taxonomy remains open and promising for the four species.

Table 3 – European taxa of *Ribes* subg. *Ribesia* (Berland.) Jancz. 1907

| species | infraspecific taxon | here | 1st description still recognisable |
|--|---|------|---|
| <i>Ribes petraeum</i> Wulfen in Jacq. 1781 | var. <i>petraeum</i> | A | BAUHIN J. et al. (1651: 98) |
| | var. <i>carpathicum</i> (Kit.) Jancz. 1907 | B | JANCZEWSKI (1907: 293) |
| <i>Ribes spicatum</i> Robson in Withering 1796 | subsp. <i>spicatum</i> | C | ROBSON (1797: 240–1) |
| | subsp. <i>scandicum</i> (Hedlund) Hylander 1945 | D | HEDLUND (1901: 90 & 99) |
| | subsp. <i>lapponicum</i> Hylander 1945 | E | HEDLUND (1901: 90 & 98: <i>glabellum</i>) |
| | subsp. <i>hispidulum</i> (Jancz.) Hämet-Ahti 1984 | | JANCZEWSKI (1907: 290) |
| <i>Ribes rubrum</i> L. 1753 emend. Wilmott 1918 | (not mature) | F | MATTHIOLI (1563: XLV 54–5) |
| <i>Ribes multiflorum</i> Kit. in Schult. 1814 | subsp. <i>multiflorum</i> | G | SPACH (1838: 163) |
| | subsp. <i>sandalioticum</i> Arrigoni 1968 | | ARRIGONI (1968: 306–308) |

Literature cited

- Armathwaite, Irthing, Newby & Wetheral 2016 (accessed 20 May 2019)- Cumbrian *Ribes* ~ currants.
<http://www.cumbriabotany.co.uk/look-out-for/cumbrian-ribes-currants>
- Arrigoni P.V. 1968- «*Ribes multiflorum*» Kit. ssp. «*sandalioticum*» nuova sottospecie di Sardegna. *Webbia* 23, 305-313.
- Badura Monika & Latałowa Małgorzata 2018- Warunki osadnictwa i użytkowanie roślin w rejonie jatek rzeźniczych (XIV-XVII w.) – przesłanki archeobotaniczne. In Pudło A. & al. (eds.)- *Jatki mięsne w Gdańsku od XIV do XX wieku*, 565-588. *Res Gedanenses XVI*, Gdańsk.
- Barney D.L. & Hummer Kim E. 2005- *Currants, Gooseberries and Jostaberries. A Guide for Growers, Marketers and researchers in North America*. Haworth Press, New York.
- Bauhin G. 1623- *Pinax Theatri Botanici. Regis*, Basel. <https://doi.org/10.5962/bhl.title.712>
- Bauhin J. (†1612) & Cherler J.-H. (†1610), auxit Chabrey D. 1651- *Historia Plantarum Universalis t.2*. Graffenried, Yverdon. 1074pp.+ index. <https://doi.org/10.5962/bhl.title.146639>
- Bentham G. 1865- *Handbook of the British flora*, v.1. Reeve, London. <https://doi.org/10.5962/bhl.title.64846>
- Berger A. 1924- A taxonomic review of currants and gooseberries. *New York Agric. Exp. Station, Techn Bull.* 109, 118p.
- Berlandier J.-L. 1828- *Mémoire sur la Famille des Grossulariées. Mém. de la Soc. de Phys. et d'Hist. nat.* III.2. https://books.google.ch/books?id=_OICAAAAYAAJ&hl=fr
- BHL (accessed 2020)- Biodiversity Heritage Library. <https://www.biodiversitylibrary.org/>
- Biondi E., Blasi C. & al. 2015- *Prodromo della vegetazione d'Italia / Elenco specie / Ribes multiflorum*. <http://www.prodromo-vegetazione-italia.org/elenco-specie>
- Blatný C., Sekera J., Dostál J., Blatná Jarmila, Kluczynska Jadwiga, Košák B., Nuhlíček Č., Králíček J. & Purtak M. 1971- *Rybízý, angrešty, maliníky a ostružiníky*. *Ovocnická edice* 16. *Academia*, Praha, 580p.
- Brennan R.M. 1996- *Currants and Gooseberries*. In: Janick J. & Moore J. N. (eds.)- *Fruit Breeding vol. II: Vine and Small Fruits*, 191-295.

