Five new species of *Rubus* L. (Rosaceae) mostly from central south England

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ABSTRACT

Five further species of the large, predominantly apomictic *Rubus* sect. *Rubus* are described and their distributions detailed and discussed. *R. pydarensiformis* D. E. Allen, *sp. nov*. (ser. *Discolores* (P. J. Mueller) Focke), closely allied to *R. pydarensis* Rilstone of Cornwall, Devon and Guernsey, has a tricentric trans-Channel range divided between the east side of Southampton Water, southernmost Devon and the northernmost Brittany coast of France, perhaps the relics of a once much wider distribution at a climatically more favourable period. *R. cerdicii* D. E. Allen, *sp. nov*. (ser. *Vestiti* (Focke) Focke), locally common in Hampshire's New Forest and the Southampton region, alone of the five is present also in the adjacent Isle of Wight. *R. clausentinus* D. E. Allen, *sp. nov*. (ser. *Hystrix* Focke), is scattered across 30 km of Hampshire but heavily concentrated east of Southampton; apparently spreading, it may be a comparatively recent immigrant from the European mainland (though as yet unknown there). *R. milesianus* D. E. Allen, *sp. nov*. (ser. *Hystrix*), dubiously identified previously with the Pyrenean *R. lapeyrousianus* Sudre, is known from three south-east English counties but in quantity only in three widely separate areas in two of those. *R. vindomensis* D. E. Allen, *sp. nov*. (ser. *Hystrix*), concentrated in central east Hampshire, has distant outliers on that county's coast and in the Oxfordshire Cotswolds.

KEYWORDS: brambles, apomictic species, distribution.

INTRODUCTION

Across the central belt of Europe, from Ireland to Poland, *Rubus* sect. *Rubus* and sect. *Corylifolii* Lindley have proved to be represented by such an immense number of distinct entities, most of those of sect. *Rubus* certainly or putatively apomictic, that in recent years it has become increasingly accepted among those specialising in their study that only a select proportion out of the total potentially describable should be accorded taxonomic recognition if that study is to be kept within practicable bounds. On this view, any new species should have a range that can be broadly categorised as "regional" – though interpretation of that term varies. In an area such as Britain, in which the genus has been the subject of more or less continuous attention for nearly two centuries now, it is perhaps surprising that there still remain undescribed entities that can meet this criterion, but such is the case. In addition, some entities that do have a distribution of the requisite extent and have therefore borne a name entirely justifiably have turned out to have been bearing one that rightly belongs to another species, a misidentification having occurred. One of the new species that are described below comes into this second category.

DESCRIPTIONS OF NEW SPECIES

1. *Rubus pydarensiformis* D. E. Allen, *sp. nov*.

A R. pydarensi primocanna semper magis minusve sulcata glabra vel subglabra, ejusdem aculeis paucioribus (4–11 nec 5–18 per 5 cm) raro subpatentibus, foliis digitatis foliolo terminali majore plerumque ovato, vix rotundo, sine dentibus tenuibus, floribus majoribus c. 2·5–3·5 cm diametro, petalis saepe vividius roseis et antheris glabris, bracteis ad margines in dimidio superiore glandulis stipitatis conspicuis et nonnunquam aciculis aliquot mediocribus praeditis differt.

Very similar to *R. pydarensis* Rilstone but with the primocane always ± furrowed (not merely angled or subterete) and, in common with the lower rachis, either glabrous or with sparse small

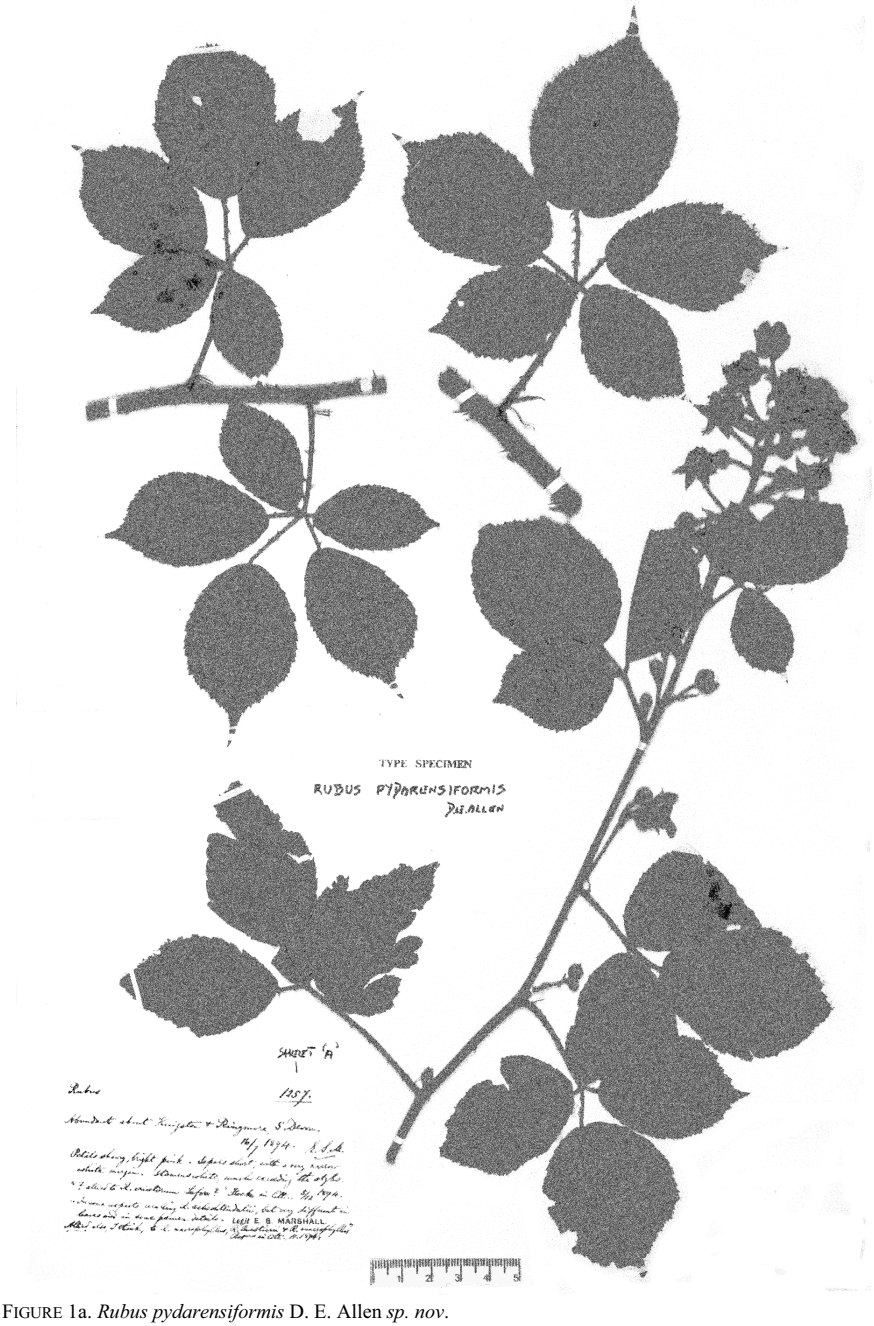

FIGURE 1a. *Rubus pydarensiformis* D. E. Allen *sp. nov*.

and medium tufted, and one or two simple, hairs at most and few to numerous sessile glands, its prickles on average fewer (4–11 as against 5–18 per 5 cm) and apparently only rarely subpatent; the leaves digitate (not subpedate) with the terminal leaflet on average larger, more exclusively ovate or ovate-elliptical and rarely if ever round, not (or at any rate less) finely serrate; the flowers larger, c. 2·5–3·5 cm in diameter (as against c. 2–2·5 cm), often with showy brighter pink petals and the anthers glabrous (instead of hairy); the bracts fringed on the margins in their upper half with frequent prominent stalked glands (as against inconspicuous very short ones that are sometimes rare or lacking) and sometimes also a few medium acicles. (Fig. 1a)

HOLOTYPUS: abundant about Kingston and Ringmore, SX64, South Devon, v.c. 3, 16 July 1894, *E. S. Marshall 1257* – sheet 'A' (**BM**). Isotypi in **BM** and **CGE**.

OTHER EXSICCATAE (COLLECTOR IN ALL CASES *D.E.A.*):

ENGLAND

v.c. 11, S. Hants.: open bushy area on east margin of one-time Titchfield Common, SU529065, 27 July 1987 (**BM**). In plenty on wooded margins, Chark Common (Lee on the Solent golf course), near Gosport, SU5702, 18 June 1990 (**BM**, **NMW**, *herb. L. J. Margetts*). Hedge of car park near Swanwick station, SU519086, 11 July 1994 (**BM**).

