

PLANT NOTES

4/4. *EQUISETUM VARIEGATUM* Schleich, ex Weber & Mohr. The recent discovery of this plant in Berkshire is of considerable interest. It was brought in to me by Mr. E. G. Arthurs who recognised it as a species with which he was unfamiliar. The pit in which it grows is an old stone quarry on the Coral Rag which has been disused since the last war. The bottom is at various levels and pools occur in places. The quarry has a varied flora partly of waste ground and calcareous grassland plants and partly of fen plants (e.g. *Dactylorchis* spp.) originating from the neighbouring Cothill Fen. It contains few obvious aliens among which *Buddleja davidii* and *Linaria purpurea* are conspicuous. Both these presumably came from gardens in the village.

The *Equisetum* occurs over an area of about 30 to 35 sq. yards on wet ground and is associated with *E. palustre*. Its appearance is consistent with vegetative spread from a single plant, and it seems to be spreading rapidly. It is believed that the area in which it occurs was only opened as a quarry during the last war.

The occurrence appears to be the first authentic inland record from the south of England as, although Druce lists v.c. 20 (Hertfordshire) in the *Comital Flora*, I have been unable to trace the source of the record. The nearest station for the plant seems to be marshy ground near Weston-super-Mare (v.c. 6, N. Somerset). It occurs also in dunes in N. Devon and S. Wales. In Scotland and N. England (from Yorkshire northwards) it occurs frequently inland as well as by the coast.

Although the pit has been used as a dump for old cars, prams, builder's rubble, tarmac and rubbish from a local aerodrome, the absence of other plants (with one exception, the hepatic, *Preissia quadrata* (Scop.) Nees, whose origin could not be local) suggests that the *Equisetum* arrived by natural means. Its origin could be either from a wind-blown spore or from one brought on a migrating water bird.

The *Preissia* is most likely to have arrived by similar means. This was first found in the pit in April 1956 in small quantity, but has since spread over a large area of the pit. It is a rather frequent plant of calcareous rock crevices in the north and west, but is rare in S. England.—E. F. WARBURG.

145/1. *CORRIGIOLA LITORALIS* L. is known as a British native only at Slapton Ley, S. Devon, v.c. 3, and in the Channel Islands. It formerly grew near Helston, W. Cornwall, v.c. 1, and in Dorset, v.c. 9, but is now extinct.

Pyrah (1959) records that the species is widespread as an adventive on the ballast of railway tracks in the Castleford area, S.W. Yorks, v.c. 63, and it has also been noted abundantly on railway tracks near Barnet, Herts, v.c. 20, 1958, J. G. Dony and B. Clay, and a small patch was reported on railway tracks near Charlton village, Bellingham, Northumberland, S., v.c. 67, 1958, Mr. and Mrs. Lesterson, comm. J. A.

Bradley. It is of interest to note that *C. litoralis* was recorded as an adventive on railway tracks at Freshfield, S. Lancs., v.c. 59, as long ago as 1928 (*Rep. Bot. Soc. & E.C.*, 8, 754, and *N.W. Nat.*, 3, 140), and here it persisted until as late as 1949.

Pedersen (1955) has shown that the species, of very rare occurrence, in the southernmost part of Jutland has been introduced to railways in north and south Slesvig with gravel used for ballast and has subsequently spread widely over the railway system of west Jutland. It seems probable, therefore, that *C. litoralis* may be more frequent and much more widespread than was formerly supposed, and the investigation of the vegetation of railway tracks in other parts of Britain may well produce new records.

REFERENCES

- PEDERSEN, A., 1955, Indslæbte planter ved jernbanerne, *Flora og Fauna*, 61, 81-109.
 PYRAH, M., 1959, *Corrigiola littoralis* in the Castleford Area, *The Nat.*, 1959, 6.
 D. H. KENT.

