Short Notes

REDISCOVERY OF THE HERBARIUM OF T. B. FLOWER

Thomas Bruges Flower (1817–1899), who carried out much field-work particularly in Somerset and Wiltshire in the middle years of the last century, formed a valuable herbarium which hardly any of his contemporaries were ever privileged to set eyes on. A conservationist before his time, he preferred not to disclose the localities of rarities that he had discovered and – as White (1912) and Grose (1957) were later led to conclude – was intentionally inaccurate in imparting the details of these to others. Only on the sheets in his herbarium, it has been supposed, were the data entered up correctly; and it has therefore been a matter of intense frustration to subsequent Flora writers that the collection, last reputed to exist in 1937 (Grose 1944), has not been available for study and latterly has appeared to have been lost.

Flower was also an enthusiastic collector of botanical manuscripts and is known to have acquired those of the Bath apothecary William Sole (1741–1802), the author of *Menthae Britannicae*. In 1974 one of us (H.S.T.) started a search for these, which are on record as having passed originally from Sole to his friend, the Rev. Benjamin Richardson, a geologist of Farleigh Hungerford, Somerset (Jenyns 1867: 57). From the Richardson family they subsequently passed in turn to the Flower family, according to Simpson (1960), who cites the W. Bowles Barrett MSS at Weymouth Public Library as his source for this statement. In checking this, a 'Botanical Common Place Book' of Barrett's was also found, on f. 79 of the second volume of which he had noted: "Mr Flower left his herbarium and botanical books to the father of Mr [name left blank]. Mrs Harper believes that his [sic] father intends to present them to the Plymouth Museum 16.4.1908".This added considerably to what Grose (1944) had been able to ascertain.

Enquiries were accordingly made at Plymouth City Museum and Art Gallery and these revealed that a number of sheets of Flower's did indeed exist there (though no trace could be found of any manuscripts of his). Being unaware of the special interest of the Flower herbarium, H.S.T. saw no cause to pass this information on. It was only on the appearance of the note by Dillon (1984) that he realized the herbarium was still being sought. Shortly afterwards the issue of the prospectus for Kent & Allen (1984) put the two of us in touch on the matter. Although all museums in the British Isles had been circularized with a request for details of the herbaria in their possession in connection with the latter publication, no report of any Flower sheets had been received. By an equal mischance, the note by Dillon had been overlooked at Plymouth Museum. It was the converging of our respective searches that thus proved crucial.

Subsequent enquiries by D.E.A. have established that the sheets in question total nearly two thousand and are thus likely to constitute Flower's actual herbarium (or at any rate what remains of it) rather than some subsidiary collection or a mere set of duplicates. Unfortunately the Museum records reveal no more than that the collection was accessioned in 1939. It is evident that it could have been donated by the Harper family to Plymouth Museum at any time between 1915, when Dr Harper died, and 1939.

Meanwhile the Sole – Richardson – Flower manuscripts remain untraced. Any information which may help in locating them would be most welcome.

ACKNOWLEDGMENTS

We are indebted to Mr D. A. Curry, Keeper of Natural History at Plymouth City Museum and Art Gallery, for arduously combing the Museum's herbarium for Flower sheets and for providing some of the information in this note. The staff at Weymouth Central Reference Library were equally helpful.

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CHROMOSOME NUMBERS OF SOME ALIEN *REYNOUTRIA* SPECIES IN THE BRITISH ISLES

Reynoutria sachalinensis (F. Schmidt Petrop.) Nakai 2n=44.
V.c. 17, Surrey: Elmbeamswood, Elstead, GR 41/89.41
V.c. 43, Rads.: Howey, GR 32/051.587
V.c. 48, Merioneth: Brithdir, Caernywch Hall (garden), GR 23/761.177
V.c. 51, Flints.: Nant Y Frith, Bwlchgwyn, GR 32/265.542
V.c. H.16, W. Galway: Ballyconneely, Connemara, GR 02/620.446; Errislannan, Clifden, GR 02/620.495

