

WEIHEAN SPECIES OF RUBUS IN BRITAIN

By W. C. R. WATSON.

The first monograph of the Rubi to appear in Europe was a work by Weihe and Nees, entitled *Rubi Germanici*, which came out in fascicles in the period 1822-1827. It contained a detailed description in Latin and in German and a plate, partly coloured, of each species: 49 species were dealt with. Of these 18 were recorded as growing around Minden only, and four were given for Silesia only and two for Altena only. It might thus be supposed that one half of the species described were purely local plants. As a matter of fact, however, 23 out of the 24 have been found in England.

Many of the species of Weihe, and of Weihe and Nees, are well understood by British botanists. Those here dealt with are mostly of recent discovery in Britain, and are then marked with an asterisk, even when the name has been used before, in error for a British bramble; whilst some others, enclosed in brackets, are included for the purpose of pointing out that they do not occur in Britain, and should be rejected from the British list.

Some of these species are extremely rare in Britain, and, indeed, they are equally so on the Continent. Their presence in Britain, however, is for that reason especially significant for the proper understanding of the past history of British Rubi and Continental Rubi. The average botanist, with small knowledge, or none, of the commoner Rubi, would hardly detect these without assistance, and rather precise indications have therefore been furnished of their stations, together with descriptions in certain cases where this seems desirable to aid in their recognition. Regard should be had to the characters of the series and sections in which they are severally placed. These will be found described in Watson (1946).

**Rubus vulgaris* Weihe & Nees var. *a viridis* Weihe & Nees; 1825: *Rubi Germanici*, 38, 39. (SILVATICI Calvescentes). See Watson (1931B, 423). 16, W. Kent; Dartford Heath, on the west side near the main road A2, in plenty (see *B.E.C. 1933 Rep.*, 754). 17, Surrey; Littleworth Com. and Ditton Marsh, abundant; Horsell Com. 22, Berks.; Yateley Com.

Rubus vulgaris* Weihe & Nees var. *e mollis* Weihe & Nees; 1825: *Rubi Germanici*, 38, 40. (SILVATICI Calvescentes). 15, E. Kent; Kings Wood, Sutton Valence. 17, Surrey; Putney Heath, east of Kingsmere, near a bush of *R. Radula* Weihe. (Can this be the "*R. leucandrus*" recorded for Putney Heath in Salmon (1931, 268), and said by Rogers to have been "untypical *R. gratus*"?). I have seen this bramble in the Belgian Ardennes. I regard it as a distinct species, **Rubus latiarcuratus

nom. nov. ("Caulis . . . late arcuatus . . ." Weihe and Nees). (SILVATICI Calvescentes). Robust. Stem red, angled, slightly hairy; prickles long, straight, many, often in two's or three's, occasionally a pricklet. Leaves glabrescent above, bifariously pilose on the nerves and felted between them beneath; terminal leaflet roundish or obovate, cuneate below. Panicle broader below, upper branches usually 1-flowered; prickles many, unequal. Stipules, bracts, pedicels and calyx slightly glandular. Flowers pink. Sepals loosely reflexed.

The three other varieties of *R. vulgaris* Weihe & Nees are now regarded as species: var. β *umbrosus* is *R. pyramidalis* Kalt.; var. γ *glabratus* is *R. nemoralis* P. J. Muell.; and var. δ *rhombofolius* is *R. rhombifolius* Weihe. The var. α *viridis* may therefore now be called simply *R. vulgaris* Weihe & Nees emend. W. Wats.

**R. Libertianus* Weihe in Lej. & Court.; 1831: *Comp. Fl. Belg.*, 2, 163. (SILVATICI Macrophylli). This was first found in the neighbourhood of Verviers, Belgium, where Lejeune lived, and was described by Weihe. It has hitherto been thought to be confined to Belgium. In 1936 I found a single plant of it on a bushy slope between the Fox Inn and Boars Hill village, Berks (v.-c. 22). In 1946 Dr J. G. Dony and I found several bushes of it growing with *R. sulcatus* Vest. and *R. plicatus* W. & N. at Heath, Beds (v.-c. 30). Focke considered that *R. Libertianus* is related to *R. sulcatus*, perhaps a subspecies of it, although he did not actually include it in the SUBERECTI, to which *R. sulcatus* belongs. *R. sulcatus* grows within 600 yards of *R. Libertianus* at Boars Hill, and is recorded from the same locality—Waterloo—as *R. Libertianus* in Belgium. I am inclined to think that *R. Weihei* Lejeune, which also Lejeune found around Verviers, is the same as *R. Libertianus*. In a weak, shaded state *R. Libertianus* could almost be mistaken for *R. Brittonii* Bart. & Ridd. (Candicantes) or for *R. egregius* Focke (SILVATICI Nemorenses).