FRANCE

Dép. Côtes-du-Nord: occasional, hedge of G.R.34 N.E. of Trébeurden, 8 July 1999 (**BM**, **NMW**). Patch among bracken on field margin by G.R.34 W. of Runigou, N. of Trébeurden, 10 July 1999(**BM**, **NMW**). Near Tropéric entrance to Le Grand Traouïéro, between Trégastel and Ploumanac'h,10 July 1999 (**BM**).

FIGURE 1b. Distribution of *Rubus pydarensiformis* D. E. Allen.

Like *R. pydarensis* best placed in ser. *Discolores* (P. J. Mueller) Focke and closely similar to that species in general aspect, both combining a usually narrow cylindrical inflorescence with conspicuously acuminate leaflets and relatively minute rachis prickles, *R. pydarensiformis* can be told apart from that at once by its glabrous anthers. Its digitate leaves and more or less furrowed primocanes which are sparsely hairy at the most are further distinguishing features that are readily apparent. In contrast to many *Rubus* species, however, the two cannot be separated by the presence or absence of hairs on the young carpels, for the variation in that is the same in both.

So far as is known at present, the ranges of the two are complementary and do not overlap. *R. pydarensis* is frequent and locally common in the west of Cornwall (where it was first discriminated in 1921, only to be dismissed for some years as merely a peculiar form of *R. adscitus* Genev.); eastwards from there it thins out but extends into both Devon vice-counties, and it has also been detected in two districts in Guernsey. *R. pydarensiformis*, by contrast, occurs in three widely-separated but relatively very restricted areas, collectively scarcely sizeable enough to qualify this bramble for taxonomic recognition were it not for the fact that one of the areas is on the European mainland. This is the west-facing stretch of the northernmost part of the Brittany coast popularly known as the Côte de Granit Rose and more particularly towards its south end in the neighbourhood of the resort of Trébeurden. This is almost exactly opposite the area towards the southernmost tip of Devon, round the mouth of the Erme estuary and for about 5 km eastwards, where this was one of several novel brambles encountered by E. S. Marshall on a holiday there in 1894 and collected by him in some quantity. Examples sent by Marshall to Rogers and Focke elicited no more than "a very interesting plant" from the former, and until the discovery of what was manifestly the same bramble in Hampshire in the 1980s his sheets lay in herbaria without attracting further attention. Curiously, in his report on that trip (Marshall 1895) the plant is not listed but, instead, one he collected nearby that had been queried as a hybrid, perhaps between *R. cardiophyllus* Lef. & P. J. Mueller and *R. pyramidalis* Kaltenb. or *R. questieri* Lef. & P. J. Mueller; the specimens of that in **BM** and **CGE** (Marshall 1253), however, are in fact just rather atypical examples of *R. pydarensiformis*.

Marshall omitted to note on his labels the habitats, but they were doubtless the counterparts of the hedges and wood margins adjoining heathland that the species favours in its other two centres. Fuller investigation of the *Rubus* flora of that underexplored corner of Devon may reveal it to be more widespread; however, it is not represented among the very numerous bramble specimens collected round Plymouth by Briggs in the second half of the 19th century and now divided equally between **BM**, **CGE** and **K**, nor has it come to the notice of L. J. Margetts during his many years of intensive work on the group in Cornwall and other parts of Devon. The Hampshire population, similarly, is located in a portion of that county that has long escaped the attention of *Rubus* specialists, namely the same stretch of country between the conurbations of Southampton and Portsmouth that has also yielded the recently-described *R. caesarius* D. E. Allen, otherwise apparently peculiar to Jersey, as well as being the headquarters of *R. clausentinus*, described later in this paper. Between Gosport and the River Hamble, where all the finds of the plant so far are located, there was formerly an extensive tract of heathland that has largely given way to agriculture or, latterly, been built over.

The plant's three centres (Fig. 1b) have in common proximity to the sea combined with some of the highest summer temperatures the western shores of the English Channel have to offer. That the French centre has a climate exceptional on that side of the Channel is suggested by its being the only part of the European mainland in which *R. hastiformis* W. C. R. Watson is known to attain a prevalence comparable with that around Plymouth (and a few other, more-or-less coastal enclaves in southern Britain). The distribution of another species, *R. boreanus* Genev., though a very much wider one, could be explained in terms of the same rather special combination of climatic requirements. Morphologically, indeed, *R. pydarensiformis* suggests itself as one of the possible ancestors of *R. boreanus*. It may well be that the origin of the former lies some considerable way back in the past and that its present fragmented, tricentric range is a relic of a period when the climate of the region was more conducive to its spread.

2. *Rubus cerdicii* D. E. Allen, *sp. nov.*

Primocanna alte arcuata, obtusangula faciebus planis vel leviter sulcatis, atropurpurea, in sole nigrescens, glabrescens vel sparsim pilosa, glandulis sessilibus numerosis sed raro glandulis stipitatis aciculisve brevissimis praedita, aculeis 6–12 per 5 cm, ad angulos dispositis, inaequalibus, nonnunquam geminatis, media longitudine (3–6 mm), e basi lata compressa rubra subulatis, rectis vel curvatis, declinatis vel nonnullis patentibus munita. Folia pedata; foliola terna vel quina, non vel vix imbricata, undulata, supra atroviridia glabra, infra pallidiora vel cinerea, sparsim vel valde pilosa, et nonnunquam coacta; petioli aculeis 6–15 2–5 mm curvatis vel falcatis muniti. Foliolum terminale ovatum vel obovatum vel nonnunquam ellipticum, apice acuto, basi magis minusve emarginata, aequaliter biserrato-dentatum dentibus primis saepe patentibus, petiolulo suo quadruplo vel triplo longius; foliola infima brevissime (1–4 mm) petiolulata. Inflorescentia aut longe racemosa aut laxe pyramidalis, apice saepissime congesto, non usque ad apicem foliata, foliis ternatis inferne et nullis vel paucis simplicibus trilobatisque superne instructa, pedunculis axillaribus usque ad octo brevibus adscendentibus multifloris multo quam foliis suis brevioribus, supra (infimo longe supra) medium divisis, aucta. Rhachis flexuosa, sulcata, dense villosa, superne praesertim ad apicem glandulis stipitatis brevibus mediocribusque et aciculis aculeolisque sparsim praedita, aculeis numerosis subulatis inaequalibus, plerumque curvatis vel falcatis, saepe congregatis munita. Flores c. 2·5–3·0 cm diametro. Sepala grisea, pilis densis et glandulis sessilibus brevissimeque stipitatis paucis vel crebris et aciculis raris vel crebris praedita, albomarginata, nonnunquam attenuata, semper laxe reflexa. Petala 8–9 x 2–4 mm, rosea vel valde rufescentia, plana, ovata vel elliptica e basi cuneata, apice denticulata et ciliata, multo separata. Stamina rufescentia stylos roseos vel virescentes parum vel multo superantia; antherae glabrae vel subglabrae, pallidae suturis purpureis. Carpella glabra vel subglabra. Receptaculum glabrum. Fructus ovoidei, copiosi.

Primocane high-arching, bluntly angled with flat or slightly furrowed sides, deep purple becoming blackish in full sun, glabrescent with sparse or rare simple and tufted medium hairs, numerous sessile glands but rarely with scattered very short-stalked glands or acicles; prickles 6–12 per 5 cm, confined to the angles, unequal, often in pairs, 3–6 mm long, subulate from a broad flattened base, straight or curved, mostly slanting or a few patent, red with a yellow tip. Leaves pedate; leaflets 3–5, not or partly imbricate, undulate, dark green and glabrous above, paler green or grey, velvety with few or many simple and tufted hairs or sometimes also felted beneath; terminal leaflet c. 7–9 × 5–6·5 cm, ovate or obovate or sometimes elliptical, with an acute apex and ± emarginate base, evenly biserrate-dentate with the principal teeth often patent, its petiolule ¼–⅓ as long as the lamina; petiolules of basal leaflets 1–4 mm; petiole longer than the basal leaflet, clothed like the primocane and with 6–15 curved or falcate prickles 2–5 mm. Flowering branch with 3-foliolate grey-felted leaves with obovate-cuneate terminal leaflets below and no or 1–3(–5) simple and sometimes trifid leaves above, not leafy to the apex; inflorescence either a long narrow raceme or laxly pyramidal, with a usually congested apex and up to eight short ascending many-flowered axillary peduncles much shorter than their leaves, divided above the middle (the lowest peduncle divided far above); rachis flexuous, furrowed, clothed with dense patent and adpressed medium simple and tufted hairs, with in the upper half a varying number of scattered short and medium stalked glands, acicles and pricklets all increasing in number towards the apex and extending to the petioles, together with numerous subulate, unequal, mostly curved or falcate and often clustered prickles. Flowers c. 2·5–3·0 cm in diameter; sepals grey-felted with dense stellate and a few longer simple hairs, few or frequent sessile and very short-stalked glands and rare or frequent acicles, white-margined, short- or long-pointed, loosely reflexed in flower and fruit; petals 8–9 × 2–4 mm rose-pink to deep reddish, flat, ovate- or elliptical-cuneate or rarely oblanceolate, notched, with an apical fringe of short and/or long hairs, well separated; stamens short but slightly to much exceeding the styles, filaments reddish and retaining that colour after anthesis, anthers glabrous or with one or two hairs, pale with purple sutures; styles pink or greenish; young carpels glabrous or with one or two hairs; receptacle glabrous; fruit ovoid, copious. Flowering from mid-June to mid-August.