Reynoutria japonica Houtt. var. *compacta* (J. D. Hook.) Buchheim 2n=44.
V.c. 16, W. Kent: Platt (garden), GR 51/616.572
V.c. 55, Leics.: Broughton Astley (garden), GR 42/525.927

Reynoutria japonica Houtt. var. *japonica* 2n=88.
V.c. 2, E. Cornwall: Liskeard, GR 20/188.643; St Austell, GR 20/052.532 (c. 88)
V.c. 11, S. Hants.: Petersfield, GR 41/744.234; Stroud, Petersfield, GR 41/720.234
V.c. 12, N. Hants.: Heckfield, Hook, GR 41/726.612; Itchen Abbas, GR 41/541.329
V.c. 17, Surrey: Hindhead, GR 41/886.356; Chilworth–Shalford, GR 51/012.466
V.c. 44, Carms.: Ammanford, GR 22/61.11
V.c. 46, Cards.: Aberystwyth, GR 22/601.820
V.c. 48, Merioneth: Dolgellau, GR 23/711.823; Tyn Coed, GR 23/67.18; Brithdir, Caerynwch Hall (garden), GR 23/761.177; Boston Lodge, Minfford, GR 23/589.382; Llanfihangel-y-Traethau, GR 23/597.353
V.c. 49, Caerns.: Pentre'r-felin, GR 23/526.396; Pwllheli, GR 23/374.350; Criccieth, GR 23/492.381; Llangwnadl, GR 23/218.335
V.c. 55, Leics.: Knighton, GR 43/617.013; University Botanic Garden, Leicester, GR 43/617.015; Sileby, GR 43/602.153; Stoughton, GR 43/644.026; Dunton Basset, GR 42/549.892

Reynoutria tetraploids 2n=44.
V.c. 17, Surrey: Gomshall Station, GR 51/09.48
V.c. 33, E. Gloucs.: Cirencester (plant no. 1), GR 41/039.033
V.c. 66, Co. Durham: South Wylam, GR 45/124.646

Reynoutria hexaploids 2n=66.
V.c. 14, E. Sussex: Lye Green, GR 51/511.336 (c. 66)
V.c. 33, E. Gloucs.: Cirencester (plant no. 2), GR 41/039.033 (c. 66)

V.c. 48, Merioneth: Dolgellau, GR 23/711.823; Brithdir, Caerynwch Hall (garden), GR 23/763.177; Pont Rhyd Sarn, near. Bala, GR 23/859.287
V.c. 55, Leics.: Loughborough, GR 43/544.204
V.c. 60, W. Lancs.: Preston, GR 42/510.298 (c. 66)
V.c. H.16, W. Galway: Maam, GR 02/963.533; Roundstone, GR 02/726.424

The rhizomatous perennials, *Reynoutria japonica* (*Polygonum cuspidatum* Siebold & Zucc.) and *Reynoutria sachalinensis* (*Polygonum sachalinense* F. Schmidt Petrop.), introduced to the British Isles last century are now firmly established with a well-earned reputation as invasive and persistant weeds (Conolly 1977). Characteristics which allow *R. japonica* to be an early colonist of lava fields in Japan ensure that it is well able to cope with habitats ranging from urban waste land to Welsh hillsides.

The threat posed by *R. japonica* is now recognized in law since it is one of the land plants which it is illegal to introduce into the wild in Britain. It was against this background that we set out to learn more about the mode of spread and reproductive biology of these plants. Since published work (none of it carried out on British plants) revealed counts of 2n=44, more than 60, and 88 for *R. japonica* var. *japonica*, 2n=44 for *R. japonica* var. *compacta*, and 2n=44, c. 66 and 102 for *R. sachalinensis* (Federov 1969; Moore 1973, 1977), we made an examination of the chromosome numbers of British and Irish plants our starting point.

