

Short Notes

69. RHYNCHOSINAPIS – The Worcestershire records.

From 1873 to 1876 a species first identified as *Brassica cheiranthos* Vill. was found 'in considerable plenty' at Sutton Common, Kidderminster by J. Fraser, J. H. Thompson and W. Mathews (Rea 1897). The plant was later identified by Mathews (1899) as *B. monensis* L. (*Rhynchosinapis monensis* (L.) Dandy). The record and identification were accepted by Amphlett & Rea (1909), Druce (1932) and Perring & Walters (1962).

In 1965 I examined the material in the herbarium of the Hastings Museum, Worcester (WOS). The specimens, collected at Sutton Common in June and July 1873, October 1874 and June 1876, were in a poor state of preservation, but the following characteristics could be ascertained: Stems branched, with a few simple setae on their lower parts; simple hairs present on petioles and basal leaves and on the sepals, which slightly exceed the pedicels in length; cauline leaves with segments narrower than those of rosette leaves; siliquae glabrous, 6.5–9.5 cm long, with beaks 11 mm without seeds.

The specimens are, therefore, of the alien species *Rhynchosinapis cheiranthos* (Vill.) Dandy and not of the endemic *R. monensis*. It has already been pointed out (Kiernan 1966) that the material bears no resemblance to *Sisymbrium orientale* L. (*S. columnae* Jacq.), to which species it was referred by Rea (1921).

In view of these findings, it is possible that other inland records for *R. monensis* might be erroneous.

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J. A. KIERNAN

115/15. HYPERICUM CANADENSE L. – In England.

In a note in a recent issue of *Watsonia* (8: 90, (1970)) R. D. Meikle suggests that this species is most probably a recent arrival in Europe. Further localities in the vicinity of the original one by Lough Mask may indicate that it is spreading there, and the discovery within such a short time of scattered localities on the Continent as well as Ireland is consistent with the plant being a recent introduction. The Eccles Hotel at Glengariff, Co. Cork is frequented by botanists and it is possible that the seeds of *H. canadense* were conveyed there on footwear or the tyres of a car which had travelled from Lough Mask.

It has now been found in England. In 1967 Mr Roy Lancaster sent me a specimen found as a weed in a seed-bed in Hillier & Sons' nursery at Ampfield, S. Hants., v.c. 11, which has now been confirmed by N. Robson (**Herb. Lousley**). It grew in ground sown earlier in the year with seed of *Cedrus atlantica* from an Italian source, but *H. canadense* is not known in Italy and this is unlikely to have been its origin. It did not persist. However it was conveyed to the nursery at Ampfield and this would seem further evidence that human agency is involved.

J. E. LOUSLEY

237/2. *CRASSULA AQUATICA* (L.) Schönl. – New to Scotland.

Crassula aquatica, hitherto recorded in Britain only from Adel Dam, Yorkshire, and now apparently extinct there, was found, on August 21st 1969, growing on mud overlying stones by fresh water in v.c. 97, Westernness. The site was obviously subject to periodic inundation and the plant, which, on the date of discovery, showed both unopened flowers and fruit in the form of four neatly arranged little carpels in the leaf axils, occupied a strip about six yards by one yard, parallel to the water.

Associated plants were very few and scattered: *Juncus articulatus*, *Juncus bufonius* and *Polygonum* sp. were also on the mud, while *Liorella uniflora* and *Alisma plantago-aquatica* grew in the adjacent water.

The status of this species in Britain is obviously still under the doubt indicated in *Flora of the British Isles* (Clapham, Tutin & Warburg 1962). It occurs in Iceland and Norway and its tiny seeds seem more fitted than most to arrive with mud on migrant waterfowl. Nonetheless Scotland fits neatly into its continental northern distribution and the lochs and rivers of north-west Scotland must offer hundreds of miles of under-botanised shoreline where this inconspicuous annual may have found a suitable habitat.