HOLOTYPUS: frequent on gravelly clay, Fattingpark Copse, near Wootton Common, SZ5292, Isle of Wight, v.c. 10, 22 July 1999, *D. E. Allen* (**BM**).

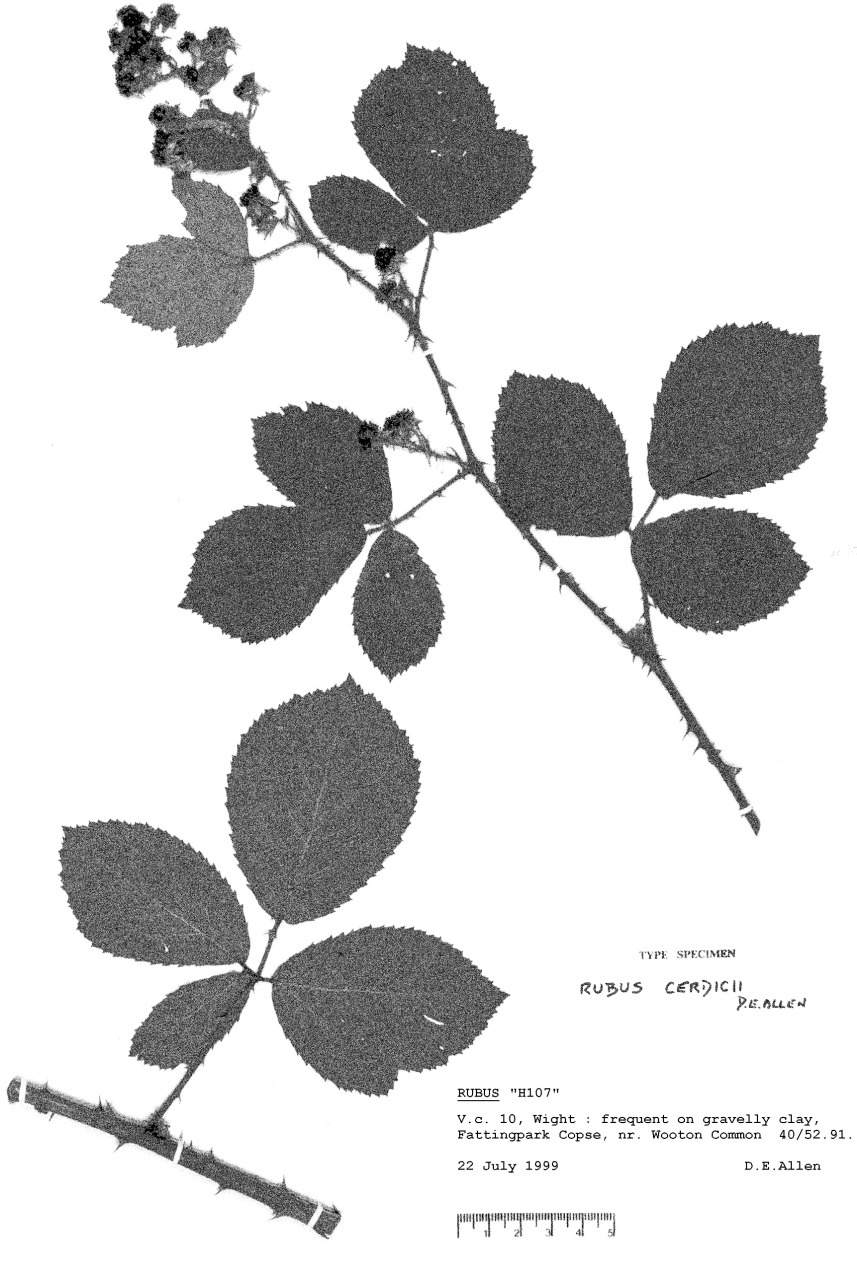

FIGURE 2a. *Rubus cerdicii* D. E. Allen *sp. nov*.

OTHER EXSICCATAE:
Representative further exsiccatae (all collected *D.E.A.*) are in **BM** from seven Hampshire localities and two further Isle of Wight ones. Duplicates from two of those Hampshire gatherings are in **NMW** also.

The epithet *cerdicii* commemorates Cerdic, the West Saxon chieftain who reputedly conquered and settled southernmost Hampshire c. 500 A.D. and the Isle of Wight half a century later as well. Under study for 30 years as "H107" (Fig. 2a), this member of ser. *Vestiti* (Focke) Focke – despite the glabrescent primocane – is occasional to common over an extensive part of south-west Hampshire, v.c. 11, from Southampton north to the terminal line of the Tertiary gravels at Hiltingbury and west to the north and central New Forest, continuing along the north edge of that just into South Wiltshire, v.c. 8. Apart from some outliers round Burley it is rare or absent in the south of the Forest and scarcely strays beyond its boundary yet nevertheless reappears quite widely in the eastern half of the Isle of Wight, v.c. 10 (though in quantity only in Fattingpark Copse, the type locality). An anomalously distant population shared by three pieces of woodland on the north-east side of Havant, close to the border with West Sussex, v.c. 13, may have originated through accidental transfer with New Forest saplings. In all, the species has been noted in 14 hectads: SU20, 21, 30, 31, 41, 42, 61, 71 and SZ29, 39, 47, 58, 59, 68. In terms of its terminal points the range is about 50 km in length and slightly more than that in breadth. Characteristic of damp heathy ground, growing more often in the open than in marginal shade, it can occur also in bogs and fen carr, while in Wight it flourishes on only mildly acid clay (Fig. 2b).

Despite its showy flowers and wide occurrence in the much-visited New Forest, there are surprisingly very few examples of this bramble dating from before 1970 in herbaria and apparently none from earlier than 1919. This could imply a substantial spread in the last hundred years or more recently still.

Though a 1931 specimen in **BM** was misdetermined by Riddelsdell as the species now known as *R. euanthinus* W. C. R. Watson and there is a superficial resemblance to *R. radulicaulis* Sudre of the southern Welsh Marches, there is no British bramble other than *R. cerdicii* that seems to combine reddish floral organs with a flexuous rachis and a primocane bearing curved prickles and typically obovate-cuneate, biserrate-dentate leaflets. A French species, *R. grypocanthus* P. J. Mueller & Lef., of dép. Aisne, however, quite closely approaches it. Authentic specimens of that in **BM**, though, have a hairier and considerably glandular-aciculate primocane with stronger prickles, more acuminate leaflets and shorter stalked glands on the rachis.

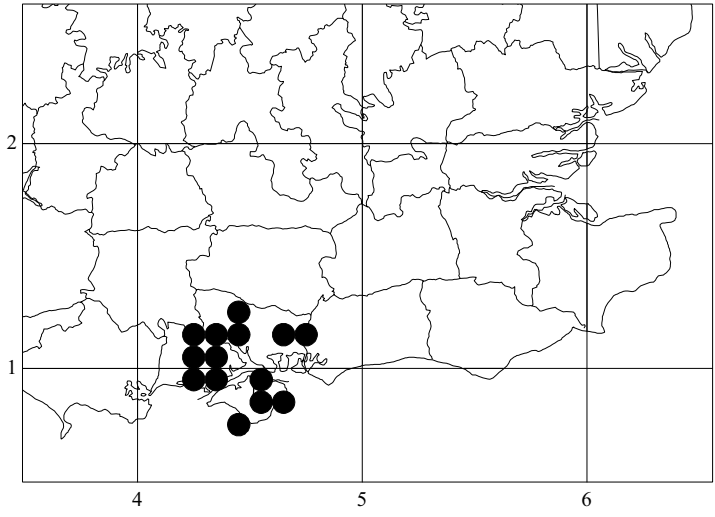

FIGURE 2b. Distribution of *Rubus cerdicii* D. E. Allen.