On the basis of evidence to be presented in a later paper, it appears that the base chromosome number for *Reynoutria* is 11. Our results show that three different ploidy levels are present in Britain. All *R. sachalinensis* and *R. japonica* var. *compacta* plants examined so far are represented only at the tetraploid level. *R. japonica* var. *japonica*, on the other hand, is found to be octoploid at the 24 sites in the survey. The octoploid *R. japonica* is the most usually encountered and the 24 locations were taken on an arbitrary basis. The nine hexaploid plants, however, were collected because they differed in some way from the plants usually encountered, and morphologically and cytologically suggest a possible hybrid origin. The Brithdir specimen (2n=66) is almost certainly a hybrid between *R. japonica* (2n=88) and *R. sachalinensis* (2n=44) and the plants at Preston and Pont Ryhd Sarn may well be of the same origin. Three tetraploid plants were also found and, although superficially similar to *R. japonica*, there are signs that these too may be interspecific hybrids. The clone at South Wylam (2n=44) may be of hybrid origin at the tetraploid level. Work is now in progress in comparing these plants morphologically and cytologically with plants produced by controlled pollinations between the two species, and between ploidy levels within *R. japonica*.

All voucher specimens are in **LTR**.

ACKNOWLEDGMENTS

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VARIATION IN THE FLORAL MORPHOLOGY OF *LINARIA REPENS* (L.) MILL.

In September 1979, *Linaria* plants were seen on a slag-heap adjacent to a disused quarry near Cathkin, Lanarkshire, v.c. 77 (GR 26/621.583). While the corolla colour and seed morphology were

typical of *L. repens* (L.) Mill. the flower dimensions suggested to different individuals the possibility of hybridization with either *L. vulgaris* Mill. (*L.* × *sepium* Allman) or *L. purpurea* (L.) Mill. (*L.* × *dominii* Druce).

We revisited the site in September 1981 to look for evidence of hybridization and again in September 1983 to measure further fresh material in order to obtain corolla length/spur length against corolla height/spur length ratios.

In September 1981 we estimated that in an area 30 × 15 m there were approximately 2,000 plants. All the flowers were identical in colour, being basically white with many violet veins on the corolla and standards, but only a few on the lower lips. There were orange hairs on the palate and in a line from there extending proximally on each side of the midline. Capsule formation was almost 100% and every capsule opened contained seeds.

20 flowers were selected at random from each end of the site and from the middle. Spur lengths of these flowers averaged 4.3, 4.3 and 4.4 mm (range 3–5 mm). As the results from each section were so similar, no further distinction was made while making subsequent measurements. The length from pedicel apex to the point at which the corolla split into upper and lower lip was, on average, 3.8 mm (range 3–4 mm); and the corolla length from pedicel apex to the tip of the boss of the lower lip averaged 8 mm (range 7–9 mm). From measurements made in 1983, the average corolla length/spur length was found to be 1.9 and the corolla height/spur length 2.2. The plants were rhizomatous.

Although the corolla length/spur length and corolla height/spur length ratios are intermediate between those of *L. purpurea* and *L. repens* (Stace 1982), the light corolla colour and creeping rootstock rule out *L. purpurea* × *repens* (Stace 1975). Indeed, the nearest population of *L. purpurea* occurs in a Glasgow park, 5.5 km to the north of the Cathkin site. In *L. repens* × *vulgaris* the corolla is yellowish; furthermore the hybrid is highly fertile and backcrosses readily (Stace 1975). Our results indicate that the large population of 2,000 more or less identical plants is not a variable hybrid swarm but a constant population of a taxon. We consider the plants to be an extreme form of *L. repens*.

Warburg (1962) and Rose (1981) stated that in *L. repens* the spur is short and straight and about a quarter as long as the rest of the corolla. Rose (1981) gives an illustration of comparable dimensions (spur 3 mm; rest of corolla 10 mm).

We have seen specimens of *L. repens* from other sites, and obtained from a colleague garden material with dimensions which agree with those quoted above, but the Cathkin plants have average spur lengths of 4.3 mm and corollas of 8 mm.

These measurements actually agree with illustrations in Ross-Craig (1966) and Butcher (1961) and suggest that the published descriptions should be changed to take account of the fact that the spur may be half as long as the rest of the corolla. Further, we have noticed that, although short spurs are always straight, those exceeding 4 mm in length are always curved.

