ABSTRACTS FROM LITERATURE

Compiled by A. H. G. Alston.

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SYSTEMATIC, Etc.

13. Delphinium. Hylander, N., 1945, Några anmärkninger om de som prydnadsväxter odlade arterna av Delphinium undersläktet Consolida, *Bot. Not.*, 75-80, contributes some observations on the cultivated species of *Delphinium* subgenus *Consolida*. He retains the names *D. orientale* and *D. Ajacis*, as understood by J. Gay, and rejects Wilmott's proposition to transfer the name *D. Ajacis* to *D. orientale* and substitute for *D. Ajacis* sec. Gay the new name *D. Gayanum*.—[A.E.W.]

35. Nasturtium. Airy Shaw, H. K., 1947, *Kew Bull.*, *1947*, 39-46, gives reasons for concluding that the earliest name for the wild tetraploid watercress (*N. uniseriatum* Howard & Manton, 1946) is *N. microphyllum* Boenningh. ex Reichb. (1832). An account of the conspecific *Dictyosperma Olgae* Regel (1882) is also given. The known extra-British distribution of the wild tetraploid includes Europe, Afghanistan, Africa and North America. The paper concludes with a translation of a paper by Th. Irmisch (1861) giving details of the diploid and tetraploid under the varietal names *brevisiliqua* and *longisiliqua*.—[H.K.A.S.]

98. Lychnis. Baker, H. G., 1948, Stages in Invasion and Replacement demonstrated by Species of Melandrium, *Journ. Ecol.*, *36*, 96-119. The author considers that *M. dioicum* colonized the British Isles by natural means, and that *M. album* was spread as a follower of agriculture. The most convenient character by which hybrids between the two species can be recognised is the length of the calyx-teeth. *M. dioicum* ranges from 2 to 2.8 mm. and *M. album* 4.5-6.0 mm. Sterility of pollen grains, direction of capsule teeth, capsule size and shape, pedical length and position of leafy stolons are also useful.—[A.H.G.A.]

98. Lychnis. Baker, H. G., 1948, The Ecotypes of Melandrium dioicum (L. emend.) Coss. & Germ., *New Phyt.*, *47*, 131-144. Four distinct ecotypes are described, among them a woodland ecotype corresponding with *M. dioicum* subsp. *villosum* (Compt.) H. G. Baker and a coastal (in the Shetlands) corresponding with subsp. *zetlandicum* (compt.) H. G. Baker. *M. album* does not occur in the Shetlands.—[A.H.G.A.]

128/3. Erodium cicutarium (L.) Hérit. Andreas, Ch. M., 1947, De inheemsche Erodia van Nederland, *Ned. Kruidk. Arch.*, *54*, 138-231. The spotted (*E. pimpinellifolium*) and unspotted inland plants are lumped together. *E. Lebelii*, *E. neglectum* and *E. Ballii* are not recorded from Holland. The specific rank of *E. glutinosum* is confirmed.

It has a different chromosome number (2n=20) from *E. cicutarium* (2n=40), and forms a sterile hybrid, which was found wild. *E. dentatum* Dum. is placed under *E. glutinosum*. The species and subspecies are separated as follows:—

(a) Mature plant entirely or almost without beaks to the fruits; inflorescence usually 5-flowered; flowers purple, usually rather small (9-10 mm., rather larger at the beginning of the year), spotted; anthers often yellow and withered. On the dunes. Rather rare. ... ×*E. anaristatum* Andreas.

(aa) Mature plants with many fruits:

(b) Inflorescence 5-7-flowered; flowers purple or white, usually with a spot on some of the petals; beaks of the fruits 25-35 mm. long; carpels (without beaks) about 6 mm. long, with a distinct furrow around the pit of the carpel. Plants of sandy fields and roadsides. Common. (In the western part of the country there are less typical examples, intermediate between this form and subsp. *dunense*). ..... *E. cicutarium* subsp. *arvale* Andreas.

(bb) Inflorescence up to 5-flowered; flowers nearly always unspotted; beaks about 15-28 mm. long; carpels without or with an inconspicuous furrow round the pit. Dunes:

(c) Inflorescence 3-5-flowered; flowers pale purple or white, zygomorphic, large (± 12 mm. in diam.); pollen orange or yellow; beak 22-28 mm. long; carpels (without beaks) 5-6 mm., with an inconspicuous furrow around the pit. Dunes. Common. ..... *E. cicutarium* var. *dunense* Andreas.

(cc) Plants thickly covered with glandular hairs, especially in the upper part, usually with adhering sand-grains; inflorescence usually 2-3-, sometimes 5-flowered; flowers pale rose, very slightly zygomorphic, small (± 7 mm. in diam.); beak 15-24 mm.; carpels less than 5 mm., strongly cuneate at base without furrow round pit. Dunes. Common. ..... *E. glutinosum* Dum.

—[A.H.G.A.]

155/15. TRIFOLIUM HYBRIDUM L. Juten, G., 1945, *Bot. Not.*, 72-74. A form with abnormal leaves and flowers is described.—[A.E.W.]

178/4. LATHYRUS MARITIMUS (L.) Bigel. Cedergren, K., 1947, Lathyrus maritimus (L.) Bigelow i Skandinavien, *Svensk Bot. Tidskrift*, *41*, 151-158. There are two subspecies—subsp. *glaber* (Ser.) C. Regel and subsp. *pubescens* (Hartm.) C. Regel (= ? var. *aleuticus* (Greene) Fernald). The glabrous one has a southern distribution and the pubescent a northern range. Both are found in Scandinavia. The glabrous subspecies was recorded from Portland by Regel (1935, Fedde *Rep. Sp. Nov.*, *38*, 58), and from Kent by Fernald (1932, *Rhodora*, *34*, 182).—[A.H.G.A.]

185. RUBUS. Watson, W. C. R., 1947, The Brambles of Bedfordshire, *Journ. Beds. N.H.S.*, *1*, 21-25. 73 species most of which were found by Watson in 1946 and 1947, are listed. The list contains *Rubus Libertianus* Weihe which had been found in Britain before but is not included in Watson's list (1946, *J. Ecol.*) and *R. luteistylus* Sud., *R. Schlechtendalii* Weihe and *R. pubescens* Weihe, species new to Britain.—[J.G.D.]

