PLANT NOTES

33/2. MATTHIOLA SINUATA (L.) R.Br. This is usually said to be a biennial. I had however a plant of it in my garden grown from seed from Saunton, Devon, and sown in 1949, which was still lusty until the frosts early this year (1954)—30° was recorded close by. It is perhaps relevant to record that in its first year it proved a prime favourite with rabbits and never managed to flower. This may have enabled the plant to form a stouter stock and last longer.—D. McCLINTOCK.

147(2)/1. **Genistella sagittalis** (L.) Gams, 1923, in Hegi *Illustr. Fl. Mittel-Eur.*, **4**, 196; *Genista sagittalis* L., 1753, *Sp. Pl.*, 710; *G. herbacea* Lam., 1786, *Encycl.*, **2**, 616; *Genistella racemosa* Moench, 1794, *Meth.*, 133; *Spartium sagittale* Roth, 1798, *Tent. Fl. Germ.*, **1**, 302; *Saltzwedelia sagittalis* Gaertn., Mey. & Scherb., 1800, *Fl. Wetterau*, **2**, 498; *Cytisus sagittalis* Koch, 1837, *Syn.*, 147; *Syspone sagittalis* Griseb., 1843, *Spic. Fl. Rum. Bith.*, **1**, 5. 12, N. Hants.; a large patch on bank by roadside on the Basingstoke-Andover road between Whitchurch and Hurstbourne Priors, 1954, Miss C. PLUNKETT, comm. Miss D. E. DE VESIAN. Dwarf procumbent shrub less than 30 cm. high, with ascending or erect mostly simple broadly 2-winged branchlets: leaves ovate to oblong, 12-20 mm. long, villous: flowers yellow, each 10-12 mm. long, in terminal racemes 2·5-4 cm. long; calyx hairy; pods linear-oblong, 20 mm. long, silky, 3-6 seeded. Native of central and south east Europe.—D. H. KENT.

156/1. ANTHYLLIS VULNERARIA L. Sir Edward Salisbury's recent book *Downs and Dunes* more than once gives this species as a biennial. A mature red-flowered plant collected in early 1951 was still flourishing three years later in my rockery until destroyed by the activities of moles. Its seedlings I might add have also produced red flowers.—D. McCLINTOCK.

195/2. PYRUS COMMUNIS L. In view of doubt about the status of the pear-tree in Britain, it is interesting to note that the carbonised fruits of either this species or the related *P. cordata* Desv. have been found in the Tardenoisian midden on Téviec island, off the coast of Morbihan, in Brittany (M. & S.-J. Péquart, et al., 1937, *Arch. Inst. Pal. Humaine, Mém.* **18**; J. G. D. Clark, 1952, *Prehist. Eur.*, 48). Since this deposit is of Mesolithic age, before the advent of orchardry, it is reasonable to assume that the fruits came from wild trees growing in the vicinity. This increases the likelihood that at least one of the species of *Pyrus* is native in southern England.—D. E. ALLEN.

378/22. ARTEMISIA NORVEGICA var. **scotica** Hultén, 1954, *Nytt Mag. Bot.*, **3**, 67. In typical *A. norvegica* the basal leaves are subpalmate and the primary lobes have long secondary lobes. The plant

recently found in Scotland has the primary lobes of the basal leaves merely deeply 3-5-dentate and is described by Hultén (1954) as a new variety. The full description of the new variety is as follows:—Humilis 1-2 capitulata albo-pilosa; foliis basalibus cuneatis, vel subpalmatis laciniis tribus usque quinque profunde 3-5 dentatis. Capitula minora iis apud *Artemisiam norvegicam*, modo c. 1-2 cm. diam. Type specimen, 105, W. Ross; near Ullapool, Wester Ross, at about 2,400 feet on spur of mountain, 1953, J. E. Lousley (Hb. Mus. Brit.).

610/2. **Kochia densiflora** Turcz. The treatment of the genus *Kochia* in Komarov *Fl. URSS.*, **6** (1936) by Iljin has drawn attention to *Kochia densiflora* Turcz. in Moquin, *Chenop. Enum.*, 91 (1840) (*K. sieversiana* Iljin, *l.c.*, 134—non C. A. Meyer) a species which is closely related to *K. scoparia* (L.) Schrad. Whereas the flowers of *K. scoparia* do not show any, or only a few, hairs at their base, in *K. densiflora* they have a more or less dense ring of long hairs. The flowers are embedded in this ring of hairs so that the flowering branches have a general very hairy appearance. The intensity of this hairy development is found in a whole series of stages, so that very often difficulties arise in assigning individual plants to one or the other species.