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BELLIS PERENNIS L. VAR. *DISCOIDEA* HUS

I recently published the name *Bellis perennis* L. forma *discoidea* for variants of our common Daisy that lack ray florets (McClintock 1984). I wrote that I had failed to find any published appellation for this form. Trust Dr Heino Heine to find something! He informs me that Hus (1911) described an aberration which had appeared among a bed of "*delicata*" daisies at the Missouri Botanical Garden: "In the capitula of this specimen the rayflowers had either disappeared or, what is more probable, had been replaced by disc-flowers. The result was a rather striking maroon-red button". He also recorded that André (1909) had mentioned the variety *discoidea* under the name "Paquerette vivace var. double à fleurs tuyautées". In fact, André does not use the word *discoidea*, but Hus (1911) also published a photograph (Fig. 2, p. 648) of "*Bellis perennis discoidea*", and this, together with his name and the diagnosis quoted from André, effectively publish this name at varietal level.

Thus, for those who consider this aberration to be of varietal rank the ascription must be to Hus; those who rate it merely as a form must ascribe it to me, until such time as another keen-eyed lynx discovers an earlier publication, which would not surprise me.

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NOMENCLATURAL NOTES ON SOME WILLOW HYBRIDS

The publication of a B.S.B.I. handbook on willows and poplars (Meikle 1984) calls for a few minor nomenclatural innovations, and it is felt that these are better published separately, rather than as an appendix to the book. In most instances the names have already appeared in the botanical or horticultural literature, but without being given the formal validation required under the International Code.

1. **Salix** × **rubens** Schrank nothovar. **basfordiana** (Scaling ex S. J. Salter) Meikle, **comb. nov**.
Basionym: *S. basfordiana* Scaling ex S. J. Salter in *Gard. Chron.*, n. s., **17**: 298 (March 1882).
Synonym: *S. fragilis* L. var. *basfordiana* (Scaling ex S. J. Salter) Bean, *Trees & shrubs hardy in the British Isles*, **2**: 481 (1914).
S. alba L. var. *vitellina* (L.) Stokes × *S. fragilis* L.

Two distinct forms of this nothovariety, both locally frequent in Great Britain and Ireland as cultivated and spontaneous plants, were confused by Salter when he first described the willow hybrid distributed as *S. basfordiana* nom. nud. by the willow-grower William Scaling around 1870. The male plant figured in the *Gardeners' Chronicle* (fig. 42), is unquestionably Scaling's *S. basfordiana*, with long, attenuate leaves, and elongate, ultimately pendulous catkins; it is here distinguished as:

1a. **S.** × **rubens** Schrank nothovar. **basfordiana** (Scaling ex S. J. Salter) Meikle forma **basfordiana** (Scaling ex S. J. Salter) Meikle, **forma nov**.
Ramulis aurantiacis vel testaceis, foliis anguste lanceolatis, longe acuminatis, usque 15 cm longis, 2 cm latis, mox glaberrimis; amentis (masculinis et foemineis) elongatis, anguste cylindricis, 7–8 cm longis (vel interdum longioribus) patentibus tandem pendulis.
HOLOTYPUS: *S. basfordiana* Scaling ex S. J. Salter pro parte quoad plantam masculam solum, *Gard. Chron.*, n. s., **17**: 299, fig. 42 (1882).

Although male and female plants of typical *S.* × *rubens* nothovar. *basfordiana* are equally frequent, the female plant figured by Salter (1882) is a distinct taxon, originally distributed by Scaling as "*Salix sanguinea*", and included in Bean (1980) under the cultivar name *Salix*

'*Sanguinea*'. I am not aware that the name has ever been formally validated at any rank, and here propose:

1b. **Salix** × **rubens** Schrank nothovar. **basfordiana** (Scaling ex. S. J. Salter) Meikle forma **sanguinea** Meikle, **forma nov**.
A forma *basfordiana* differt ramulis rubris (nec aurantiacis), foliis brevioribus, raro 8 cm excedentibus, amentis foeminis brevioribus, 3–4 cm longis, maturitate patentibus vel suberectis, eisdem masculis ignotis.
HOLOTYPUS: Great Britain, Middlesex, side of the R. Thames opposite Mortlake brewery, 20 April [and 14 Sept.] 1949, *Meikle 1571* (**K**).