190. ALCHEMILLA. Walters, S. M., (1948, *Naturalist*, 1948, 41-43), with a view to encouraging northern botanists to look at the micro-species of *Alchemilla vulgaris* L. agg., contributes a paper containing

a key to these species. Their ecology and distribution is discussed but the author, who is preparing an account for the Biological Flora, seeks further information and asks for the opportunity of seeing material which cannot be identified by the key.—[F.A.S.]

210/1. COTYLEDON UMBILICUS-VENERIS L. Uhl, C. H., 1948, Cytotaxonomic Studies in the Subfamilies Crassuloideae, Kalanchoideae and Cotyledonoideae of the Crassulaceae, *Amer. Journ. Bot.*, *35*, 695-705. *Umbilicus* DC. has about 16 species ranging from the Cape Verde Islands to Britain. The segregation of *Umbilicus* and *Cotyledon* is strongly supported by the cytological evidence. In a plant from the mountains south of Marrakech, Morocco, doubtfully referred to *U. pendulinus* DC., the number is given as n=24.—[A.H.G.A.]

211/22. SEDUM ROSEA (L.) Scop. Fernald, M. L., 1947, Sedum Rosea, not S. roseum, *Rhodora*, *49*, 78-80. The author argues that to write the trivial with a small letter would " wholly misrepresent the truth," and make it look like a feminine adjective and not a generic name.—[A.H.G.A.]

339. AMBROSIA. Vignolo-Lutati, F., 1948, Una nuova località piemontese per Ambrosia elatior L. e la distribuzione ligure-piemontese del genere Ambrosia, *Nuov. Giorn. Bot. Ital.*, *55*, 158-160. *A. elatior* L. (*A. artemisiifolia* Auct. non L.) is a North American species now naturalised in Germany, England, Belgium, Holland, France and Italy. *A. artemisiifolia* L. is not found in Europe. *A. coronopifolia* Torr. & Gray, which has also been confused with *A. artemisiifolia*, is recorded from Italy, as are *A. psilostachya* DC. and *A. trifida* L. *A. tenuifolia* Spreng. is adventive in France, Germany, Holland and Italy. —[A.H.G.A.]

380/1. PETASITES HYBRIDUS (L.) G., M. & S. Valentine, D. H., (1947, *N.W. Nat.*, *22*, 111-114), publishes a further note with reference to the distribution of the sexes of this plant in the North-west of Britain. More information is wanted by the author for his account in the Biological Flora.—[F.A.S.]

380/1. PETASITES HYBRIDUS (L.) G., M. & S. Ilien, Gösta, (1945, Bidrag till Skånes Flora. Förekomsten av Petasites hybridus i Skåne, *Bot. Not.*, 181-303), gives an account of the distribution in Scania, Sweden.—[A.E.W.]

423. TARAXACUM. Haglund, Gustaf E., 1946, Zur Taraxacum-Flora der Insel Öland, *Bot. Not.*, 335-363. A number of new species and forms are described.—[A.E.W.]

423. TARAXACUM. Fernald, M. L., 1948, The Name Taraxacum officinale, *Rhodora*, *50*, 216. The author points out that *T. officinale* Weber (1780) is correct, and not *T. vulgare* (Lam.) Schrank (1792), as Lamarck's *Leontodon vulgare* (1778) was a nomen abortivum.—[A.H.G.A.]

427. SONCHUS. Lewin, R. R., 1948, Sonchus L., *Journ. Ecol.*, *36*, 203-222. (Biological Flora).

445/1. CALLUNA VULGARIS L. 104, N. Ebudes (Skye). A stem of heather, one branch of which bore flowers of the usual purple colour, the other pure white flowers, is reported by Gilmour, J. S. L., (1947, *J. Roy. Hort. Soc., 72*, iv). The sport has been recorded before (1920, *Kew Bulletin*, 221).—[D.P.Y.]

460. PRIMULA. Valentine, D. H., 1947, Studies in British Primulas. I. Hybridization between Primrose and Oxlip, *New Phyt., 46*, 229-253. Among characters are given intermediate leaf-shape, pedunculate inflorescence, calyx teeth longer than oxlip, capsule exceeding calyx, shaggy indumentum on pedicels as in primrose.—[A.H.G.A.]

515. CUSCUTA. Verdcourt, B., 1948, Cuscuta L., *Journ. Ecol., 36*, 356-365. (Biological Flora).

532/26. LINARIA CYMBALARIA (L.) Mill. Cufodontis, G., 1947, Die Gattung Cymbalaria Hill, *Bot. Notiser, 1947*, 135-156. *Cymbalaria muralis* forma *Seguieri* (Beg.) Cuf., with white flowers, is recorded from Forfar: Broughty Ferry, Corstorphine (a specimen at the British Museum is labelled var. *pallidior* (Rouy)). The forma *glechomifolia* (Chev.) Cuf. is widespread in France and considered likely to occur elsewhere. It has the basal lobe of the leaves touching instead of widely divergent as in the typical form. The var. *pilosa* (Vig.) Degen. with pubescent adult leaves and stems has been found wild near Paris.—[A.H.G.A.]

560. ORIGANUM. Webster, H. N., 1948, Notes on the Marjorams, *The Herbarist*, No. 14, 19-22. *Origanum vulgare* L. was cultivated by the American colonists and used for tea. It is now found as an escape in New England. In addition, there is an extremely aromatic, bushy, white-flowered variety identified as *O. vulgare* var. *virens*, probably introduced from Greek or Italian gardens. Also a rose-coloured form, not as robust as the typical species, with the foliage paler green, with soft, thin leaves and flat-topped inflorescence. It has not yet escaped, and resembles winter marjoram (*O. heracleoticum*) in some respects. Another kind is a strong woody herb, with long inflorescences with deep red bracts and fragrant purple flowers. It resembled var. *prismaticum*, which should apparently have white flowers. Pot marjoram (*Majorana onites*) and sweet marjoram (*M. hortense*) are quite different plants of annual habit.—[A.H.G.A.]

561. THYMUS. Jalas, J., 1947, Zur Systematik und Verbreitung der Fenno-Skandischen Formen der Kollektivart Thymus Serpyllum L., em. Fr., *Acta Botanica Fennica, 39*, 3-85. The writer separates the species and subspecies as follows: —

(a) Leaves with a thick, white-felted pubescence on the under surface; erect, shrubby perennial with woody branches. Occasionally planted or escaped ..... *T. vulgaris* L.