3. *Rubus clausentinus* D. E. Allen, *sp. nov*.
Planta robusta. Primocanna alte arcuata, obtusangula faciebus planis vel leviter sulcatis, purpurea, glabrescens vel sparsim pubescens, glandulis stipitatis aciculisque nullis vel paucis brevibus brevissimisque sed aculeolis crebris nonnunquam glanduliferis praedita, aculeis c. 7–20 per 5 cm, nonnunquam geminatis, plerumque ad angulos limitatis, valde inaequalibus (2–8 mm), e basi lata compressa rubropurpurea tenuibus, saepissime omnibus declinatis vel falcatis sed nonnunquam omnibus magis minusve patentibus rectisque munita. Folia digitata; foliola quina, plana vel ad marginem undulata, vix imbricata, supra pilis longis paucis vestita, infra sparsim pubescentia (praesertim ad venas) aut insuper copiose longipilosa; petioli pilis stellatis frequentibus vel numerosis simplicibusque sparsis vestiti, aculeolis paucis vel crebris (nonnunquam nonnullis glanduliferis) et aculeis 2–4 mm numerosis (c. 15–20) valde curvatis vel falcatis vel geniculatis muniti; foliolum terminale rotundum vel rotundo-ovatum, apice gradatim acuminato, basi emarginata vel subcordata, (bi-)serrato-dentatum dentibus latis, saepissime saltem inferne incisum, petiolulo suo quintuplo vel quadruplo vel triplo longius; foliola infima brevissime (1–2 mm) petiolulata. Inflorescentia non usque ad apicem foliata, foliis infra albescentibus omnibus ternatis vel etiam usque ad quattuor simplicibus vel trilobatis (et interdum bracteis nonnullis) instructa, late vel anguste pyramidalis, apice truncato vel rotundato, pedunculis mediis nonnullis patentibus, axillaribus distantibus adscendentibus multifloris, infimis longis (9–18 cm), supra medium divisis longe (1–3 cm) pedicellatis aucta; rhachis flexuosa, sulcata, coacta et saepissime sparsim pilosa, praesertim superne glandulis stipitatis et aciculis brevibus mediocribusque (aciculis nonnunquam glanduliferis) praedita et praesertim inferne aculeolis nonnullis et praesertim superne aculeis inaequalibus (1–5 mm) curvatis et falcatis numerosis munita. Flores c. 2–3 cm diametro. Sepala griseoviridia, albomarginata, dense coacta et pilosa, glandulis sessilibus et brevissime breviterque stipitatis et aculeis brevissimis paucis vel multis praedita, longe vel longissime attenuata, in flore et fructu reflexa. Petala alba, obovata vel rhombea, breviter pubescentia, apice ciliato, non contigua. Stamina alba stylos flavovirides saepe rufescentes superantia; antherae glabrae. Carpella dense pilosa. Receptaculum glabrum. Fructus magni (usque ad 1·8 × 1·8 cm), globosi vel perlate oblongi, deliciosi.

Plant robust. Primocane high-arching, stout, bluntly angled with flat or slightly furrowed sides, purple, glabrescent or sparsely pubescent, with no or few short and very short stalked glands and acicles but frequent sometimes gland-tipped pricklets; prickles c. 7–20 per 5 cm, tending to cluster, sometimes in pairs, mostly confined to the angles, very unequal, 2–8 mm long, slender from a broad compressed base, usually all slanting or falcate but sometimes all ± patent and straight, red-purple with a yellow tip. Leaves digitate; leaflets 5, flat or undulate on the margin, slightly imbricate, mid-green and glabrescent with a few long simple hairs on upper surface, pale green or cinerascent with sparse adpressed simple hairs mainly on the veins or, in addition, copiously long-pilose beneath; terminal leaflet (7–)9–10 × (5–)7–9·5 cm, ± round or roundish-ovate with a gradually acuminate apex 1–1·5 cm and emarginate or subcordate base, (bi-)serrate-dentate with broad teeth and usually incised at least in the lower half, petiolule $^{1}/_{5}$–$^{1}/_{3}$ as long as the lamina; petiolules with one or several gland-tipped pricklets, those of the basal leaflets 1–2 mm; petiole equalling or shorter or longer than the basal leaflets, with frequent or numerous stellate and sparse simple hairs, few or frequent (sometimes several gland-tipped) pricklets and c. 15–20 strongly curved or falcate or geniculate prickles 2–4 mm. Flowering branch with leaves whitish-felted on under surface, all 3-foliolate or up to 4 simple or trifid ones above as well as sometimes with 1–3 leaf-like simple or trifid bracts too, not leafy to the apex; inflorescence pyramidal with a truncate or rounded apex, short and compact or long and lax with one or more patent middle peduncles 2·5–3 cm long and distant ascending many-flowered axillary ones, the lowest 9–18 cm and much exceeding their leaves, divided above the middle, with pedicels 1–3 cm; rachis flexuous, furrowed, felted and usually also with sparse simple and tufted hairs, frequent short and medium stalked glands and (sometimes gland-tipped) acicles especially above, occasional pricklets especially below and numerous unequal curved and falcate prickles 1–5 mm long increasing in quantity above. Flowers c. 2–3 cm in diameter; sepals greyish-green, white-bordered, with dense stellate and numerous short simple and tufted hairs, few to many sessile and very short- and short-stalked glands and few or many very short prickles, mostly long- or very long-tipped, reflexed in both flower and fruit or sometimes erect-ascending in fruit; petals 8–12 × 5–6 mm, white, obovate or

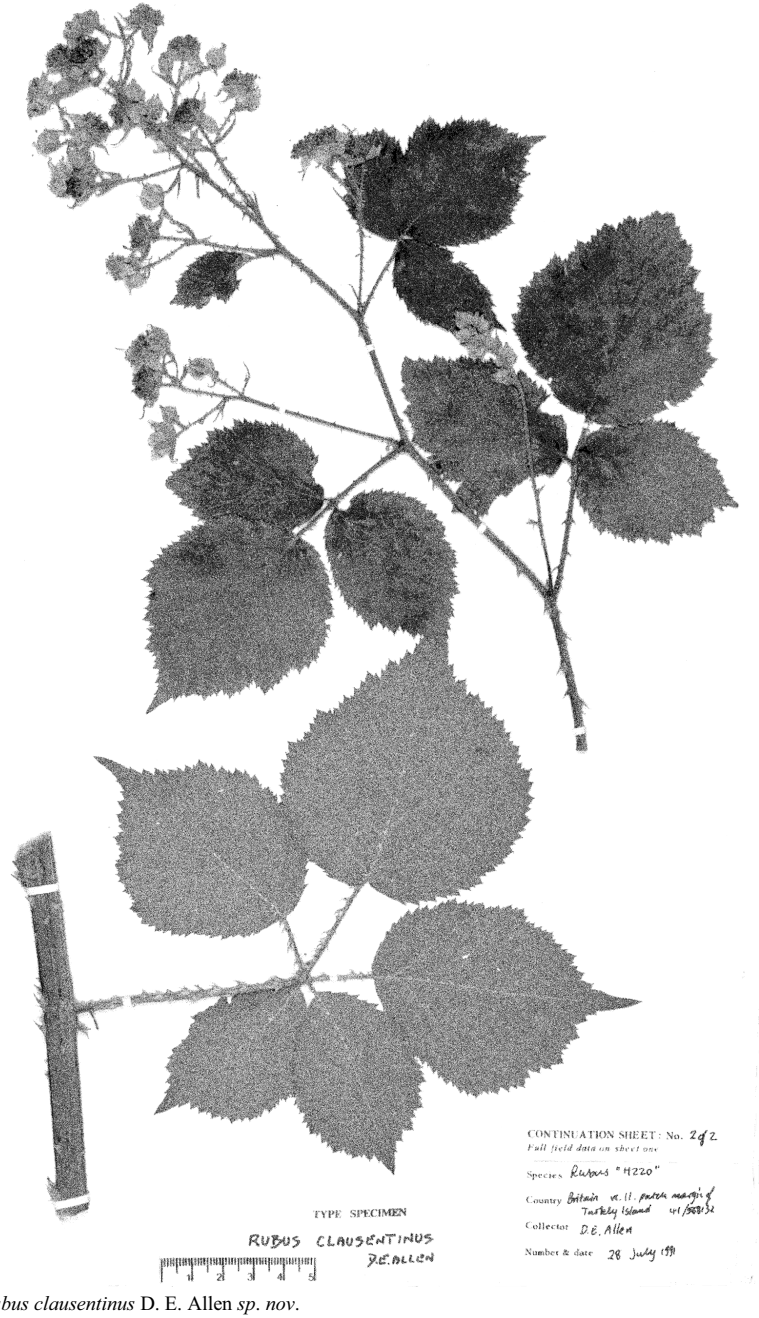

FIGURE 3a. *Rubus clausentinus* D. E. Allen *sp. nov*.

rhombic, clothed with numerous short adpressed hairs, with unequal simple and tufted hairs at the apex, not contiguous; stamens exceeding the styles, filaments white, anthers glabrous or with a rare hair; styles yellowish-green or reddish; young carpels densely pilose; receptacle glabrous; fruit large (up to 1·8 x 1·8 cm), globose or very broadly oblong, delicious. Flowering from mid-July to late August.

