Notes

THE ENIGMA OF MONTANE *SAGINA MARITIMA* Don

Last September I collected a group of *Sagina* seedlings from a roadside at 300 m altitude on Shap Fell, Cumbria near plants of *Sagina nodosa.* On cultivation I thought that they would turn out to be the latter but I was very surprised to find that they produced plants of *S. maritima.* Michael Braithwaite had already given intimation of this species occurring as a roadside halophyte up to 350 m on roadsides in Berwickshire (Braithwaite 1997). As it is a plant I rarely see, I consulted my Floras and was intrigued to see that it is given as a mountain plant in Scotland. Clapham, Tutin and Warburg (1952) state: "occasionally on Scottish mountains to 4000 ft. (var. *alpina* Syme)". This statement was unchanged in the second edition (1962). Clapham, Tutin and Moore (1987) had modified this to: "occasional on Scottish mountains to 1200 m." Flora Europaea (1964) followed CTW stating that it occurred "occasionally inland, and on mountains up to 1300 m in Scotland." However the second edition of Flora Europaea (1993) had changed this to: "rarely on mountains in Scotland." The most recent references give its montane status as: "rarely slightly inland on mountains in Scotland." (Stace 1997) and "rarely inland on salted roads or on mountains in Scotland" (Stace 1999). Raven and Walters (1956), when discussing the difficult taxonomy of mountain pearlworts in the British Isles, state that: "to make matters worse, there is even a mountain form of Sea Pearlwort (*S. maritima)* which is said to occur, notably on Ben Nevis at altitudes up to 4000 ft."

Older references on which these recent ones are obviously based are naturally much more specific. William Hooker (1821) states: "*Sagina maritima*: on Ben Nevis. This very distinct species of *Sagina*, first discovered by the acute Mr G. Don, has been for many years known as a native of the coast of Ireland, where it was detected by my learned friend R. Brown Esq. In England too it is not infrequent". J. D. Hooker (1884) states under *S. apetala* subsp. *S. maritima* Don. var. *alpina,* Syme: "Top of Ben Nevis, *Don"*. Williams (1909) gives an interesting historical account of this species listed under *Sagina stricta* Fries. He notes its discovery by George Don on the summit of Ben Nevis in 1794 and again in 1803, although he states that we have only his son David Don's word that his father found it again on the later occasion. It was described by Don as a new species in 1810, (1806 on title page). Material collected by him in 1794 is in **BM** and the collection of 1803 in **LINN-SMITH.** It was from cultivated plants grown by Don from his collection of 1794 that plate 2195 by J. Sowerby in J. E. Smith's "English Botany" (Smith 1790–1814) was drawn (Garry 1903). The Royal Botanic Garden, Edinburgh has a set of Don's fasicles including number 155, *Sagina maritima.* (D. McKean, pers. comm.). The label accompanying the specimen gives the following localities and habitat. "On the sea coast, not infrequent, in Angusshire, Isle of Skye, near Aberdeen, Queensferry, and Edinburgh." There is no mention of Ben Nevis. Although credited to Don, it was Robert Brown who first described (in MS. only) *maritima* in 1797 as *Sagina maritima* Nost. from specimens collected in 1795–7 from the coast at Ballycastle and Larne in Antrim, Northern Ireland (Britten 1888), and Browns's specimens from Ireland were received by Sir J. E. Smith for "English Botany" in 1799 (Garry 1903). Babington (1881) describes the various forms of *S. maritima* and mentions that: "Fries states that this plant sometimes occurs upon mountains in Norway; and G. Don seems to have found it on Ben Nevis".

H. C. Watson must have had reservations on Don's discovery. In Topographical Botany (1837) he makes a reference to *Sagina maritima* casting doubt on Don's find: "may not the latter locality (Ben Nevis) be referable to *Sagina saginoides?"* and makes no mention of it as a montane species in his Cybele Britannica (Watson 1847) where he states: " but the species is even yet only imperfectly understood by English botanists." In his Topographical Botany (1883), Ben Nevis in v.c. 97 is given in brackets. More recently, Albert Wilson (1956) in his comprehensive work on altitudinal data of British and Irish plants makes no reference to Don's *S. maritima* on Ben Nevis and quotes Druce's altitude of 300 ft (91 m) in "Zetland" as the altitudinal limit.