163/r. *Geranium retrorsum* L'Hérit. ex DC., 1824, *Prodr.*, 1, 644. *G. pilosum* Soland. ex Forst. f., 1786, *Fl. Ins. Austr. Prodr.*, 91, nom. nud. Willd., 1800, *Sp. pl.*, 3, 706; non *G. pilosum* Cav., 1788. O, Channel Islands: Alderney; railway line between naval quarries and Platte Saline, abundant and well established, 1957, H. J. M. BOWEN, D. McCLINTOCK and Mrs. B. H. S. RUSSELL, det. E. F. WARBURG. Plant biennial or perennial, rootstock usually stout. Stems 30-60 cm. long, branched, decumbent at the base, ascending above, often covered with soft spreading or retrorse hairs. Lower leaves on slender petioles 10-15 cm. long which are usually covered with spreading or reversed hairs; upper leaves on shorter petioles, uppermost sessile. Lamina cut to the base or nearly so, into 5-7 segments, which are again deeply lobed or partite; lobes cuneate, \pm rounded at the top. Stipules lanceolate, acuminate. Peduncles equalling the petioles in length, usually set with spreading hairs, but sometimes subglabrous, 1-2 flowered, bracteate. Flowers pink, very variable in size. Sepals ovate, abruptly acuminate. Petals exceeding the calyx, obcordate, emarginate. Carpels hairy, even. Native of Australia and New Zealand. The above description is based on that given in Cheeseman, T. F., 1925, *Manual of the New Zealand Flora*, Edition 2.

G. retrorsum resembles *G. dissectum* L. but has larger petals which are less deeply notched. It is a critical species and the group to which it belongs is in need of revision.—D. H. KENT.

169/c. *Erodium crinitum* Carolin in *Proc. Linn. Soc. N.S.W.*, 83, 93 (1958). The Australian *Erodiums*, which hitherto have been placed under *E. cygnorum* Nees, have been studied by Carolin and shown to include four taxa. One of these, *E. aureum* Carolin, is a diploid ($2n=20$) inhabiting the dry central parts of Australia. The second, *E. crinitum* Carolin, is a tetraploid ($2n=40$), which is widespread in eastern and Southern Australia with occasional outliers in Western Australia. The remaining two taxa are classified by Carolin as subspecies of *E. cygnorum*

Nees; both are hexaploids ($2n=60$). Typical *E. cygnorum* has the sepals covered with short appressed white hairs and the mericarp of the ripe fruit rather sparsely clothed with stiff spreading hairs. In the subspecies *glandulosum* Carolin, the sepals are covered with spreading glandular hairs of variable length intermingled with a few simple hairs and the mericarps are rather densely clothed with stiff hairs appressed along the long axis. This subspecies is concentrated mainly in South Australia, but does occur occasionally in Western Australia. In the British Isles most of our adventive material must be assigned to *E. crinitum*. Among other characters this is distinguished by the absence of glandular hairs visible under a hand lens and in having the calyces covered by stiff spreading hairs of variable length, with, usually, a tuft of long reflexed hairs at the base of the calyx and top of the pedicel. The mericarps are covered with stiff hairs which are appressed obliquely to the long axis.

The following British specimens, formerly identified as *E. cygnorum* Nees, are *E. crinitum* Carolin. In Herb. Kew: v.c. 16, W. Kent; Hextable, 1949, J. E. LOUSLEY: v.c. 20, Herts; Great Wymondley, 1928, J. E. LITTLE: v.c. 30, Bedford; Flitton, 1957, J. E. LOUSLEY: v.c. 63, S.W. York; Bradford, 1918, J. CRYER: v.c. 64, Mid-W. York; Thorp Arch, 1951, R. KILBEY. In Herb. R. A. Graham: v.c. 30, Bedford; Sandy, 1950; Maulden, 1950. In Herb. J. E. Lousley: v.c. 16, W. Kent; Hextable, 1948, D. MCCLINTOCK: v.c. 30, Bedford; Maulden, 1950; Flitton, 1953; Flitwick, 1956: v.c. 37, Worcester; Charlton, 1955, C. W. BANNISTER.

The following specimens in Herb. J. E. Lousley are correctly assigned to *E. cygnorum* Nees, (a) as subsp. *cygnorum*:—v.c. 12, N. Hants.; Froyle, 1947, C. LANGRIDGE: v.c. 30, Bedford; Maulden, 1950; Flitwick, 1958: v.c. 37, Worcester; Charlton, 1958, C. W. BANNISTER: (b) as subsp. *glandulosum* Carolin: v.c. 37, Worcester; Evesham, 1958, C. W. BANNISTER; Charlton, 1958, C. W. BANNISTER.—R. MELVILLE.

188. *SAROTHAMNUS* Wimm. Although I am not interested in maintaining a determined opinion about the independence of the genus, it is convenient, I think, to note that the argument used by Heywood (1958) against this independence is not very consistent. The endemic spanish complex *Cytisus commutatus* (Wk.) Briq., as I have shown in a recent paper (1958) does not present the least affinity with Wimmer's genus.

