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APPENDIX.

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THE NORTH STAFFORDSHIRE FLORA.

BY

W. T. BOYDON RIDGE, B.Sc.

Part 1.

(To be continued.)

(Loals all Observer press)

THE NORTH STAFFORDSHIRE FLORA.

INTRODUCTION.

R. Garner's *Natural History of the County of Stafford*, published in 1844 and with *Supplement*, 1860, contained the first complete flora of the county; in 1901, J. E. Bagnall published a *Flora of Staffordshire* comprising the result of Garner's work together with that of other workers, including his own. The present work is confined to the flora of the north of the county and is an attempt to bring up-to-date the records of the distribution of flowering plants and ferns in this particular area, *north of Stafford*.

I have given for all but the commonest species every published record to which I have had access, and wherever I have seen specimens growing in the localities given in such records the symbol † has been affixed. On the other hand, wherever a locality is mentioned without a reference I have seen specimens of the particular plant growing there.

No attempt has been made to give all the synonyms of each species, but only those used by other workers on Staffordshire botany. English names have also been appended for those desirous of having the local names used in North Staffordshire. I have not classified the localities because I consider that the only classification of any real value would be one based upon the nature of the soil, and at present the necessary information for such a classification is not available.

On the vexed question of "aliens" I have adopted the attitude of S.T. Dunn in his *Alien Flora*; any plant which does not occur in a natural habitat has been described as alien, as well as those which may occur in natural habitats but which are known to have been introduced by artificial means.

From a botanical point of view North Staffordshire presents many exceedingly interesting features. Geographically it is a little to the north-west of the centre of the country, and as a natural consequence it possesses plants typical both of the northern and southern portions of our island, although not in the proportion we should be led to expect from the sole consideration

of its situation. H. C. Watson, in his *Compendium of the Cybele Britannica*, has arranged British plants in definite groups or "Types of Distribution." Of those which he recognizes as southern we have about three-fifths in North Staffordshire, while of those which are typical of the north of England we can only claim about one half. If the question of distance only were to be taken into account we ought to have a greater percentage of the northern than of the southern type. The discrepancy is due to the fact that North Staffordshire possesses a more genial climate than it would if latitude were the dominating factor; the Pennine Range shields us to some extent from the cold north and east winds and at the same time increases our rainfall. The varied physical configuration and the geological structure enable the district to become the home of plants partial to special habitats. Within the boundaries of our district are to be found splendid examples of sub-alpine, upland, lowland, heather-moor, woodland, river valley and marsh areas, each with its own peculiar flora. In addition, due to the varied industrial enterprises, we possess many distinct types of waste ground and refuse heaps, each marked by special forms of plant life.

My thanks are due and are gratefully given to the many members of the North Staffordshire Field Club who have supplied me with information regarding the habitats of certain plants, the records of which may be found in the various annual reports of the Botanical section, printed in the Club's *Transactions*. The number of such helpers precludes any detailed mention of them all, but chief among them are Mr. J. A. Audley, B.Sc., Mr. S. A. Bennett, B.A., B.Sc., Miss E. M. Blake, LL.A., Mr H. Daltry, the Rev. E. Deacon, B.A., and Mr. J. R. B. Masefield, M.A. I should also like to record my indebtedness to Mr. G. Claridge Druce, LL.D., M.A., who has given me valuable assistance in the naming of critical species.

Complete references to the works consulted and to the former workers in the North Staffordshire flora will be given at the end of the final section. References, the volume numbers of which are in heavy type, are, without exception, to the *Transactions and (or) Annual Reports of the North Staffordshire Field Club*; in most cases the name of the authority is prefixed to the reference.

✓ Thal. minus L. Weaver Hills Pickard 60. 155. 1926

RANUNCULACEÆ

- ✓ **CLEMATIS VITALBA**, L. TRAVELLER'S JOY.
Near Stafford (Moore, 31, 75, 1897); in the grounds at Ilam†. Not wild in North Staffordshire.
- ✓ **THALICTRUM FLAVUM**, L. MEADOW RUE. *Local w/ acetate*
Burton (given but not confirmed by Garner, 380); near Stafford (Douglas in Bagnall, 5). I have not seen it in the north of the county. *Janstall Redware. Same Bridge (w/ Brown)*
- ✓ **ANEMONE NEMOROSA**, L. WOOD ANEMONE.
Frequent in woods, sheltered hedge banks and scrub. Sometimes occurs on grasslands, persisting as a relic of former woodland.
- ✓ **A. RANUNCULOIDES**, L. YELLOW ANEMONE. Alien.
Growing plentifully about the lawn at Stapenhill vicarage (Brown in Garner, 381). *annua (L)*
- ✓ **ADONIS AUTUMNALIS**, L. PHEASANT'S EYE. Alien.
Tutbury (Brown, 234); Oakamoor† (40., 73, 1906).
- ✓ **MYOSURUS MINIMUS**, L. MOUSE-TAIL.
Burton (given but not confirmed by Garner, 363). I have not seen this plant in North Staffordshire.
- ✓ **RANUNCULUS CIRCINATUS**, Sibth. WATER CROWFOOT.
In the Dove, Uttoxeter † (Bagnall, 5); near Stafford (Douglas in Bagnall, 5); Copmere Pool † (26, 94, 1892); in the Dove† and Trent near Burton; not common in the latter (Brown, 233); in a stream between Endon and Wall Grange. *Wakelhill (taken in the park at Rangemore)*
- ✓ **R. FLUITANS**, Lam. WATER CROWFOOT.
In the Dane at Rushton†; Dovedale†, in the Dove at Uttoxeter, in the Churnet at Alton†, and in the Blythe throughout its course (Bagnall, 5); near Stafford† (Douglas in Bagnall, 5); in the Manyfold. *R. aquatilis (L) ssp. aquatilis*
- ✓ **R. HETEROPHYLLUS**, Weber. WATER CROWFOOT. *Alton. w/ Brown*
Hilderstone (46, 117, 1912); Gun† (49, 156, 1915).