The following description is from the Heath plant.

Stem not suberect, green to reddish purple, glaucescent, somewhat sulcate, slightly pilose, occasionally aculeolate; prickles few below, rather many above, rather unequal, declining, rather hairy. Leaves quinate, petiole felted, prickles hooked, pricklets rare; leaflets all shortly stalked, imbricate, greyish green felted and pubescent beneath; terminal leaflet ovate acute and slightly lobate, or elliptical cuspidate, shallowly crenate, principal teeth patent, base subentire. Panicle compound, rather long and dense, with rather long, sharply ascending lower branches and half-erect, 1-2 flowered upper branches, which exceed the terminal flower, usually with 1-4 simple leaves; prickles few above, rather many below, slender and declining; pricklets rare; leaves finely serrulate. Sepals grey felted, often with broad long leafy tips. Petals obovate, pinkish white, fringed with hairs. Stamens white, long. Carpels glabrous. All the axes of the plant sprinkled with minute subsessile glands. Flowering from the first week in July into August.

**R. Schlechtendalii* Weihe in Boenningh.; 1824: *Prod. Fl. Monast.* 152. (SILVATICI Macrophylli; Weihe & Nees, *Rubi Germanici*, 134, t. 11; Boul. in Rouy, 1900, *Fl. Fr.*, 6, 52; P. J. Mueller, *Versuch*, 108; G. Braun, *Hb. Rub. Germ.*, no. 6, Löhne im Wesergebiet. Löhne is situated 2½ miles from Mennighüffen, in the vicinity of which was one of Weihe's stations for *R. Schlechtendalii*. Billot's no. 1469, coll. Questier, Aisne, is a specimen from the shade.

Dr J. G. Dony and I found a bush of this at Deadmansea Wood, Beds. (v.-c. 30), in 1946, and another at Heath, Beds., in 1947.

Robust. Stem bluntly angled, furrowed, exaculeolate, pruinose, violet on the exposed side. Leaves very large, ovate-elliptical, long-acuminate, rather regularly crenate-serrate, strigose above, grey or white silkily felted and pubescent beneath, shortly stalked; petiole and central petiolule geniculate at apex. Panicle long, lax, leafy often to the summit, branches widely spreading and paniced, rhachis hirsute; prickles short, slender, nearly straight. Flowers about 2.5 cm. Sepals prolonged into leafy linear tips, white felted, laxly pilose, aculeate, glandular-punctate and sometimes aculeolate, loosely reflexed. Petals pink. Stamens pink, equalling or hardly exceeding the pinkish styles. Anthers at first long-pilose. Carpels long-pilose. Plant covered with subsessile glands on all the axes, flowering late.

Focke states that *R. lophophilus* G. Braun is a dry soil state of *R. Schlechtendalii*. I consider it to be a different species altogether. It somewhat resembles a small form of *R. Schlechtendalii* var. *anglicus*, but differs in its subcylindrical stem, short, curved, broad prickles, roundish cuneate petals, etc.

I regard *R. Schlechtendalii* var. *anglicus* Sudre as a species distinct from *R. Schlechtendalii*. It has been erroneously identified as *R. Schlechtendalii* by British botanists, along with *R. amplificatus* Ed. Lees (sometimes) and *R. subinermoides* Druce (sometimes), e.g., the Claygate record in Salmon (1931, 270). A description follows.

R. albonis sp. nov. (SILVATICI Pyramidales). (*Albion*, a Greek name for Britain). Stem striate with raised angles, yellowish and brownish-red, glabrescent, sometimes slightly aculeolate; prickles subulate, declining, often bent slightly upwards. Leaves glabrous above, green beneath and at first a good deal pilose on the veins; terminal leaflet obovate cuneate, base entire, apex ± truncate cuspidate, teeth unequal, acuminate, erect or partly patent. Panicle dense, rather narrow, subracemose and slightly narrowed upwards, not leafy; rhachis in its upper part unarmed, densely felted and hirsute, inconspicuously glandular; pedicels and rhachis below armed with acicular prickles. Flowers about 2.75 cm.; sepals ovate-lanceolate attenuate, reflexed. Petals deep pink, elliptical cuneate, entire. Stamens long, pink; anthers almost always pilose. Styles yellowish. Fruit subglobose.