Unfortunately the reviewers of a group are sometimes unfamiliar with the species they deal with and the problems they present. It was Briquet who placed his *Cytisus commutatus* (a combination that must be accepted and attributed to him, even if proposed in Sect. *Sarothamnus* Bentham) in subsect. *Verzinum*!

The only reason for his essential error were surely the affinities indicated by Willkomm for his "*Sarothamnus commutatus*" (judging incomprehensibly by external aspect of the shrub in flower). The plate (1885) certainly was conclusive, although Willkomm himself never had seen living material of his species and committed other inexactitudes (geographical, etc.), as it may be seen already in Laguna (1890).

I shall publish a later paper with new data. Cytotaxonomical and biochemical studies had been undertaken by my colleagues.

REFERENCES

- HEYWOOD, V. H., 1958, *Proceedings B.S.B.I.*, **3**, 175.
 LAINZ, J. M^a & M., 1958, Sobre un *Cytisus* infortunado, *Bol. Soc. Bot.*, 2^a sér., **32**, 63-68.
 WILLKOMM, M., 1885, *Illustrationes florae Hispaniae insularumque Balearum*, **1**, tab. 26.
 LAGUNA, M., 1890, *Flora forestal española*, **2**, 302.

M. LAINZ.

249/2. *LYTHRUM HYSSOPIFOLIA* L. In October of this year Mrs. G. Crompton discovered a considerable colony of *Lythrum hyssopifolia* growing in standing water at the edge of a wheatfield in Whittlesford, seven miles south of Cambridge, v.c. 29. There were c. 30 plants in an area of about 10 × 4 yards, many of them 18"-24" tall. A few weeks later Dr. D. E. Coombe found another, and larger, colony, in the same field a few hundred yards from the first locality. Details of this site are as follows:—

28th October and 1 November 1958

Damp hollow in mustard field, ploughed in the spring of 1958; ridge and furrow still evident; soil very moist but no standing water. Soil: base-rich (calcareous), silty river gravel. Whole area of *Lythrum* c. 15 m. by 15 m.

1 m. by 1 m. quadrat in the centre of the *Lythrum* area: Slope 1 degree to west; cover by higher plants 90%, to c. 20 cm. high; cover by bryophytes c. 30%.

<i>Lythrum hyssopifolia</i>	8%, to 21 cm. high, fl. and fr.
<i>Kickxia elatine</i>	15%, fl and fr., to 28 cm. long.
<i>Juncus bufonius</i>	50%, fr. and seedlings, to 23 cm. high.
<i>Anagallis arvensis</i>	3%, fl. and fr., small individuals.
<i>Plantago major</i>	5%, fr. (with c. 20 seeds per capsule),
" <i>P. intermedia</i> "	abundant small plants.
<i>Polygonum mite</i>	3%, fr., most of leaves fallen.
<i>Mentha arvensis</i>	2%, many small sterile plants to 3 cm.
<i>Agrostis stolonifera</i>	1%, occasional sterile shoots.
<i>Potentilla anserina</i>	1%, a few small sterile rosettes.
<i>Poa trivialis</i>	1%, a few sterile tufts.
<i>Sonchus asper</i>	Cover small, one sterile rosette.
<i>Aethusa cynapium</i>	Cover small, one small seedling.
<i>Cerastium holosteoides</i>	Cover small, a few small sterile shoots.
<i>Euphorbia exigua</i>	Cover small, fl. and fr., many small plants.
<i>Riccia glauca</i>	} 5%, very abundant small plants. together 25%, both fruiting.
<i>Dicranella varia</i>	
<i>Pottia davalliana</i>	

Other species in the same *Lythrum* area (15 by 15 m.): *Acinos arvensis*, *Arenaria leptoclados*, *Atriplex patula*, *Chaenorhinum minus*, *Cirsium arvense*, *Epilobium adnatum*, *E. hirsutum*, *Equisetum palustre*, *Galeopsis angustifolia*, *Kickxia spuria*, *Lythrum salicaria*, *Medicago*

lupulina, *Papaver rhoeas*, *Ranunculus repens*, *Reseda lutea*, *Rumex crispus*, *Senecio vulgaris*, and *Sinapis alba*. *Riccia crystallina* (locally abundant), *Pohlia delicatula* (rare), *Phascum floerkeanum* (very rare), *Chara vulgaris* (land form on wet mud, rare).

Research into records of the species suggests that it is now extremely rare in Britain and is known to occur in only one other locality, the wet floor of a quarry in Jersey. Moreover, the plant has only been found in four other localities in the 20th century.