2. **Salix** × **sepulcralis** Simonk. nothovar. **chrysocoma** (Dode) Meikle, **comb. et stat. nov.**
Basionym: *S. chrysocoma* Dode in *Bull. Soc. bot. Fr.*, **55**: 655 (1909).
S. alba L. var. *vitellina* (L.) Stokes × *S. babylonica* L.
The most popular of the 'Weeping Willows', with very pendulous, yellow twigs, very commonly cultivated in gardens. Although common as an ornamental, I have no evidence that it has been given a formal name as a variety (or nothovariety) of the hybrid *S. alba* L. × *S. babylonica* L. (*S.* × *sepulcralis* Simonk.). Its origin is obscure, but there can be little doubt that it is *S. alba* var. *vitellina* × *S. babylonica*, and not just a pendulous variant of *S. alba* var. *vitellina*, as some authors have suggested.

3. **S.** × **pendulina** Wenderoth var. **elegantissima** (K. Koch) Meikle, **comb. et stat. nov.**
Basionym: *S. elegantissima* K. Koch in *Wschr. Ver. Beförd. Gartenb. Preuss.*, **14**: 380 (1871).
This rather rarely cultivated plant appears to be one of several variants of the hybrid *S. babylonica* L. × *S. fragilis* L., for which I adopt the earlier name *S.* × *pendulina* Wenderoth in preference to the more familiar, but later, *S.* × *blanda* Anderss.

4. **Salix** × **grahamii** Borrer ex Baker var. **moorei** (F. B. White) Meikle, **comb. et stat. nov.**
Basionym: **S.** × **moorei** F. B. White in *J. Linn. Soc., Bot.*, **27**: 438 (1890).
S. × *moorei* F. B. White differs from *S.* × *grahamii* Borrer ex Baker only in having rather longer, narrower catkin-scales, thinly, occasionally rather densely, pilose ovaries, and glabrous pedicels. It must without doubt have the same parentage as *S.* × *grahamii*, of which it can be considered no more than a variety.

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RUPPIA SPIRALIS L. EX DUMORT. IN YORKSHIRE

The recent discovery of *Ruppia spiralis* L. ex Dumort. at Kilnsea, S.E. Yorks., v.c. 61, has been documented by Crackles (1983). Because of taxonomic and, more particularly, nomenclatural confusion between *R. spiralis* (*R. cirrhosa* (Petagna) Grande, *R. maritima* auct.) and *R. maritima* L. (*R. rostellata* Koch), early *Ruppia* records are often difficult to interpret unless they are substantiated by herbarium specimens. Although the first published record of *Ruppia* in S.E. Yorks. is of *R. spiralis* (Robinson 1900), this was subsequently reported by Robinson (1902) as *R. rostellata*. In the absence of any herbarium specimen, Miss Crackles concluded that the recent discovery was the first certain record of *R. spiralis* in Yorkshire and the first record on the eastern coast of Britain north of the Humber.

I recently had occasion to look at *Ruppia* specimens in **BM**, and found there three sheets of *R. spiralis* collected in Yorkshire. These specimens not only show that there are earlier records of *R. spiralis* in v.c. 61, but also extend its northern limit on the east coast. The details of the specimens are as follows:

a) Brackish pools on salt-marsh near Salt End, Hedon, v.c. 61, GR 54/16.27., 2 September 1907, *C. Waterfall.*

b) Dyke near Long Bank, near Kilnsea, v.c. 61, GR 54/4..1.., 13 June 1933, *W. A. Sledge*, det. J. E. Dandy. (There are also specimens of this gathering in **CMM** and **RNG**).

c) Coatham, v.c. 62, GR 45/5..2.., August 1852, *J. G. Baker*, det. J. E. Dandy.