The plant was collected for identification without its uniqueness being realised and thanks are due to Mary McCallum-Webster, who paid a later visit to the site, for confirming and amplifying some of the original observations.

Specimens are now in the herbaria of the Royal Botanic Garden, Edinburgh, the British Museum, Kew and Cambridge.

ALAN J. SOUTER

NAUFRAGA BALEARICA Constance & Cannon – Refound.

Work on *Flora Europaea* (Tutin, T. G. *et al.* 1964, 1968) has encouraged the study in detail of some of the botanically lesser-known areas of Europe and, perhaps surprisingly, the Balearic Islands have been found to be of special interest. In fact the rapid spread of tourism and the resulting urbanisation have underlined the need for study, pointing the lack of readily available information and the loss of valuable, unexplored land to building.

The proof of the interest of the Balearic flora was confirmed by the discovery in 1962 of a genus new to science. On 22 July 1962, Professor J. Duvigneaud found at Cala San Vicente, Mallorca, a plant which he did not recognise. He was still unable to name it when he returned to Belgium and therefore he sent it to Professor T. G. Tutin, Chairman of the Editorial Committee of *Flora Europaea*, who forwarded it to Mr J. F. M. Cannon, an acknowledged expert on European Umbelliferae.

Mr Cannon investigated the plant thoroughly and then consulted Professor Lincoln C. Constance, an expert on American Umbelliferae; together they decided the plant was representative of a genus new to science and it was described and named *Naufraga balearica* (Constance & Cannon 1967), the description being based on this one collection. It was noted as having affinities with New Zealand and South American Umbelliferae; this apparently startling relationship however was noted for other Balearic plants by Dr H. Knoche (Knoche 1921) fifty years ago.

In 1966 I went to Mallorca to collect specimens for the British Museum (Natural History) and to study the flora in the field in connection with work I have undertaken on Balearic plants. In relation to this, *Naufraga* had little importance; its habitat and locality were known, it had been reliably determined and its nomenclature was uncomplicated. But its curiosity value and the need to have further material available to herbarium botanists made it worth collecting and a desultory search was made for it, but it was not found.

During 1967 and 1968 four other British botanists joined the search and in 1968 my husband and I made an intensive search but also failed. The affinities of *Naufraga* and its elusiveness were now increasing its importance.

In 1969 a series of errors and confusions resulted in another holiday being spent in the Balearic Islands, and at Cala San Vicente. The proximity of the *Naufraga* locality led inevitably to another attempt to find it. Careful re-appraisal of the maps and the lure of the shaded, north-facing cliffs of Punta des Covas Blancas, with masses of *Laurentia tenella* (Biv.) A.DC. and *Erodium reichardii* (Murray) DC., resulted in a scrambled climb around the shoulder of the cliffs and down a steep talus slope which ended in a 300 foot drop into the sea. Here *Naufraga balearica* was growing in profusion on fine talus in an almost inaccessible habitat.

Material was collected and prepared for a number of herbaria, and a living plant was sent to the Royal Botanic Gardens, Kew, where it is now in cultivation. A chromosome count has been made and further cytological studies will be undertaken.

In Mallorca the plant may well be more widespread on shaded, precipitous maritime cliffs on the north-west of the island; but attempts to study the cliff faces from land were abortive and approach from the sea seems to be the only practical way of investigating these areas successfully.

The type specimen, second collection, cultivated plant, maps and photographs of the type-locality were shown at the Exhibition Meeting of the Society on 29 November 1969.

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L. F. FERGUSON

590/1. *MAIANTHEMUM BIFOLIUM* (L.) Schmidt - Its status in the British Isles.

It is strange that such a conspicuous plant as the May Lily was not recorded for Norfolk until 1955 (Petch & Swann 1962), when it was found in a wood at Swanton Novers. Dr Francis Rose later estimated the colony to contain 50,000 plants 'certainly native in this ancient relic of old forest' (*in lit.*). Its abundance suggests it must not only be long-established but also the largest colony in the British Isles. Both in the work cited and in their recent *Flora of Norfolk* (1968) these authors have considered the species to be doubtfully native.