It seems that the strongly hairy *K. densiflora*, which is found in steppes and deserts of Central and Eastern Asia, is the wild form of *K. scoparia*, which in Asia grows especially in cultivated ground such as cornfields, or in ground influenced by man.

In recent years *K. densiflora* has been observed as an introduced plant several times in Europe (Germany, Austria, Holland). In England it was collected by Miss C. M. Goodman on a track adjoining fields in which wool-aliens were abundant at Charlton, Worcs., v.c. 37, on October 11th, 1953, and a specimen was sent to me by Mr. J. E. Lousley.

An account of the Asiatic species of this genus by the writer will be found in *Mitt. Basler Bot. Gesellsch.*, **2** Jahrg., No. 1, 4-16 (May 1954) which includes a description of *K. densiflora* and discussion of the nomenclature.—P. Aellen.

656/2. **Elodea callitrichoides** (Rich.) Caspary, 1857, *Monatsb. Berl. Acad.*, 47; *Anacharis callitrichoides* Rich., 1814, *Mém. Inst. France*, **2**: 7, 75, t.2. 20, Herts.; river Colne near Harefield, c. 1948, G. Taylor. 21, Middx.; Longford River, Stanwell, abundant, 1950, H. C. Grigg; still plentiful, 1954, D. H. Kent. A dark green pellucid submerged plant. Stems up to 2 m. long, usually much less, brittle. Leaves 15-25 mm. long × 1·5-2·5 mm. broad, opposite (or in whorls of 3), linear-lanceolate, acute, translucent, lightly toothed. Flowers dioecious, small, solitary, whitish. Male flowers carried on a pedicel 20-50 mm. long, sepals 5-6 mm. long; stamens 9. Female flowers submerged with very long stigmas which reach the surface of the water. Fruit with 7-8 seeds. Water-pollinated at the surface. Only female flowers have so far been noted in Britain (cf. *Year Book, B.S.B.I.*, **1951**, 80). Native

of temperate South America, and believed to have been accidentally (or deliberately) introduced into British waters by aquarists.—D. H. KENT.

656(2)/1. **Egeria densa** Planch., 1849, *Ann. Sci. Nat.* Ser. 3 *Bot.* **11**, 80; *Elodea densa* (Planch.) Casp., 1857, *Monatsb. Berl. Acad.*, 49. 59, S. **Lancs.**; Ashton Canal, Droylsden, 1953, L. W. FROST, det. J. E. DANDY. Plant resembling *Elodea canadensis*, but larger and coarser. Branches elongate with whorls of 4 (rarely 6) linear-lanceolate, acuminate, finely toothed leaves, 20-30 mm. long. ×2-3·5 mm. broad. Flowers dioecious, large, whitish. Male flowers grouped 2-4 in a spathe and carried on long pedicels; corolla 18-20 mm.; sepals 3-4 mm.; petals showy; stamens 9. Female flowers solitary in a spathe, the corolla somewhat smaller. Fruits elongated with 1-2 seeds. Insect-pollinated, the showy flowers being raised above the water, whereas in *Elodea* pollination takes place at the surface of the water.

Plants have been observed for some years at Droylsden, growing in warm waste water from cotton-mills, but were thought to be luxuriant forms of *Elodea canadensis* until 1953 when the plant flowered profusely. The plant is frequently grown as an oxygenator in aquaria (often as *Elodea canadensis* var. *gigantea*), and it seems likely that the Lancashire plants have arisen from aquarium waste, and have established themselves in the warm water, multiplying by vegetative propagation, as only male flowers have been detected so far. *E. densa* is another native of temperate South America, and is naturalised and spreading vegetatively in the U.S.A., mainly in southern California and along the Atlantic coast; it has also been introduced into Kenya.—D. H. KENT.