The sheet from Hedon does not bear a det. slip of Dandy's, probably because it is the only one of the three specimens actually labelled *R. spiralis*. The specimen has sinuous peduncles 7–10 cm long, which confirm the identity of the plant. Dr N. T. H. Holmes has kindly examined all three specimens at **BM** and agrees that they are *R. spiralis*.

The specimens collected in 1933 substantiate the published record of *R. spiralis* (as *R. maritima*, the name then applied to *R. spiralis*) from Kilnsea (Sledge 1934; Lees 1941). They suggest the possibility that the species may have persisted in the Kilnsea area (but not in the recently discovered site, a pit excavated in 1978–1979) from 1933 until its rediscovery in 1981. It perhaps evaded detection for so long if, as Crackles (1983) suggests, it either does not fruit or fruits late in the season at the northern edge of its range.

In addition to the record from Coatham, N.E. Yorks., *Ruppia spiralis* has been recorded from the Durham side of the River Tees. In 1917 J. W. Heslop Harrison found *R. spiralis* growing in small quantity with masses of *R. maritima* in pools in Greenabella Marsh, v.c. 66, GR 45/5.2. (G. G. Graham, in litt. 1983). This is apparently the northernmost record of *R. spiralis* on the east coast, although there are reliable records of the species from the Outer Hebrides, Orkney and Shetland (Perring & Walters 1976).

ACKNOWLEDGMENTS

I am grateful to Miss Crackles, Mr Graham and Dr Sledge for help in writing this note.

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SOME UNUSUAL ORCHID VARIANTS FROM ANGLESEY

Individuals with white flowers occur occasionally in a number of our wild orchid species, but the frequency with which they do so varies considerably from one species to another. Albino plants of *Orchis morio* L. have been found on a number of occasions in Anglesey over the last 30 years, but white-flowered plants of *O. mascula* (L.) L. turn up far less frequently, even though this species is much the commoner of the two. Consequently when one was seen in Cors Goch Nature Reserve in the spring of 1983, it attracted a good deal of attention, especially from photographers.

This plant was found at the foot of the limestone scarp which runs along the south-eastern edge of the fen. It was a fairly robust specimen, over 27 cm tall, with a large spike of white flowers, but closer examination showed that the purple spots which normally occur in the central area of the labellum were present, though much fainter than usual. In this plant, too, the deep coloration, normally found on the upper part of the stem and on the bracts and the ovaries, was absent, and the leaves appeared to lack any kind of spotting. This agrees with observations elsewhere that white-flowered plants of this species mostly have unspotted leaves, although exceptions to this have been recorded, according to Summerhayes (1951).

A few weeks later, during a visit to Cors Erddreiniog N.N.R., the warden, Mr L. T. Colley, showed me a white-flowered plant of *Dactylorhiza traunsteineri* (Sauter) Soó. In this the flowers were a pure white with no trace of colouring at all, even in the form of faint marks on the labellum. In all other respects the flowers were typical of this species, the labellum having the usual deltoid shape, shallowly tri-lobed with the mid-lobe projecting and the lateral lobes moderately reflexed. There were only 6 or 7 flowers in the spike, which was rather loose and secund, but the bracts and the upper part of the stem were green and lacked the deep reddish-purple colour normally found in this species. Otherwise the plant was quite typical, having a rather slender, flexuous stem about 17–20 cm tall and carrying four narrow leaves.

Albino plants are very rare in *D. traunsteineri*. The only other record of one from Britain is from Yorkshire, where it was found by Mr D. J. Tennant a few years ago. This situation contrasts with that in *D. incarnata* (L.) Soó in which albino plants are found much more frequently: they can often be seen at some Anglesey localities where they are sometimes mistaken for subsp. *ochroleuca* (Boll) P. F. Hunt & Summerhayes.