- aquatilis* ssp *peltatus* (Schrank) Syme
- ✓ R. PELTATUS, Schrank. WATER CROWFOOT.
Knypersley Pool† and Rudyard reservoir† (Painter, 31, 75, 1897); Hilderstone (Barns, 46, 117, 1912); feeder between the Dane and Rudyard.
- ✓ VAR. TRUNCATUS, (Hiern).
Hopton Pools, Ingestre (Bagnall, 5).
- ✓ VAR. FLORIBUNDUS, (Bab).
Hopton Pools, Ingestre† (Bagnall, 5); Knypersley† (Painter, 22, 114, 1888); feeder at Rudyard.
- ✓ R. LENORMANDI, F. Schultz. (R. CÆNOSUS, Guss). *Reaps Moor*
Chartley (Brown, 233); near Flash†, Morridge Top near Leek† and near Ramsor (Bagnall, 5); Knypersley Park† (Painter, 22, 114, 1888); near Stone (Bostock, 25, 11, 1891); Wetley Moor; Gun; Cresswell's Piece. The statement by Bagnall (5), Bishop's Woods, (25, 11, 1891) is an error.
- ✓ R. HEDERACEUS, L. IVY-LEAFED CROWFOOT. *Reaps Moor. Old Long Pool (Great Bath)*
Frequent on wet mud and in shallow streams and ditches. Hilderstone; Denstone; Barlaston; Moslee; Norton.
- ✓ R. SCELERATUS, L. CELERY-LEAVED CROWFOOT.
Frequent in or near stagnant water. Denstone; Hilderstone; Stafford; Trentham; Ashley.
- ✓ R. FLAMMULA, L. LESSER SPEARWORT.
Fairly common in damp and marshy places. Hilderstone; Biddulph; Denstone; Yarlet; Stafford; Beech.
- ✓ *var. angustifolius Walker Belmont. Garner 381*
✓ R. LINGUA, L. SPEARWORT.
Very local in its distribution. Kingston Pool near Stafford† (Stokes in With., 618); Eccleshall (given but not confirmed by Garner, 381); Denstone (11, 51, 1877); Endon (48, 97, 1914), not there now; Blakemoor Pool (55, 139, 1921).
- ✓ R. AURICOMUS, L. GOLDBLOCKS.
Local. Burton (Brown, 234); Denstone† (11, 51, 1877); Yarlet (Tylecote, 19, 28, 1885); banks of Doxey (Moore, 31, 75, 1897); Manyfold valley† (34, 73, 1900); Stanton† (35, 68, 1901); Stafford† (38, 110, 1904); Oakamoor (40, 73, 1906); Ham† (Fraser in Bagnall, 5); Alstonefield (Bagnall, 5); Draycott-in-the-Clay (Audley, 56, 110, 1922); Dovedale; Musden Woods.

- ✓ R. ACRIS, L. ACRID BUTTERCUP.
Very common on grassland and grassy roadsides.
- ✓ R. REPENS, L. CREEPING BUTTERCUP.
Very common in damp situations and ditches. A form occurs at Keele possessing ten petals where it has persisted for many years.
- ✓ R. BULBOSUS, L. BULBOUS BUTTERCUP.
Common on grassland, particularly meadows. Double flowered form in Burton meadows (Garner, 382).
- ✓ R. SARDOUS, Crantz. (R. HIRSUTUS, Curt). PALE HAIRY BUTTERCUP. Alien.
Stafford† and High Offley† (Garner, 382); Burton and Newcastle (given but not confirmed by Garner, 382); cornfields, Stretton (Brown, 234); Denstone (11, 51, 1877); Oakamoor (40, 73, 1906).
- ✓ R. PARVIFLORUS, L. SMALL FLOWERED BUTTERCUP.
On the banks of the Sandon road, half a mile from Stone (Garner, 382); Tutbury (given but not confirmed by Garner, 382); cornfield by Outwood Hill (Brown, 234).
- ✓ R. ARVENSIS, L. CORN BUTTERCUP. Alien.
Garner (382) says "General in cornfields." My experience in North Staffordshire does not confirm this as I have found it on only a few occasions. Horninglow and Tatenhill (Brown, 234); Denstone (11, 51, 1877); Stafford† (38, 110, 1904); Cocknage; Barlaston; Whitmore.
- ✓ R. FICARIA, L. LESSER CELANDINE.
Very common in damp ditches, woods and hedgerows.
- ✓ CALTHA PALUSTRIS, L. MARSH MARIGOLD.
Common in canals, marshy ground and edges of pools.
- ✓ TROLLIUS EUROPÆUS, L. GOLDEN BALL.
Near Throwley (Garner, 382); Belmont and Longnor (given but not confirmed by Garner, 382); Belmont Woods (Shaw, 114). I have failed to find this plant in North Staffordshire.
- ✓ HELLEBORUS VIRIDIS, L. HELLEBORE.
Biddulph Castle (Garner, 380); not there now. Grounds of Knypersley Hall; remains of former cultivation (Painter,

31, 75, 1897); by the Dove below Thorpe† (Garner, 380); by the Manyfold under Castern† (Garner, 380 and 34, 73, 1900).

- ✓ H. FŒTIDUS, L. STINKING HELLEBORE.
Moorlands and Belmont Woods (given but not confirmed by Garner, 380); moorlands near Leek (42, 87, 1908). I have failed to find it at Belmont.
- ✓ ERANTHIS HYEMALIS, Salisb. WINTER ACONITE. Alien.
Naturalized at Cotton Hall and in the vicarage grounds at Stapenhill (Brown, 234).
- ✓ AQUILEGIA VULGARIS, L. COLUMBINE.
Ashley Heath (Garner, 380); moorlands and Seabridge (given but not confirmed by Garner, 380); Needwood Forest† (35, 74, 1901 and Shaw, ii, 6); Calke Park and Foremark (Brown, 235); Bishop's Woods† (25, 32, 1891); Stanton† (50, 134, 1916).
- ✓ DELPHINIUM AJACIS, L. (D. CONSOLIDA, Smith). LARKSPUR. Alien.
Needwood Forest (Hewgill in Garner, 380). I have failed to find it there.
- ✓ ACONITUM NAPELLUS, L. MONKSHOOD.
Banks of Churnet, two miles below Cheddleton (Garner, 380); Denstone (11, 51, 1877); Dimminsdale on the bank of stream some distance from any habitation† (35, 71, 1901).