HOLOTYPUS: margin of copse, Turkey Island, Shedfield, SU568132, South Hampshire, v.c. 11, 28 July 1991, *D. E. Allen* (**BM**).

OTHER EXSICCATAE (ALL **BM**, COLLECTED *D.E.A.*):
v.c. 11, S. Hants.: Weston Common, Sholing, Southampton, SU464119, 25 July 1976. Copse by Fair Oak sandpits, SU500185, 28 Aug. 1977. Chilworth Common, SU411182, 9 Aug. 1978.
v.c. 12, N. Hants.: Fulley Wood, Tichborne, SU5629, 5 Aug. 1977. Hedge of path alongside easternmost branch of R. Itchen N. of Durngate, Winchester, SU487297, 23 July 1999.

Known for three decades now as "H220" (Fig. 3a), this robust, late-flowering member of ser. *Hystrix* Focke can be readily recognised by its pyramids of largish white flowers contrasting with often reddish styles, the large leaves with round incised terminal leaflets, the very pilose carpels and the unusual combination of glabrescent and often eglandular primocanes (with nevertheless plentiful pricklets) with a typically Hystrican armature on the inflorescence (especially above).

If only the district where it principally occurs had received attention from collectors prior to the 1970s, the species would surely be represented in herbaria by more than just a single doubtful earlier specimen. With a range that extends to only nine hectads (SU30, 31, 40–43, 50, 51, 53), of which the two terminal points are about 35 km apart, and virtual restriction to just one vice-county, South Hampshire, its claim to be ranked as a "regional" species is not all that compelling (Fig. 3b). In view of its conspicuousness and often striking abundance locally, however, denying it taxonomic recognition has come to seem increasingly inappropriate.

That abundance is confined to a narrow belt of country extending from the east part of Southampton to the west outskirts of Fareham, a distance of 7 km. Absent from the coastal fringe in all but one place, the species keeps instead to the terrace of Tertiary gravel above that and mainly to the woods along or close to the west banks of the Meon and Hamble Rivers and the main tributary of the latter, Badnam Creek. Near the mouth of this last, at Mallards Moor, it attains its

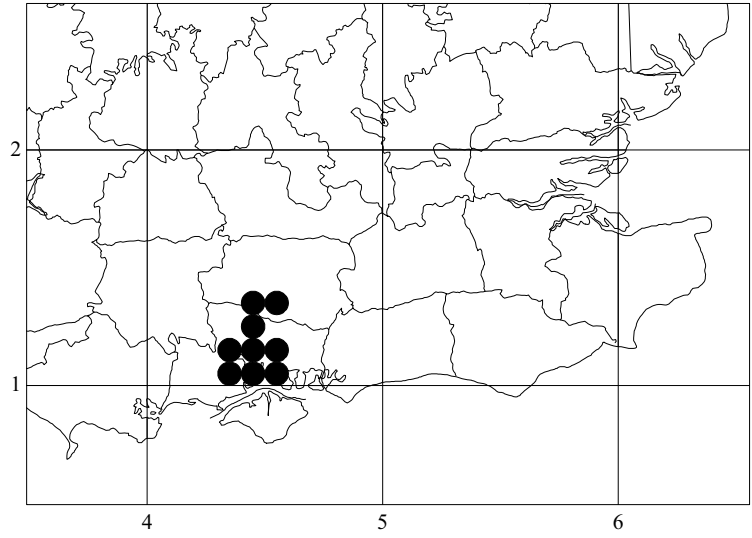

FIGURE 3b. Distribution of *Rubus clausentinus* D. E. Allen.

maximum ascertained abundance, dominating the ground flora. Within Southampton it also occurs in quantity along two deep stream valleys that have survived as public open spaces, Weston Common and Sholing Common. These two are close enough to Bitterne, the site of Clausentum, to justify naming this bramble after that Romano-British settlement, the only one of that period known in the Southampton area.

Outside the belt of abundance isolated patches or bushes are normally the most that are met with. These are oddly scarce to the immediate east and south but extend west across Southampton Water well into the New Forest at Matley Wood and as far as the Beaulieu River near Bucklers Hard, while to the north they penetrate a short way into North Hampshire in two places. Like many of the commoner brambles of the Southampton region, however, the species is absent from the Isle of Wight. Viewed as a whole, this distribution pattern is of a kind suggestive of a species that has arisen in the comparatively recent past (in this case by hybridization, as predominantly in *Rubus* sect. *Rubus*) and is still in the process of primary spread. Alternatively, it could be an immigrant from the European mainland like two other, similarly robust Wessex species, *R. corbieri* Boulay ex Corbière and *R. thyrsigeriformis* (Sudre) D. E. Allen; however, extensive sampling of the *Rubus* flora of north-west France in recent years has not brought it to light, nor have searches of French herbarium material, nor is it a bramble known to the Belgian *Rubus* specialist, H. Vannerom.

An apparent hybrid with *R. ulmifolius* Schott has been noted near Manor Farm, Botley, at SU506115.

4. *Rubus milesianus* D. E. Allen, *sp. nov*.

Planta robusta. Primocanna alte arcuata, obtusangula faciebus planis vel sulcatis, rubropurpurea, in sole nigrescens, glaucescens, pruinosa, glabra vel pilis sparsis vestita, glandulis stipitatis aciculisque brevibus et longis crebris praedita, aculeolis interdum glanduliferis numerosis et aculeis c. 10–30 per 5 cm saepe geminatis valde inaequalibus (4–7 mm), e basi compressa triangulata atrorubenti vel purpurea gradatim subulatis, declinatis vel falcatis munita. Folia magna, digitata vel pedata; foliola quina vel rarius terna, subimbricata, supra atrovirentia glabrescentia nitentia, infra pallidiora molliter pubescentia; petioli aculeis c. 15–20 curvatis vel retrorsofalcatis 2–4 mm muniti. Foliolum terminale magnum (c. 11–13 × 6·5–8 cm), ellipticum vel obovatum vel rotundo-ovatum, apice longissimo (2–3 cm) gradatim acuminato, basi emarginata, serrato-dentatum (vel in umbra crenatum) dente saltem uno patenti, ad marginem undulatum, petiolulo suo triplo longius; foliola infima modice (2–5 mm) petiolulata. Inflorescentia non usque ad apicem foliata, foliis inferne ternatis et superne duobus magnis integris vel uno solo instructa, nutans, longa, anguste pyramidalis, apice congesto saepissime truncato, pedunculis axillaribus omnibus adscendentibus, supra medium divisis, mediis et inferioribus magis minusve corymbosis paucis, infimis c. 10–15 cm. Rhachis recta vel flexuosa, angulata, copiose hirsuta, in modo primocannae munita. Flores c. 2–3 cm diametro, cupulati. Sepala extra tandem griseoviridia, intra albescentia, albomarginata, dense breviterque hirsuta et pilis frequentibus vestita, glandulis stipitatis aciculisque praedita, tandem usque ad 7 mm attenuata, sub anthesi laxe reflexa, post anthesin interdum patentia vel plerumque reflexa vel plerumque erecta. Petala alba vel subrosea, obovata vel ovato-elliptica, copiose utrinque pubescentia, integra, multo separata. Stamina alba, stylos viridulos vel flavos, tandem basi rubros, aequantia vel parum superantia; antherae glabrae. Carpella dense pilosa. Receptaculum glabrum. Fructus magni, longiores quam latiores, copiosi, deliciosi.