Although it is often difficult to distinguish with any certainty between natural and semi-natural woodland, there is no doubt that the wood at Swanton Novers is a relic of old forest, with records of management going back to the early thirteenth century. Today it still has good stands of deciduous trees including *Tilia cordata* and the native oak with hazel scrub but the inevitable planting of the more rapidly maturing conifers is being carried out.

Although it could be said that the abundance of the May Lily gives the appearance of it being a native plant, neither Smith (1828) nor Stillingfleet (1761), reputable and reliable recorders of the Norfolk flora, make any reference to the species.

The plant is well adapted to spreading, both by reason of its conspicuous red berry containing one or two seeds and also its slender rhizomes. According to Ridley (1930) its fruit forms part of the food of the magpie, a by no means uncommon bird in this county. Although many suitable habitats abound in Norfolk, it remains exclusive to Swanton Novers. For these reasons it is probably more accurate to regard it as one of the many naturalised aliens, 'introduced species which are naturalised in natural or semi-natural habitats' (Lousley 1953).

Elsewhere in the British Isles, it has had a somewhat chequered history. A note possibly by Newman in *The Phytologist* (1: 520 (1843)) states that Loudon gives the

year 1596 as the date of its introduction into Britain. Jackson (1913) gives the history of the plant in England and he considered its Continental distribution is entirely in favour of its being a native species in the south of England. His conclusion is somewhat invalidated by the fact that of the eight counties mentioned, namely Lancashire, Northumberland, Yorkshire, Lincolnshire, Durham, Bedfordshire, Middlesex and Oxfordshire, the majority cannot be regarded as southern English counties.

Its past and present distribution given by the *Atlas of the British Flora* (Perring & Walters 1962), supplemented by information kindly provided by Mr Douglas Kent and Dr Perring, is as follows:

v.c. 21, Middlesex. '*Maianthemum* was recorded first by Hunter, steward at Caen Wood Towers, from Caen (Ken) Wood in J. J. Park's *Topography and Natural History of Hampstead* (1813). I have seen specimens collected there in 1829, 1840, 1845 and 1861. Trimen and Dyer in their *Flora of Middlesex* (1869, p. 277) refer to "a patch of about twenty square yards on an eminence under the shade of a very large beech in the enclosure of the Ken Wood grounds near its south-east angle.". Jackson and H. Boyd Watt recorded it as plentiful in 1912, and from 1917 it was observed annually by H. S. Redgrove; a good patch in flower 1917; scarce in 1922 and did not flower; a single plant which did not flower, 1924. Redgrove thought the severe drought in 1921 was responsible for its extinction: other people have claimed it was destroyed by path-making. It has been variously claimed as a native or denizen - my view is certainly the latter, and most certainly an introduction. In 1933 it was reintroduced at Ken Wood by J. S. L. Gilmour (*J. Bot., Lond.*, 71: 168) and in 1945 was reported by R. S. R. Fitter as naturalised and increasing. I saw it there several times after the war - the last time in 1953' (Kent, *in lit.*).

v.c. 23, Oxfordshire. There is a specimen in the Oxford Herbarium collected by Druce in June, 1892, and an unconfirmed record of 1900 between Thame and Wheatley.

v.c. 30, Bedfordshire. In 1833 a doubtful record from Apsley Wood, but Dony (1952) was unable to confirm this.

v.c. 54, N. Lincolnshire. Recorded in 1895 at Turnby (Tumby), where it still persists. Jackson (1913) suggests it is introduced.

v.c. 59, S. Lancashire. Gerard (1597) records it from Dinckley Wood, Aundernes and Harwood. Savidge, Heywood & Gordon (1963) state it is extinct.

v.c. 62, N. E. Yorkshire. According to Jackson (1913) it was first discovered by Breby and Reynolds in its well-known station, Forge Valley near Scarborough, in 1857. Here the plant has shown a steady increase in recent years, 'between 90 and 100 flowers in May, 1945' (Garton 1945).