BERBERIDACEÆ.

- ✓ BERBERIS VULGARIS, L. BARBERRY.
Really wild in the valley of the Hamps, one mile below Waterhouses† (Garner, 363); near Knypersley Hall (Painter in Bagnall, 6); Branstone (Brown, 234); abundant at Colton (Bagnall, 7); Enson and Fradswell (Tylecote, 19, 27, 1885).
- ✓ EPIMEDIUM ALPINUM, L. Alien.
Grounds of Knypersley Hall; planted (Painter, 31, 76, 1897).

NYMPHÆCEÆ.

- ✓ NYMPHÆEA LUTEA, L. (NUPHAR LUTEA, Sm). YELLOW WATER LILY.

Trent, near Stoke (Garner, 380); Manyfold,† Ilam† and frequent in the Blythe† (Bagnall, 7); Trentham† (21, 57, 1887); pool at Alton† (Goodall, 16, 78, 1882); Knypersley† (Painter, 31, 76, 1897); Trent and Sow†, near Stafford (Moore, 31, 76, 1897); Chartley. *Newborough Lake in Holly Bush Park Anslow (Lake near head wood Ho.*

- ✓ CASTALIA ALBA, Wood. (NYMPHÆEA ALBA, L., CASTALIA SPECIOSA, Salisb). WHITE WATER LILY.

Boggy pit near Betley, Alton and Bailaston (Shaw, 101); Maer (Garner, 380); Trent near Burton (given but not confirmed by Garner, 380); near Stafford† (Douglas in Bagnall, 7); Trent near Walton and Lily pits at Branstone† (Brown, 238); Denstone (Edwards, 11, 51, 1877); pools at Alton† (Goodall, 16, 78, 1882); Chartley. *Biddulph Grange*

PAPAVERACEÆ.

- ✓ PAPAVER SOMNIFERUM, L. POPPY. Alien.

Below Tutbury Castle (Garner, 379); Brown (235) says "Formerly at Tutbury Castle and on waste ground at Stapenhill." Evidently when he wrote the plant had died out in that area. I have failed to find it there.

- ✓ P. RHŒAS, L. RED POPPY. Alien.

Rare in the north part of the county† (Garner, 379); near Stafford (31, 76, 1897); Denstone (Edwards, 11, 51, 1877). I have found a few specimens in fields at Cheddleton, Aston, Barlaston and Whitmore.

- ✓ P. DUBIUM, L. RED POPPY. Alien.

Fairly common as a weed, especially in cornfields.

✓ VAR. LECOQII, Lam.

Mill Dale and Alstonefield (Purchas in Bagnall, 7).

- ✓ VAR. LÆVIGATUM, Lecoq et Lamotte. (LAMOTTEI, Bor.) Near Rudyard Station (31, 76, 1897).

(Boenn. Highland)

- ✓ P. ARGEMONE, L. RED POPPY. Alien.
Occasional in cornfields and hedges. Boothon and Coton Field (Garner, 379).
- ✓ MECONOPSIS CAMBRICA, Vig. WELSH POPPY.
Near Denstone, on the confines of Derbyshire and near Wootton Lodge (Goodall, 16, 78, 1882). Probably garden escapes; not there now.
- ✓ CHELIDONIUM MAJUS, L. GREATER CELANDINE. Alien.
Frequent in hedges, near cottage gardens.

FUMARIACEÆ.

- ✓ CORYDALIS BULBOSA, DC. (NECKERA BULBOSA, N. E. Brown. CORYDALIS SOLIDA, Swartz.) FUMITORY. Alien. Grove near the rectory at Muxton (Shaw, 392); at Blithfield House (Bagot in With., 606); near the rectory at Mucclstone (Shaw, 105).
- ✓ C. LUTEA, DC. (NECKERA LUTEA, Scop.) YELLOW FUMITORY. Alien.
Naturalized on walls at Walton Hall (Brown, 236).
- ✓ C. CLAVICULATA, DC. (NECKERA CLAVICULATA, N. E. Brown.) CLIMBING FUMITORY.
Frequent on dry, rocky or sandy soils. Heighley Castle; Dane Valley; Cocknage; Willowbridge; Barlaston Downs; Swithamley; Bucknall; Rudyard; Biddulph; Stafford, Aston; Ashley.
- ✓ FUMARIA CAPREOLATA, L. FUMITORY. Alien.
Garner (393) gives it as frequent. This is, I think, an error, as I have only seen it once. Stafford† (31, 76, 1897).
- ✓ F. OFFICINALIS, L. FUMITORY. Alien.
Common as a weed in fields.
- ✓ F. VAILLANTII, Lois. FUMITORY. Alien.
Tutbury Castle (Brown, 396). I have failed to find it there.

CRUCIFERÆ.