Druce appears to have had some reservations about Don's find. He gives details of the species British distribution including a queried Ben Nevis record in his Comital Flora (Druce 1932). He attempted to refind Don's plant on Ben Nevis but was defeated by cold and driving rain and was

unsuccessful (Williams 1909). He was sure he collected identical plants "which appeared to be Don's *Sagina alpina*" (presumably *S. maritima* var *alpina* Syme.) from Coire an t-Sneachda and elsewhere in the Cairngorms and Arthur Bennett agreed with him (Druce 1892). However he was almost certainly mistaken as Williams (1909) noted that these plants had sepals equalling the petals. Presumably these plants were *S. saginoides* or *S.* × *normaniana* which are both recorded from this corrie (Webster 1978). *S. maritima* is always apetalous or minutely petaloid. Elliston Wright (1938) stated that he was sure that a *Sagina* he collected from the Ben Lawers area was *S. maritima*. However when cultivated it grew to be *S. caespitosa* (now *S. nivalis*). He further stated that: "he should not be willing to accept the validity of any plant from such an inland mountain habitat as *S. maritima* without the opportunity of growing it or examining the seed". There is an interesting reference in Wilson (1938) where the "var. *alpina* Syme (of *S. maritima*) is recorded from Helvellyn at 3000 ft. in *Black's Guide to the English Lakes*, 1882. Confirmation is needed". It has never been seen there since and can be discounted as an error and was ignored by Halliday (1997). The mainland Inverness-shire survey of 1970–75, which covers the Ben Nevis range (Hadley 1985), mentions Don's record but makes no further mention of the plant which was presumably not found during the survey.

My attempts to confirm literature records of it as a montane species in Europe have been unsuccessful. Hultén (1950) does not show it away from the coast in Fennoscandia and Lid (1963) makes no mention of it occurring on mountains there. The relevant map in Jalas & Suominen (1983) shows it as a native coastal plant species there and in the rest of Europe. Although its northern range has recently been extended to 69° North latitude on the coast in Troms in northern Norway (Engelskjøn & Skifte 1995), it does not reach the true Arctic and is absent from the Faeroes and Iceland. Polunin does not include it in his Circumpolar Arctic Flora (Polunin 1959).

All the references to *Sagina maritima* occurring as a montane species appear to be based almost solely on George Don's two collections from Ben Nevis in 1794 and 1803. To my knowledge no one has ever seen it there again nor have there been confirmed reports of it from montane localities elsewhere in the British Isles or indeed in Europe. Don described this species as new to science from these collections so the identity of the species is not in doubt and there is supporting herbarium material. The history of this species occurring on mountains therefore became firmly established and accepted by most of the botanical establishment. However it is not a montane or arctic species and being an annual, would have difficulty maintaining a population under the severe climatic conditions at over 1200 m altitude. It is known that Don's garden contained a remarkably large stock of plants, a catalogue at that time listing over 2000 species and it is recognised that mistakes in the provenance of some of the plants were made Roger (1986). Don knew the plant from coastal localities and I believe that the plants of *Sagina maritima* thought to come from Ben Nevis were actually from coastal sites. It is an odd plant to grow in a garden and one which self seeds so readily it could spread well outside its allotted space and appear in areas labelled for other species. As 200 years have passed with no confirmed reports of it being seen on Ben Nevis again or as a montane species elsewhere in the British Isles or Europe, I feel that any further references to *Sagina maritima* as a plant of the Scottish mountains should be omitted from the Floras and doubt expressed as to its past occurrence on Ben Nevis.

ACKNOWLEDGMENTS

I would like to thank Douglas McKean for helpful discussion and Sandy Payne and Gordon Rothero for their comments.

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OBSERVATIONS ON INTROGRESSION BETWEEN *CAREX NIGRA* AND *CAREX BIGELOWII* (CYPERACEAE)

My interest in *Carex bigelowii* Torr. ex Schwein. was stimulated when I noted that the first Atlas of the British Flora (Perring & Walters 1962) gave *C. bigelowii* as erroneously recorded for v.c. 80 (Roxburghshire). When George Swan found it new to v.c. 67 (South Northumberland) on Peel Fell in 1970, I felt it must occur in v.c. 80 as this hill straddles the national and county boundary. Sure enough the sedge was locally abundant on the summit area extending well into v.c. 80. As there were no other records for this circumpolar Arctic-montane species for v.c. 79 (Selkirkshire) and v. c. 80, and as this biogeographical element of the flora is absent apart from *Thalictrum alpinum* L. in these two vice-counties, I felt it was worth looking for in a systematic way and was soon able to confirm its presence on several of the higher hills in both vice-counties descending as low as 500 m in two localities.