v.c. 65, N. Yorkshire. Recorded by Gerard (1597) from '... Howgill, Yorkshire, in a field next Todberry.' This record is included by Lees (1888) in his *Flora of West Yorkshire*. Although the locality is in the West Riding it is actually in v.c. 65 and not 64. This record is generally regarded as an error.

v.c. 66, Durham. Recorded by Oliver (1896) in a plantation at Hunstanworth where it still persists.

v.c. 67, S. Northumberland. There is an unsubstantiated record from near Blanchland but Dr G. A. Swan considers that the species is not in this vice-county.

v.c. 68, N. Northumberland. First found in 1843 by the Rev. Oswald Head in one of the woods at Howick, close to Earl Grey's garden, and Watson (1849) in his *Cybele Britannica* considered the plant 'Incognit or Alien'. Oliver (1896) refers to a further record from Rothbury.

v.c. 83, Midlothian. There is a specimen in the Cambridge Herbarium collected by T. Cowan, Junr, in 1909 from Carlowrie in West Lothian.

The foregoing evidence shows that it has been occasionally introduced and, although formerly far from uncommon (Parkinson 1640), it has considerably diminished in frequency with the exceptions of Norfolk and north-east Yorkshire. British woodlands have been much reduced in acreage by felling with the consequent loss of the characteristic flora. A survey of the literature has shown conflicting views concerning its status.

In his summary, Jackson (1913) quotes de Candolle's note (1855) to the effect that, contrary to both Babington (1847) and Watson (1849), who considered the plant to be an alien, the French botanist had no doubt at all that it was a good British native.

In an attempt to assess its status here it is necessary to take into account its distribution and ecology outside the British Isles. In France, Boreau (1857), Coste (1906) and Fournier (1961) refer it to woods and pastures, particularly in the mountainous districts. It is certainly abundant in the mountainous woods of Switzerland. Clapham, Tutin & Warburg (1962) give its European distribution as 'Europe from Scandinavia and N. Russia to N., E. and C. France, N.E. Spain, N. Apennines, Bosnia and S. Russia'. I can find no correlation between this presumably Eurasian element and any of the British stations, particularly the largest colony extant in Norfolk.

In conclusion, therefore, there is so much suspicion on historical grounds, suggestions of introduction, and slender ecological correlation, that a more accurate estimation would be that in Britain the May Lily is a naturalised alien.

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E. L. SWANN

668/1. *SIEGLINGIA DECUMBENS* (L.) Bernh. – Pulvini of palea.

The palea, the characteristic scale of the grass flower, is usually a thin two-veined structure with margins folded inwards to form uniformly sharp keels which are frequently ciliolate. Seldom does the palea exhibit striking characters useful in identification – unlike its opposing scale, the lemma – and consequently it is often overlooked in keys and descriptions.

However, in the heath-grass, *Sieglingia decumbens*, common in moorland, the keels of the palea are considerably enlarged and progressively thickened towards the base (Fig. 1). These tissue-swollings, or pulvini, are soft-textured, well-rounded below, and flesh-coloured or colourless in fresh plants. In dry specimens they become pale orange

and shrivelled but on wetting soon regain their natural colour and turgescence. Internally they are composed of relatively large thin-walled cells bounded by a poorly defined epidermis.

These distinctive pulvini were first noticed in a plant grown at Ottawa, Canada, transplanted from Louisburg, Nova Scotia, where *Sieglingia* thrives in peaty coastal turf as a local introduction, possibly dating back to the time of early French colonization. The plant was of the usual cleistogamous (apomictic) form with reduced anthers and abortive lodicules. Examination of numerous specimens from throughout the native range of the species, including a chasmogamous specimen from Austria, revealed a consistent occurrence of the paleal pulvini (although these are not described or clearly depicted in any of the numerous published works so far searched). I consider, therefore, that these swellings are an inherent feature of *S. decumbens*, not pathological or abnormal structures, even though they may have superficial resemblance to rust pustules especially when dry. Their function is not immediately apparent, although their activity may serve to loosen the ripe floret in the absence of a well-developed awn such as members of the closely related genus *Danthonia* possess.