658(2)/1. **Lagarosiphon major** (Ridley) C. E. Moss, 1928, *Trans. Ry. Soc. S. Afr.*, **16**, 193; *L. muscoides* var. *major* Ridl., 1886, *J. Linn. Soc. Bot.*, **22**, 233. 1, W. Cornwall; old quarry, Sennen, 1954, Miss B. M. STURDY, det. at Kew. 17, Surrey, gravel pit near Teddington Lock, 1948, J. P. M. BRENAN (Hb. Kew & Hb. Mus. Brit.). Distributed through B.S.B.I. Exchange Section (see *Year Book, B.S.B.I.*, **1950**, 96); 1949, J. E. LOUSLEY; B. WELCH (Hb. Mus. Brit.); gravel pit now filled in. 30, Beds.; pond in chalkpit, Arlesey, 1944, J. G. DONY & E. MILNE-REDHEAD; 1945, J. G. DONY, det. J. E. DANDY (Hb. Kew, Hb. Mus. Brit., Hb. Luton Mus.); still there, 1954, J. G. DONY. 59, S. Lancs.; Ashton Canal, Droylsden, 1953, J. E. LOUSLEY. A large, strong, rigid, submerged aquatic species, resembling in the field luxuriant *Elodea canadensis*. Stems long, ± branched, leafy throughout; leaves thick, dark green, translucent, whorled to alternate, linear-acute, 10-15 mm. long × 2-3 mm. broad, with short blunt triangular-shaped teeth. Flowers dioecious, small, whitish, enclosed in long spathes. Male spathe ovate, bifid at the apex, many-flowered (up to 40). Female spathe ovate or oblong, 1-flowered. Male flowers float free on water on reaching the surface. Water-pollinated at the surface. Native of S. Africa. Frequently grown as an oxygenator of aquaria

(often under the name *Elodea crispa*), and believed to have been introduced into British waters by the action of aquarists.—D. H. KENT.

830/4 × 835/1. × **Agrohordeum langei** (Richt.) G. Camus ex A. Camus, 1927, *Bull. Mus. Hist. Nat. Paris*, 33, 537 (**Agropyron repens** × **Hordeum secalinum**); *Agropyron repens* var. *hordeacea* Nielson, 1872, *Bot. Tidsskr.*, **5**, 202; *Agropyrum pratense*×*repens* Lange, 1886, *Haandb. Danske Fl.*, **4**, 49; × *Agropyron langei* Richt., 1890, *Plantae Europ.*, **1**, 126; ×*Tritordeum langei* Aschers. & Graebn., 1901, *Syn.*, **2**, 748; × *Elytrordeum langei* Hylander, 1953, *Nord. Kärlväxtflora*, **1**, 369. 34, W. Glos.; brackish pasture by the river Avon, Shirehampton, 1945, Mrs. C. I. SANDWITH; 1954, Mrs. C. I. & N. Y. SANDWITH. Plant male-sterile; the slender yellow anthers remain closed and contain imperfect pollen only. This hybrid is intermediate in several respects between its putative parents, but its facies is that of an *Agropyron* due to the dominance of certain *A. repens* characteristics. It is possible that for this reason it has been passed over, being mistaken for slender *A. repens*. From that species it may be distinguished by the articulated spike-rhachis, the internodes of which fracture horizontally just above each spikelet as they do in *Hordeum secalinum*; by the narrower, more rigid, fewer(3-4)-nerved, awned glumes which are often placed slightly obliquely in relation to the florets; and by the fewer (2-4) florets. Occasionally there are two, rarely three, spikelets at each of the lower nodes of the spikes; usually, however, they are solitary and in this respect differ from *Hordeum secalinum*. The hybrid may also be separated from that species by the wider glumes and the shorter awns. The anthers (3-3·5 mm.) agree in length with those of *Hordeum secalinum*.—C. E. HUBBARD & N. Y. SANDWITH.