Plant robust. Primocane high-arching, bluntly angled with flat or furrowed sides, reddish-purple turning blackish in sun, glaucescent, pruinose, glabrous or with sparse unequal simple and tufted hairs, with frequent, short to long, stalked glands and acicles (the latter often gland-tipped) and numerous sometimes gland-tipped pricklets; prickles c. 10–30 per 5 cm, not confined to the angles, often in pairs, very unequal (4–7 mm), gradually subulate from a flattened triangular base, slanting or falcate, dark red or purple with a yellow tip. Leaves large, digitate or pedate; leaflets (3–)5, subimbricate, dark green, subglabrous and shining on upper surface, paler green and felted and softly pubescent with numerous to sparse simple and tufted hairs beneath; terminal leaflet large (c. 11–13 × 6·5–8 cm), elliptical or obovate or roundish-ovate, with a very long (2–3 cm) gradually acuminate apex and emarginate base, rather finely serrate-dentate (or in shade crenate) with usually at least one tooth patent, undulate on margin, the petiolule ⅓ as long as the lamina;

FIGURE 4a. *Rubus milesianus* D. E. Allen *sp. nov*.

petiolule of basal leaflets 2–5 mm; petiole subequalling the basal leaflets, with frequent stellate and tufted and simple hairs, c. 15–25 curved or retrorse-falcate prickles 2–4 mm, otherwise endowed or armed like the stem. Flowering branch with 3-foliolate leaves below but only 1–2, usually both large, simple ones above, not leafy to the apex; inflorescence nodding, long, narrowly pyramidal with a congested usually truncate top, with the axillary peduncles all ascending, divided above the middle, the middle and lower ones ± corymbose, few (1–4)-flowered, the lowest c. 10–15 cm long; rachis straight or flexuous, angled, felted and with numerous white medium simple and tufted hairs, coloured like the primocane and with a similar but denser armature. Flowers c. 2–3 cm in diameter, cupped; sepals bright green becoming grey-green outside, whitish within, white-bordered, with dense short hairs, frequent longish simple and tufted ones and varying numbers of stalked glands and acicles of different lengths, with a long tip from bud up to 7 mm ultimately, in flower loosely reflexed or (rarely) subpatent, in fruit sometimes patent with erect-ascending tips or mostly reflexed or mostly erect; petals white or pale pink, 6–11 × 3–5 mm, roundish-obovate or ovate-elliptical, with numerous short adpressed hairs on both surfaces, entire at apex, well separated; stamens equalling or slightly exceeding styles, filaments white, anthers glabrous; styles greenish or yellow, ultimately red-based; young carpels densely hairy; receptacle glabrous; fruit large, longer than broad, copious, delicious. Flowering from mid-June to late August (Fig. 4a).

HOLOTYPUS: Tylney Park plantations, near Hook, SU7155, North Hampshire, v.c. 12, 17 Aug. 1996, *D. E. Allen H1158* (**BM**). Isotypus in *herb. H. Vannerom* (Belgium).

OTHER EXSICCATAE:

v.c. 11, S. Hants.: wood margin in east section, Southampton Common, SU422151, 16 July 1988, *D.E.A.* (**BM**, **NMW**).

v.c. 15, E. Kent: quarry between Bigbury and Chartham Hatch, near Canterbury, TR1157, 13 Aug. 1950 *W. C. R. Watson* as *R. gelertii* (**SLBI**). A weak, thinly glandular example.

[v.c. 16, W. Kent; Pembury Wood, Tunbridge Wells, TQ6141, 26 July 1959, *E. S. Edees 13393*, indet. (**NMW**). Specimen too condensed for certainty.]

v.c. 17, Surrey: Tooting [Bec] Common, TQ2972, 30 Aug. 1903, *C. E. Britton*, det. Rogers as *R. pallidus* (**SLBI**). St. Ann's Hill, Chertsey, TQ0267, 7 July 1939, *C. Avery* (**SLBI**); 4 Aug. 1950, *W. C. R. Watson* (**SLBI**, **K**); patch on slope above M3 there, TQ02546785, 22 July 1998, *D.E. A*. (**BM**, **NMW**). (A further specimen from this wood collected in 1867 by *J. G. Baker* cited by Watson (1958) has not been traced.) Blackdown [Hill, Chobham Ridges], SU9057 or 58, 26 July 1948, *C. Avery* (**SLBI**). Chobham Ridges, at crossroads [Redroad Hill], SU907605, 3 July 1963, *B. A. Miles* (**CGE**, **NMW**); 28 July 1969, *E. S. Edees 20383* (**NMW**); 17 July 1997, *D.E. A*. (**BM**). Mound Copse, Lynbrook, Knaphill, SU962591, 16 June 1999, *D.E.A.* (**BM**).

This further member of ser. *Hystrix* is known in quantity in only three areas, two at opposite ends of Hampshire, the third in adjoining West Surrey. The largest population by far is in north-east Hampshire, extending across a series of woodland fragments, doubtless once a single whole, about 3 × 2 km in size, between Hook and Mattingley. The other two occupy the wooded north ends of both sections of Southampton Common, v.c. 11, and at least two copses on the west outskirts of Woking, v. c. 17 (whence the other West Surrey patches have probably come) (Fig. 4b).

The species was first discriminated apparently c. 1940 by W. C. R. Watson, who identified it with – and subsequently consistently determined it as – *R. lapeyrousianus* Sudre, a bramble described from two localities in dép. Ariège in the eastern half of the French Pyrenees (Sudre 1912) but apparently unrecorded from anywhere else in mainland Europe since. Though one or two British-cum-Irish *Rubus* species do have ranges that extend at least that far south, there is not the great disjunctness in those cases that there appears to be in this one, though *R. neomalacus* Sudre, divided between West Surrey and the region round the mouth of the Loire, provides a half-way case.

Its relative unlikelihood geographically, however, is not the only reason for treating Watson's identification with reserve. More seriously, there appears to be no material of *R. lapeyrousianus*, whether collected by Sudre himself or by others and authenticated by him, in any British or Irish herbarium. Sudre omitted it from the two sets of exsiccatae he distributed internationally in 1903–17, presumably in view of its apparently very local occurrence, and potential type specimens of the many other new taxa he described that are not represented in those sets have been found extremely

elusive by subsequent *Rubus* specialists. Even had Watson been in the practice of borrowing material from herbaria outside Britain it is hard to believe that he would have had more success in that direction. In all probability, therefore, he made his identification solely on the strength of the description in Sudre (1912) and the accompanying drawing – as indeed would seem to have been his practice in other instances. While Sudre's description certainly fits the South of England bramble in many respects, there are sufficient differences, in particular glabrescent carpels and leaves white tomentose on the under surface, to render the common identity of the two at best uncertain in the absence of a specimen, a conclusion also reached by Edees & Newton (1988, p. 282).

The impressive consistency with which the English bramble has been determined all along is explained by the plant's distinctiveness. The exceptionally long, narrow leaflets terminating in an ultra-long acuminate apex together with the massive pyramidal inflorescence and Hystrican armature make it unmistakable when growing under optimal conditions in the open. Contrary to what one might expect from that, though, it occurs in greatest quantity, as in the Knaphill and two Hampshire populations, in comparatively deep shade, in which those characters are less in evidence and its identity would be hard to make out in the absence of open-ground specimens close by. In shade it nevertheless retains its robustness, whereas under arid conditions in the open it tends to become deceptively diminutive. The frequent presence outside woodland of what is evidently essentially a sylvestral species is doubtless attributable to the attractiveness to birds of the abundant large fruits. It is possible indeed that their size and particular deliciousness has led this bramble to be taken into cultivation at one time or another. Its puzzlingly isolated occurrence on Tooting Bec Common, deep within London, may perhaps have had that origin.

This was a species that the late Beverley Alan Miles paid special attention to in the course of his intensive but tragically truncated study of *Rubus* in Britain. As *R. milesii* Newton, previously dedicated to his memory, has regrettably proved to be a later synonym of *R. asperidens* (Sudre ex Bouvet) Bouvet (Allen 1996), it seems appropriate that he should be commemorated by this one in its stead. Unfortunately, none of the specimens of *R. milesianus* of his collecting in various herbaria are sufficiently well-developed to be suitable for selection as the holotype.