Indeed, the relationship of *Sieglingia* to *Danthonia* is so close, that the propriety of maintaining the former as a monotypic genus has long been questioned (Hubbard 1948). When De Candolle created the genus *Danthonia* in 1805 he even referred *Festuca decumbens* L. to it, apparently unaware that this was already the type of *Sieglingia* of Bernhardt of 1800. The choice has largely rested on whether the central tooth of the lemma in *Sieglingia* represents an abbreviated awn or not, other features being comparable with *Danthonia*. The recent action taken to conserve *Danthonia* (Baum 1968; Moore *et al.* 1970) would mean that the now familiar name *Sieglingia* would be lost to *Danthonia*, if considered congeneric. The prominent feature of paleal pulvini noticed here supports the maintenance of *Sieglingia* as a distinct genus.

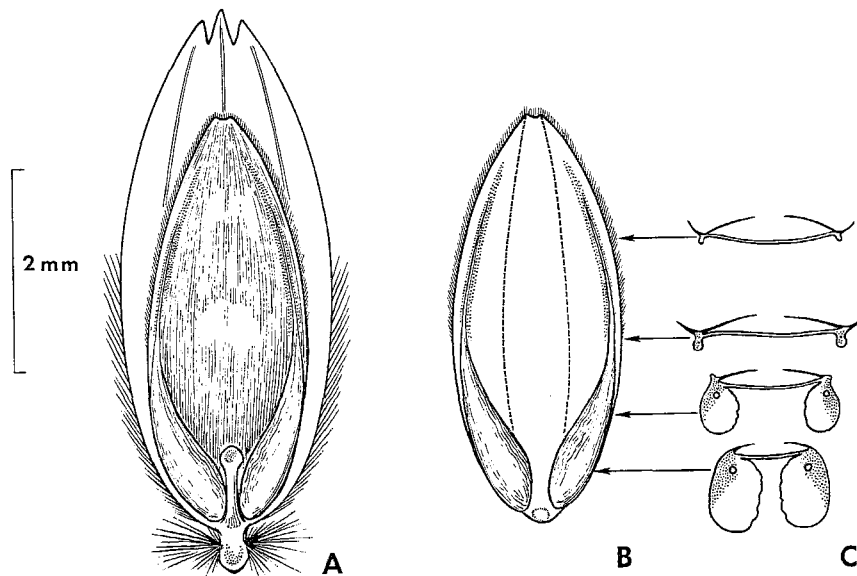


FIGURE 1. *Sieglingia decumbens*. A. Complete floret in adaxial view, the lemma flattened out. B. Palea (diagrammatic) showing the pulvini on lower portion of keels, ciliate upper portion of keel, and infolded margins (dashed lines). C. Sections of palea at levels indicated, showing position of vein (circle) and thin-walled tissue (not stippled) of turgid pulvini. (Drawn from Dore & Marchant 23253 - DAO.)

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W. G. DORE

Plant Research Institute Contribution No. 729, Canada Department of Agriculture, Ottawa 3.

671/2 × r. *LOLIUM MULTIFLORUM* Lam. × *L. RIGIDUM* Gaud. - At Blackmoor, N. Hants., v.c. 12.

The following natural interspecific hybrids involving different species of *Lolium* have been listed in the botanical literature (Ascherson & Graebner 1902, Ullmann 1936, Terrell 1966): *Lolium multiflorum* × *perenne* (*L.* × *hybridum* Hausskn.), *L. multiflorum* × *remotum*, *L. multiflorum* × *rigidum*, *L. perenne* × *rigidum* and *L. perenne* × *temulentum*. Of these, only *L. multiflorum* × *perenne* has hitherto been reported from Britain (Dandy 1958). When examining British material of *Lolium* at the British Museum (Natural History), Dr E. E. Terrell, of Beltsville, Maryland (U.S.A.), identified a specimen collected by J. E. Lousley on October 29, 1960, at Blackmoor, N. Hants. (v.c. 12) and distributed in his Wool Adventive Flora of Britain under the name *L. rigidum* (No. W/1651), as *L. multiflorum* × *rigidum*, which has not been previously recorded from Britain.