835/2(2). **Hordeum leporinum** Link, 1835, *Linnaea*, **9**, 133. 30, Beds.; railway sidings, Flitwick, 1950, J. G. DONY (J. G. Dony 1068, Herb. Luton Mus.): shoddy heap, Deepdale, Potton, 1952, E. MILNE REDHEAD and J. G. DONY (J. G. Dony 1820, Herb. Kew): railway sidings, Willington, 1952, J. G. DONY (J. G. Dony 1985, Herb. Luton Mus.): railway sidings, Southill, 1952, J. G. DONY (J. G. Dony 1991, Herb. Kew): railway sidings, Shefford, 1954, J. G. DONY (J. G. Dony 2232): arable field, Maulden, 1954, J. G. DONY (J. G. Dony 2217). 37, Worcs.; arable field, Pinvin, 1954, Miss C. M. GOODMAN. 63, S.W. Yorks.; waste-wool heap, Kirkheaton, 1952, J. G. DONY (J. G. Dony 1924, Herb. Kew): railway sidings, Eccleshill, 1953, J. G. DONY, J. E. LOUSLEY and D. MCCLINTOCK (J. G. Dony 2107): railway sidings, City Road, Bradford, 1954, J. G. DONY (J. G. Dony 2136). 65, N.W. Yorks.; arable field, Catton, 1954, MISS C. M. ROB and J. G. DONY (J. G. Dony 2170).

835/2(3). **H. glaucum** Steud., 1854, *Syn. Pl. Glum.*, **1**, 352, *H. stebbinsii* Covas, 1949, *Madroño*, **10**, 17. 30, Beds.; railway sidings, Flitwick, 1953, J. G. DONY (J. G. Dony 2020, Herb. Kew, Herb. Luton Mus.); 1954, J. G. DONY (J. G. Dony 2148). 37, Worcs.; arable field,

Pinvin, 1954, Miss C. M. Goodman and J. G. Dony (J. G. Dony 2263). 63, S.W. Yorks.; Valley Scouring and Cleaning Works, Shipley, 1952, J. G. Dony (J. G. Dony 1911, Herb. Kew): Minerva Works, Kirkheaton, 1953, J. G. Dony, J. E. Lousley and D. McClintock (J. G. Dony 2108, Herb. Kew). 65, N.W. Yorks.; railway sidings, Baldersby, 1954, Miss C. M. Rob and J. G. Dony (J. G. Dony 2174).

835/2(4)b. **H. pusillum** var. **pubens** Hitchcock, 1933, *Journ. Wash. Acad. Sci.*, **23**, 453. 30, Beds.; arable field, Maulden, 1953, J. G. Dony (J. G. Dony 2058, Herb. Kew): railway sidings, Flitwick, 1954, J. G. Dony (J. G. Dony 2149).

Hordeum glaucum and *H. leporinum* are superficially alike, and closely allied to, *H. murinum* L. from which they differ in the floret of the central spikelet being borne on a "pedicel" (rhachilla-internode) usually as long as the "pedicels" of the lateral spikelets. In *H. murinum* the floret of the central spikelet is sessile or subsessile. The lemma, awn and palea of the central spikelets of *H. glaucum* and *H. leporinum* are shorter than those of the lateral spikelets: in *H. murinum* they are longer. In *H. glaucum* and *H. leporinum* the inner glumes of the lateral spikelets are as broad as those of the central spikelet, and the paleas of the lateral spikelets are pubescent. In *H. murinum* the inner glumes of the lateral spikelets are narrower than those of the central spikelet, and the paleas of the lateral spikelets are almost glabrous.

H. glaucum differs from *H. leporinum* in its spike being more dense, 6-8 spikelets per cm. of rhachis, and the stamens of the central floret being included at anthesis; the anthers are 0·2-0·5 mm. long, their upper filaments having no starch grains. In *H. leporinum* there are 3-5 spikelets per cm. of rhachis, and the stamens of the central floret are exserted at anthesis; the anthers are 0·8-1·5 mm. long, their filaments having conspicuous starch grains.

H. pusillum is closely allied to *H. marinum* Huds. It has a linear-oblong spike, usually over 4 cm. long, the glumes being suberect. In *H. marinum* the spike is ovate, usually less than 4 cm. long, the awns being strongly spreading.

H. leporinum is a native of the Mediterranean region, N. Africa and the Orient, and is now cosmopolitan in warm temperate regions. *H. glaucum* is also native in the Mediterranean region, N. Africa and the Orient, and is becoming cosmopolitan in warm temperate regions (N. & S. America, S. Africa, Australia). *H. pusillum* is probably native from the U.S.A. to central Argentine, and is appearing as an adventive in Europe.

I wish to thank Mr. C. E. Hubbard and Dr. A. Melderis for their assistance in naming my material.

REFERENCE

COVAS, G., 1949, Taxonomic observations on the North American species of Hordeum, *Madroño*, **10**, 1-21.

J. G. Dony.