Turio acutangulus striatus, glabrescens, ruber, interdum parce aculeolatus; aculei mediocres, subulati, declinati. Folia quinata, supra glabra, subtus primum adpresse pilosa; foliolum terminale obovatum

cuneatum, truncatum cuspidatum, argute inaequaliter inciso-serratum. Panicula parum composita, densa, angustata, pro magna parte efoliosa atque inermis, superne imprimis tomentosa hirsutaque necnon glandulosa. Flores rosei, magni; sepala attenuata, reflexa; petala elliptica cuneata; stamina longa roseola; antherae saepissime pilosae.

Type: ref. no. 18733 in Hb. Watson; v.-c. 22, Berks.; Boars Hill, behind the Post Office.

Distribution: v.-c.'s 3, 5, 8, 9, 13, 22, 23, 24, 36, 38, 40, 47, 110. H.20. Schleswig.

**R. macroacanthos* Weihe & Nees; 1825: *Rubi Germanici*, 44, t. 18. T. Braeucker, 292 *Deutsche, vorzugsweise rheinische Rubus-Arten und Formen*, 10, 11, e. descr. "Eine sehr charakteristische Art." (SILVATICI Subvirescentes). In 1928 I found a bush of this species on Mousehold Heath, near Norwich (v.-c. 27), and another bush near the crossroads at Sprowston, about one mile away. There is also a specimen of this species in the Wedgwood Herbarium at Marlborough College, collected by Mrs Wedgwood at Sprowston, July 1925. Compare Wedgwood Catalogue, no. 518, where it is recorded that it was determined by H. J. Riddelsdell as *R. Colemanni* Bab. Bloxam and Babington also have misunderstood the species, and Focke errs in suggesting its identity with *R. incarnatus* P. J. Muell. in *Rubi Europae*, 137.

R. argenteus Weihe & Nees; 1825: *Rubi Germanici*, 45, t. 19. (SILVATICI Subdiscolores). This name is a later synonym of *R. rhombifolius* Weihe in Boenningh. (1824, 151), and should therefore not be used. Focke (1902, 480) records that he saw a bush of *R. argenteus* at Spa; I saw a bush which I recognised as the true *R. rhombifolius* at Spa in 1937, and on going into the matter afterwards I became convinced that Wirtgen and Mueller, and Sudre, were right in identifying Lejeune's authentic specimens of *R. rhombifolius* as *R. argenteus* and that I was also right in recognising them as *R. rhombifolius*: Weihe has described the same bramble under the two names. See Watson (1933). As I there pointed out, Sudre's (1908-13) "*R. rhombifolius*," like Rogers's, is *R. rhodanthus* W. Wats., and his "*R. argenteus*" is *R. rhombifolius* Weihe. The bramble which British botanists call "*R. argenteus*" is *R. cryptadenes* Sudre, and the one which they call "*R. subcarpinifolius*" is *R. rhombifolius* Weihe. Magnificent bushes of *R. rhombifolius* Weihe may be seen at Hollybush Corner on Ham Common, Surrey (v.-c. 17), in the first half of July.

Distribution of *R. rhombifolius* in Britain: v.-c.'s 13, 16, 17, 20, 21, 22, 23, 29, 30, 55, 68 or 81, 110.

[*R. rhamnifolius* Weihe & Nees; 1825: *Rubi Germanici*, 22. This species does not grow in Britain, nor in fact anywhere west of the Rhine. Rogers admits that the British plant so called agrees exactly with a French specimen named *R. cardiophyllus* Lef. & Muell. collected by Letendre, but objects (i) that Mueller "represents the leaf-toothing as coarser than we find it," and (ii) that "Genevier makes the stalk

of the terminal leaflet nearly $\frac{1}{3}$ the length of the leaflet, instead of (as it is with us) very nearly $\frac{1}{2}$, or rarely quite $\frac{1}{2}$ its length." Riddelsdell repeats these objections, stating that Mueller describes the tothing as "very coarse nettlelike" and "nettleleaved or coarse and unequal." But all four of their quotations are incorrect. (i) Mueller's actual words are "Bezahnung fast nesselartig eingeschnitten gesägt," that is, "Tothing nearly nettlelike-incise-serrate," meaning that the serrations are separated by incisions nearly as sharply cut as in the nettle. Notice that there is not a word in Mueller corresponding to "very" or "coarse" or "unequal." Mueller abbreviates to "sägeartigen gezähnten . . ." (serrate dentate) in his summary of characters. (ii) Genevier's (1880, 248) exact words are "foliole terminale à pétiole égale la $\frac{1}{2}$ de sa hauteur . . . les laterales à pétioles égales le $\frac{1}{3}$ de leur hauteur." Need more be said?]

