Short Notes

100/b. ARABIS BOREALIS Andrz. ex Ledeb.—Not in Ireland.

Arabis borealis Andrz. ex Ledeb. is part of the *Arabis hirsuta* aggregate (Jones 1964, *cf.* Titz 1972). It is a native of northern Asia and northern Russia (Jalas 1949), but it was recently also reported from Ireland by Scannell (1965). This was based on the identification of a herbarium specimen in **DBN** (originally labelled '*Arabis* sp.? Kilrush, Co. Clare (Dock), 16/4/1930. R. A. Phillips') by B. M. G. Jones in 1965.

In the course of the revision of Irish herbarium material from **DBN** this plant has recently been investigated by me. Its habit is distinctly different from that of *Arabis hirsuta* agg., and a thorough examination of its flowers revealed a more or less pear-shaped ovary, which indicates that it is in fact a species of *Camelina*. Though there are no siliculae on the plant, which is rather immature, it seems probable that it is *Camelina sativa* (L.) Crantz var. *pilosa* DC. Thus the record of *Arabis borealis* for Ireland (being rather improbable from the first) should be deleted.

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W. TITZ

406. CALYSTEGIA—Some British chromosome counts.

Dr C. A. Stace has invited me to publish the following chromosome counts which were included in my thesis (Brummitt 1963). Voucher specimens are deposited in the herbarium of the University of Liverpool (**LIVU**). Anthers were obtained from buds in wild populations. Root-tips were obtained by growing rhizomes in gravel under a mist propagation unit for a few days. Material was fixed in Carnoy's fluid and stained in aceto-carmine.

Calystegia sepium (L.) R.Br. subsp. *sepium*

Burrows Lane, near St Helens, v.c.59, GR 33/474.947 $n = 11$

Cartbridge Lane, Halewood, near Liverpool, v.c.59, GR 33/448.864 $2n = 22$

Calystegia sepium subsp. *roseata* Brummitt

Salt marsh, Llandudno Junction, v.c.49, GR 23/280.773 $n = 11$

Calystegia silvatica (Kit.) Griseb.

Waste ground, Storeton Quarry, Bebington, v.c.58, GR 33/316.843 $n = 11$

Railway embankment, Thomas Lane, Broadgreen, Liverpool, v.c.59, GR 33/407.907 $2n = 22$

In all the preparations a pair of small satellites, as described by Stace (1973), was noticed. The above count of *C. sepium* subsp. *roseata* is, as far as is known, the only one to date of this taxon.

The opportunity is also taken to record a count made by Dr C. J. Marchant in 1966 on rhizomes supplied by me. A voucher specimen is deposited at Kew (**K**).

Calystegia soldanella (L.) R.Br.

Sand dunes, Deganwy, eastern side of mouth of R. Conway, v.c.49, GR 23/774.797
$2n = 22$

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R. K. BRUMMITT

506. CALYSTEGIA—Inheritance of the schizoflorous character.

Variants of various species of *Calystegia* and related genera in which the normally infundibuliform corolla is divided almost to the base into 5 separate segments have been known for a long time. Druce (1897) pointed out that the plant he later described as *Convolvulus arvensis* var. *stonestreetii* was first reported *c* 1690, and it has been found at fairly frequent intervals since.

Similar variants in the species of *Calystegia* are less common in Britain. Druce (1922) described *Volvulus sepium* var. *schizoflorus* (= *Calystegia sepium* f. *schizoflora* (Druce) Stace), collected in S. Devon in 1921, and Hepper (1954) reported the analagous *C. silvatica* var. *quinquepartita* Terracciano from Dumbarton. At **K** there is a specimen of *C. sepium* f. *schizoflora* from Chichester, W. Sussex, collected in 1948 by H. D. Hewitt, and recently McClintock (1972) reported from Guernsey a schizoflorous pink-flowered plant.

In 1966 Mr F. J. Holroyde kindly showed me colour-slides of *C. silvatica* var. *quinquepartita* growing at Ruxley Gravel Pits, W. Kent, and at my request also sent seeds from this plant. Since this species is very highly if not completely self-sterile (Stace 1961) the seeds had almost certainly been the result of cross-pollination from another plant, which would have possessed a normal corolla, no other plants of var. *quinquepartita* then being known in the area. Thus it should be possible to determine whether the divided corolla is dominant or recessive to the undivided one. The 1966 seed failed to germinate, and although a similar batch collected in 1968 germinated well the plants failed to survive the winter of 1969–70. However a further batch collected in 1970 germinated successfully and three of the plants flowered at Manchester in 1972. The corollas were completely normal, suggesting that the divided corolla is genetically recessive, as would be expected from its rarity in nature.

The constancy of this character as recorded in the wild argues strongly against the possibility that its expression is governed by growth conditions. The Ruxley plant has appeared constant for at least 8 years, and there are records of *Convolvulus arvensis* var. *stonestreetii* persisting in one spot for 16 and 28 years respectively (Lousley 1937, Cruttwell 1944).