(aa) Leaves glabrous or hairy, but pubescence not felted; ± prostrate herbs or shrubby perennials with only slightly woody branches.

(b) Stems strongly 4-angled, hairy only on the angles (goniotrichous). Plants of erect growth. Main stem always terminated by an inflorescence. Sterile runners either wanting (Sect. *Suberecti* Vel.), or growing out from the branches of the main stem ..... (Sect. *Pseudorepentes* Vel.). *T. pulegioides* L.

(bb) Branches only slightly angled or almost terete, not goniotrichous :
(c) Plant of erect growth. Sterile runners wanting (Sect. *Suberecti* Vel.). Flowering axis about 20 cm. long. Leaves oblong to linear, usually over 15 mm. long, finely veined. Inflorescence elongate. Occasional as an escape ..... *T. Marschallianus* Willd.
(cc) Plant of creeping habit. Main stem usually grows out into a sterile runner (Sect. *Repentes* Vel.). Flowering axis rarely more than 15 cm. long. Leaves up to 15 mm. long with conspicuous veins on the under surface. Inflorescence usually thick, ± clavate ..... *T. Serpyllum* L. em. Fr.
(d) Flowering branches with two lines of hairs. Leaves 5-7-nerved, small, thick, with conspicuous veins on the under surface. ..... Subsp. *arcticus* (Dur.) Hyl.
(dd) Flowering branches hairy all round (holotrichous), or only partially with two lines of hairs (subgoniotrichous).
(e) Flowering branches usually subgoniotrichous. The lower bracts greatly exceeding the flowering branches. Leaves 7-9-nerved. ... Subsp. *tanaënsis* (Hyl.) Jalas.
(ee) Flowering branches usually holotrichous. Leaves and lowest bracts of the same size and shape. Leaves usually 7-nerved. ..... Subsp. *angustifolius* (Pers.) Vollm.

The subsp. *angustifolius* has four varieties :—

(f) Leaves small, 3-5 mm. long. Internodes of stem usually short, their leaves overlapping. ..... Var. *ericoides* Wimm. & Grab.
(ff) Leaves 5-10 mm. long. Internodes of stem longer :
(g) Flowering axis robust, with patent glands in the upper part. Main stem often terminated by an inflorescence. ... Var. *rigidus* Wimm. & Grab.
(gg) Flowering axis slender, with glandular hairs :
(h) Leaves oblong-elliptic to obovate, 2½ to 3½ times as long as broad. ..... Var. *Linneanus* Gren. & Godr.
(hh) Leaves oblong-linear to linear, 4-6 times as long as broad. ..... Var. *lineatus* Endl.

T. pycnotrichus (Uechtr.) Ronn. is reduced to *T. Serpyllum* subsp. *angustifolius*, which is recorded from the British Isles and the Faeroes, as well as from northern Europe generally. Two forms are made :—f. *ciliatus* Jalas and f. *hirsutus* Jalas. The form *lanuginosus* Mill. with hairy undersurface is rare in Scandinavia, and there are also completely glabrous examples (f. *glabratus* Wimm. & Grab.). No British records are given for var. *Linneanus*, var. *lineatus* or var. *rigidus*. Subspecies *tanaënsis* is restricted to northern Scandinavia. It has been confused with *T. Drucei* Ronn., which, with *T. neglectus* Ronn. and *T. britannicus* Ronn., is referred to subspecies *arcticus* (Dur.) Hyl., which is given for Scandinavia, Faeroes, Iceland, Greenland and rare in the British Isles. There are good illustrations and the nomenclature is discussed. Chromosome numbers are quoted with some doubt as 2n=54 for *T. britannicus* (and *arcticus*), 2n=24 for subsp. *angustifolius*.—[A.H.G.A.]

561. THYMUS. Jalas, J., 1948, Chromosome Studies in Thymus I, *Hereditas, 34*, 414-434. The following chromosome numbers (among others) are given :—*T. Drucei* 2n=54, *T. Serpyllum* subsp. *angustifolius* 2n=24, *T. pulegioides* subsp. *eu-pulegioides* 2n=28, *T. vulgaris* 2n=30. *T. Drucei* Ronn. emend. Jalas (*T. Serpyllum* subsp. *arcticus* (Dur.) Hyl.) is now regarded as a species distinct from *T. Serpyllum*, contrary to the author's earlier opinion.—[E.F.W.]

561/1×4. THYMUS PULEGIOIDES L. × SERPYLLUM L. Jalas, J., 1947, Thymus pulegioides L. × T. Serpyllum ssp. angustifolius (Pers.) Vollm. (*T. oblongifolius* Opiz, non H. Braun), ein für Ostfennoskandien neuer Bastard, *Mem. Soc. Fauna Fl. Fenn.*, *23*, 151-154. The occurrence of this hybrid in Finland is reported.—[E.F.W.]

588/8. PLANTAGO LANCEOLATA L. Snyder, W. E., 1948, Mechanism of the Photoperiodic Response of Plantago lanceolata L., *Amer. Journ. Bot.*, *35*, 520-525. Ribwort plantain is a long-day plant developing flowers when exposed to 15 or more long days, or to 9 or more days of continuous illumination. Plants have been kept for over 14 months in the vegetative condition by continuous exposure to short-day conditions.—[A.H.G.A.]

633. ULMUS. Ciferri, R., 1948, Qualche dato per una revisione degli Olmi italiani, *Arch. Bot.*, *24*, 67-72. *U. carpinifolia* Gled. is frequent, *U. montana* Stokes is frequent in northern and central Italy, but ×*U. vegeta* (Loudon) Schneider seems to be commoner; it is planted in parks and streets. ×*U. hollandica* (Miller) Moss is rarer. The third kind cultivated in Italy is "*U. minor* Miller," which is found in southern Italy and Sicily, where it is the commonest species. ×*U. stricta* Lindl. is scarce and *U. procera* Salisb. has not been recorded.—[A.H.G.A.]