- Nasturtium microphyllum* Needwood Forest. Beley. Blithfield, Ellenhall
microphyllum × *officinale* Hoo Brook (Endon, 1917) Springpool (Whitmore) 1952
 Biddulph. Cheddleton. Spaton's Quornford [× *sterile* Cery. Shaw
microphyllum Kingston. horbury. Weston upon Trent. Whitmore. Yocall
- ✓ CHEIRANTHUS CHEIRI, L. WALLFLOWER. Alien.
 Burton Abbey walls (Garner, 390) ; Denstone (Edwards, 11, 51, 1897).
- ✓ RADICULA NASTURTIUM-AQUATICUM, Rendle & Brown. (L) Hayek
 (NASTURTIUM OFFICINALE, R. Brown.) WATER CRESS.
 Common in streams and ditches.
- ✓ R. SYLVESTRIS, Druce. (N. SYLVESTRIS, R. Brown.)
 Burton (Garner, 389) ; Wetmore (Brown, 236).
- ✓ R. PALUSTRIS, Moench. (N. PALUSTRE, DC., N. TERRESTRE, R. Brown.)
 islandica (Ceder) Borbas. Dutch SW of Outwoodon. Inasall Parish
 Common in damp soil. Oakamoor ; Consall ; Biddulph ; Rudyard ; Stoke ; Dimminsdale ; Barlaston ; Stafford.
- ✓ R. AMPHIBIUM, Druce. (N. AMPHIBIUM, R. Brown.) WATER ROCKET.
 Lowerham (canal) amphibia (L) Bess.
 Stoke† and Burton† (Garner, 389) ; Kingston Pool† and Alton† (Bagnall, 8) ; Barlaston ; canal near Endon.
- ✓ BARBAREA VULGARIS, Ait. WINTER CRESS.
 Common near canals, streams and ditches. Denstone ; Biddulph ; Cheadle ; Stoke ; Stanton ; Needwood Forest ; Cheddleton ; Barlaston ; Burslem ; Milton ; Bucknall.
- ✓ B. VERNA, Aschers. (B. PRÆCOX, R. Br.) Alien.
 Near Stoke, introduced (Garner, 389). I have not seen it anywhere near Stoke. Garden weed, Calke (Brown, 236) ; Oakamoor (40, 73, 1906).
- ✓ ARABIS HIRSUTA, Scop. HAIRY ROCK CRESS.
 Frequent on limestone in Dovedale†, the Manyfold valley† and Tutbury (Garner, 389).
- ✓ A. GLABRA, Bernh. (A. PERFOLIATA, Lam., TURRITIS GLABRA, L.) TOWER MUSTARD.
 Woodville (Brown, 236) ; Denstone (Edwards, 11, 51, 1877) ; Burton (given but not confirmed by Garner, 389). I have not found this plant in North Staffordshire.
- ✓ CARDAMINE AMARA, L. BITTER CRESS.
 Fairly common. Leek ; canal at Wall Grange ; Rudyard ;

Biddulph; Trent side, Burton meadows; Knypersley; Stafford; Tittensor; Stanton and Ellstone.

- ✓ C. PRATENSIS, L. LADYSMOCK.
Very common in damp situations.
- ✓ C. HIRSUTA, L. HAIRY BITTERCRESS.
Very common in ditches, hedgebanks, walls and waste ground.
- ✓ C. FLEXUOSA, With.
Dimminsdale and Alton† (Bagnall, 8); Knypersley Park and Pool† (31, 76, 1897); Newcastle (26, 92, 1892); Biddulph valley, Trent valley and Rudyard† (Painter, 26, 99, 1892). *var. sylvatica Star wood (oak wood)*
- ✓ C. IMPATIENS, L. IMPATIENT BITTERCRESS. *Waterhouses*
Dovedale on limestone shales (Shaw, 100); Hamps valley and Ecton Hill† (Garner, 389); Manyfold valley† and Ilam (Bagnall, 8); Denstone (Edwards, 11, 51, 1877); Rocester† (48, 95, 1914); Musden Woods. *Canal (Knoet)*
- ✓ C. BULBIFERA, Crantz. (DENTARIA BULBIFERA, Reich.) CORAL WORT. *Ext*
Garner (388) states that he has seen specimens from a grove by the churchyard at Blithefield. He also gives Needwood Forest, but does not confirm it. I have failed to find this plant anywhere in Needwood Forest. *Yoxall in wood n' Yoxall (odge 1945)*
- ✓ DRABA MURALIS, L. WALL ROCK CRESS.
Common on limestone. Manyfold valley, Ilam, Dovedale and Weaver Hills.
- ✓ D. INCANA, L. HOARY ROCK CRESS.
Limestone rocks by Thor's Cave† (Garner, 388); Dovedale† (Bagnall, 8). *(L) Chevall*
- ✓ EROPHILA VERNA, E. Meyer. (E. VULGARIS, DC. DRABA VERNA, L.) WHITLOW GRASS.
On the top of Mow Cop (Garner, 388); Ingestre and Dovedale (Bagnall, 8); Denstone (Edwards, 11, 51, 1877); Cheadle (Masefield, 47, 95, 1913); Leek (Bennett, 48, 96, 1914); Castle Fields, Stafford (Moore, 31, 76, 1897); bank of canal at Cheddleton; Waterhouses; Cauldon Low; Stanton; Consall.

- ✓ *Ammoracia rusticana* (Gaertn.) Mey. & Scherb
 COCHLEARIA ARMORACIA, L. HORSE RADISH. Alien. *Old 77000 Pool*
 Near Knypersley Hall; remains of cultivation (Painter, 31, 76, 1897). Sometimes found in country lanes growing among refuse from gardens.
- ✓ HESPERIS MATRONALIS, L. DAME'S VIOLET. Alien.
 Near Cheadle (Carter, 1839). I have not seen this plant anywhere near Cheadle.
- ✓ SISYMBRIUM THALIANUM, Gay. (ARABIS THALIANA, L.)
 THALE CRESS. Alien. *Arabisopsis thaliana (L.) Heynck*
 Common on wall tops, dry banks and fields.
- ✓ S. OFFICINALE, Scop. HEDGE MUSTARD. Alien.
 Common. Roadsides, hedgebanks and waste places.
- ✓ *var. leucocarpum Penn. n. Ledeb.*
 S. SOPHIA, L. FLIXWEED. Alien. *Descurainia sophia (L.) Webb*
 Occurs only occasionally on roadsides and waste places. Tutbury Castle (Shaw, 114); Coton Field and Burton (Garner, 390); Walton Lane Bridge (Brown, 237); near Stafford (Douglas in Bagnall, 9); Gipsy Lane, Stoke; Tean.
- ✓ S. ALLIARIA, Scop. (ERYSIMUM ALLIARIA, L.) GARLIC HEDGE MUSTARD. Alien. *Alliaria petiolata (Cesb.) Cavara + Grande*
 Common in hedges.
- ✓ ERYSIMUM CHEIRANTHOIDES, L. TREACLE MUSTARD.
 Alien.
 Rare. Roadside near Mayfield (Garner, 390); Denstone (Edwards, 11, 51, 1877); Oakamoor (40, 76, 1906). I have only seen it once on waste ground in Gipsy Lane, Stoke. *Arley*
- ✓ E. ORIENTALE, Mill. (E. PERFOLIATUM, Crantz, CORINGIA ORIENTALIS, Dum.) HARE'S EAR TREACLE MUSTARD. Alien.
 Croxden (Deacon, 52, 121, 1918); Alton (Brett, 54, 109, 1920); Oakamoor (Berrisford, 40, 74, 1906).
- ✓ CAMELINA SATIVA, Crantz. GOLD OF PLEASURE. Alien.
 Only occasional in cultivated fields. In fields at Penkhull (13, 88, 1879); several times in Cheddleton parish (Garner, 388); Bagnall (4, 5, 1870); Oakamoor (Berrisford, 40, 73, 1906). I have seen it in fields near Newcastle and at Dilhorne.