- Brennan R.M. 2008- Currants and Gooseberries. In: Hancock J.F. (ed.)- Temperate Fruit Crop Breeding, Germplasm to Genomics. Springer. 177-196.
- Bunyard E.A. 1917- The History and Development of the Red Currant. Journ. Roy. Hort. Soc. London 42, 260-270.
- Bunyard E.A. 1920- A Revision of the Red Currants. Journal of Pomology and Horticultural Science 2/1, 38-55 (reprint from The Gardener's Chronicle 1917).
- Camerarius J. 1588- Hortus medicus et philosophicus. Feyerabend, Frankfurt am Main.
<https://doi.org/10.5962/bhl.title.128839>
- Chytrý M., Kučera T. & Kočí M. (eds.) 2001- Katalog biotopů České republiky. Agentura ochrany přírody a krajiny ČR, Praha, 307p.
- Cinovskis R. & Lekavičius A. 1996- XLIV. *Grossulariaceae* DC. In : Kuusk V., Tabaka L. & Jankievičienė R. (eds.)- Flora of the Baltic Countries, vol.2, 32-35. Russian-English ed. Eesti Loodusfoto, Tartu.
- Clot F. 1990- Les érablaies européennes : essai de synthèse. Phytocenologia 18/4, 409-564.
- Clusius C. 1583- Rariorum aliquot stirpium per Pannoniam, Austriam & vicinas quasdam provincias observatarum historia. Plantin, Anvers. <https://doi.org/10.5962/bhl.title.845>
- Dalton D.T. (& Hummer Kim E. for chap.3) 2009- Disease Resistance and Spring Phenological Characteristics of *Ribes* L. Germplasm. Thesis Oregon State University, 336p.
<http://www.openthesis.org/documents/Disease-resistance-spring-phenological-characteristics-382870.html>
- Darrow G.M. 1937- Improvement of Currants and Gooseberries. Yearbook Agr. U.S. Dept. Agr. Washington, 534-544. <https://fliphtml5.com/dgcj/laaf>
- De Candolle A.P. 1828- Prodromus systematis naturalis regni vegetabilis, vol.3. Treuttel et Würtz, Paris.
<https://doi.org/10.5962/bhl.title.286>
- De Wit H.C.D. (French tr. Baudière A.) 1994- Histoire du développement de la biologie, vol.3. Presses polytechniques et universitaires romandes, Lausanne, 638p.
- Delarze R., Gonseth Y. & Galland P. 1998- Guide des milieux naturels de Suisse. Delachaux & Niestlé, Lausanne, 414p.
- Dietrich D. 1839- Synopsis plantarum, vol.1/1. Voigt, Weimar. <https://doi.org/10.5962/bhl.title.7558>
- Dodonaeus R. 1583- Stirpium historiae pemptades sex sive libri XXX. Plantin, Antwerpen.
<https://doi.org/10.5962/bhl.title.855>
- Duhamel du Monceau H.-L. 1768- Traité des arbres fruitiers, tome 1. Saillant & Desaint, Paris.
<https://doi.org/10.5962/bhl.title.16026>
- Elven R., Murray D.F., Razzhivin V.Y., Yurtsev B.A.† (eds.) & many contributors [*Grossulariaceae* : Mrs. Gladkova V.N.] (accessed 2019)- Annotated Checklist of the Panarctic Flora (PAF) Vascular plants.
<http://panarcticflora.org/>
- Fenu G., Porceddu M., Mattana E., Congiu A. & Bacchetta G. 2011- *Ribes multiflorum* Kit. ex Roem. & Schult. subsp. *sandalioticum* Arrigoni. Informatore botanico Italiano 43/2, 381-458.
https://www.researchgate.net/publication/258531814_Ribes_multiflorum_Kit_ex_Roem_Schult_subsp_sandalioticum_Arrigoni
- Fontenelle B. de 1687- Histoire des oracles. de Luyne, Paris. <http://dx.doi.org/doi:10.1522/cla.fob.his>
- Fournier P. 1931- Deux *Ribes* de la flore parisienne, *R. vulgare* Lmk et *R. alpinum* L., Bulletin de la Société Botanique de France, 78:2, 201-204. <https://doi.org/10.1080/00378941.1931.10832881>
- Fuchs L. 1542- De historia stirpium commentarii insignes. Officina Isingriniana, Basileae.
<https://doi.org/10.5962/bhl.title.63882>
- Gallica (accessed 2019)- bibliothèque numérique de la Bibliothèque nationale de France et de ses partenaires.