637. URTICA. Selander, S., 1947, Urtica gracilis Ait. in Fennoscandia, *Svensk Bot. Tidskrift*, *41*, 264-282. *Urtica dioica* L. [as *dioeca*] subsp. *gracilis* (Ait.) Selander has been known in Scandinavian literature as *U. dioica β glabra* Hartm. (1832). The writer considers that it is conspecific with *U. gracilis* Ait. from North America. It is commonly monoecious and differs from var. *subinermis* Uechtritz (1863), which is a glabrous form of *U. dioica*. The plant is montane and has broad leaves and coarse, not stinging, hairs on the stem.—[A.H.G.A.]

637. URTICA. Greig-Smith, P., 1948, Urtica L., *Journ. Ecol.*, 1948, *36*, 339-355. (Biological Flora.)

642. BETULA. Lindquist, B., 1947, On the Variation in Scandinavian Betula verrucosa Ehrh., with some Notes on the *Betula* Series Verrucosae Sukacz., *Svensk Bot. Tidskr.*, *41*, 45-71. The chromosomes of *B. verrucosa* Ehrh. and *B. pubescens* Ehrh. [the author does not use the name *B. alba* L. for either] have been counted. The former has 2n=28 and the latter 2n=56. Intermediate forms have been found with 2n=42. Some of the forms with 42 may be autopolyploids of *B. verrucosa*. The main varieties of *B. verrucosa* in Europe are discussed. The plant from the British Isles, Southern Sweden and Central Europe is referred to var. *saxatilis* Lindq., while that of Northern Scandinavia is var. *lapponica* Lindq. Among other characters var. *lapponica* has a much smoother, white bark, and acute buds.—[A.H.G.A.]

642/1. BETULA ALBA L. Johnsson, Helge, 1946, Progeny of triploid Betula verrucosa Ehrh., *Bot. Not.*, *1946*, 285-290, gives the results of crossing experiments with two triploids.—[A.E.W.]

643. ALNUS. Ehrenberg, C. E., (1946, Till frågran: existerar Alnus glutinosa × incana i naturen?, *Bot. Not., 1946*, 529-535), discusses an investigation of the meiosis of *Alnus glutinosa*, *Alnus incana*, and intermediate forms (possible hybrids, growing in the same grove). All forms have 14 bivalents in metaphase I, small irregularities occurring in less than 1% and somewhat more commonly in the intermediate forms than in the pure species. It is suggested that the great uniformity in all the intermediate forms is due to intermediate forms being, not hybrids, but varieties of the pure species (*A. glutinosa* × *incana* has never been produced artificially), or to the chromosomes of the parent species being homologous to a great extent.—[A.E.W.]

646. QUERCUS. Weimarck, H., (1947, De Nordiska ekarna, I. Quercus Robur subsp. pedunculata och subsp. puberula, *Bot. Not., 1947*, 61-78; II. Quercus petraea och Q. petraea × Robur jämte en systematisk od växtgeografisk överblick, *ibid.*, 105-134), discusses the systematic and geographical distribution of the Scandinavian oaks. The following forms under *Q. Robur* subsp. *pedunculata* are recognised:—f. *brevipedunculata* (Lasch) Schwarz, female catkins short; f. *holophylla* (Rehd.) Schwarz, leaves more or less entire; f. *longipedunculata* (Lasch) Schwarz, female catkins long; f. *petiolens* DC., leaves cuneate at the base, without auricles, petioles 5-15 mm. long. A more or less entire leaved form, forma *mespilifolia* (Wallr.) Weim., of the hybrid *Q. petraea* × *Robur* is dealt with at some length. *Quercus petraea* (Matt.) Liebl. (*Q. sessiliflora* Salisb.) has usually been separated from *Q. Robur* L. by its stellate pubescence. The writer shows that there is also a subspecies of *Q. Robur* with pubescent leaves which is found in Scandinavia. This is subspecies *puberula* (Lasch.) Weim. From the hybrid *Q. petraea* × *Q. Robur* it is distinguished by its fertility. The hybrid is almost sterile.—[A.H.G.A. and A.E.W.]

651. POPULUS. Rouleau, E., 1948, New Names in Populus, *Rhodora*, *50*, 233-236. The type specimen of *Populus candicans* Ait. proves to be *P. balsamifera* L. The new name ×*P. gileadensis* Rouleau is accordingly proposed for *P. candicans* Auct. (*P. Tacamahacca* sensu Moss 1914, *Cambr. Brit. Fl.*, *2*, 13).—[A.H.G.A.]

668. EPIPACTIS. Nannfeldt, J. A., (1946, Tre för Norden nya Epipactis-arter, E. persica Hausskn., E. leptochila (Godf.) Godf. och E. purpurata Sm., *Bot. Not., 1946*, 1-28), records three species new to Scandinavia and gives an extensive review of the literature on *Epipactis* sect. *Euepipactis*. *Epipactis persica* Hausskn. (1927) is stated to be identical with a plant which has passed falsely under various names, and is also stated to be identical with *E. vectensis* (T. & T. A. Steph.) Brooke and Rose (1940), *E. Troodii* Lindb. fil. (1942), *E. viridiflora* f. *acutiflora* Krösche, *E. latifolia* f. *gracilis* Dageförde, and probably also with *E. latifolia* subsp. *viridiflora* var. *dilatata* Graber. Its distribution extends from France and England in the West to Iran in the East. *E. persica*, *E. leptochila* and *E. purpurata* are illustrated by photographs.—[A.E.W.]

669/1. ORCHIS PURPUREA Huds. Rose, F., 1948, Orchis purpurea Huds., *Journ. Ecol.*, *36*, 366-377. (Biological Flora).

669. ORCHIS. D'Alleizette, M., 1947, Au sujet de l' ×Orchis Nummiana P. Fourn. de St Nom-la-Brerèche, *Bull. Soc. Bot. France*, *94*, 102-104; Senay, P., A propos d'hybrides d'Orchis, *ibid.*, 249-250. A putative hybrid between *O. elodes* [=*O. ericetorum* (Linton) E. S. Marshall] and *O. latifolia* [probably *O. majalis* Reichb.]. Characters are given separating it from ×*O. Hallii* Druce (*O. elodes* × *O. praetermissa*). Senay in the same journal suggests that *O. Nummiana* P. Fourn. (1931) is the same as ×*O. Hallii* Druce and suggests that d'Alleizette's hybrid is, in fact, *O. maculata* [*O. Fuchsii* Druce] × *praetermissa* (×*O. Mortonii* Druce).—[A.H.G.A. and E.F.W.]