**R. macrophyllus* var. *velutinus* Weihe & Nees; 1825: *Rubi Germanici*, 35, 36. Now treated as a species, *R. hypomalacus* Focke (1877). (VESTITI Virescentes). I have gathered this in a ditch in the lane below West Lavington Church, W. Sussex (v.-c. 13); in Cogg's Wood, Oxon. (v.-c. 23); and, with Mr N. D. Simpson, in Germany at Aachen "am Linzshäuschen." At the last station the plant was more strongly aciculate and glandular than in the other stations, illustrating the variability to which Focke calls attention in this species in the appearance of stalked glands on the pedicels. *R. hypomalacus* has been placed, no doubt from this cause, in many different groups—(i) Suberecti-Subvestiti, (ii) Sprengeliani, (iii) Silvatici, (iv) Vestiti, (v) Adenophori-Subplicati, and (vi) Adenophori-Subcorylifolii. E. H. L. Krause's observations under *R. hypomalacus* Focke and *R. Hansenii* E. H. L. Krause may be consulted in Prahl (1890, 60).

**R. silesiacus* Weihe in Wimm. & Grab.; 1829: *Fl. Sil.*, 1, (2), 53. (VESTITI Virescentes). This exceedingly rare species was found by Mr C. Avery and myself some ten years ago in Shrewsbury Park, Shooters Hill, W. Kent.

Stem arcuate-prostrate, climbing, scantily pubescent, glandular and aculeolate; prickles moderate; leaves quinate rather large, green and rather softly hairy beneath, terminal leaflet oblong-ovate, long-acuminate-cuspidate, base subcordate, margin rather doubly, unequally serrate, basal leaflets rather long stalked, petiole nearly glabrous, but glandular and aculeolate. Panicle felted and subpubescent, long, narrowed to apex, intricate, the branches deeply divided, conspicuously but not densely glandular and aciculate, prickles rather many, weak, declining and falcate. Calyx aculeolate and glandular, greyish white felted, reflexed. Petals rather narrow elliptical, white. Stamens white, about equalling the greenish styles. Carpels glabrous.

**R. foliosus* Weihe in Bluff & Fingerh.; 1825: *Comp. Fl. Germ.*, 1, 682. (APICULATI Foliosi). Locally rather plentiful in Middlesex (v.-c. 21)

occurring here and there also in v.-c.'s 16, 17, 20, 30. I have seen it abroad at Eupen. It is not represented in the *Set of British Rubi*, and British botanists when they use the name seem always to mean *R. flexuosus* Muell. & Lef., which Rogers gives as a synonym of *R. foliosus*.

R. fuscus Weihe in Bluff & Fingerh.; 1825: *Comp. Fl. Germ.*, 1, 682. (APICULATI Foliosi). The true species is not common in Britain. I sent it to the B.E.C. Distributor in 1945 from The Chart (near the pit), Limpsfield, Surrey (v.-c. 17). The bramble of the west of England which has been identified as true *R. fuscus* by British botanists, allegedly on Focke's authority, is **R. fusciformis* Sud. (APICULATI Pallidi), which has a broader, roundish ovate, long-pointed leaflet, and clasping fruit-sepals. Focke (1890, 133) says he collected (i) *R. fuscus* W. & N. at Milton and near Sway, S. Hants., and (ii) a variety with broader leaflets and sepals embracing the fruit in Leigh Woods near Bristol; and further he says that, besides (ii), he had received from England specimens resembling *R. fuscus* but more or less anomalous. Only (i), therefore, was, according to Focke, true *R. fuscus*; and this, as a matter of fact, was later described by Rogers as *R. fuscus* var. *nutans*: it equals *R. insectifolius* Lef. & Muell., completely. Thus Focke did not see, and did not know of, the true *R. fuscus* Weihe in England at all. White, in (1912, 282), and Townsend (1904, 136) do not quote Focke correctly.

**R. Menkei* Weihe in Bluff & Fingerh.; 1825: *Comp. Fl. Germ.*, 1, 679. (APICULATI Foliosi). Mr C. Avery and I found this species in 1937 growing in company with *R. Balfourianus* Blox. in the hedge of a wet pasture west of Heathfield Park, E. Sussex (v.-c. 14).

