PLANT NOTES

497. DIPSACUS. Dr. A. Hansen, Botanical Museum, Copenhagen, has recently drawn attention to the occurrence of *Dipsacus strigosus* Willd. as an adventive in England (1963, *Proc. B.S.B.I.*, **5**, 123-124).

D. strigosus may easily be passed over for *D. pilosus*, but the two species differ in the following characters:—

	DIPSACUS PILOSUS L.	DIPSACUS STRIGOSUS Willd.
HEADS	15-25 mm. in diameter.	30-40 (45) mm. in diameter.
INVOLUCRAL BRACTS	10-12 mm. long, narrowly triangular, not conspicuously narrowed towards the tip, abruptly contracted into a spiny point.	15-25 mm. long, linear or narrowly triangular, gradually tapering into a spiny point.
RECEPTACULAR BRACTS	obovate, abruptly contracted into a green, spine-like appendage shorter than the bract (about 3-5 mm. long), tipped with a spiny point.	broadly obovate, more or less gradually tapering into a spine-like appendage longer than the bract (about 10-12 mm. long), much darker towards the tip, ending with a spiny point.
STEM	30-120 cm. long, angled, hollow, furrowed, with scattered upward-pointing prickles.	50-150 cm. long, angled, hollow, deeply furrowed with strongly upward-pointing prickles.
LEAVES	upper stem leaves in pairs, short stalked, prickly on midrib beneath, ovate to elliptical, sometimes crenate toothed, margins hairy; lower leaves long stalked, ovate acuminate, crenate toothed with one pair of basal leaflets.	upper stem leaves in pairs, short stalked, narrowly ovate, sparsely hairy on upper surface; lower leaves long stalked, broadly ovate, crenate toothed with one pair of broad basal leaflets.
DISTRIBUTION	England and Wales northwards to S. Lancs. and Yorks. Outside Britain: Central Europe from Spain, N. Italy, N. Balkans, Central and Southern part of the European U.S.S.R., Crimea, Caucasus, Iran. Doubtful in the Black Sea region.	Central and S. Eastern part of the European U.S.S.R., Black Sea region, Crimea, Caucasus, Asia Minor, Iran, Central Asia (Turkmenia). Introduced in Sweden.

I should be glad to receive any new records and fresh specimens of *Dipsacus strigosus* Willd., for further study. They should be sent to me at the Department of Botany, British Museum (Natural History), Cromwell Road, London, S.W.7.

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—MARGARET B. GERRANS.

506. SENECIO. Miss E. M. Bullard sent me in 1962 a series of puzzling *Senecio* specimens found growing at the edge of sand dunes at Burray, Orkney. Study of this material revealed that the plants were undoubtedly part of a hybrid population between *Senecio aquaticus* and *S. jacobaea*, in which considerable back-crossing with both parents had taken place. Most of the material examined appeared to be producing fertile seed.—D. H. KENT.

*570. ELODEA. A recent revision of the S. American species of *Elodea* (1963, St. John, H., *Darwiniana*, **12**, 639-652) shows that the plant naturalised in the Longford River, Stanwell, Middlesex, v.c. 21, which has been referred to *E. callitrichoides* is in fact a newly described species **E. ernstae** St. John. It is likely that all other British gatherings of '*E. callitrichoides*' are referable to *E. ernstae*.

In his monograph the author keys the two species as follows:—

Middle and upper leaves in whorls of 2-4; lower leaves opposite; flowers dioecious.
Middle and upper leaves opposite or occasionally some in whorls of 3; staminate petals linear-spatulate ..... *E. callitrichoides*
Middle and upper leaves in whorls of 3; staminate petals spatulate; pistillate petals 3 mm. long ..... *E. ernstae*

—D. H. KENT.

676/4. POA ALPINA. *P. alpina* is a circumpolar arctic species that extends southwards in Europe to the Alps and the Caucasian mountains. In Britain it is widespread in the Central Highlands of Scotland, with scattered localities in the north and west of Scotland. Further south it is found in the Lake District and on Ingleborough in England, in Snowdonia in Wales, and in Sligo and Kerry in Ireland.

Vivipary is common in the species, and in Britain *P. alpina* is almost exclusively viviparous. Previously only two sites have been known for the seminiferous form, namely Caenlochan Glen in Angus, and Ingleborough in Yorkshire (Raven and Walters, 1956, *Mountain Flowers*, London).

In September 1962, seminiferous *Poa alpina* was found in Teesdale. A few plants were growing in rock crevices in an east-facing cliff at an altitude of 1900 ft. (580 m.) in the Maize Beck valley. These limestone cliffs have been described briefly by Pigott (1956, *J. Ecol.*, **44**, 545).

Seed collected from the wild plants proved to be viable and the resultant plants, raised in the Cambridge Botanic Garden, also produced seed in 1963. Root tips from the cultivated material were prepared by

*See p. 253.—ED.

the late G. L. Smith for cytological study, and the chromosome number was found to be $2n=32$. This compares with $2n=28$ (seminiferous) and 35 (viviparous) recorded by Tutin (Clapham, Tutin and Warburg, 1962, *Flora of the British Isles*. Edition 2. Cambridge), and with $2n=$c. 32 (seminiferous) and 39 (viviparous) recorded by Hedberg (1958, *Svensk. Bot. Tidskr.*, **52**, 37). Tutin's seminiferous material came from Ingleborough; that of Hedberg from Angus.

Muntzing (1954, *Hereditas*, **40**, 459) has shown that *Poa alpina* is apomictic, and has found Scandinavian and Alpine material to have a range of chromosome numbers from $2n=14$ to $2n=74$, with 33, 38 and 44 most frequent in Sweden. In Iceland $2n=33$ is the most frequent number, in the range from 22 to 47 found by Löve and Löve (1956, *Act. Hort. Got.*, **20**, 65). Muntzing has found that viviparous forms tend to have higher chromosome numbers than do seminiferous forms, and on the limited data available, this is borne out by the British material.

The Teesdale population of *Poa alpina* is thus interesting in that it represents an extension of the known distribution of the species in Britain; it is of the rare (in this country) seminiferous form; and its chromosome number of $2n=32$ shows it to be distinct from the nearest seminiferous population, at Ingleborough.—P. S. LLOYD.

676/6. POA NEMORALIS L. Most floras fail to indicate that this species is an introduction in many of its recorded stations. One of the few to have done so, Scully's *Flora of County Kerry* (p. 349), notes that it is a favourite constituent of grass mixtures sold by seedsmen for sowing in shady places. In Kerry, Scully could only find it in demesnes or near residences which had imported plants, not in the older and more remote woods.

In the Isle of Man, similarly, all the known occurrences of this species are on garden walls or on banks by houses. And this pattern is doubtless repeated over much of north and west Britain.

Even in Central London it is possible to find odd individuals occurring in flower borders and on newly-deposited soil. Along the edge of one shrubbery in Kensington Gardens in 1961 many specimens came up which were all growing in one or two obvious straight lines. This suggests that the species is still being offered by seedsmen and intentionally sown.—D. E. ALLEN.