<https://gallica.bnf.fr/accueil/fr/content/accueil-fr?mode=desktop>
- GBIF Secretariat 2017- GBIF Backbone Taxonomy. Global Biodiversity Information Facility. Checklist dataset
<https://doi.org/10.15468/39omei>
- Grondin J. 2005- La fusion des horizons. La version gadamérienne de l'*adaequatio rei et intellectus*? Archives de Philosophie 68/3, 401-418. <https://www.cairn.info/revue-archives-de-philosophie-2005-3-page-401.htm>
- Hämét-Ahti Leena & Kukkonen I. 1984- Nomenclatural combinations of Finnish vascular plants. Ann. Bot. Fennici 21/2, 209-211.
- Hartman C.J. 1843 (4th ed.)- Handbok i Skandinaviens Flora. Haegström, Stokholm.
<https://bibdigital.rjb.csic.es/idurl/1/15933>

- Hedlund T. 1901- Om *Ribes rubrum* L. s.l. Botaniska Notiser (Lund) för år 1901,33-72 & 88-106 & 155-158. <https://biodiversitylibrary.org/page/51676492>
- Hedrick U.P., Howe G.H., Taylor O.M., Berger A., Slate G.L. & Einset O. 1925- The Small Fruits of New-York. Lyon, Albany, 614p. <https://doi.org/10.5962/bhl.title.7032>
- Hylander N. 1945- Nomenklatorische und systematische Studien über nordische Gefäßpflanzen. Almqvist & Wiksells, Uppsala, 338p.
- Issler E. 1932- Nomenclature et origine du Groseiller rouge, Bulletin de la Société Botanique de France, 79:2, 241-245. <https://doi.org/10.1080/00378941.1932.10837258>
- Jacquin N.J. (ed.) 1781- Icones plantarum rariorum, vol.1. Waffler, Vienne. <https://doi.org/10.5962/bhl.title.329>
- Janczewski E. de 1900- Sur la pluralité de l'espèce dans le groseillier à grappes cultivé. Comptes rendus hebdomadaires des séances de l'Académie des sciences 130, 588-590. <https://gallica.bnf.fr/ark:/12148/bpt6k3086n/f588.image>
- Janczewski E. de 1907- Monographie des Groseilliers. Mém. Soc. Phys. Hist. Nat. Genève 35/3, 24-517.
- Janczewski E. de 1909- Ancêtres des Groseilliers à grappes. Bull. Soc. Nat. Acclimat. France 56e année, août 1909, 313-320. <https://gallica.bnf.fr/ark:/12148/bpt6k6578542w/f373.image>
- Kanitz A. (ed.) 1863- Pauli Kitaibelii Additamenta ad Floram Hungaricam. Linnaea 32, 305-642. <http://mdz-nbn-resolving.de/urn:nbn:de:bvb:12-bsb10303150-0>
- Keep Elizabeth 1975- Currants and Gooseberries. In: Janick & Moore (eds.)- Advances in Fruit Breeding. Perdue University Press, West Lafayette, 197-268.
- Kirschner J. 1992- *Grossulariaceae* DC.– rybízovitě, meruzalkovitě. In : Květena České Republiky vol.3, 358-371. Academia, Praha.
- Kissling P. 2016- Une esquisse morphotaxonomique des *Ribesia* médioeuropéens ou 52 questions pour la biologie moléculaire / A morphotaxonomic sketch of the Central European *Ribesia* or 52 questions for molecular biology, 78p. <https://hal.archives-ouvertes.fr/hal-01408201> (français) & <https://hal.archives-ouvertes.fr/hal-01408211> (English tr. Rachel Fell)
- Kissling P. 2019- Pour une biométrie taxinomique dans *Ribesia*. 165p. <https://hal.archives-ouvertes.fr/hal-02003504>.
- Koch K. 1869- Dendrologie; Bäume, Sträucher und Halbsträucher, welche in Mittel- und Nord- Europa im Freien kultivirt werden. Enke, Erlangen. <https://doi.org/10.5962/bhl.title.20459>
- Koch W.D.J. 1836- Synopsis Florae Germanicae et Helveticae I. Wilmans, Frankfurt.