L. multiflorum × *rigidum* is intermediate in several respects between its putative parental species, and is characterized by the following features.

Annual or biennial, about 60 cm high. Culms tufted, geniculate in the lower part, erect in the upper, somewhat stout, branched at the base, usually 3-noded, scaberulous below the spike, otherwise glabrous, smooth; nodes tinged with purple. Leaves green, glabrous; sheaths rounded on the back; ligules about 1 mm long, membranous; leaf-blades 10-25 cm long, 3-7 mm wide, scaberulous above, rolled in the young shoot, with short, spreading auricles. Spike 20-25 cm long, rather stout, erect or slightly nodding, compressed; axis scaberulous. Spikelets 1.5-2.8 cm long, 9-11-flowered, sessile, with their edges in hollows of the axis, oblong-lanceolate, breaking up at maturity below each lemma. Lower glume present only in the terminal spikelet, similar in shape and size to the upper; upper glume 14-17 mm long, narrowly oblong, 5-7-nerved, obtuse. Lemmas 5-8 mm long, lanceolate-oblong, 5-nerved, tipped with a short, straight awn 1-2 mm long. Paleas as long as the lemmas, 2-keeled, minutely ciliate towards the tip. Rhachillas slightly scaberulous. Anthers about 4 mm long.

This hybrid differs from *L. multiflorum* mainly in having a longer upper glume and a much shorter awn of the lemma, and from *L. rigidum* in having a shorter upper glume and a short-awned lemma.

The results obtained by Jenkin *et al.* (Jenkin 1931, 1935, 1954a, b, c, d, e, 1955; Jenkin & Thomas 1938, 1939) in crosses among the three cross-pollinated and largely self-sterile species, *L. multiflorum*, *L. perenne* and *L. rigidum*, indicate that they are strongly interfertile. Crosses between these species with self-pollinated species, such as *L. loliaceum*, *L. temulentum* and *L. remotum*, produced sterile hybrids.

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A. MELDERIS

683/p. *BROMUS PUMPELIANUS*—An introduced species, at Walthamstow, S. Essex, v.c. 18.

A Brome found by J. Whisher on 23rd September, 1967, at Walthamstow, S. Essex (v.c. 18), growing in large quantities on a bank of the reservoir, proved to be *Bromus pumpelianus* Scribn., which is a polymorphic N. American species, occurring in meadows and on grassy slopes from Colorado to S. Dakota, Idaho, Yukon and Alaska. It is closely related to *B. inermis* Leyss., a native of northern and central Europe and of temperate Asia, extending eastwards to China. As a fodder plant, *B. inermis* has been introduced in the British Isles (also in N. America), where it has become naturalised in widely scattered localities, especially on sandy and stony soils. The following are details of the Walthamstow specimen:

A perennial, 50–100 cm high, forming loose tufts, spreading by long wiry rhizomes. Culms erect, stout, unbranched, minutely pubescent below the nodes. Leaves dark green; sheaths tubular, splitting in the upper part, striate, smooth or minutely pubescent towards the base; ligules short; leaf-blades about 20–25 cm long, 3.5–9 mm wide, scaberulous on the upper surface, glabrous, smooth beneath, flat, except for the involute, pungent tip, auricled at the base. Panicle 10–20 cm long, more or less dense, green; branches 5–10 cm long, erect, divided; the lower in pairs, the upper 3–5 at each node; axis glabrous. Spikelets about 30 mm long, narrowly lanceolate to narrowly oblong, somewhat compressed, 5–10-flowered, breaking up below each lemma. Glumes persistent, glabrous, keeled, unequal; the lower 5–7 mm long, narrowly lanceolate, 1-nerved, finely pointed; the upper 7–9 mm long, oblong-lanceolate, 3-nerved, obtuse. Lemmas 9–12 mm long, 7-nerved, minutely pubescent towards the base and along the margins, tipped with a fine straight awn 2–3 mm long. Paleas shorter than the lemmas, 2-keeled, with shortly ciliate keels. Rhachillas pubescent. Anthers 4.5–5.5 mm long.