699. ORCHIS. Vermeulen, P., 1947, *Studies on Dactyorchids*, pp. 180, Utrecht. A well-illustrated preliminary revision of the group. The author gives arguments why *Dactylorchis* should be treated as a separate genus and makes numerous new combinations. The text is in English.—[J.E.L.]

669/7×10. ORCHIS ERICETORUM × LATIFOLIA. Pettersson, B., 1947. On some Hybrid Populations of Orchis incarnata × O. maculata in Gottland, *Svensk Bot. Tidskr.*, *41*, 115-137. A comparatively tall and large-flowering orchid related to *O. incarnata* L. (*O. latifolia* L. sensu Pugsley) was found in Gottland and named *O. elatior* (Fries) Lönnr. (×*O. ambigua* Kerner). The stem is less hollow than in *O. incarnata* and the spike not as dense.—[A.H.G.A.]

702/11. ALLIUM SCHOENOPRASUM L. Nybom, Nils, 1947, Non-random distribution of chromosomes at meiosis in triploid Allium Schoenoprasum, *Bot. Not.*, *1947*, 55-60.

729. ALISMA. Tschermak, Uvess E., 1948, Zytologische Untersuchungen an den Alisma Arten der Umgebung Wiens, *Österr. Bot. Zeitschr.*, *95*, 270-275. *Alisma Plantago-aquatica* and *A. gramineum* are shown to have a chromosome number 2n=14, while *A. lanceolatum* from near Vienna and from Denmark has 2n=26, and is apparently allopolyploid.—[A.H.G.A.]

738. RUPPIA. Setchell, W. A., 1946, The Genus Ruppia, *Proc. Calif. Ac. Sc.*, *series 4*, *25*, No. 18. After 15 years' cultivation, two species were recognised, *R. maritima* L. with short, non-spiral peduncles, and *R. spiralis* Dumort. with elongated, spiral peduncles.—[A.H.G.A.]

738. RUPPIA. Luther, H., 1947, Morphologische und Systematische Beobachtungen an Wasserphanerogamen, *Acta Bot. Fenn.*, *40*, 3-26. Among other genera, *Ruppia* is keyed out as:—1. Leaves about 1 mm. broad, with rounded apex. *R. spiralis*. 2. Leaves about ½ mm. broad, acuminate or with an irregularly lacerate apex. *R. rostellata*, *R. brachypus*. These differences are illustrated on p. 19. The leaves of *R. spiralis* are dark green, relatively stiff and over 1 mm. broad. The leaves of the other species are more delicate.—[A.H.G.A.]

753. CAREX. Hjelmquist, H., and Nyholm, E., (1947, Några anatomiska artkaraktärer inom Carex-gruppen Distigmaticae, *Bot. Not., 1947*, 1-31), discuss the leaf anatomy in the group *Distigmaticae* of *Carex* in Scandinavia. Characters of value in determination have been found. The main differences are illustrated by transverse sections of the leaves. The species dealt with are *C. caespitosa* L., *C. elata* All., *C. fusca* All., *C. trinervis* Degl., *C. gracilis* Curt., *C. rufina* Drej., *C. Bigelowii* Torr., *C. aquatilis* Wahl., *C. recta* Boott, *C. halophila* F. Nyl., *C. subspathacea* Wormskj., *C. salina* Wahl., *C. paleacea* Wahl., and the hybrids including *C. aquatilis* × *elata*, *C. aquatilis* × *gracilis* and *C. aquatilis* × *salina*. Anatomically different geographical forms have been found especially in *C. paleacea*.—[A.E.W.]

753/59(2). CAREX VULPINA L. sec. Nelmes. Naustdal, J., 1947, Carex vulpina L. ny for Norge, *Blyttia*, *5*, 7-12. The writer records the species and compares it with *C. Otrubae* Podp.—[A.H.G.A.]

754/10. PANICUM SANGUINALE L. Brown, W. V., 1948, A Cytological Study in the Gramineae, *Amer. Journ. Bot.*, *35*, 382-395. The chromosome number was found to vary among individual plants of *Digitaria sanguinalis* growing together. These may be interfertile polyploid plants.—[A.H.G.A.]

797/1. CYNODON DACTYLON (L.) Pers. Hurcombe, R., 1947, A Cytological and Morphological Study of Cultivated Cynodon species, *Journ. South African Botany*, *13*, 107-116. The chromosome number indicated that the basic number of the genus is 10 and that the species form a polyploid series, in which *C. transvaalensis* Burtt-Davy (Transvaal) is the diploid form, × *C. Magennisii* Hurcombe the triploid (a hybrid between *C. transvaalensis* and *C. dactylon*), and *C. dactylon* Pers. and *C. dactylon* var. *densus* Hurcombe (Hall's selection), both tetraploid forms. The basic number was given as 9 by previous authors. The cosmopolitan species is *C. dactylon* Pers.—[A.H.G.A.]

777/4. PHLEUM ARENARIUM L. Af Rantzien, H. H., 1946, Taxonomical and Phytogeographical Studies in Phleum arenarium L., *Bot. Not., 1946*, 364-386), gives an account of the taxonomy and distribution. *P. arenarium* shows little variation, and with the exception of ssp. *aegaeum* Vierh. no isolated populations of taxonomic or geographical significance seem to have been developed. The centre of distribution is in the dunes of oceanic Western Europe. " From eu-oceanic region on the Atlantic coast of Central Europe the distribution enters to the north and south the sub-oceanic and eury-oceanic regions, where it gradually becomes more split up. Consequently the distribution in Northern Europe has a strong S.W. character." The distribution type can be described as a Mediterranean and Atlantic one. Ecologically *P. arenarium* is indifferent to salt, and is a pronounced psammophyte with a primary occurrence on sand dunes and areas of drifting sand where stabilisation and concentration of humus have begun in some degree. It is to some extent an adventive, more especially Northern Scandinavia. —[A.E.W.]

824. Poa. Heg, O. A., 1944, Poa supina i Norge, *Blyttia, 2*, 21-24. The writer gives a map of the distribution in Scandinavia, and records a hybrid *P. annua* L. × *P. supina* Schrad.—[A.H.G.A.]