- Kulpiński K. 2009- Edwarda Janczewskiego kolekcja porzeczek w Ogrodzie Botanicznym Uniwersytetu Jagiellońskiego w Krakowie / Edward Janczewski's collection of *Ribes* in Botanic Garden of the Jagiellonian University in Cracow. Rocznik polskiego towarzystwa dendrologicznego 57, 85-94. <http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.dl-catalog-4c3a835d-2376-42f4-a1c8-f6ed9a288d0d>
- Lamarck (citoyen) 1793- Botanique. In: Tableau encyclopédique et méthodique des trois règnes de la nature, tome 2. Panckoucke, Paris. <https://doi.org/10.5962/bhl.title.218>
- Lamarck, J.-B.P.A. de Monet de 1778- Flore française ou Description succincte de toutes les plantes qui croissent naturellement en France... Tome 3. Imprimerie royale, Paris. <https://biodiversitylibrary.org/page/10167649>
- Lamarck, J.-B.P.A. de Monet de 1789- Botanique. In: Diderot & d'Alembert (eds.)- Encyclopédie méthodique, tome 3. Panckoucke, Paris. <https://doi.org/10.5962/bhl.title.824>
- Lanham P.G. & Brennan R.M. 1998- Characterization of the genetic resources of redcurrant (*Ribes rubrum* : subg. *Ribesia*) using anchored microsatellite markers. Theor. Appl. Genet. 96, 917-921.
- Ledebour C.F. 1844- Flora Rossica sive enumeratio plantarum in totius imperii Rossici... Vol.2.1. Schweizerbart, Stuttgart. <https://doi.org/10.5962/bhl.title.46626>
- Leišová-Svobodová L. & Kissling P. 2020- The European Species of *Ribes* subg. *Ribesia*, genetic testing of classical inductive botany.
- Linnaeus C. 1732 (trad. & ed. Smith J.E. 1811)- Lachesis lapponica; or, A tour in Lapland, vol.2. White & Cochrane, Londres. <https://doi.org/10.5962/bhl.title.28686>
- Linnaeus C. 1737a- Flora Lapponica. Schouten, Amsterdam. <https://doi.org/10.5962/bhl.title.41432>
- Linnaeus C. 1737b- Hortus Cliffortianus, plantas exhibens quas in hortis tam vivis quam siccis, Hartecampi in Hollandia. Amsterdam. <https://doi.org/10.5962/bhl.title.690>

- Linnaeus C. 1753- Species Plantarum, tomus 1. Laurentius Salvius, Stockholm.
<https://doi.org/10.5962/bhl.title.669>
- Magnin-Gonze Joëlle 2009 (2nd ed.)- Histoire de la botanique. Delachaux & Niestlé, Paris, 264p.
- Mansfeld R. 1939- Zur Nomenklatur der Farn- und Blütenpflanzen Deutschlands V. Feddes Repert. 46, 286-287.
- Matthioli P.A. 1562- Commentarii denuo aucti in libros sex Pedanii Dioscoridis. Gabriel Coteries, Lugduni.
<https://bibdigital.rjb.csic.es/idurl/1/13528>
- Matthioli P.A. 1563- New Kreuterbuch : mit den allerschönsten und artlichsten Figuren aller Gewechs...
 Melantrich, Prague. <https://doi.org/10.5962/bhl.title.9009>
- Matthioli P.A. †, revised by Camerarius J., tr. from German to Czech by Huber z Rizenpachu & Adam z Veleslavína 1596- Herbář aneb bylinář wysocectěného a wznešeného P. Doktora Petra Ondřeje Mathiola. Adam z Veleslavína & Trewtlara z Krosswic, Prague. <https://doi.org/10.5962/bhl.title.107478>
- McNeill J., Barrie F. R., Buck W. R., Demoulin V., Greuter W., Hawksworth D. L., Herendeen P. S., Knapp S., Marhold K., Prado J., Prud'Homme van Reine W. F., Smith G. F., Wiersma J. H. & Turland N. J. 2012- International Code of Nomenclature for algae, fungi, and plants (Melbourne Code). Regnum Vegetabile 154. Koeltz Scientific Books. Traduction française approuvée de Loizeau P.-A. & Price Michelle J. 2017- Code international de nomenclature pour les algues, les champignons et les plantes (Code de Melbourne). Conservatoire botanique, Genève.
- Mertens F.C. & Koch W.D.J. 1826- J. C. Röhlings Deutschlands Flora , vol. 2. Wilmans, Frankfurt am Main.
<https://doi.org/10.5962/bhl.title.6640>
- Moret J.-L. & Jaques A. 2008- Le nom des plantes en patois vaudois. Mém. Soc. Vaud. Sc. Nat. 21, 1-248.