Diplotaxis muralis ^{L. DC.} Weston on Trent. Newcastle under Lyme.
D. tenuifolia ^{L. DC.} Railway to Bromwich (L. DC.)

- ✓ *BRASSICA NAPUS*, L. RAPE. Alien.
Occurs as a weed on cultivated ground. This and the two following species are often confused.
- ✓ *B. RUTABAGA*, DC. SWEDE. Alien. ^{L. DC.}
Fairly common on cultivated ground and on the banks of streams.
- ✓ *B. RAPA*, L. WILD TURNIP. Alien.
Often occurs as remains of cultivation.
VAR. *SYLVESTRIS*, H. C. Watson.
Horton (Painter, 31, 77, 1897).
- ✓ *B. NIGRA*, Kock. (*SINAPIS NIGRA*, L., *B. SINAPIOIDES*, Roth.) BLACK MUSTARD. Alien.
Common about Stafford† (Garner, 390); Tutbury (Shaw, 100); road from Knypersley to Leek† (Painter, 31, 77, 1897). Rare in the north of the county.
- ✓ *B. ARVENSIS*, O. Kuntze. (*B. SINAPISTRUM*, Boiss., *SINAPIS ARVENSIS*, L.) CHARLOCK. Alien.
Very common on waste ground and cultivated fields, especially cornfields.
- ✓ *B. ALBA*, Boiss. (*SINAPIS ALBA*, L.) WHITE MUSTARD. Alien.
Bagnall (9) says that it is frequent in the north of the county. Such is not my experience. It occurs only occasionally. I have seen it on waste ground at Stoke, Stafford, Cheadle, Whitmore and Biddulph, and in each case only a few specimens.
- ✓ *CAPSELLA BURSA-PASTORIS*, Medic. (*BURSA PASTORIS*, Weber., *THLASPI BURSA-PASTORIS*, L.) SHEPHERD'S PURSE. Alien.
Very common on roadsides and on waste places and cultivated ground.
- ✓ *CORONOPUS DIDYMUS*, Sm. WART CRESS. Alien. ^(L) ^{Erville}
Coton Field (Garner, 16, 60, 1882); Shobnall (Brown, 239).
- ✓ *C. PROCUMBENS*, Gilib. (*C. RUELLII*, All.) SWINE'S CRESS. ^{*C. squamatus* (Forsk.) Aschers}
Between Stafford and Kingston Pool† (Garner, 387); Uttoxeter (Garner, 387); Coton Field (Garner, 16, 60, 1882).

- ✓ **LEPIDIUM RUDERALE**, L. Alien.
Tean Brook at Fole (Goodall, 16, 78, 1882); roadside from King's Bromley to Sudbury† (Bagnall, 9).
- ✓ **L. SATIVUM**, L. GARDEN CRESS. Alien.
Occasionally found in country lanes or as an escape from gardens; Aston; Ashley; Thorncliffe bank near Leek; Cheadle; Alton.
- ✓ **L. CAMPESTRE**, R. Br. FIELD CRESS. Alien.
Denstone (Edwards, 11, 51, 1877); Glutton Dale (25, 36, 1891); Oakamoor† (40, 74, 1906); Shobnall and Needwood Forest† (Brown, 238); near Alton† (Bagnall, 9).
- ✓ **L. SMITHII**, Hooker. (L. **HIRTUM**, Sm., L. **HETEROPHYLLUM**, Benth.) SMITH'S CRESS. Alien.
Leycett, Betley, Swynnerton,† Willowbridge,† Maer† and Tittensor (Garner, 388); Shobnall† (Brown, 238).
- ✓ **L. DRABA**, L. HOARY CRESS. Alien.
Cheadle (Masefield, 48, 96, 1914).
- ✓ **THLASPI ARVENSE**, L. PENNY CRESS. Alien.
Stone (Ray, *Syn.*, 305); Burton (Brown, 238); Stafford† (Moore, 38, 110, 1904); Denstone† (Edwards, 11, 51, 1877); Oakamoor† (53, 97, 1919).
- ✓ **IBERIS AMARA**, L. CANDYTUFT. Alien.
Near Leek (Wood in Bagnall, 10); by the roadside on a common between Cheadle and Oakamoor (Shaw, 113). I have failed to find it in either of these places.
- ✓ **TEESDALIA NUDICAULIS**, R. Brown. SHEPHERD'S CRESS.
Shooters' Hill,† near Tittensor and Swynnerton (Garner, 388); Betley (given but not confirmed by Garner, 388).
- ✓ **HUTCHINSIA PETRÆA**, R. Br. ROCK HUTCHINSIA.
Beresford, Wetton Mill,† Weaver Hills†, Beeston Tor and Dovedale† (Garner, 388).
- ✓ **RAPHANUS RAPHANISTRUM**, L. WILD RADISH. Alien.
Occurs frequently throughout the area on waste ground and as a weed in gardens and cornfields. Wandsworth

RESEDACEÆ.

- ✓ RESEDA LUTEA, L. WILD MIGNONETTE.
Near Rushton (47, 96, 1913).
- ✓ R. LUTEOLA, L. DYER'S WEED. *Widnesbury*
Leycett† and Heighley Castle (Garner, 374); Tutbury
Castle† (Brown, 237); Silverdale.

CISTACEÆ.