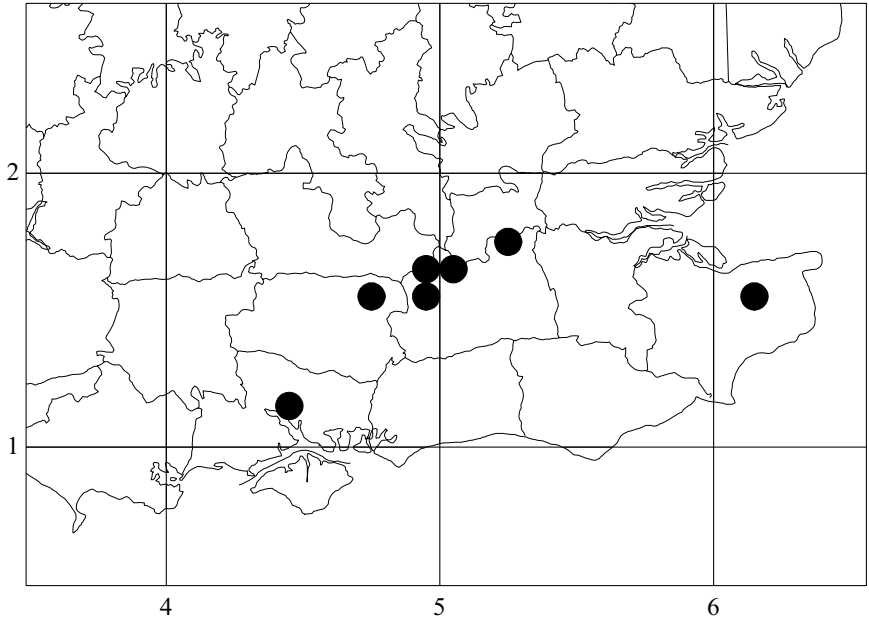

FIGURE 4b. Distribution of *Rubus milesianus* D. E. Allen.

5. *Rubus vindomensis* D. E. Allen, *sp. nov.*

Planta robusta. Primocanna alte arcuata, obtusangula faciebus planis vel sulcatis, atropurpurea nigrescens, pruinosa, pilis crebris vestita, glandulis stipitatis aciculisque paucis vel crebris et aculeolis paucis vel numerosis, omnibus valde inaequalibus, praedita, aculeis c. 10–20 per 5 cm, nonnunquam geminatis, plerumque ad angulos limitatis, valde inaequalibus, usque ad 6–8 mm longis, declinatis vel falcatis vel geniculatis, e basi compressa triangulata rubra gradatim subulatis munita. Folia digitata; foliola quina, non vel vix imbricata, ad marginem undulata, supra atroviridia et glabrescentia, infra pallidiora vel albescentia pilis mediocribus paucis vel numerosis adpressis vestita vel etiam coacta; petioluli glandulis stipitatis inaequalibus crebris vel numerosis et aciculis inaequalibus paucis vel crebris et aculeolis raris et aculeis usque ad tredecim curvatis falcatisque ultra medium costae extensis praediti; petioli primocannae similiter vestiti et muniti; foliolum terminale 6·5–9 × 5–7 cm, rotundum vel rotundo-ovatum, apice gradatim acuminato, basi integra vel emarginata, inaequaliter et nonnunquam tenuiter uni- vel biserrato-dentatum, dentibus saepissime nonnullis patentibus, petiolulo suo triplo vel quadruplo longius; foliola infima modice (2–5 mm) petiolulata. Inflorescentia non usque ad apicem foliata, foliis saepe infra albescentibus, inferne ternatis et superne 0–5 simplicibus lobatisque instructa, nutans, pyramidalis vel racemosa, superne nonnunquam aequalis et congesta, apice truncato, pedunculis axillaribus inferioribus usque ad 22 cm, distantibus, adscendentibus vel rarius subpatentibus, subcorymbosis vel rarius paniculatis, multis (4–20) floribus praeditis, supra medium divisis; pedicelli glandulis stipitatis valde inaequalibus numerosis praediti; rhachis parum flexuosa, saltem inferne sulcata et acutangula, pilis adpressis patentibusque brevibus mediocribusque densis vestita, superne glandulis stipitatis longis crebris praedita, aculeis crebris, valde inaequalibus (1–6 mm), patentibus vel declinatis vel deflexis, rectis vel curvatis vel falcatis munita, aliter primocannae similis. Flores magni et speciosi, (2·5–)3–3·5(–4) cm diametro. Sepala vivide viridia vel griseoviridia, albomarginata, dense coacta et pilosa, glandulis sessilibus numerosis stipitatisque paucis et aciculis paucis praedita, longe vel longissime attenuata, patentia tandem reflexa, et sub anthesi et post anthesin, vel nonnunquam in fructu erecta. Petala alba vel rarius subrosea, plana, rotundata (etiam nonnunquam unguiculata) vel ovata vel late obovata vel elliptica, pubescentia, apice saepe emarginato vel sinuato sparsim piloso, multo separata. Stamina alba stylos viridescentes vel rubros vel basi rubros superantia; antherae glabrae. Carpella dense pilosa. Receptaculum glabrum. Fructus globosi, deliciosi.

Plant robust. Primocane high-arching, bluntly angled with flat or furrowed sides, deep purple, turning blackish, pruinose, with frequent short and medium tufted hairs and fewer simple ones, few or frequent very unequal stalked glands and (sometimes gland-tipped) acicles, and few to numerous very unequal often gland-tipped pricklets; prickles c. 10–20 per 5 cm, sometimes in pairs, mostly confined to the angles, very unequal and grading into the pricklets, the longest 6–8 mm, slanting or falcate or some geniculate, gradually subulate from a flattened triangular base, red with a yellow tip. Leaves digitate; leaflets (4–)5, not or slightly imbricate, undulate on margin, dark green and glabrescent on the upper surface, light green to whitish and felted and/or with few to numerous adpressed medium simple and tufted hairs and prominent veins beneath; terminal leaflet 6·5–9 × 5–7 cm, round or roundish-ovate, with a gradually acuminate apex c. 1–2 cm, entire or emarginate at the base, unequally and sometimes finely uni- or biserrate dentate, usually with some patent principal teeth, the petiolule ⅓–¼ as long as the lamina; petiolules with frequent or numerous short-, medium- and long-stalked glands, few or frequent acicles of a similar size range, rare pricklets and 0–13 curved and falcate prickles which continue more than midway along the lamina midrib, the petiolules of the basal leaflets 2–5 mm; petioles equalling or slightly exceeding the basal leaflets, clothed and armed like the primocane. Flowering branch with 3-foliolate leaves below and 0–5 simple and lobed leaves above, often whitish-felted beneath, not leafy to the apex; inflorescence long, nodding, pyramidal or sometimes racemose, much interrupted below, truncate and sometimes equal and congested at the apex, the mid and lower peduncles distant, long (up to 22 cm), ascending or more rarely subpatent, subcorymbose or more rarely paniculate, with 4–20 flowers, divided above the middle; pedicels with numerous very unequal stalked glands; rachis slightly flexuous, furrowed and sharply angled at least below, with dense adpressed and spreading short and medium tufted and a few simple hairs, frequent long-stalked glands above and frequent, very unequal (1–6 mm) patent or declining or deflexed, straight or curved or falcate prickles,