- Oberdorfer E. 1983- Pflanzensoziologische Exkursionsflora. Ulmer, Stuttgart. 1052p.
- Oberdorfer E. 1992 (2nd ed.)- Süddeutsche Pflanzengesellschaften, Teil IV : Wälder und Gebüsche, Textband. Fischer, Jena, 284p.
- Otto F. & Dietrich A. 1842- Ueber in den Gärten von Berlin befindlichen *Ribes*-Arten. Allgemeine Gartenzeitung 10/33, 259-270.
- Pikunova A.V., Martirosyan E.V., Knyazev S.D. & Ryzhova N.N. 2011(in Russian)- Molecular analysis of genetic polymorphism and phylogenetic relationships in *Ribes* L. Ekologiticheskaja Genetika IX/2, 34-44.
- Poyarkova Antonina Ivanovna 1939 (english translation 1971)- Subfamily 3. Ribesioideae Engl. In: Komarov V. L. & Yuzepchuk S. V. (eds.)- Flora of the U.S.S.R. vol. IX,175-208.
- Printz 1921- The vegetation of the Siberian-Mongolian frontiers (the Sayansk region). Kongelige Norske Videnskabers Selskab. <https://doi.org/10.5962/bhl.title.54768>
- Raabe E.W. 1980- Bestimmungshilfen für *Ribes silvestre* und *Ribes spicatum*. Kieler Notizen zur Pflanzenkunde in Schleswig Holstein 12/1, 1-6. https://www.zobodat.at/pdf/Kieler-Notizen-zur-Pflanzenkunde_12_0002-0006.pdf
- Rehder A. 1947 (2nd ed.)- Manual of Cultivated Trees and Shrubs Hardy in Noth America. MacMillan, New York, 1032p.
- Reichenbach H.G.L. 1830-1832- Flora germanica excursoria ex affinitate regni vegetabilis naturali disposita, vol. 2. Cnobloch, Leipzig. <https://doi.org/10.5962/bhl.title.309>
- Richards A.J. 2015- *Ribes spicatum* Robson. Downy Currant. Species Account. Botanical Society of Britain and Ireland. <http://bsbi.org/species-accounts>
- Robson E. 1797- Description of the *Ribes spicatum*. Read July 7, 1795. Transactions of the Linnean Society of London 3.1, 240-241+1pl.
- Roemer J.J. & Schultes J.A. 1819- Caroli Linné equitis Systema Vegetabilium secundum, vol. 5. Cotta, Stuttgart.
<https://bibdigital.rjb.csic.es/idurl/1/10980>
- Schlechtendal D.F.L. 1862- Bemerkungen über einige Ribes-Arten. Linnaea 31, 729-744.
<https://biodiversitylibrary.org/page/35305543>
- Schneider C.K. 1906 & 1912- Illustriertes Handbuch der Laubholzkunde, vol. 1&2. Fischer, Jena, 799p. & 1070p. <https://doi.org/10.5962/bhl.title.194>
- Schöffler P. (ed.) 1484- Herbarius Latinus. Mainz. Ed. Harald Fischer Verlag 2005, Erlangen.
- Schultes J.A. 1814 (2nd ed.)- Österreichs Flora, 1^e partie. Schaumburg & Co., Vienne.
<https://books.google.co.zw/books?id=MoBkAAAAcAAJ>
- Šibík J. 2010- Výskum kosodrevinových spoločností (zväz *Pinion mugo*) v Západných Karpatoch a hercýnskej oblasti – história a súčasný stav poznania. Zborn. Vlastiv. Múz. Považská Bystrica, roč. 1, 83-101.

- Šibík J., Šibíková I. & Kliment J. 2010- The subalpine *Pinus mugo*-communities of the Carpathians with a European perspective. *Phytocoenologia* 40/2–3, 155–188.