- Ext* ✓ HELIANTHEMUM CANUM, Baumg. HOARY ROCK ROSE.
Weaver Hills (Shaw in Garner, 379). I have failed to find it.
- ✓ H. CHAMÆCISTUS, Mill. (H. VULGARE, Gærtn.) ROCK
ROSE.
Abundant on grassland on the limestone, but not elsewhere.
Dovedale and the Manyfold valley.

VIOLACEÆ.

- ✓ VIOLA PALUSTRIS, L. MARSH VIOLET.
Frequent in bogs and marshy places. Cotton and Whiston
(Carter in Bagnall, 10); Morridge Top near Leek,† Dimmin-
dale and Alton† (Bagnall, 10); near Knypersley Pool†
(22, 114, 1888); Hilderstone† (46, 117, 1912); Talke; Ferny
Hill near Leek; Barlaston; Consall.
- ✓ V. ODORATA, L. SWEET VIOLET.
Heighley Castle†, Betley and Croxden† (Garner, 356);
Rolleston (Brown, 239); near Cheadle† (Carter in Bagnall,
10); Alton†, Draycott-in-the-Clay and Chartley (Bagnall,
10); Denstone (Edwards, 11, 51, 1877); road from Knypers-
ley to Leek† and near Stafford† (31, 77, 1897); near Stanton;
road between Stone and Yarlet. A white variety occurs
at Darlaston.
- ✓ V. HIRTA, L. HAIRY DOG VIOLET.
Ecton and Wetton valley† (Garner, 355); Dovedale† (32,
102, 1898); near Beeston Tor and the Manyfold valley†
(Fraser in Bagnall, 11).

V. hirta x odorata Manyfold valley

V. desepulsa Needwood Forest. var *subtilis*. Eccleshall
V. arvensis do
V. desolata do. Mansyn. Radnor (at Bentley Farm)

VIOLACEÆ—POLYGALACEÆ

15

V. Reichenbachiana Wt. Mar. Hall. Mar. 1944

- ✓ *V. SYLVESTRIS*, Kit. DOG VIOLET. *Reichenbachiana* (Jord)
Draycott-in-the-Clay† and near Uttoxeter (Bagnall, II).
- ✓ *V. RIVINIANA*, Reichb. DOG VIOLET.
Woods and hedgebanks: frequent. Biddulph; Stafford;
Clayton; Consall; Needwood; Barlaston.
- ✓ *V. CANINA*, L. (*V. ERICETORUM*, Schrad.) DOG VIOLET.
Common in woods and hedgebanks.
- ✓ VAR. *FLAVICORNIS*, Smith.
Draycott (given but not confirmed by Garner, 356).
VAR. *PUSILLA*, Bab.
Black Hill, Yarlet (Tylecote, 19, 27, 1885).
- ✓ *V. TRICOLOR*, L. WILD PANSY.
Occurs occasionally on light soil, pasture land and waste
ground. Alton† (Parsons in Bagnall, II); Biddulph†
(Painter, 22, II4, 1888); Stafford† (Moore, 31, 77, 1897);
Denstone (Edwards, 11, 51, 1877); canal at Cheddleton;
Willowbridge; Croxden; Swynnerton.
- ✓ *V. ARVENSIS*, Muir. FIELD PANSY. Alien.
Common as a weed in cornfields and on waste ground.
- ✓ *V. LUTEA*, Huds. MOUNTAIN PANSY. (rocky bank above mill)
Butterton† (Manyfold valley), Wetton,† Alstonefield,†
Throwley, Weaver Hills,† Grindon,† Longnor† and Leek
(Garner, 356); highlands at Swithamley† and Warslow†
(Bagnall, II); Glutton Dale,† both yellow and purple colours
(25, 36, 1891); Bosley; Roches; Morridge; Stanton.
- ✓ VAR. *AMCENA*, Symons.
Dovedale (Bagnall, II). This may be a Derbyshire record.
I have not found it in Dovedale.

POLYGALACEÆ.

- ✓ *POLYGALA VULGARIS*, L. MILKWORT.
Fairly common on heaths and slightly acid soils. Star
Wood, Oakamoor† (Bagnall, II); Denstone† (Edwards,
11, 51, 1877); Hilderstone † (Barns, 46, II7, 1912); Enson
and Hardwick (19, 28, 1885); Wall Grange; Dane valley;
Hanchurch; Consall; Stanton.

P. oxyptera. The common species in Manyfold Valley

- ✓ *P. serpyllifolia* Hoss.
 ✓ P. SERPYLLACEA, Weihe. (P. DEPRESSA, Wend.) HEATH MILKWORT.
 Hilly land at Swithamley† and Weaver Hills† (Bagnall, 11); Whitmore (Fraser in Bagnall, 11); near Biddulph Grange and on the road between Knypersley and Leek† (Painter, 22, 114, 1888).

CARYOPHYLLACEÆ.

- ✓ DIANTHUS DELTOIDES, L. MAIDEN PINK.
 Glutton Dale near Longnor† (Garner, 371). Still there in 1914.
- ✓ SAPONARIA OFFICINALIS, L. SOAPWORT. Alien.
 Occurs occasionally as an escape from gardens. Hixon (Garner, 370); near Marchington.
- ✓ SILENE LATIFOLIA, Rendle and Britten. (*S. cucubalus*, Wibel. *S. inflata*, Sm.) BLADDER CAMPION. *Silene vulgaris (Macneil) Farook*
 Fairly common on cultivated land, roadsides and waste places; often occurs on pit mounds. Hilderstone; Stafford; Denstone; Fenton; Endon; Bucknall; Stoke; Stone; Longton; Alton. *Ecton Hill*
- ✓ S. NUTANS, L. NOTTINGHAM CATCHFLY. *Hall Dale, Sugar Loaf*
 Dovedale† (Bree in Purt., i, 733); Thor's Cave† (Garner, 371); Cheadle (Heywood, 47, 94, 1913); Alstonefield† (Bagnall, 11).
- ✓ *S. anglica* Madely. *Dalley 59. 157 1925 Buxton*
 ✓ S. NOCTIFLORA, L. NIGHT-FLOWERING CATCHFLY. Alien.
 Denstone (Goodall, 16, 78, 1882); Oakamoor (Berrisford, 40, 74, 1906); Alton† (Brett, 52, 121, 1918).
- ✓ LYCHNIS ALBA, Mill. WHITE CAMPION. Alien.
 Given by Garner (373) under L. DIOICA, L. Occurs only as a weed on cultivated land, or in hedges or waste ground. *Oxhill Lane*
 It is fairly common but not abundant throughout the area.
- ✓ *S. clausa*
 ✓ L. DIOICA, L. (L. DIURNA, Sibth.) RED CAMPION.
 Common in damp woods, especially oak woods, and in damp shady hedgerows. This and the preceding species are often attacked by a fungus, *Ustilago violacea*, in which case the flowers are usually smaller, and in the female flowers