**R. thyrsiflorus* Weihe in Bluff & Fingerh.; 1825: *Comp. Fl. Germ.*, 1, 684. (APICULATI Scabri). There is a colony of this uncommon species in Kings Wood, Sutton Valence, E. Kent (v.-c. 15) by the roadside just 1000 yards north of East Sutton Church. It may also be studied conveniently in Angling Spring Wood, beside the footpath through the wood, west of Great Missenden Station (Bucks., v.-c. 24). It is gone from Tunbridge Wells Common. The Putney Heath and Wimbledon Common bramble which I recorded as *R. thyrsiflorus* in *J.B.* (1937, 201), is not that species, but a shade state of *R. fuscus*.

R. apiculatus Weihe in Bluff & Fingerh.; 1825: *Comp. Fl. Germ.*, 1, 680. (APICULATI Incompositi). Like Focke, Sudre, and Gelert (who identified a wild Holstein bramble with his *R. anglosaxonicus* from the south of England) I regard *R. anglosaxonicus* Gel. as a synonym of *R. apiculatus* Weihe. Rogers and Linton (1905, 203) suggest that certain slight differences might be found between *R. apiculatus* and *R. anglosaxonicus* if they were compared, not knowing, apparently, that they had been already compared by Focke (1902, 580), and found to be identical. Riddelsdell changed the name from *R. anglosaxonicus* to *R. apiculatus*

in *London Catalogue*, ed. 11 (1925), being quoted in the preface as writing, "it is better to wait for certainty than to have to retract"; but in Salmon (1931) and Wolley-Dod (1937) the name is changed back to *R. anglosaxonicus*. Neither in Britain nor on the Continent does a bush of *R. apiculatus* produce solely roundish stems throughout, or solely long, narrow, oval, terminal leaflets with nearly parallel sides. A bush which I saw near Malmédy (Belgium) in 1937 had an angled stem and oblong-obovate terminal leaflets, and seemed to me to be identical with the British and Irish plant; in fact, if a small piece of one bush were compared with a small piece of another in a different situation it would be easy to find greater differences on two British plants of *R. apiculatus*. Much would depend on the particular level on the stem at which the leaf specimen was taken, on the degree of exposure to the light in which the leaf had developed, on the moisture in the soil, the temperature, the date collected, whether the bush had been subject to mutilation in a hedge, and so on (Weihe and Nees' description was written to define a single bush growing in a hedge). The vigorous *R. apiculatus* (affected with a "pilosism") that grows near the Beverley Brook on Wimbledon Common, Surrey (v.-c. 17), has not altogether the same leaves and flowers as the weaker *R. apiculatus* that grows abundantly in the wood at Bookham Common, Surrey, or as that growing in the very dark wood, closely coppiced, near Ryarsh Church, W. Kent (v.-c. 16). A specimen selected in July looks different from one taken in late August from the same bush.

**R. Reichenbachii* Koehl. ex Weihe in Bluff & Fingerh.; 1825: *Comp. Fl. Germ.*, 1, 685. (APICULATI Incompositi). This is an extremely rare bramble originally found by Koehler near Schmiedeberg in Silesia, and regarded by Focke as so rare as to deserve notice only by reason of its historic interest. It was, however, he relates, refound in Silesia in 1869. I found a small group of bushes of this species, first about 20 years ago, fully exposed to the sun, by the entrance gate to Windmill Farm in Benhall Mill Lane near Tunbridge Wells, E. Sussex (v.-c. 14). There is, in Herb. Kew, a specimen from the same locality collected by Dr Gilbert of Tunbridge Wells in 1909, as *R. Colemanii*.

Stem procumbent, subterete, glabrous or glabrescent, blackish purple, glaucescent; stalked glands and acicles scattered, or absent on some internodes; prickles moderate, irregularly distributed, unequal, declining or falcate. Leaves large, quinate, digitate, glabrous above, very finely pubescent beneath, coarsely, unequally, deeply and sharply serrate, undulate, the principal teeth somewhat patent, mucros blackish; terminal leaflet roundish ovate or slightly obovate, emarginate; intermediate and basal leaflets obovate cuneate; all leaflets long pointed; petiole rather short, prickles falcate and hooked; basal petiolules about 1 cm. long; petiole and petiolules black at their insertion and apex. Panicle almost equal, dense at the apex and furnished there with several narrow grey felted leafy bracts; all branches sharply

ascending, densely corymbose; rhachis glabrous to felted or slightly pubescent at the apex, acicular prickles, acicles and stalked glands many and unequal, as also on the peduncles, pedicels and calyces. Flowers large. Sepals linear-pointed, loosely erect. Petals white, broad, ovate-rhomboid, glabrous above and on the margin. Stamens white, long. Styles greenish. Carpels strongly pilose. Fruit ovoid, abundant.