825/3b. Glyceria declinata Bréb. Størmer, P., 1948, Glyceria declinata, New to Norway, *Blyttia, 6*, 40. This plant, recently found in Denmark by S. M. Walters, is now reported from Oslo and from Ytre Sandsvær in Norway.—[A.H.G.A.]

826×829. Festulolium. Camus, A., 1947, Sur deux × Festucololium récoltés dans le sud-ouest, *Bull. Mens. Soc. Linn. Lyon, n.s. 16*, 50-51. ×*Festucololium adscendens* Asch. & Gr. (*Festuca pratensis* × *Lolium perenne*), and ×*F. Braunii* A. Camus (*F. elatior* × *L. italicum*) are recorded. In hybrids the habit usually recalls *Lolium*, but usually some of the lateral spikelets have two glumes as in *Festuca*, with the lower glume often reduced and adaxial, while the upper glumes are abaxial. In *Lolium* all lateral spikelets have one glume, but the terminal has two. The principal axis is less excavated than in *Lolium*. The pollen is usually abortive. In ×*F. adscendens* the lower glume is adaxial and shorter than the upper, the fertile glume is usually muticous. The lower glume is rather scarious. In ×*F. Braunii* the rudimentary lower glume is adaxial, the fertile glume muticous in the lower flowers and aristate in the upper ones. Other hybrids known are: —×*F. Colini* (*Festuca pratensis* × *L. temulentum*), ×*F. Frederici* (*Festuca rubra* × *L. perenne*) and ×*F. Nilssonii* (*Festuca gigantea* × *L. multiflorum*).—[A.H.G.A.]

844/6. Equisetum palustre L. Fernald, M. L., 1947, Equisetum palustre, example of careless bibliography and phytography, *Rhodora, 49*, 278-286. Deals with the correct authorities for the minor variations and forms of the species.—[A.H.G.A.]

847/1. Pteridium aquilinum (L.) Kuhn. Watt, A. S., 1947, Contributions to the Ecology of Bracken (Pteridium aquilinum), *New Phyt., 46*, 97-121.

856/1(2). Dryopteris Borreri Newm. Nordhagen, R., 1947, Dryopteris paleacea (Sw.) C. Chr. og dens utbredelse i Norge, *Blyttia, 1947*, 89-118. [This is the species usually known as *D. Borreri* Newm. in Britain, because it is doubtful if it is really conspecific with *D. paleacea*, a species originally described from Mexico.] *D. Borreri* Newm. differs from sexual *D. Filix-mas* in being apogamous and having a different chromosome number in the vegetative cells. The prothallia occasionally bear antheridia (but never archegonia), and different "strains" with different chromosome numbers are known. A map shows the distribution in Europe, which is compared with that of *Ilex Aquifolium*. There is a most useful plate showing the differences between the two species.

856/1(2). Dryopteris Borreri Newm. Knaben, G., (1948), Kromosomtall og generasjonsveksel hos Dryopteris paleacea (Sw.) C. Chr. i Norge, *Blyttia, 1948*, 17-31 (Chromosome Number and Alternation of Generations of *D. paleacea* in Norway.) It was found that *D. Filix-mas* has unicellular hairs only on the margin of the gametophyte, while

those of *D. Borreri* may be either uni- or multi-cellular. The fronds of third year growth of *D. Filix-mas* have more acutely denticulate segments than those of *D. Borreri*.—[A.H.G.A.]

861. WOODSIA. Butters, F. K., and Tryon, R. M., 1948, A Fertile Mutant of a Woodsia hybrid, *Amer. Journ. Bot., 35*, 132-133. The hybrid ×*Woodsia Abbeae* (*W. ilvensis* × *W. Cathcartiana*) is normally sterile, but the author's is a wild example with half of the frond fertile. This was allopolyploid and represents a spontaneous development of that state in nature.—[A.H.G.A.]

876/6. CHARA TOMENTOSA L. Björkman, S. O., 1947, On the Distribution of Chara tomentosa L. round the Baltic and some Remarks on its Specific Epithet, *Bot. Not., 1947*, 157-170.

FLORAS, ETC.

BIOLOGICAL FLORA.—There is a list of accounts published or in preparation in *Journ. Ecol.*, (1948), *36*, 198-201. This gives 22 as published and 92 in preparation in July 1948.—[A.H.G.A.]

RUSSIA. Komarov, V. L., 1948, *Flora U.R.S.S., 13*, Moscow. This is an important work for students of the European Flora. This volume deals with the Leguminosae from *Oxytropis* to *Glycine*.—[A.H.G.A.]

SCANDINAVIA, ETC. Löve, A. & D., 1948, Chromosome Numbers of Northern Plant Species, *Reykjavik Univ. Inst. Appl. Sc., Dept. Agric. Rep.*, Ser. B, No. 3. A complete list of plants growing in Denmark, Finland, the Faeroes, Iceland, Norway and Sweden, with chromosome numbers (most recent counts). The countries in which each plant grows are given and italics are used for counts from material from the area covered. There is an appendix with some new names and combinations and the following new plants—*Ophioglossum vulgatum* var. *islandicum*, *Anthoxanthum alpinum*, *Dactylorchis maculata* ssp. *islandica*.—[E.F.W.]

HISTORY.

NATURAL HISTORY SOCIETIES. *The Advancement of Science, 5*, No. 17 (1948). Dr J. Ramsbottom's address on "The Natural History Society" is printed in this number. The origin and nature of local natural history societies is described. The Botanical Society was founded in 1721, and the Society for Promoting Natural History in 1782. These were London societies. In the provinces societies of a more generalized type were started. Such were the Literary and Philosophical Societies; Edinburgh 1739, Manchester 1781 and Newcastle 1792. Societies were now often organised into groups, and contact between members of different societies served a useful purpose. However, there seemed to be a lack of drive, and the remedy seemed to be organized excursions under expert guidance, so that specimens collected should be correctly named. Local societies should meet on early-closing days, and might associate themselves with the British Legion and Working Men's Clubs. The work most appropriate to local societies is the making of local records. Valuable work has also been done in connection with wild life conservation. The Geographical Association wel-

comes opportunities for collaboration with other societies in the preparation of regional surveys. As regards publications, two different standards have been recommended—11½″ × 8″ and 9″ × 6″ (Aslib) and 9¾″ × 7¼″ (Congress of Archaeological Societies). All editors should send a note of new county records to some central body, as these might be overlooked in local publications.—[A.H.G.A.]