The third unusual plant, one of *Ophrys insectifera* L., was also found by Mr Colley a year previously, in 1982, at another fen area known as Cors Bodeilio. This place is two miles south-west of Pentraeth and *O. insectifera* was recorded here as long ago as 1813 by Hugh Davies. The species occurs here regularly and sometimes in good numbers: over 60 plants were counted in flower in June 1981. The abnormal specimen found by Mr Colley had two labella, four sepals instead of three, a third narrow, brown petal like those forming the antennae of the "fly", and two stamens. All the flowers which had opened were identical and were also peculiar in that the labella had two sinuses at the apex instead of one and were held almost horizontally and not more or less vertically as in normal flowers. The sketch of a flower of the Cors Bodeilio plant (Fig. 1) was made from a photograph taken by Mr Colley. Summerhayes (1951) has described another mutant form of *O. insectifera* in which the two "antennae" were replaced by additional labella so that there were three "bodies" to the fly.

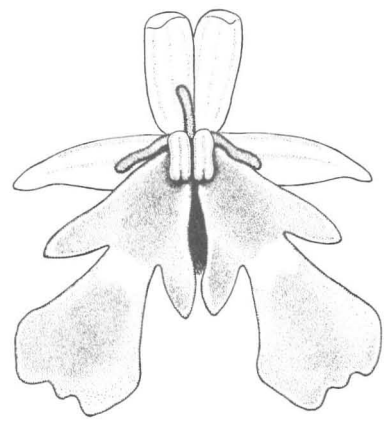

FIGURE 1. Single flower of mutant *Ophrys insectifera*. Scale bar = 1 mm.

Yet another uncommon orchid variety came to light when Mr M. Hammett showed me some photographs of orchids taken in various localities in Anglesey in June 1983. Among them was a

mutant *Ophrys apifera* Hudson which proved to be the very distinct var. *bicolor* (Naegeli) Nelson. In this the lip completely lacked the usual pattern of lines and blotches, and the basal part, where the speculum is normally found, was a pale greenish-brown, shading to a dark chestnut-brown at the apex. This variety is beautifully illustrated by Danesch & Danesch (1968: Abb. 159) and by Davies *et al.* (1983: photo 316). Mr Hammett's photograph shows a plant with flowers identical with these illustrations. It had been found among the sand-dunes near Rhosneigr and there appears to be no previous record of this variety from the island.

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OROBANCHE CARYOPHYLLACEA SM. IN NORTH WALES

During the course of an investigation into the genus *Orobanche* in Britain (Rumsey 1984), I came across two specimens of *O. caryophyllacea* Sm. (Clove-scented Broomrape) from North Wales. This plant is widely accepted to be restricted to a small area in East Kent, v.c. 15, and until now the only other records have been from Suffolk (Simpson 1982) (certainly in error for *O. rapum-genistae* Thuill.) and Argyll. This latter record is based on an 1844 specimen, which was originally determined as *O. elatior* Sutton, from the Loch Nell area. The specimen is at **K** and has been correctly redetermined as *O. caryophyllacea*.

Given the plant's accepted range in Britain, I treated the first Welsh specimen (Conway Castle, v.c. 49, August 1883, *J. W. Reed* (**RNG**)) that I found with scepticism. Originally determined as *O. hederae* Duby., the sheet indeed consists partly of that species but also partly of *O. caryophyllacea*. I assumed that some error had occurred during the preparation of the sheet, and that *O. caryophyllacea* from another locality had been mixed mistakenly with Welsh *O. hederae*; Reed's herbarium does contain much European material. However, there is a second mixed sheet of *O. caryophyllacea* and *O. hederae* from the same locality (July 1890, *S. H. Bickham* (**CGE**)), also labelled *O. hederae*. Even given that the *O. caryophyllacea* plants are smaller than usual, it is difficult to see how two botanists could independently mix foreign material with *O. hederae* from Conway Castle. I therefore believe that *O. caryophyllacea* could have existed in this botanically rich area in the last quarter of the nineteenth century and provisionally suggest that the species be accepted as a native Welsh plant. I hope that searches both in this area and at Loch Nell, Argyll, will prove me right and thereby gain us sites for a very rare and beautiful plant.

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