In 1997 Arthur Chater produced information on the distribution of stomata on *Carex* leaves including *C. nigra* L. and *C. bigelowii*. The stomata are easily visible especially on fresh material with a 10 × or 20 × hand lens as tiny white dots and can be visualised in herbarium material by removing the leaf epidermis and examining it under the microscope. *Carex nigra* has the upper leaf surface densely covered with stomata with none or only a few scattered on the lower surface of the leaf whereas *C. bigelowii* has no stomata on the upper leaf surface but the lower surface is densely covered. I checked my collections of *C. bigelowii* and although the great majority of the material had no stomata on the upper surface of the leaves, there were some plants resembling *C. bigelowii* with abundant stomata on both leaf surfaces. These latter plants had puzzled me in the

field as they were not quite typical of *C. bigelowii* and it struck me that these plants could be hybrids with *C. nigra.* I revisited some of the populations and cultivated plants from three separate ones. They are all fertile with good pollen. Although two of the populations appear identical, the third is a more robust plant. I also cultivated a plant which resembled *C. nigra* which also had stomata abundantly on both leaf surfaces and it too has produced good pollen and was fertile.

Chromosome studies and experimental hybridisation have been carried out by Faulkner on *Carex s*ection *Acutae* which includes the two species under discussion (Faulkner 1972, 1973). He was able to synthesise hybrids which were partially fertile and also produced some fertile backcrosses, although Stace (1975) states that wild populations of the hybrid *C.* × *decolorans* are sterile. I believe the fertile populations I have found are more likely to have arisen from introgression by repeated back crossing of *C. nigra* and *C. bigelowii* probably over a long period of time. This has resulted in a range of variation of fertile plants resembling the parents at each end of the spectrum and probably explains the origins of plants described in the literature as montane forms of *Carex nigra.* The broad field character differences are given in Table 1.

TABLE 1. BROAD DIFFERENTIAL FIELD CHARACTERISTICS FOR INTROGRESSED PLANTS OF *CAREX BIGELOWII* AND *C. NIGRA*

Character	Plants resembling *C. bigelowii*	Plants resembling *C. nigra*
Rhizomes and scales	Rhizomatous with purplish scales	More tufted with paler scales
Leaves	Relatively broad with upper surface strongly ribbed	Relatively narrow and less strongly ribbed
	Apices with relatively short trigonous points	Apices with long attenuated trigonous points
Inflorescences	Stems relatively stout	Stems relatively slender
	Male spike with short pedicel	Male spike with long pedicel
	Female spikes contiguous	Female spikes more widely spaced
	Subtending leafy bract usually shorter than inflorescence	Subtending leafy bract equalling or longer than inflorescence

It is essential to examine the distribution of the leaf stomata first before looking at the general morphology of the plants in order to check the possibility of hybridisation or introgression. The total lack of stomata on the upper leaf surface of *C. bigelowii* holds true. In the field this gives the leaf surface a shiny appearance compared with the dull leaf surface of introgressed plants. Plants resembling *C. bigelowii* are far more likely to attract attention in the field than introgressed plants resembling *C. nigra.* The former look different from "good" *C. nigra* whereas plants resembling *C. nigra* do not stand out from such a common, variable and widespread species. Listed in Table 2 are the sites where I have recorded these plants. Herbarium material is in **Herb. RWMC**.

My observations of the "hybrid" are virtually limited to the rounded and rather featureless hills of South East Scotland and the Northern Pennines where blanket bog and acid grasslands dominate the terrain. *Carex nigra* is very common in the wetter sites whereas *C. bigelowii* is more local in the drier and higher parts of the hills. It does not occur below 500 m. Of the 22 sites I have listed for the "hybrid", 73% had *C. bigelowii* at or close to the sites. On Cauldcleuch Head in v.c. 80 where the "hybrid" was especially common, the habitat was shared with large beds of dominant *Luzula sylvatica* which, because of their vigour and extent, gave the appearance of almost overwhelming the habitat. The topography of these hills probably favours hybridisation by allowing good populations of the parent species to grow close to one another. More rugged terrain with fewer populations of *C. nigra* may perhaps help to keep the populations apart. The advent of blanket afforestation in parts of Southern Scotland and the cessation of grazing above the planted tree line has allowed *C. bigelowii* and *C. nigra* together with the "hybrid" to grow with uncropped leaves and to produce conspicuous inflorescences. Plants of *C. bigelowii* with inflorescence stems 40 cm long have been seen. This ungrazed growth has made it possible to examine the plants much more easily and has helped to postulate the idea of introgression. It was originally thought that the

TABLE 2. A. LOCALITIES OF INTROGRESSED PLANTS RESEMBLING *C. BIGELOWII.* * DENOTES THE PRESENCE OF *C. BIGELOWII* AT OR CLOSE TO THE SITE.