THE BOTANICAL MAGAZINE. Synge, P. M., (1948, *J. Roy. Hort. Soc.*, *73*, 5-11), describes the history of this publication.—[D.P.Y.]

DONY, J. G., 1947, Bedfordshire Naturalists: I, William Crouch, *Journ. Beds. N.H. Soc.*, *1*, 50-52. A short account of the work of Crouch (1818-46) who was an early Bedfordshire botanist.—[J.G.D.]

DONY, J. G., 1947, Bedfordshire Naturalists: II, James Saunders, *Journ. Beds. N.H. Soc.*, *1*, 58-61. An account of the work of Saunders (1839-1925), author of *Field Flowers of Bedfordshire* (1911), etc.—[J.G.D.]

METHODS OF PLANT COLLECTING.

HODGE, W. H., 1947, The Use of Alcohol in Plant Collecting, *Rhodora*, *49*, 207-210. Discusses the Schwenfurth method of collecting plants in alcohol and drying them afterwards. Formaldehyde may also be used as described by Schultes in the same periodical (p. 54).—[A.H.G.A.]

HOWARD, R. A., 1947, The Use of D.D.T. in the preparation of Botanical Specimens, *Rhodora*, *49*, 286-288. 100% powdered D.D.T. was found effective in the protection of specimens from insect damage, while collecting.—[A.H.G.A.]

M.C., 1948, Séchage rapide des plantes pour herbiers, *Bull. Mens. Soc. Linn. Lyon*, *n.s.*, *17*, 199. M. Maillefer has a system of drying plants by electricity, which comprises a wooden box with two compartments. The first contains a little electric ventilator, which drives heated air into the second compartment, where the plants are placed, between corrugated cardboard. A weight is placed on the press of plants to take up the slack as drying proceeds. Heat is applied for an hour a day for two days.—[A.H.G.A.]

MERCIE, C., 1948, Préparation des collections végétales par dessiccation sous vide, *Bull. Soc. Bot. Franc.*, *95*, 38-43. Plants were dried in a vacuum to retain their colour, and to avoid changing drying papers. This process took a week, and the colours were retained. *Scrophulariaceae*, *Orchidaceae* and *Liliaceae* did not turn black. The apparatus required consists of a vacuum dryer (étuve à vide), and a water-jet injector (trompe à eau), or better still a vane-pump (pompe à palettes). To obtain plants which were not pressed but retained their shape, a bath of hot sand was used in a vacuum. The water vapour given off was taken up by calcium chloride. Unfortunately this method produces unnaturally slender stems. Experiments in dessication at low temperatures are also described. They were particularly valuable for fleshy fungi. [Dr Mercie added in a letter: " L'appareil que j'utilise est très comparable à un autoclave pour stérilisation. C'est une en-

ceinte cylindrique avec couvercle et joint en caoutchouc, dans laquelle je fais le vide, au lieu d'y créer une pression. J'ai fait sonder tout autour un serpentin en cuivre, qui sert d'évaporateur à chlorure de méthyle. Une groupe compresseur avec détendeur et tous les accessoires habituels aux installations frigorifiques, permet de refroidir l'appareil et d'assurer la dessication à basse température ± −10° à −20° environ suivant les objets à traiter.'']—[A.H.G.A.]

STEYERMARK, J. A., 1947, Notes on Drying Plants, *Rhodora, 49*, 220-227. Discusses the use of artificial heat and recommends 24 hours without heat, before placing over a stove between corrugated cardboard.—[A.H.G.A.]

NOMENCLATURE.

AIRY SHAW, H. K., 1947, Typification of New Names derived from Persons or Places, *Kew Bull., 1947*, 35-37. The writer considers that where the name of a species embodies the name of a collector, the species should be typified by that specimen, unless it can clearly be shown that the description was based upon other material.—[A.H.G.A.]

FASSET, N. C., 1948, The Proposed Changes in Article 58, *Rhodora, 50*, 249-252. The American Society of Plant Taxonomists have proposed that the " earliest legitimate name " given to a group shall in all cases be retained for that group when its rank is changed, but that this shall only apply to names published after 1st January 1953. The writer is opposed to the proposed change.—[A.H.G.A.]

FERNALD, M. L., and SCHUBERT, B. G., 1948, Studies of American Types in British Herbaria, *Rhodora, 50*, 149-175, 181-208. *Impatiens capensis* Meerb. is adopted as the correct name for *I. biflora* Walt. (*I. fulva* Nutt.). Linnaeus included both *Juncus scirpoides* Michx. and *J. nodosus* under his *J. nodosus*, but his *diagnosis* applies better to the latter.—[A.H.G.A.]

RICKETT, H. W., 1948, Orthography in Botanical Nomenclature, *Brittonia, 6*, 365-368. Suggests that Recommendation XLIV should read:—" When two or more Greek or Latin words are united to form a name or epithet, this should be done as nearly as possible in accord with classical usage. When needed, a connecting vowel may be inserted, *o* in Greek, *i* in Latin; and Latin stems for this purpose should generally be taken as ending in *i*. The original spelling of existing compounds should, however, be retained, except for manifest orthographic or etymological errors."—[A.H.G.A.]

RICKETT, H. W., and CAMP, W. H., 1948, The Nomenclature of Hybrids, *Bull. Torr. Bot. Club, 75*, 496-501. The author discusses the different kinds of hybrid and species existing in nature, and notes that Article 14 is inadequate. Dr Camp is Secretary of a committee to report on the subject to the International Botanical Congress at Stockholm in 1950. He will be pleased to receive communications on the subject.—[A.H.G.A.]

TOPOGRAPHICAL.