- Sloboda D. 1852- Rostlinnictví : cili Návod k snadnému určení a pojmenování rostlin v Cechách, Moravě a jiných zemích Rakouského mocnářství domácích. Řivnáč, Prague. <https://doi.org/10.5962/bhl.title.9992>
- Smith J.E. 1800a- Flora Britannica, vol. 1. White, Londres. <https://gallica.bnf.fr/ark:/12148/bpt6k96914f?rk=21459:2>
- Smith J.E. 1800b- English Botany, or Coloured Figures of British Plants... The figures by James Sowerby, vol. X. London. <https://bibdigital.rjb.csic.es/idurl/1/11311>
- Sokołowski M. 1935- Szata roślinna Tatr polskich. Z Tatr i Podhala 1, Wydawnictwo popularno-naukowe, Zakopane. 212p.+2pl. https://rcin.org.pl/Content/18454/WA058_3058_K863_Szata-Tatr-Sokolows.pdf
- Spach E. 1838- Histoire naturelle des végétaux, vol. 6. Librairie encyclopédique de Roret, Paris. <https://doi.org/10.5962/bhl.title.44839>
- Sturm Jacob 1798- Deutschlands Flora in Abbildungen nach der Natur mit Beschreibungen, I. Heft 4. Nürnberg, at the author's own expense. <http://mdz-nbn-resolving.de/urn:nbn:de:bvb:12-bsb10303563-2>
- Sturm Johann 1830- Deutschlands Flora in Abbildungen nach der Natur mit Beschreibungen, I. Bändchen 13. Nürnberg, at the author's own expense. <https://doi.org/10.5962/bhl.title.77305>
- Swartz 1814- Summa Vegetabilium Scandinaviae systematice coordinatorum. Delén, Stockholm. <https://doi.org/10.5962/bhl.title.106772>
- Syme (publishes under his first name Boswell) 1877 (3rd ed.)- English botany or Coloured figures of British plants, vol. 4. Bell, London. <https://doi.org/10.5962/bhl.title.11893>
- Thayer P. 1923- The red and white currants. *Bul. Ohio Agr. Expt. Stn.* 371, 309-394. <http://hdl.handle.net/1811/60801>
- USDA, Agricultural Research Service, National Plant Germplasm System. 2019. Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. <https://npgsweb.ars-grin.gov/gringlobal/taxonomydetail.aspx?id=31860>
- Wahlenberg G. 1812- Flora Lapponica : exhibens plantas geographice et botanice consideratas, in Lapponiis Svecicis ... nec non Lapponiis Norvegicis... Taberna Libraria Scholae Realis, Berlin. <https://doi.org/10.5962/bhl.title.41432>
- Wallroth F.G. 1822- Schedulae criticae de plantis florum Halensis selectis, vol. 1. Kümmeilius, Halle an der Saale. https://books.google.cz/books?id=3hYAAAAAQAAJ&ie=ISO-8859-1&redir_esc=y
- Webb D.A. 1993 (2nd ed.)- *Grossulariaceae*. in Tutin T.G. & al. (eds.) *Flora Europaea* vol. 1, Cambridge University Press, 461-2.
- Weber H.E. 1992- Zur Klärung der als *Ribes rubrum* L. und *Ribes spicatum* Robson bezeichneten Sippen. *Flor. Rundbr.* 26/1, 1-10.
- Weber H.E. 1993- Nachtrag zur Typisierung und Anwendung des Namens *Ribes rubrum* L. *Flor. Rundbr.* 27/1, 1-6.
- Weigend M. 2007- *Grossulariaceae* DC. In Kubitzki K. (ed.)- *The Families and Genera of Vascular Plants*. Springer, Berlin & Heidelberg, 168-176.
- Weigend M., Mohr O. & Motley T.J. 2002- Phylogeny and classification of the genus *Ribes* (*Grossulariaceae*) based on 5S-NTS sequences and morphological and anatomical data. *Bot. Jahrb. Syst.* 124: 163–182.
- Wiethold J. 2016- Red currant and black currant, new cultivated fruits in late medieval and early modern Europe. Historic and archaeobotanical evidence. In : Ruas M.-P. (ed.)- *Des fruits d'ici et d'ailleurs*. Omniscience, Montreuil, 576p., 267-284.
- Willkomm M. 1887 (2nd ed.)- *Forstliche Flora von Deutschland und Oesterreich*. Winter, Leipzig. <https://doi.org/10.5962/bhl.title.30016>
- Wilmott A.J. 1916- What is *Viola montana* L.? *The Journal of Botany, British and Foreign* 54, 257-262.
- Wilmott A.J. 1918- The Red Currant. *The Journal of Botany, British and Foreign* 56, 19-23.
- Withering W. 1796 (3rd ed.)- *An arrangement of British plants; according to the latest improvements of the Linnaean system*, vol. 2. Robinson & White, London. <https://doi.org/10.5962/bhl.title.118576>