Vice-county	Locality	O.S. grid reference	Altitude (m)	Date(s) of collection
67	Limestone Knowe, Carter Fell	NT673020	540	26.6.1993
*67	Peel Fell, Kielder	NY624996	600	11.9.2001
*70	Ashness Fell, E. of Alston	NY767395	530	20.5.1999
*70	Great Dodd, Matterdale	NY3521	670	10.8.1999
*70	High Scar, Melmerby Fell	NY6634	600	11.7.1999
72	Arkleton Hill, Ewes Water	NY408926	500	14.4.1996
*75	Cairn Table, Muirkirk	NS724244	533	15.9.1986
75	Hare Hill, Afton Water	NS655097	590	20.8.1995
*78	S. of Pikestone Hill, Manor Water	NT171307	670	10.11.1984
*78	The Scrape, Manor Water	NT176325	715	10.11.1984
*78	Windlestraw Law, Innerleithen	NT364424	625	14.9 2001
79	The Wiss, S. of St Mary's Loch	NT264206	580	1984 & 28.8.1998
*80	Carlin Tooth, Wauchope Forest	NT630025	540	22.9.1990
*80	Cauldcleuch Head, Teviothead	NT461109	580	1981 & 30.7.1999
*80	W. of Cauldcleuch Head, Teviothead	NT450010	550	30.7.1999
80	Hartsgarth Fell, Newcastleton	NY447941	530	1981 & 24.5.1998
*80	Peel Fell, Wauchope Forest	NT624999	580	1972 & 11.9.2001
80	Roan Fell, Newcastleton	NY451921	550	1971 & 21.4.1974
*80	Starcleuch Edge, Greatmoor Hill, Teviothead	NT483008	550	1981 & 26.7.1999
*111	S. of Peerie Water, Rousay, Orkney	HY495291	152	5.8.1987

B. LOCALITIES OF INTROGRESSED PLANTS RESEMBLING *C. NIGRA.*

Vice county	Locality	O.S. grid reference	Altitude (m)	Date of collection
*65	Widdale Little Tarn, Great Knoutberry Hill, Hawes	SD7988	625	30.5.1984
*72	Wisp Hill, Teviothead	NY387992	590	26.9.1999

C. bigelowii-like plants were *C. nigra* × *bigelowii* (*C.*× *decolorans*) as a result of simple hybridisation but the fertility and production of good pollen complicate the picture and the variation in the morphology of the populations makes introgression much more likely. Much of the variation in montane *C. nigra* is probably the result of introgression with *C. bigelowii.* I believe that these introgressed plants are almost certainly widespread in montane sites where *C. bigelowii* and *C. nigra* occur, especially where their populations are in relatively close contact. Where these "hybrids" are found in areas where *C. bigelowii* is absent, it may mean that the latter was present at one time but has now become extinct. Although it is a strong competitor and able to withstand centuries of prolonged and intensive grazing, some of the populations of *C. bigelowii* seen were very small. There is no doubt that both it and the "hybrid" benefit from the lack of grazing. It should be stressed that this work is based purely on field observations and no experimental evidence of introgression has been produced. Further studies are required on the morphology of these hybrid plants and on their distribution. Modern molecular techniques may help to clarify the situation.

ACKNOWLEDGMENT

I wish to thank Arthur Chater for his kind encouragement and help in the preparation of this note.

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A THIRD LIST OF BRITISH SPECIES OF *RUBUS* L. (ROSACEAE) IN NORTH-WEST FRANCE

The *Rubus* flora of those portions of France closest to England was almost unknown to British specialists in the genus until very recent years. Although the Low Countries have been explored intensively by Dutch and Belgian batologists, the loss of interest in the genus among botanists in France since the 1940s has resulted in continuing uncertainty about the true extent of *Rubus* endemism in Britain as well as about the range limits of those British species already known to occur on the other side of the Channel.