In the past doubt has been cast upon the native status of this species, but there are a number of reasons why this doubt might be dispelled.

1. An analysis of all records shows that, whilst some are undoubtedly for casual occurrences only, others are from wet cornfields which must have been very similar to the Whittlesford localities, or indeed to its first British locality in unenclosed fields near Dorchester, Oxon. (Johnson's 'Gerarde', 1633.)
2. In 1853 *Lythrum* was recorded from "a damp hollow by the Chippenham Avenue" (Babington, C. C., 1860, *Flora of Cambridge-shire*). Nearly 90 years later, in 1940 (and again in 1941) it was found in a locality which would fit the previous description almost exactly, suggesting that seed may persist for long periods. The seed of the biologically similar *Juncus mutabilis* is known to remain viable for at least 12 years (D.E.C.).
3. The distribution range of these wet cornfield localities is limited to central and eastern England and may be compared with that of two other species of similar ecology, *Myosurus minimus* and *Pulicaria vulgaris*.
4. The habitat conditions on which it was found agree very closely with those in which it is found elsewhere in Europe. Both *Lythrum hyssopifolia* and *Myosurus minimus* are characteristic species of the order *Isoetetalia*, which includes most of the vegetation of periodically wet, open communities in Europe. This order is divided into two main alliances, the *Nanocyperion flavescentis* of north and central Europe, a therophyte community which reaches its maximum development in autumn, and the *Isoetion* of Mediterranean areas which develops in spring and early summer. The Whittlesford site probably falls into the former alliance whilst the *Isoetion* is found in Britain on the Lizard Peninsula: *Juncus capitatus*, *Cicendia filiformis* and *Isoetes histrix* are characteristic species of association which are placed into this alliance by Continental plant sociologists. It is interesting that in communities of the *Nanocyperion*, both in Belgium and at the Lizard, *Kickxia elatine* is characteristic of the more calcareous habitats: the Whittlesford list contains this species in abundance and several other calcicoles, but none of the more calcifuge ephemeral bryophytes.
5. Mrs. Crompton's locality is on the flooded meander of a stream which is now canalised, and is less dependent on human activity for maintenance than the cornfield localities.

The chances of being able to interpret more exactly the communities in which species like *Lythrum*, *Myosurus* and *Pulicaria* occur in Britain are now becoming very remote. All three are disappearing rapidly due no doubt to drainage operations, and for this reason the authors would welcome lists of associated species from metre quadrats wherever any of them are found. Particular attention should be paid to bryophytes, especially species of the Liverwort, *Riccia*, and other ephemerals, which are important members of the communities.—D. E. COOMBE, F. H. PERRING and S. M. WALTERS.

269/m. *Hydrocotyle moschata* Forst. f., 1786, *Prodr.*, n. 135, H.1, S. Kerry. This interesting little alien is completely naturalized on grassy roadside banks at several different stations in the eastern half of Valentia Island, S. Kerry. It was discovered last June by a student party from Trinity College, Dublin, led by Mr. W. A. Watts. It is a native of New Zealand, being widely distributed throughout both islands, and it must be presumed to have been introduced into Ireland as a carpeter for gardens, or a filler of the chinks in crazy paving, though I cannot trace a reference to it in any gardening book. The identification was made by Mr. N. Y. Sandwith.

It is a neat little plant, not unlike *Sibthorpia europaea* in habit, though somewhat coarser, with creeping and rooting, hairy stems, and leaves 5-12 mm. across, suborbicular in outline, but deeply cordate with a narrow or broadish sinus (not peltate as in our native species), distinctly 5- or 7-lobed, with the lobes irregularly and bluntly toothed. The leaves are conspicuously pilose on both surfaces. The flowers are extremely minute, in a simple umbel, but with the pedicels so short that it is almost a head, and the collection of pinkish-brown fruits is much more suggestive of the head of achenes of a Batrachian *Ranunculus* than of a series of independent fruits.—D. A. WEBB.

Mr. D. McClintock has pointed out that *H. moschata* is included in W. E. T. Ingwersen's current catalogue, and that Mr. Ingwersen has informed him that his nursery has stocked the plant for 30 to 40 years. It is mentioned also by A. G. L. Hellyer (*Sander's Encyclopaedia of Gardening*, edition 22, 241, 1959) who states that it forms neat ever-green carpets but is slightly 'invasive.'—Ed.