B. pumpelianus differs from *B. inermis* in having a lemma which is more or less pubescent along the margins and across the back (densely and long-hairy all over in forms of the northern parts of N. America), tipped with a short awn 2–3 mm long. In *B. inermis* the lemma is glabrous, smooth or slightly scaberulous, with an obtuse tip, awnless or mucronate.

A. MELDERIS

PERSISTENCE OF *SILENE MARITIMA* AND OTHER PLANTS ON AN INLAND TIP IN SOUTH LANCASHIRE, V.C. 59.

In 1942, imported sand was deposited on an ash-tip at Leigh, South Lancashire which I had first known in 1938. The site lies about thirty miles inland. Several new plants appeared on the sand in 1943 and a watch was kept on these until 1948, after which the site was not visited until 1968.

In the intervening years, part of the ash-tip and a large part of the adjoining railway complex had been removed. Despite this, the sand was still visible in places in 1968 and, on and around it, all but one of the adventives of 25 years earlier were still present. Status changes were as follows:

Cakile maritima. 1943, several large plants. 1947, five, very small, sickly plants. 1968, not refound.

Diplotaxis muralis. 1943, several, robust plants. 1948, a few, very small but healthy plants. 1968, ten, small, fertile specimens.

Erodium cicutarium subsp. *cuticularium*. 1943–1948, some fluctuation due to trampling, usually about ten moderate plants. 1968, twelve tiny plants among taller vegetation.

Linaria dalmatica. 1943–1948, 1968, fairly constant, five or six large and as many small, unbranched flowering plants.

Silene maritima. 1943–1948, constant at four perennial plants. 1968, 25 large mats, now also on the surrounding ashes.

Ononis repens. 1943–1948, increased and spread to the ashes. 1968, still common but now discontinuous over a wider area.

Saponaria officinalis. 1943–1948, 1968, very similar in status and history to *Ononis repens*.

Anthyllis vulneraria. 1943 and 1944, common on the sand. 1948, apparently gone. 1968, common on and near the sand.

The persistence of several of these species and the increase of *Silene maritima* at this inland, lowland site is unusual.

The plant community of the main tip, which is well-trodden, appeared to have changed little between 1938 and 1968, the main components being:

very common – *Epilobium angustifolium*, *Artemisia vulgaris* and *Conium maculatum*
 common – *Reseda luteola*, *Melilotus officinalis* and *M. alba*
 frequent – *Oenothera biennis*, *Potentilla norvegica* and *Silene vulgaris*

T. EDMUNDSON

TWO ADDITIONS TO THE FLORA OF FOULA, ZETLAND, V.C. 112.

Since the publication of 'Notes on the Flora and Vegetation of Foula, Zetland (v.c. 112)' (Hawksworth 1969), it has been possible to confirm two further species for the island:

19/1. *Cystopteris fragilis* (L.) Bernh. in shelter of Old Red Sandstone boulders Hamnafjeld, Foula, 1965, D. L. Hawksworth; under a boulder, Hamnafjeld, Foula, 1968, W. Scott and R. C. Palmer.

192/17. *Trifolium hybridum* L. near Ham, introduced with corn, 1965, D. L. Hawksworth, confirmed by T. G. Tutin and A. O. Chater, LTR.

REFERENCE

HAWKSWORTH, D. L. (1969). Notes on the Flora and Vegetation of Foula, Zetland (v.c. 112). *Proc. bot. Soc. Br. Isl.*, 7: 537–547.

D. L. HAWKSWORTH