The petioles of the flowering branch leaves are very short; the panicle branches which they subtend are often in pairs, the longer branch of the pair exceeding the petiole but falling short of the leaf. The bush has somewhat the aspect of **R. melanoxydon* Muell. & Wirtgen (frequent around Tunbridge Wells, W. Kent; and in Bucks., N. Essex, and Berks.), to which Focke considers it to be related. His description, as well as those of Weihe and Nees (1825, 87, t. 37), and Reichenbach (1830-2, 606), and Otto Kuntze's (1867, 94), remarks, are all based on material collected by Koehler at the foot of the Sudetens.

**R. Lejeunei* Weihe in Bluff & Fingerh.; 1825: *Comp. Fl. Germ.*, 1, 683. (GRANDIFOLIUM). In 1937 Mr N. D. Simpson and I collected this at Malmédy, Belgium, the *locus classicus* for the species. It grew in the hedge of the lane leading up La Montagne from Malmédy, one bush, against the fourth station of the Calvary. I collected it again at Spa, and also *R. fundipartitus* Foerster (= *R. Lejeunei* Wirtgen), which had roundish, deep pink petals and deep pink stamens, and is I think almost certainly the plant of Lejeune (1811, 233), *R. fruticosus*, which Weihe and Nees quote as a synonym of *R. Lejeunei*. See Watson (1935, 253). I have found *R. Lejeunei* in Ashenbank Wood, Cobham, and against the Mausoleum in Cobham Park, W. Kent (v.-c. 16).

R. Lejeunei of Rogers's (1900, 70) becomes *R. breconensis* W. Wats. (1946, 341).

R. Lejeunei var. *ericetorum* of Rogers (1900, 71), if taken as a species, as I think it should be, is *R. Moylei* Bart. & Ridd.

R. rosaceus Weihe in Bluff & Fingerh.; 1825: *Comp. Fl. Germ.*, 1, 685. (GRANDIFOLIUM). This species has been widely misunderstood, on the Continent as well as in this country. Rogers in his Handbook describes the west of England *R. scabripes* Genev. as the type—according to him—of *R. rosaceus* Weihe. (*Set.*, No. 21, “. . . The type as yet with certainty only in Warwickshire and a few S.W. counties”). Focke describes the German-Belgian *R. aculeatissimus* Kalt.; 1845: *Fl. Aachen*, 300, in the belief that it is Weihe's plant. Sudre follows Focke's example. I have seen both *R. rosaceus* and *R. aculeatissimus* in some plenty in the Belgian Ardennes; and at Polleur, near Verviers—they were growing together beside a culvert over a stream east of the road (and tramway) to Verviers. *R. rosaceus* Weihe is well represented on two plates no. 122, with a description in *B.E.C. 1928 Rep.*, 862-3. *R. aculeatissimus* has not been found in Britain, but *R. rosaceus* is rather frequent in W. Sussex (v.-c. 13), W. Kent (16), Surrey (17),

S. Essex (18), and Middlesex (21). *R. rosaceus* is called *R. serpens* var. *calliphylloides* (Sudre) Sudre by Sudre (1908-13, 220), and "*R. viridis*" by some British botanists (*Set*, No. 23, Witley, Surrey). *R. rosaceus* of Genevier is **R. adornatiformis* Sudre (*Obscuri*), a frequent bramble on the Lower Greensand, south-east of Westerham, W. Kent (v.-c. 16).

R. Koehleri Weihe in Bluff & Fingerh.; 1825: *Comp. Fl. Germ.*, 1, 68. I have found this in the wood south of the cricket ground at Waterham, W. Kent (v.-c. 16). The British species most often mistaken for *R. Koehleri* is *R. spinulifer* Muell. & Lef. (*HYSTRICES*), see Watson (1931, 426), and (1932, 767). The supposed "*R. Koehleri*" of Epping Forest, referred to in the former, 427, was *R. pygmaeopsis* Focke.

R. infestus Weihe in Boenningh.; 1824: *Prod. Fl. Monast.*, 153. (*HYSTRICES*). British, as well as most Continental, authors have applied this name to a bramble which is not Weihe's plant, and is far less prickly and less highly glandular, with greyish felted leaves and pink flowers, called *R. spurius* L. M. Neuman (*APICULATI Incompositi*). Rogers's (1900, 59) description applies to *R. spurius*, not to *R. infestus*. For the latter see Watson (1931A, 71).