366/1b. *ARMERIA MARITIMA* subsp. *ELONGATA* (Hoffm.) Bonnier. In my paper, "An inland *Armeria* overlooked in Britain: II (1958, *Watsonia*, 4, 136), appears the sentence, "The chromosome-number of subsp. *elongata* has been determined both from the Continental cultures and from Ancaster and shows $2n=14$, the same as for the other sub-species of *A. maritima*." This should be $2n=18$, as is well known for all material of *A. maritima* which has been counted.—H. G. BAKER.

627/3. *SPIRANTHES ROMANZOFFIANA* Cham. On Tuesday, 5th August 1958, a small party consisting of Mrs. Jocelyn Russell, Dr. Humphrey Bowen, Arthur Chater and myself, were working on squares in the vicinity of the western shores of Lough Corrib. It fell to my lot to approach and examine the vegetation of the margin of the lake. Owing to the exceptionally wet season, the level of the lake was considerably

above the normal and much of the shore was flooded, but almost at once I observed the inflorescence of what was, undoubtedly, *Spiranthes romanzoffiana*, standing up in the water about a yard from the edge. The leaves were completely submerged by the flood-water. Although the shores of the lake were examined in both directions no other flowering spikes were found then, but the theory was advanced that the water had prevented this spike being eaten by horses or cattle which seem to like the species.

When the 'find' was reported to Professor Webb, he informed us that this was of great interest as the plant had not previously been reported for Galway. Since then, other plants of the orchid have also been found on the shores of the same Lough by Mrs. M. Cullen, suggesting that it is well established in the district.—KATHLEEN HARDING.

The finding of new localities for *Spiranthes romanzoffiana* by mapping parties in two successive seasons may at first sight seem surprising. However, when the history of the plant in Britain as a whole is considered it becomes apparent that this is merely an extension of the changes which have been taking place during the last 70 years.

The plant (subsp. *gemmipara*) was first recorded near Castletown Berehaven, W. Cork, in 1810, by Drummond, and this was the only area from which it was known until 1892, when subsp. *stricta* was found in North Armagh. In 1895 came a record from Londonderry and, in the next 34 years, it was also found in Antrim, Down and Tyrone. By 1924 there was a rumour that the species occurred on the Isle of Coll and its presence there has since been confirmed. It was in the news again in 1930 when Lady Strathcona reported it from Colonsay. Then followed a period of comparative quiet, but since the war it has been attacking new ground and reached the British mainland first in Westernness and then last year in South Devon. Last week I heard of a new locality for *Spiranthes* in County Cork. Has the wheel turned full circle and does the Galway record represent the beginning of a second revolution? There seems no reason why damp rushy pastures near loch shores on acid soils in the west should not be searched with abundant hope and expectation.—FRANKLYN PERRING.

672/a. **Vulpia australis** (Nees ex Steud.) Blom, 1934, in *Acta Hort. Got.*, 9, 163; *Festuca australis* Nees, 1854, in Steud., *Syn. Pl. Gram.*, 304. 34, W. Glos.; Sharpness Docks, 1955, R. B. ABELL, C. W. BANNISTER and C. C. TOWNSEND, det. C. E. HUBBARD (*Hb. Kew, Hb. Lousley & Hb. Townsend*).

Root fibrose, fibres slender, fuscous. Culms caespitose with erect branches; leaves glabrous, capillary, triquetrous, ligule exserted, emarginate or truncate-bilobed. Panicle erect, subsecund, spiciform, spikelets with (8-) 10 compressed florets. Lower glume $\frac{1}{4}$ - $\frac{1}{3}$ length of the upper; lemmas $3\frac{1}{4}$ -4 mm., long-awned, scabrous.

Very close to *V. bromoides*, but distinct enough in appearance. Hitchcock in his work on the grasses of the high Andes differentiates *V. australis* from *V. bromoides* on the length of the lemma, giving the measurements as: *V. bromoides*, 10 mm.; *V. australis*, 5 mm. Henrard,

in *Blumea*, 2, 323 (1937), questions if the lemma of *V. bromoides* reaches 10 mm., and in my experience 8 mm. is about the maximum, 6-7 mm. being more usual. Compared side by side with *V. bromoides*, the lemma of *V. australis* is obviously narrower. Similarly, although *V. bromoides* may have up to 10 florets in the spikelet, about 7 seems more usual. The inflorescence in *V. australis* thus appears much denser, and the lower glume is much shorter in relation to the upper than in *V. bromoides*. *V. australis* is widespread in temperate South America.—
C. C. TOWNSEND.