It is perhaps worth emphasising here that in a self-sterile species it is obviously not possible to determine by growing seed collected in the wild whether a characteristic is plastic or genetically-controlled, since the expression of the character in the offspring depends partly on the nature of the pollen parent. It seems very likely that some of the conflicting results reported by Allen (1966) are explicable on this basis, e.g. *Plantago lanceolata* varieties which have been variously reported as breeding true from seed or not so.

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C. A. STACE

431/1. HEBE × FRANCISCANA (Eastwood) Souster, not *H.* × *lewisii*—Naturalized in Britain.

For some years a shrubby *Veronica* or *Hebe*, naturalized in a number of places in south-western Britain and the Channel Isles, has passed under the name *H.* × *lewisii* (Armstrong) Cockayne & Allan. Recently, Mr David McClintock noted its similarity to the plant known in horticultural circles as *H.* × *franciscana* and, knowing of my interest in the New Zealand flora, asked me to look into the question of the correct name for the naturalized plant.

Both names were coined to cover interspecific hybrids and in both cases the authors suggested that the parentage was *H. elliptica* (Forst. f.) Pennell × *H. speciosa* (R. Cunn. ex A. Cunn.) Andersen. In doing this, Armstrong (1881), who first described *H.* × *lewisii* (as *Veronica* × *lewisii* Armstrong), was evidently in error for, thanks to the help of Mr L. J. Metcalf of the Christchurch Botanic Garden, New Zealand, who kindly examined Armstrong's type material in **CANTY** for me, it is apparent that the parentage of this plant is really *H. elliptica* × *H. salicifolia* (Forst. f.) Pennell, as had been suggested by Allan (1961). Not only does the type indicate this but Mr Metcalf informs me that he raised progeny by selfing plants comparable with Armstrong's hybrid and obtained offspring ranging in appearance from ones approaching *H. elliptica* to others more like *H. salicifolia*.

There is, however, no doubt about the parentage of *H.* × *franciscana*. It first arose as an artificial hybrid raised in cultivation in Edinburgh by Mr Isaac Anderson-Henry about the middle of the last century, using as parent plants *Veronica decussata* (a synonym of *H. elliptica*) and *H. speciosa*. Anderson-Henry proposed the name *Veronica lobelioides* for the hybrid, but evidently this name was never validly published, although an inadequate unsigned description appeared in *The Garden*, **6**: 328 (1874). It is also interesting to note that the name *V. lobelioides* was used by Druce (1932), without description, for the plant naturalized in Devon and Cornwall.

A comparison of specimens of *H. elliptica*, *H. salicifolia* and *H. speciosa* from the wild with the plant naturalized in Britain shows that the last is quite unlikely to include *H. salicifolia* in its parentage, and that its appearance is consistent with its being a hybrid between the other two species. Furthermore, it exactly matches material in cultivation as *H.* × *franciscana* and without doubt has become naturalized by escaping from cultivation and by being planted as a hedge-plant resistant to sea-spray and wind. Evidently the use of the name *H.* × *lewisii* arose from an early misidentification of the cultivated plant (for example the name was used in this sense by Nicholson (1901)).

HEBE × FRANCISCANA (Eastwood) Souster, Jl R. hort. Soc., **81**: 498 (1956)
H. elliptica (Forst. f.) Pennell × *H. speciosa* (R. Cunn. ex A. Cunn.) Andersen

Veronica lobelioides hort. ex Druce, Rep. botl Soc. Exch. Club Br. Isl., **9**: 570 (1932), *nom. nud.*

V. × *lewisii* sensu auct. angl., *non* Armstrong
V. × *franciscana* Eastwood, Leafl. West. Bot., **3**: 221 (1943)
Hebe × *lewisii* sensu auct. angl., *non* (Armstrong) Cockayne & Allan

Naturalized in Devon, Cornwall (including the Isles of Scilly) and the Channel Islands.

Hebe salicifolia has also been recorded as naturalized in south-western England and Ireland, and *H. speciosa* in Ireland. The former is readily distinguished from *H.* × *franciscana* by its acute, narrowly lanceolate leaves, 4–15 × 1–3 cm. In *H. speciosa* they are obtuse, obovate-oblong and 5–10 × 2·5–4·5 cm, in contrast to those of *H.* × *franciscana* which are smaller, rounded-obtuse, oblong-elliptic and 2–5 × 1·3–2·3 cm.