**R. pygmaeus* Weihe in Bluff & Fingerh.; 1825: *Comp. Fl. Germ.*, 1, 687. (*HYSTRICES*). I first collected this on 21.7.1938 in E. Sussex (v.-c. 14) near Tunbridge Wells, in the hedge beside the footpath leading from Forest Road, Warwick Park, to the Cemetery, at the point opposite a cottage where the hedge makes a right-angled bend to the west. I collected it again on 19.7.1940 at the same spot. I know no other station for it. This is another of Koehler's Silesian species found by him around Schmiedeberg.

It is a small bramble, obviously a *Hystriean*, the peduncles bearing long-stalked glands and long acicles, as well as prickles and felt and a slight amount of hair. Leaves ternate only, on my plant, both in 1938 and 1940. Terminal leaflet obovate cuneate long-acuminate, base subentire, margin very unequally, shallowly, sharply serrate-dentate, the principal teeth large, angular and patent. Panicle well developed, pyramidal, with long-peduncled branches and several simple leaves; prickles very long, declining. Sepals aculeate, long-pointed, erect. Petals rather narrow, elliptical, white. Stamens white, longer than the reddish-based styles. Carpels pilose.

**R. humifusus* Weihe in Bluff & Fingerh.; 1825: *Comp. Fl. Germ.*, 1, 685. (*HYSTRICES*). This grows on Shooters Hill, W. Kent (v.-c. 16) in Jacks Wood, and also at the highest point of Eltham Common, near by that station. I have collected it also in Benhall Mill Lane, near Tunbridge Wells, E. Sussex (v.-c. 14).

Rogers and E. F. Linton (1905, 204) surmise that *R. humifusus* must greatly resemble *R. acutifrons* A. Ley, judging by a German specimen

and Weihe and Nees' (1825-27) description and figure. With a knowledge of both brambles, growing, I do not see any such resemblance.

R. humifusus is a low, slender and elegant plant, felted and pubescent, rather than pilose, with small white flowers, petals rather narrow, elliptical, notched, anthers sometimes pilose, sepals erect on the young fruit. The terminal leaflet is small, ovate cordate acuminate, the point being particularly long and slender. The stalks of all the leaflets are long on all the plants I have seen. The stem is not terete, but angled, obtusely below, acutely above, and bears many prickles and long acicles. The plant slightly recalls *R. euryanthemus* W. Wats.

R. acutifrons has few prickles, many but quite short acicles, a long panicle with nearly all the stalked glands shorter than the hair, and has larger, pink flowers and long stamens. It is a more robust and hairy plant. I have not met with it in S.E. England.

**R. Schleicheri* Weihe in Tratt.; 1823: *Rosac. Mon.*, 3, 22. (GLANDULOSI Feroces). In 1937 I saw growing plants of this species at Burtscheid, Aachen, Germany, and at Spa, Belgium. It has until now not been recorded, I believe, in its typical form for Belgian territory—see Sudre (1910, 220). In 1938 I found a bush of this species exactly agreeing with the Continental plant, as described by Weihe and Nees. It grew in King's Wood, Sutton Valence, E. Kent (v.c. 15). The following description relates to the typical plant (there are many varieties on the Continent).

Stem arching procumbent, rather weak, obtuse angled, pilose, slightly pruinose; prickles many, yellowish, strong based, unequal, the larger ones hooked; stalked glands crowded, yellowish, unequal. Leaves rather small, 3- (4, 5)-nate; terminal leaflets ovate-subrhomboid, tapering, sharply, unequally serrate, strigose and subglaucous to shining above, densely, softly hairy beneath, with midribs glandular. Panicle narrow and leafless and subracemose above, nodding in bud, the peduncles and pedicels bearing crowded yellowish acicular prickles; rhachis flexuose, densely pilose and felted, stalked glands mostly shorter than the hair, some prickles hooked. Calyx felted, acuminate and glandular. Sepals long-tipped, patent to \pm erect. Petals glabrous, white, rather broad, elliptical-obovate, contracted gradually to the base, some notched at apex. Stamens long. Young carpels pubescent. Fruit oblong.

The panicle is drawn erect in Weihe & Nees, t. 23, by an acknowledged artist's error.

R. Schleicheri Ed. Lees in Steele (1847) related to a bramble found around Great Malvern, of which the name was changed by Lees to *R. tenuiarmatus* in 1852: *Bot. Malvern*. His descriptions being overlooked, the same bramble was described afresh by A. Ley (1902, 70) as *R. dumetorum* var. *triangularis*. Babington (1869, 255, 257) wrongly identifies the bramble with *R. Balfourianus*.