Two lists have now appeared (Allen 1996a, 2000) reporting some of the results of a series of forays in this connection into certain of the nearer parts of Normandy and Brittany. In the meantime exploration has been taken further southwards and westwards, to the region of the middle Loire on the one hand and to the far west of Brittany on the other, and the results of this are now due for reporting in turn. To these can be added some new records of interest that have come to light in herbaria.

In this latest list, as in its predecessor, species recorded for the first time from mainland Europe are highlighted with an asterisk, while an obelisk (†) against a locality indicates the material from there has been seen, and the determination assented to, by A. Newton. In the case of *départements* renamed in recent years the previous name is adhered to for the sake of consistency with earlier records – by analogy with the vice-county system of Britain and Ireland. Specimens have all been lodged in **BM** apart from one or two duplicates donated to **NMW**. Except where indicated the records are my own and date from 1999 or 2000.

R. riparius W. C. Barton ex Newton Orne: a third population – well to the south of the two reported earlier from the 'Suisse Normande' in Calvados – in an unconiferised fragment of the Forêt des Andaines opposite the Manoir du Lys outside Bagnoles-de-l'Orne.

**R. ramosus* Bloxam ex Briggs Finistère: a colony in heathy scrub at 180 m on the east margin of the Forêt Communale d'Argol about 4 km east of Ménez-Hom†. Long known round Plymouth, this species is still unrecorded in Britain other than in Cornwall, Devon and the westernmost tip of Dorset.

R. hylophilus Rip. ex Genev. Loir-et-Cher: Forêt de Montrichard, one patch. (The Falaise record in the previous list should be deleted; the specimen has proved to be of some other, non-British species).

R. adscitus Genev. This western species is still impressively plentiful, despite its mainly submaritime range, in forests in *départements* as close to the centre of France as Indre-et-Loire (Forêt d'Amboise) and Loir-et-Cher (Forêt de Montrichard). On the other hand its penetration of Brittany is as unexpectedly truncated as it is of Cornwall: in the west of Finistère, as in v.c. 1, it all but disappears, relatively abruptly, seemingly intolerant of their more oceanic conditions.

**R. longus* (Rogers & Ley) Newton Manche: locally common on a heath margin, la Pernelle, near Quettehou, 1991† ("fairly sure" but some lingering doubt - A. N.)

**R. aequalidens* Newton Côtes-du-Nord: single patches in three widely-separated localities along the Côte de Granit Rose†.

R. fuscoviridis Rilstone Finistère: one bush in lane near the coast south of Tréfeuntec, 3 km west of Plonévez-Porzay†. Previously known (outside Britain) only near Cherbourg, in Normandy.

**R. hastiformis* W. C. R. Watson Côtes-du-Nord: widespread, in several places in abundance, north from Trébeurden along the Côte de Granit Rose† (where, unexpectedly, several western species common elsewhere in Brittany and in parts of Normandy are rare or absent). Finistère: plentiful on the margins of a valley wood 2 km east of St.-Thégonnec.

R. melanodermis Focke ex Rogers Extends to far west Brittany, where it is locally abundant in at least one place in Finistère†.

R. raduloides (Rogers) Sudre Côtes-du-Nord: Forêt de Coat-an-Hay, near Guingamp, one patch only. The westernmost find.

R. trichodes W. C. R. Watson Aisme: Bois de Crépy en Valois, 1939, J. Arènes & G. Didier (Ronces Gauloises, fasc. 9, no. 1170, as *R. pallidus* var. *crispulifolius* Sudre: **BM**†). New to France, but known already in Belgium.

**R. adamsii* Sudre Orne: Forêt de Bellême, in quantity in open heathy scrub†.

R. longithyrsiger Lees ex Focke Local to abundant in woods in the Cotentin Peninsula of Normandy (1998) and along the far north and far west peripheries of Brittany, but elsewhere seen only in a chestnut copse near La Bazoge in Sartre (and there only one bush).

**R. peninsulae* Rilstone Côtes-du-Nord: frequent in Le Grand Traouïéro (the longer of two deep wooded coombes between Trégastel and Ploumanac'h), especially towards the upper end†.