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P. S. GREEN

522. CONYZA—Taxa found in Britain.

As a result of the examination of numerous specimens of the genus *Conyza* in the herbaria at the British Museum (Natural History) and at Kew, the following analytical key has been devised and one new combination has proved to be desirable:

C. FLORIBUNDA Kunth var. SUBLEIOTHECA (Cuatr.) J. B. Marshall, **comb. et stat. nov.**
C. bonariensis var. *leiotheca* forma *subleiotheca* Cuatr., Webbia, **24**: 222 (1969)

1. Leaf-margins ciliate .. .. *C. canadensis*
1. Leaf-margins smooth or with minute, hooked setulae
2. Inflorescence a pyramidal panicle or sometimes with lateral (secondary) pyramidal panicles overtopping main axis; pappus dirty white or light russety-brown, becoming darker in older herbarium specimens; phyllaries greyish-green frequently tipped with reddish-purple.. .. .. *C. bonariensis*
2. Inflorescence a cylindrical or sub-corymbose panicle; pappus drab straw-coloured or tawny-yellow; phyllaries greenish-brown
3. Capitula 4–6mm diam.; involucres sparsely to moderately pubescent; phyllaries light brown on mature heads; leaf-surfaces with evenly appressed hairs; leaf-margins smooth .. .. *C. floribunda* var. *subleiotheca*
3. Capitula 3–4 mm diam.; involucres glabrescent; phyllaries dark chestnut-brown on mature heads; leaf-surfaces glabrescent or glabrous; leaf-margins with minute hooked setulae .. .. *C. floribunda* var. *floribunda*

Conyza canadensis seems to have been first described by John Parkinson in *Theatrum Botanicum* (1640) as *Eupatorium cannabinum americanum angustifolium* from material sent to him from New England. It is now an almost cosmopolitan weed, being recorded from many parts of the world. Although it is common and widespread in south-eastern and eastern England, and scattered in Wales, it seems to be unrecorded for Scotland and Ireland.

C. bonariensis was first described by Dillenius in *Hortus Elthamensis* (1732) as *Senecio bonariensis purpurascens foliis imis coronopi* and was based on material grown from seed originating, it is thought, from Buenos Aires. It now occurs as a weed in many tropical and sub-tropical regions of the world. In Europe it has a mainly Mediterranean distribution. In this country it is an infrequent alien, first recorded from Galashiels, Selkirk, in 1913. Since then it has been occasionally reported, usually as an introduction with wool shoddy.

C. floribunda var. *floribunda* is native of tropical South America and Brazil and has occurred as an alien in Spain. It has not yet been recorded in Britain. *C. floribunda* var. *subleiotheca*, a native of South America, is a widely distributed weed in the tropics and subtropics. It appeared in Spain and southern France during the early part of this century and has during recent years been observed and collected in Guernsey.

The following is a list of the known synonyms:

CONYZA CANADENSIS (L.) Cronq.
Eupatorium canadensis L.
Conyzella canadensis (L.) Rupr.
Leptilon canadense (L.) Britt. & Brown
Marsea canadensis (L.) Badillo

CONYZA BONARIENSIS (L.) Cronq.
Erigeron bonariensis L.
E. crispus Pourr.
E. undulatus Moench
E. linifolius Willd.
E. ambiguus (DC.) Schultz Bip.
Conyza ambigua DC.
Conyzella linifolia (Willd.) Greene
Leptilon bonariensis (L.) Small
L. linifolium (Willd.) Small

CONYZA FLORIBUNDA Kunth
Erigeron coronopifolius Sennen
E. gonzaloi Sennen
E. sumatrensis Retz.
Conyza altissima Naudin
C. barcinonense Sennen
C. capillipes Spencer Moore
C. daveauana Sennen
C. flahaultiana Sennen
C. naudini Bonnet
C. pappiflava Sennen
C. rouyana Sennen

J. B. MARSHALL

605/7f. JUNCUS FOLIOSUS Desf.—In Wales.

On 20th September 1971 I found a colony of *Juncus foliosus* growing in a shady, peaty part of the shore of the Mawddach estuary near Barmouth, Merioneth, v.c. 48 (GR 23/6.1). It was growing with *J. bufonius* L. *sensu stricto*, but I could find no morphological intermediates. Specimens have been deposited in **NMW**. To the best of my knowledge *J. foliosus* has not been previously reported from Wales, though Dr C. A. Stace tells me (1972 *in litt.*) that old specimens from Merioneth and elsewhere in Wales of *J. bufonius sensu lato* which are in fact *J. foliosus* do exist in some herbaria, e.g. **BM, MANCH.**

The characters of the two taxa in this district are here compared:

J. bufonius L. *sensu stricto*. Germinating in spring. Erect, scarcely rooting at the nodes, and proliferating only late in the season and in wet places. Flowers often cleistogamous. *Perianth green*, rarely slightly dark-tinged. *Anthers shorter than the filaments*, often adhering to the top of the developed capsule. Pollen scanty. *Seeds with* 54–72 *concolorous ribs* 13–27μm apart, appearing nearly smooth through a hand-lens.

J. foliosus Desf. Germinating in autumn. Sprawling, rooting at the nodes, and freely proliferating from an early age. Flowers usually chasmogamous. *Perianth strongly tinged with brownish-black. Anthers longer than the filaments*, not adhering to the top of the capsule. Pollen abundant. *Seeds with* 22–30 *conspicuous dark-brown ribs* 35–55μm apart, plus faint intermediate ribs, obviously ribbed even through a hand-lens.

Numerous searches of other apparently suitable places in Merioneth during 1972 failed to reveal any further colonies of *J. foliosus*.

P. M. BENOIT