R. Schleicheri Leighton (1840), based on a specimen no. 4 so named for him by Nees, and now in Hb. Babington, is *R. myriacanthus* Focke.

[*R. serpens* Weihe in Lej. & Court.; 1825: *Comp. Fl. Belg.*, 2, 172. (GLANDULOSI Imbelles). Mr N. D. Simpson and I gathered the true *R. serpens* in 1937 on La Montagne above Malmédy, and on the way thence to Francorchamps. Focke also found it at Malmédy, and described it in (1877) *Syn. Rub. Germ.* Mlle. Libert, who lived at Malmédy, identified it as *R. Bellardii* according to a specimen from Malmédy, the name *R. serpens* Weihe being subsequently added. There are several other Belgian specimens agreeing exactly with it, according to Sudre, and agreeing with Weihe's description in Lejeune and Courtois. It seems to me that there need be no dubiety as to what *R. serpens* Weihe is. Sudre, however, although knowing this, in *Rubi Europae*, 210, makes this bramble a variety *aglabratus* Sudre of *R. ricularis* Muell. & Wirtgen, a much later species than *R. serpens*, using *R. serpens* to denote a different group of brambles. He defines the two groups as follows:

Pedicels and sepals armed with crowded acicular prickles and long glands	<i>R. ricularis</i> M. & W.
Pedicels and sepals glandulose but not armed or not very aciculate	<i>R. serpens</i> Weihe.

Sudre says that there are other specimens identified by Lejeune (not by Weihe) as *R. serpens* Weihe, viz., (i) near *R. tereticaulis* var. *pseudo-Bellardii* Sudre; (ii) a Luxembourg specimen correctly named *R. serpens* Weihe; and (iii) a Luxembourg specimen gathered by Lejeune, which according to Sudre is *R. hirtus* var. *guestphalicus* Sudre. It is not clear why Sudre goes on to say that it is therefore certain that Weihe (surely he should say Lejeune) confused three distinct forms under this name.

The description under *R. serpens* in Rogers (1900) seems to me to be written to cover (i) *R. angustifrons* Sudre, to which *Set* No. 74, collected by Rogers, refers; and (ii) *R. hylonomus* Muell. & Lef. It does not relate to *R. serpens* Weihe, for the occurrence of which in Britain I have seen no evidence.]

**R. hirtus* Waldst. & Kit.; 1805: *Pl. rar. Hung.*, 2, 150. (GLANDULOSI Imbelles). Although this species was not published first by Weihe and Nees it is dealt with in their Monograph. Rogers stated that he was not acquainted with it and could not confirm any record of its occurrence in Britain. Riddelsdell denied that it grows in Britain. I therefore sent British specimens to the B.E.C. Distributor in 1945. It will be found abundantly on Horsendon Hill near Sudbury, Middx. (v.-c. 21). I have also seen it in 15, E. Kent (King's Wood, Sutton Valence); 16, W. Kent (Pembury Walks); 17, Surrey (Coopers Hill, Hinchley Wood); 19, N. Essex (several woods about Quendon, Ugley and Widdington).

**R. Guentheri* Weihe in Bluff & Fingerh.; 1825: *Comp. Fl. Germ.*, 1, 679. (GLANDULOSI Imbelles). Exclude the *R. Guentheri* of previous British authors and botanists, which is *R. flexuosus* M. & L. I have known a bush of Weihe's species for many years near Tunbridge Wells, west of the tunnel mouth south of Forest Road, Warwick Park, just inside E. Sussex (v.-c. 14). The chief distinguishing characters are as follows:

Stalked glands very dark red. Stems only slightly hairy, prickles moderately broad based, declining to recurved. Leaves deep green nearly glabrous above, and only slightly hairy beneath, mostly 3- and 4-nate, unequally, rather coarsely serrate; terminal leaflet elliptical-ovate acuminate, base subcordate. Whole panicle and calyces greyish felted, sepals for a time reflexed, not concave, afterwards ascending. Petals white, notched. Stamens shorter than the red styles.

This also is a bramble which Koehler found at Schmiedeberg in Silesia, but it extends westwards to Switzerland, the Jura, and the Auvergne to the Pyrenees.

Other species mentioned above as growing in Kent or E. Sussex, which were also found by Koehler at or near Schmiedeberg, are *R. silesiacus*, *R. pygmaeus*, *R. hirtus*, *R. Schleicheri* and *R. Reichenbachii*.

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