16, W. KENT; 17, SURREY. Prime, C. T., (1948, *Proc. Croydon N.H. Soc., 11*, 243-268), discusses the origin and distribution of the flora of

S. England, with special reference to the Croydon Regional Survey area (parts of v.-c. 16 and 17). Adopting Matthews' classification of distributional types, in the Croydon area plants of the Continental Northern group and also the few representatives of the Arctic Alpine, Northern Montane, and Oceanic Northern groups, are largely bog and marsh species and on that account are much restricted in distribution and many are decreasing. The Oceanic W. European group are mainly calcifuges and include several characteristic species of acidic soils; the Oceanic S. European are also mainly confined to acidic soils in the area, but are in general rare. Plants of the Continental type are largely found in dryer areas. The Continental Southern group is well represented, and includes a high proportion of calcicoles and plants of dry habitats. Only 3-4 Mediterranean species occur in the area. The European, Eurasian, and N. Hemisphere types are too widespread to repay study in a restricted area. Six British endemics (excluding species of highly critical genera) occur in the area concerned. The spread of aliens is also discussed.—[D.P.Y.]

17, SURREY; Purley Downs Golf Course and Coulsdon Common. A comparative ecological survey of these two areas, 3 miles apart, is made by Ash, M., (1948, *Proc. Croydon N.H. Soc.*, *11*, 315-329). Purley Downs is mainly on chalk, and has an appreciably lower rainfall and greater exposure to wind than Coulsdon Common, which is chiefly on clay-with-flints. Detailed frequency lists are given, also a table showing relationships between frequency of 32 species and pH of the soil.—[D.P.Y.]

17, SURREY; Croydon District. Blackheath Pebble Areas. Prime, C. T., (1948, *Proc. Croydon N.H. Soc.*, *11*, 269-302), describes ecological studies of several woods and heaths on the Blackheath Beds, especially Worms Heath, Addington Hills, Croham Hurst. Detailed frequency lists for these three areas are given, and compared with the earlier lists made by Parsons (1912, *Proc. Croydon N.H. Soc.*). On Worms Heath, *Calluna* is decreasing at the expense of *Ulex europaea*, *Betula*, *Molinia caerulea*, etc. Here and also on Addington Hills there has been since Parsons' time a decrease in moisture-loving plants owing to progressive drying of the soil and disappearance of boggy spots, and on Addington Hills also *Calluna* has been very largely invaded and displaced by *Betula*. The woodland of Croham Hurst is probably the climax vegetation of this type of soil. The ecological progression of vegetation of the Blackheath beds differs from that of the Greensand soils in the neighbourhood, notably in Callunetum being unstable and eventually giving place to trees, and more resembles that of Bunter sandstones of Sherwood Forest.—[D.P.Y.]

27, E. NORFOLK. Lambert, J. M., 1948, A Survey of the Rockland-Claxton Level, Norfolk, *Journ. Ecol.*, *36*, 120-135. The locality is an embanked and drained area in the Yare Valley, south of Rockland Broad.—[A.H.G.A.]

29, CAMBS. Rishbeth, J., 1948, The Flora of Cambridge Walls, *Journ. Ecol.*, *36*, 136-148. 186 vascular plants are recorded, including *Papaver atlanticum* (Ball) Cosson.—[A.H.G.A.]

30, BEDS. Dony, J. G., (1947, What Bedfordshire Is, *Journ. Beds. Nat. Hist. Soc.*, *1*, 8-12, with map), discusses the limits of Watsonian v.-c. 30, Bedford, in relation to present administrative county, with notes on plant species gained or lost to the vice-county.—[J.G.D.]

30, BEDS. Dony, J. G., and Piercey, K., 1948, Nature Reserves: A Report on the Situation in Bedfordshire, *Beds. Naturalist*, *2*, 19-21.

49, CAERN. Wilson, A., (1947, *N.W. Nat.*, *22*, 62-63 + 1 plate), continues his Flora of a Portion of North-east Caernarvonshire. The list of species has now reached the *Gramineae*.—[F.A.S.]

61-5, YORKS. Cheetham, C. A., (*Nat.*, 1948, The Yorkshire Naturalists' Union Eighty-Sixth Annual Report, 23-24) gives a report on botany for 1947.—[F.A.S.]

96, EASTERNESS, etc. Watt, A. S., and Jones, E. W., 1948, The Ecology of the Cairngorms, *Journ. Ecol.*, *36*, 283-304.

H 9, CLARE. Webb, D. A., 1947, The Vegetation of Carrowheel, *Journ. Ecol.*, *35*, 105-129. (N.W. Clare).

MISCELLANEOUS.

CHENERY, F. M., 1948, Aluminium in Plants and its Relation to Plant Pigments, *Ann. Bot. N.S. 12*, 121-136. Certain plants accumulate aluminium. There are often species with blue flowers and blue fruits, e.g. *Hydrangea macrophylla*. The pink flowers of *Hydrangea* will change to blue if transferred to a more acid soil, or after treatment of the soil with aluminium salts. Such plants have delphinidin flower pigment. In aluminium-accumulating plants treated with an excess of aluminium the leaves soon turn yellow, and this is characteristic of dried specimens of *Symplocos*, which have yellowish-green leaves. The aluminium-accumulating plants so far discovered have been mainly tropical, and they are rare in Europe.—[A.H.G.A.]

EHRENBERG, LARS, (1945, *Bot. Not.*, *1945*, 430-437), reports the chromosome numbers of some Scandinavian plants. High chromosome numbers have been found in the genus *Isoetes* and *Lycopodium* as well as tetraploid races of *Scleranthus annuus*. The chromosome structure in *Hottonia* and *Pulmonaria* is discussed. A few chromosome numbers differ from those previously published (e.g. *Carices*, *Scirpus sylvaticus* and *Calla palustris*).—[A.E.W.]

ERDTMAN, G., 1947, Suggestions for the Classification of Fossil and Recent Pollen Grains and Spores, *Svensk Bot. Tidskr.*, *41*, 104-114. The author defines the terms which he recommends for use in the description of pollen grains.—[A.H.G.A.]

MITCHELL, G. F., 1948, Late-Glacial Deposits in Berwickshire, *New Phyt.*, *47*, 262-264. Whitrig Bog shows marl resting on red clay, in the upper layers of the latter leaves of *Salix herbacea* and *S. reticulata* were common. Pollen grains were sparse, but showed a higher proportion of arboreal pollen in the marls. *Pinus* and *Artemisia* were more common in the clay, *Empetrum* in the marls. The clay and lower marl are considered to be late-glacial, and the upper marl post-glacial.—[A.H.G.A.]