Helianthus macrocarpum (Willk) Smethwicke (Canal)

the staminodes form stamens which bear spores of the fungus in place of pollen.

- ✓ **L. FLOS-CUCULI, L.** RAGGED ROBIN.
Common in damp meadows, marshes and by stream banks.
- ✓ **L. GITHAGO, Scop.** (AGROSTEMMA GITHAGO, L.) CORN COCKLE. Alien.
Garner (372) gives this as common. Such is not my experience. I have found it only occasionally as a weed in cornfields. Field near Wickenstone Rocks (Painter, 31, 77, 1897); Bradnop (Powell, 35, 68, 1901); Cheadle† (Heywood, 47, 94, 1913); Denstone † (Edwards, 11, 51, 1877); Barlaston; Whitmore; Ashley; Cheddleton; Dilhorne.
- ✓ **CERASTIUM ^{alsoverens (Bab)} TETRANDRUM, Curtis.** SEA MOUSE-EAR CHICK WEED.
Garner (373) says "not rare in waste places." Probably an error. It is usually found near the sea. I have not seen it in North Staffordshire. Bagnall (12) gives Stafford on the authority of "Mr. Spark." It may have occurred in the salt marshes near Stafford. I have failed to find it there.
- ✓ **C. SEMIDECANDRUM, L.** SMALL MOUSE-EAR CHICKWEED. *Kewer Edge*
Garner (373) gives this as common. I have not found it so. Weaver Hills; Manyfold valley; Dovedale. *Wellingworth Damaces*
- ✓ **C. VISCOSUM, L.** (C. GLOMERATUM, Thuill.) BROAD-LEAVED MOUSE-EAR CHICKWEED.
Common on roadsides, arable and waste land.
- ✓ **C. ^{C. hololeucodes} VULGATUM, L.** (C. TRIVIALE, Link.) MOUSE-EAR CHICKWEED. *Wedgebury*.
Common as a weed.
- ✓ **C. ARVENSE, L.** FIELD MOUSE-EAR CHICKWEED. Alien.
Garner (373) gives it as occurring occasionally on limestone. I have not found it in our area.
- ✓ **MENCHIA ERECTA, Gærtm, Mey and Scherb.** (C. QUAT-
-ERNELLUM, Fenzel.) ERECT PEARLWORT.
Barlaston (Garner, 350).

- ✓ *hyosoton aquaticum (L.) Moench.*
 STELLARIA AQUATICA, Scop. (C. AQUATICUM, L.) GREAT CHICKWEED.
 Weston† and Trentham (Garner, 17, 75, 1883); Stoke meadows (Garner, 13, 88, 1879); Ravensclough† (47, 96) ^{near Ruchde} 1913; Uttoxeter† and Marchington (Bagnall, 12); Stretton and Branstone (Brown, 242).
- See ✓ S. NEMORUM, L. WOOD STITCHWORT. ^{by R. Charnet}
 Alton† and Oakamoor† (Yates, 23, 10, 1889); Hilderstone (Barns, 46, 117, 1912); near Barlaston† (51, 108, 1917).
- ✓ S. MEDIA, Vill. CHICKWEED.
 Common on cultivated and waste land.
- ✓ S. NEGLECTA, Weihe. CHICKWEED. ^{Alton, Towdell & Rednall}
 Draycott-in-the-Clay†, Uttoxeter and Marchington Wood-lands (Bagnall, 12); Wetton; Barlaston. ^{The Conches}
- ✓ S. HOLOSTEA, L. GREATER STITCHWORT.
 Common in woods and shady hedgerows.
- ✓ S. PALUSTRIS, Retz. (S. GLAUCA, With.)
 Hilderstone† (Barns, 46, 117, 1912); Denstone (Edwards, 11, 51, 1877); Garner (371) gives it as common. This is an error as it is very local in its distribution.
- ✓ S. GRAMINEA, L. LESSER STITCHWORT.
 Common on sandy pasture, commons and hedgerows.
- ✓ *S. alsine* Grmn
 S. ULIGINOSA, Murr. BOG STITCHWORT.
 Very common by the sides of streams and ditches.
- ✓ *arenaria* ^{Hem}
 ARENARIA VERNA, L. SPRING SANDWORT.
 Dovedale† and Ecton Hill† (Garner, 371); Denstone (Edwards, 11, 51, 1877).
- ✓ *A. hybrida* (Vill.) Schischk
 A. TENUIFOLIA, L. FINE-LEAVED SANDWORT ^{Hall Dale, Wetton Hill}
 Weaver Hills† (Garner, 371); Dovedale (Garner, Supplement 36); Froghall† and Cauldon† (1, 6, 1866).
- ochringia*
 A. TRINERVA, L. ^{Clav.} THREE LEAVED SANDWORT.
 Common in hedgerows and woods.