R. asperidens Sudre ex Bouvet To the group of *départements* in Anjou can now be added Ille-et-Vilaine to the west (wood on E50 about 10 km south-east of Vitré) and Orne to the east (Forêt de Bellême, one clump – confirming the rarity of this species in Normandy). The claim by Watson (1958) to have seen material from Seine-et-Oise of *R. adenolobus* W. C. R. Watson, recently shown to be synonymous with this species, after being earlier discounted (Allen 1996b), has turned out to be supported by specimens in **SLBI**, received by him from Didier.

**R. bercheriensis* (Druce ex Rogers) Rogers Loir-et-Cher: Forêt de Montrichard, abundant throughout†.

R. scabripes Genev. Orne: Forêt de Bellême, one patch.

R. tamarensis Newton Loir-et-Cher: one patch in an oakwood clearing (roost casual?), park of Château de la Menaudière, Montrichard†. Previously known only in central Normandy, far to the north.

**R. vigursii* Rilstone Manche: three bushes in hedge of D122 south of La Glacerie Église crossroads, near Cherbourg, 1987†.

Also worthy of mention is an unnamed member of series Radula (Focke) Focke locally common in the Forêt de Coat-an-Hay, near Guingamp (Côtes-du-Nord), which was seen only a few days later in S. Devon, v.c. 3 (a patch among bracken by Burrator Reservoir†). This will merit description should it prove to have a wider range in either country.

These latest additions, together with further ones made in the meantime by H. Vannerom in Belgium, A. van de Beek in The Netherlands and G. Matzke-Hajek in North Rhine-Westphalia in Germany, raise to 47 the number of indigenous species believed to be endemic to the British Isles at the time of the monograph by Edees & Newton (1988) that have since been detected in mainland Europe. As the interpretation of endemism adopted in that work embraced species with ranges extending to the Channel Islands, territory which could be regarded as classed more properly with mainland Europe, the total is arguably somewhat greater. On either reckoning, the post-1988 discoveries on the mainland are sufficient in number to alter the ratio between endemics and non-endemics very markedly, to a point where the two categories are currently almost equal in size, as shown in the table below:

TABLE 1. RUBUS SPECIES ENDEMIC TO THE BRITISH ISLES

	Edees & Newton (1988)	added since	total	% endemic
No. of indigenous species	299	35	334	
Endemic (on present knowledge) to:				
British Isles	163	23	186	56%
Britain & Ireland & Isle of Man without Channel Islands	156	19	175	53%
Britain only	154	18	172	52%

These figures still slightly exaggerate the proportion of endemism, for the 299 included a number of species with ranges so narrowly local that they would not qualify for taxonomic recognition on the more stringent criteria observed in European batology today. Precisely how many belong in that category is open to argument, but 12 might be a reasonable minimum. Offsetting that figure, though, are currently several more species, including some in Ireland, with 'regional' distributions that entitle them to be described in the not-too-distant future. Thus, even if species supposedly confined to Britain and/or Ireland continue to be detected on the European mainland in some numbers, the ratio of endemics to non-endemics may not alter significantly for quite some time to come.

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NOMENCLATURAL COMPLEXITIES IN PUBLICATIONS OF SUDRE AND BOUVET ON *RUBUS* L. (ROSACEAE)

Thirty-one species of *Rubus* currently accepted as occurring in Britain (and in three cases in Ireland as well) owe their names, solely or in combinations, either to Sudre, the foremost authority on the group in Europe during the first two decades of the twentieth century, or to his principal regional collaborator in France, Bouvet, who had been studying *Rubus* in the province of Anjou over a long period of years. Most of these names were published before 1907 and have proved unproblematic. In that year, however, apparently in deference to Sudre (with whom he had entered into frequent correspondence), Bouvet departed from his practice up till then of using the species as the standard rank in the group and took to employing a hierarchy of subordinate ranks as well. A more elaborate version of that hierarchy, including the novel rank of 'microgene', was then published by Sudre (1908–13). In contrast to their previous publications, these later ones are all too easy to misinterpret nomenclaturally, for a variety of reasons.