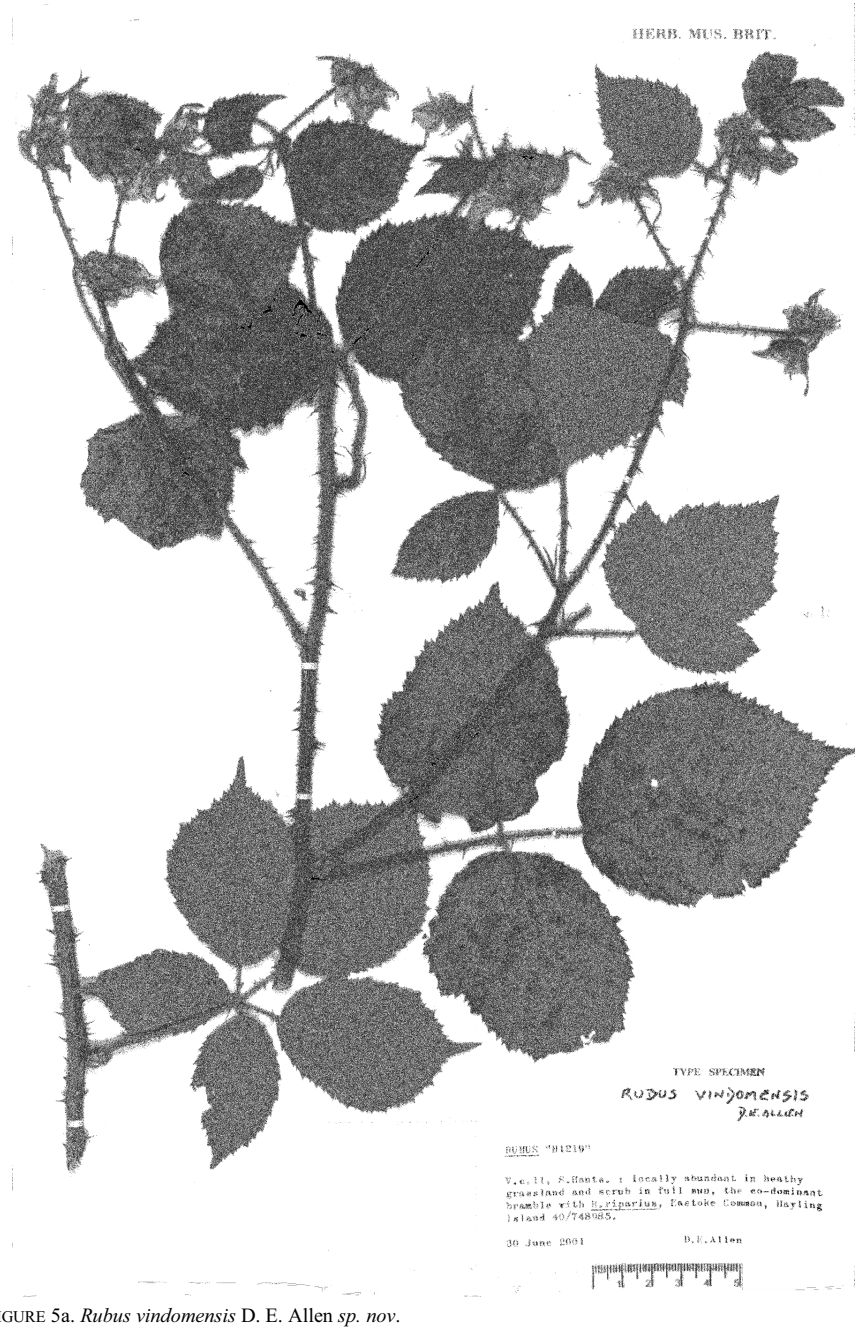

FIGURE 5a. *Rubus vindomensis* D. E. Allen *sp. nov*.

otherwise similar to the primocane. Flowers large and showy, (2·5–)3–3·5(–4) cm in diameter; sepals bright or greyish-green on external surface, clothed with dense stellate and numerous spreading simple and tufted hairs as well as numerous sessile and a few stalked glands and a few acicles, white-margined, the tips long or very long and sometimes leafy, patent becoming reflexed in flower and fruit or sometimes erect in fruit; petals white, less often pale pink, flat, 12–15 × 7–12 mm, roundish (and sometimes abruptly clawed) or ovate or broadly obovate or elliptical, with numerous short adpressed hairs on the dorsal surface but sparse ones on the other side, often notched or sinuate at the apex with a sparse fringe of medium short and tufted hairs, well separated; stamens long, exceeding the styles, filaments white, anthers glabrous; styles greenish or red or red-based; young carpels densely pilose; receptacle glabrous; fruit globose, delicious. Flowering from mid-June to mid-August.

HOLOTYPUS: Locally abundant in open heathy grassland and scrub, Eastoke Common, Hayling Island, SZ748985, South Hampshire, v.c. 11, 30 June 2001, *D. E. Allen* (**BM**). Isotypus in **NMW**.

REPRESENTATIVE OTHER EXSICCATAE:

v.c. 12, N. Hants.: Alice Holt Forest, locally abundant especially in Goose Green Inclosure, SU8040, 1968, *E. S. Edees 20154* (**NMW**); 2 Aug. 1977 and 18 July 1989, *D.E.A.* (**BM**). Abundant throughout various copses above Lower Froyle, SU7445, SU7545, SU7645, 18 July 1988, *D.E.A.* (**BM**). Clump by cross-paths, New Copse, Four Marks, SU686349, 30 July 2000, *D.E.A.* (**BM**). Along top of M3 embankment, Old Potbridge Road, Winchfield, SU753543, 25 June 2001 (**BM**, **NMW**, *herb. R. D. Randall*).

v.c. 23, Oxon: Heythrop Park, [near Chipping Norton, SP3626 or adjoining square], 1929–32 and 1936, *H. J. Riddelsdell* (**BM**).

This third robust member of ser. *Hystrix*, hitherto "H1219" (Fig. 5a), is readily told by its large, usually white flowers, long-tipped sepals, dark purple axes, typically round, acuminate, biserrate leaflets and long nodding inflorescences. It is mainly a bramble of the eastern half of North Hampshire, in which it has been noted in seven hectads (SU43, 54, 63, 73–75, 84) but with a strong concentration to the east and north-east of Alton, where it is abundant in woods and copses on the Clay-with-flints on the slopes above the valley of the infant River Wey, close to the border

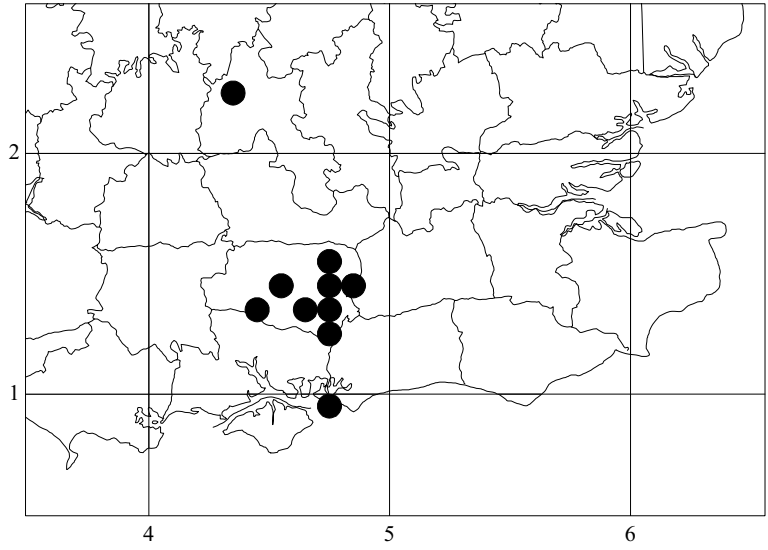

FIGURE 5b. Distribution of *Rubus vindomensis* D. E. Allen.

with Surrey, v.c. 17, into which it almost certainly continues in the neighbourhood of Farnham. Away from that core area the plant's North Hampshire occurrences are largely limited to a wide scatter of solitary, isolated clumps or patches, which peters out in the centre of the county north of Winchester. In addition, however, far to the south, nearly 40 km from the nearest other known locality, there is an unexpected large population on the coast at the south-east tip of Hayling Island (less than 2 km from West Sussex, v.c. 13). Even more anomalous, in this case far to the north and at a distance of nearly 100 km from the headquarters of the species, is a further population in the Oxfordshire Cotswolds sizeable enough to have yielded gatherings by Riddelsdell on five occasions in the course of eight years. This was in Heythrop Park, a large, well-wooded estate of long standing outside Chipping Norton. Numbers 2385, 2618, 3076, 3896 and 11537 of the former combined herbarium of Riddelsdell and W. C. Barton, now integrated with the general British collection in **BM**, the gatherings were successively determined by Riddelsdell as *R. saxicolus* P. J. Mueller, a species then erroneously thought to be British, and 'aff.' the East Anglian *R. lintonii* Focke ex Bab. All are unquestionably identical with the Hampshire plant. Whether this Oxfordshire outlier is part of a more extensive occurrence in the Cotswolds has yet to be investigated. Of possible relevance in that connection, as a part-way 'stepping-stone', is a further find – though of a mere solitary and perhaps transient clump – on the roadside margin of The Chase (SU438618), an ancient wood rich in rare *Rubus* species in the north-west corner of Hampshire just south of its border with Berkshire, v.c. 22, outside Newbury (Fig. 5b).

The species is named after Vindomi, a *mansio*, or posting station, mentioned in the Antonine Itinerary and credibly suggested (Rivet 1970, p. 61; Millett & Graham 1986, p. 158) as identical with a large Romano-British settlement recently found and excavated on the eastern outskirts of Alton.

ACKNOWLEDGMENTS

Alan Newton has examined on different occasions material of each species described in this paper and seen three of them in my company in the field. Len Margetts has similarly examined at my request material of *R. pydarensiformis*, and Herman Vannerom material of *R. clausentinus* and *R. milesianus*. I thank each of them for their assistance in these connections. I am also indebted to Philip Oswald for assistance with the Latin diagnosis and descriptions, to Arthur Chater and Philip Oswald for advice on a point of orthography, to Roy Vickery for arranging the taking of the photographs and especially to Martin Sanford for producing the maps.

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