Foremost among those reasons is these authors' reliance on different typefaces to indicate the subordinate ranks. Though Sudre provided a key to those used by him on page 7 of the introduction to his monograph (where it is liable to be overlooked by the uninitiated), Bouvet's intended ranks can be established only from internal evidence in successive papers of his. Unique to Bouvet is the further trap that he used the word 'espèce' in a generalised sense, analogous to the present-day 'taxon' or 'morphotype'. Sudre in his turn published certain names initially in a series of printed notes issued in conjunction with his 1903–17 set of exsiccatae, *Batotheca Europaea*, but in citing those names subsequently he failed to make clear that his references are to the page numbers of the notes and not to the individual exsiccatae. Not all institutions in possession of the *Batotheca*, moreover, appear to have received or at least retained the series of notes, much less placed them with the specimens to which they relate. To complicate matters still further, the two authors interpreted differently their respective roles in cases where Bouvet anticipated Sudre by describing a taxon on his behalf. In place of Bouvet's 'Sudre in litt.' Sudre invariably wrote in those cases 'Sudre in Bouvet' (which Bouvet himself adopted subsequently). As a result the authorship of the names in question has been wrongly credited to Sudre alone in everyday usage. In fact it was Bouvet who was the author validating these names, which should accordingly be attributed to 'Sudre ex Bouvet'.

Most of the taxa exposed by these idiosyncrasies and pitfalls to misinterpretations in nomenclature are probably restricted in range to the European mainland, but two that occur in the

British Isles are currently listed under names that have turned out on closer scrutiny to be in use at ranks differing from those at which the taxa were described originally. If these are to be treated as species, as now conventional in *Rubus*, some minor adjustments in nomenclature are accordingly necessary.

R. asperidens Sudre ex Bouvet is one of the names. In an earlier note (Allen 1996), reporting the identity of the British species latterly known as *R. milesii* Newton with a French bramble bearing that prior legitimate epithet, Bouvet's use of the words "cette espèce" in the protologue was taken as indication that he intended specific rank for the new taxon he described. Fuller study of Bouvet's practices has since shown that assumption to be unsustainable. The particular typeface allotted to the new bramble is the one he employed in that paper for subspecies, and it was at that rank under *R. koehleri* Weihe that it is now clear that it was placed. That subsequently Sudre (1912) treated it as a subspecies too, unambiguously, adds strength to that conclusion. Later, however, after finding the bramble rather common in Anjou, Bouvet (1923: 8) decided it deserved promotion to a species – and this time, by placing Sudre's name in brackets and also citing the subspecific name in synonymy, made the intended rank quite explicit. The correct citation at species level is thus *R. asperidens* (Sudre ex Bouvet) Bouvet.

The second name, *R. subopacus* Sudre, was first introduced into the British Isles list by Druce (1928), though at varietal level under *R. subintegribasis* Druce, a purely nomenclatural transfer that has never found support on taxonomic grounds. Its current use at specific rank dates from Watson (1946). Previously, *Rubus* specialists in Britain preferred to call this bramble (long known in parts of Cornwall and Devon, v.cc. 1–4) by the name under which it was distributed (as no. 106) in the 'Set of British *Rubi*': *R. nitidus* subsp. *opacus* fa. *minor*. A description of the taxon was supplied by Rogers (1900) shortly after that distribution. Subsequently Sudre (1904) identified no. 106 of the Set with a bramble from dép. Maine-et-Loire of which he had received material from Bouvet, and that was followed (Sudre 1908) by his pronouncing it identical in turn with specimens seen by him from two more *départements* further west, in Brittany. This trans-Channel distribution seemed to warrant a rank higher than that of a mere forma but, perhaps under a misapprehension that that name had not been published, Sudre avoided using the epithet *minor* as the basionym and decided on a different one. In the event this new name was first published, with an accompanying description, by Bouvet (1907), citing 'Sudre in litt.', and not by Sudre, as subsequent authors have been misled by Sudre (1908) into supposing. What is more, contrary to more recent British usage, Bouvet published the new taxon not as a species but as a variety. This is evidenced by his employment of the lower-case italics he elsewhere used for that rank, by the words "var. *subopacus*" on the line above the description and, most conclusively, by his listing of the new taxon in that form in a "*tableau synoptique*" which he appended to his paper by way of a summary. Sudre in turn retained the taxon at that rank. Later, presumably in the light of the trans-Channel distribution that Sudre had meanwhile claimed to have detected, Bouvet (1911) opted for a higher rank but, by leaving it unclear whether that was to be a subspecies or a 'microgene', rendered the intended promotion invalid. His contemporary counterparts in Britain might have taken a similar view, or perhaps preferred to raise the taxon to a species, but Sudre's lack of acquaintance with British *Rubi* other than as herbarium specimens – and commonly single ones at that – and some of the manifestly dubious taxonomic conclusions reached by him as a result (Riddelsdell 1923, 1930) were seen by them as good reason to treat his determinations with reserve. For many years afterwards, therefore, they adhered to fa. *minor*. That was unavailable as a basionym, though, had they wished to promote it to a species, for the epithet was preoccupied at that rank by a Chinese taxon described by Kuntze (1879).

A bramble with so narrow an Anglo-French range is likely to have received mention only in the French or British literature. Subsequent French students of *Rubus* adhered to Sudre's nomenclature so faithfully that any promotion of this taxon to specific rank by one of them is hardly to be expected. As no employment of the name at that rank by a British author prior to 1 January 1935 has been discovered, and no formal and valid publication to that effect after that date would appear to have taken place, the requisite new combination is accordingly now made:

R. subopacus (Sudre ex Bouvet) D. E. Allen, **stat. nov**.

BASIONYM: *R. nitidus* var. *subopacus* Sudre ex Bouvet, Bulletin de la Société d'Études scientifiques D'Angers n.s. **36**: 7 (1907).

ACKNOWLEDGMENTS

I am indebted to Arthur Chater, Charles Jarvis, Günter Matzke-Hajek and Norman Robson for guidance on certain of the points in this note, and to Clive Stace for a number of helpful suggestions.

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RANGE EXTENSIONS FOR *RUBUS RHOMBIFOLIUS* WEIHE EX BOENN. AND *RUBUS BABINGTONIANUS* W. C. R. WATSON IN EAST ANGLIA

At the time of publication of *Brambles of the British Isles* by Edees and Newton *Rubus rhombifolius* had only one record in the whole of East Anglia and, until recently, the source of that record could not be traced. However, whilst transferring old records from the late E. L. Swann's card index, Mrs G. Beckett came across an entry for this species "B.S.B.I. excursion to Roydon Common (near Kings Lynn) v.c. 28, 1964, Miss K. Marks." For many years now, the present author has plotted a *Rubus* species in Norfolk, which had baffled the late E. S. Edees as well as A. Newton and at one stage a specimen was sent to Prof. H. E. Weber in Germany. Always on poor soils in Breckland and often in shaded conditions, the plant did not seem to tally completely with any known taxon and was code-named 'Breckland 1'. During the summer of 2001, whilst plant recording with a party for a forthcoming Flora of Suffolk, the plant was found growing in some abundance by the road along the edge of Thetford golf course which is in v.c. 26, West Suffolk. Though the panicles were still round topped and compact, with short pedicels, the bushes were robust and strong and the leaves were clearly white felted beneath, a characteristic which had only been dubiously present in a few specimens hitherto, though most gatherings did have at least a few hairs on the anthers.

As this record was new to the vice-county, and was reinforced by a second about five miles away at Brandon, a further gathering was sent to A. Newton who, after considerable deliberation, named the sheet as *Rubus rhombifolius* and admitted specimens previously gathered from TL78, 79, and 89, the present specimen being in TL88. A further recently named sheet collected in 1972 from Holt Lowes, v.c. 27, TGO3, and specimens from the above hectads are all in **herb. A. L. Bull**. A. Newton suggests that the Breckland form of *Rubus rhombifolius* is accounted for by the very arid conditions in which it is always found growing in Breckland.

Rubus babingtonianus has always been recognised as a Cambridgeshire endemic, though it has been suggested that one of the dots in Edees and Newton, either TL64 or 66 (Haverhill or Newmarket areas) may refer to a specimen collected from a site just in v.c. 26, West Suffolk. Be that as it may, *Simpson's Flora of Suffolk* does not mention the species at all, even though E. S. Edees had a week visiting every corner of the county for this Flora in 1965.

In 1997 specimens were collected from a site at Snailwell, v.c. 29, having received a grid reference from A. Newton and, though an eye was kept open for it subsequently, nothing further was found until 2001 when a visit was paid to collect a requested specimen of another *Rubus* from a known site at Barton Mills TL77 v.c. 26 when a low growing thicket of *Rubus babingtonianus* was found just a few metres away. On the same recording meeting that led to the discovery of *Rubus rhombifolius* above, the present taxon was discovered in the Horse Meadows at Thetford, v.c. 26, and two weeks later a further colony was found in TL78 at Fenhouse Drove, Lakenheath.

Finally, whilst visiting Thompson Common, v.c. 28, West Norfolk, TL99, during mid-August, a colony was found at that site, just about doubling the previously known range for this species. All specimens have been agreed by A. Newton and are in **herb. A. L. Bull**.

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