- ✓ A. SERPYLLIFOLIA, L. THYME-LEAVED SANDWORT.
Frequent in dry places, on walls and rocks. Biddulph ;
Denstone ; Consall ; Cheddleton ; Stanton ; Manyfold valley ;
Tittensor.
VAR. VISCIDULA, Roth.
Tittensor.
- ✓ A. LEPTOCLADOS, Guss. *Reichb* *Consall Colerick W.P. Ashley W. d*
Manyfold valley.
- ✓ SAGINA APETALA, Ard. PEARLWORT.
Common on walls, waste places and dry soil.
- ✓ S. PROCUMBENS, L. PEARLWORT.
Common on rather damp walls, garden paths and waste
ground. *S. alata* *Hall Dale. Welton Mill. Chapel Hill Chorlton* [with *Arenaria*
Caryophylla
at railway st.]
- ✓ S. SUBULATA, Presl. (SPERGULA SUBULATA, Swartz).
HEATH PEARLWORT.
Tittensor† and Whitmore heaths (Garner, 373) ; Weaver
Hills† (Bagnall, 12).
- ✓ S. NODOSA, Fenzl. (SPERGULA NODOSA, L.) KNOTTED
SPURREY. *Heathley (near Moorland stream)*
Oakamoor† and Offley Hay (Garner, 373) ; near Wall Grange†
(Audley, 27, 64, 1893) ; Ramsor (Brett, 37, 95, 1903).
VAR. GLANDULOSA, Rouy et Foucand.
Ipstones (Blake, 55, 139, 1921).
- ✓ SPERGULA ARVENSIS, L. CORN SPURREY. Alien. *Handsworth*
Very common as a weed on sandy soils. Hilderstone ;
Biddulph ; Horton ; Stafford ; Whitmore ; Barlaston.
- ✓ S. SATIVA, Boenn.
Sandon, (Bagnall, 13) ; Barlaston, Whitmore and probably
in many other places.
- ✓ SPERGULARIA RUBRA, Pers. (ARENARIA RUBRA, L.,
LEPIGONUM RUBRUM, Fries., BUDA RUBRA, Dunn).
SAND SPURREY.
Frequent on sand or gravel. Denstone ; Trentham ;
Swynnerton ; Barlaston ; Ashley ; Cheadle ; Whitmore ;
Creswell.

Elatine hydrophila (L.) Pott. Reservoir

PORTULACÆ.

- ✓ *Montia* CLAYTONIA SIBIRICA, L. (C. ALSINOIDES, Sm.) CLAYTONIA. Alien. *Clayton 1932*
Bank at Penkhull (Garner, 355); Knypersley† and Greenway Banks† (Painter, 12, 114, 1888); Maer,† Hanchurch† and Beech † (45, 110, 1911); Bucknall.
- ✓ *Willis Heer* C. PERFOLIATA, Donn. Alien. *Burton*
Stableford (42, 88, 1908); Caverswall.
- ✓ MONTIA FONTANA, L. WATER BLINKS. *Brocton*
Common in wet places, near ditches, ponds and streams.

HYPERICÆ.

- ✓ HYPERICUM ANDROSÆMUM, L. TUTSAN.
Denstone (Edwards, 11, 51, 1877); Needwood Forest (Shaw, ii, 7); Leycett (Garner, 396). I have not seen it at any of these places.
- ✓ H. PERFORATUM, L. ST. JOHN'S WORT.
Not uncommon in hedgebanks.
- ✓ H. MACULATUM, Crantz. (H. QUADRANGULUM, Fries., H. DUBIUM, Leers). MARSH ST. JOHN'S WORT.
Anglesey Coppice, near Chartley (Bagnall, 13); Denstone (Edwards, 11, 51, 1877). Alton Pickard Co. 155. 1926
- ✓ H. QUADRANGULUM, L. (H. TETRAPTERUM, Fries., H. QUADRATUM, Stokes). MARSH ST. JOHN'S WORT.
Frequent in damp places. Hilderstone; Biddulph; Knypersley; Denstone; Consall; Ashley; Whitmore; Moddershall.
- ✓ H. HUMIFUSUM, L. CREEPING ST. JOHN'S WORT.
Frequent. Maer; Biddulph; Ramsor; Lask Edge; Weaver Hills; Stanton.
- ✓ H. PULCHRUM, L. HEATH ST. JOHN'S WORT. *Starwood (Bakewell)*
Frequent in heathy places. Hilderstone; Glutton Dale; Stafford; Biddulph; Denstone; Willowbridge; Wetley Moor.
- ✓ H. HIRSUTUM, L. HAIRY ST. JOHN'S WORT.
Frequent on calcareous soils. Tutbury (Shaw in Bagnall, 13); Rocester† (Fraser in Bagnall, 13); Stafford (Moore, 31, 78, 1897); Hilderstone (Barns, 46, 117, 1912); Denstone (Edwards, 11, 51, 1877); Ilam; Manyfold valley.

- ✓ *H. MONTANUM*, L. MOUNTAIN ST. JOHN'S WORT. *Rocks Welton Mill to Welton Burton* (Garner, 396).
- ✓ *H. ELODES*, L. BOG ST. JOHN'S WORT.
Garner (396) says "In all our bogs and marshes." This, if true in his time, is certainly not the case now. It is one of our rare plants. Needwood Forest (Shaw, ii, 7); Chartley Moss (Brown, 243; Bagnall, 13).

MALVACEÆ.

- ✓ *ALTHÆA OFFICINALIS*, L. MARSH MALLOW.
The only record for this is Denstone (Edwards, 11, 51, 1877). I think this is an error. I have failed to find it in that district, and it is usually found in marshes near the sea, not in inland ones.
- ✓ *MALVA MOSCHATA*, L. MUSK MALLOW.
Garner (392) gives this as common. Although it occurs occasionally in fields on light soils it is by no means common in the north of the county. *Near Sudbury†, Chartley† and Tixall* (Bagnall, 14); *Needwood Forest†, Blakelaw* (Brown, 242); *Denstone†* (Edwards, 11, 51, 1877); *Manyfold†* (34, 140, 1900); *Stafford†* (Moore, 38, 110, 1904); *Hilderstone†* (Barns, 46, 117, 1912); *Willowbridge†* (49, 156, 1915); *Madeley†* (Daltry, 54, 109, 1920).
- ✓ *M. SYLVESTRIS*, L. MALLOW. Alien.
Usually occurs on waste ground. Garner (392) gives it as common. Although it occurs frequently I should hardly term it common in North Staffordshire. *Denstone†* (Edwards, 11, 51, 1877); *Stafford†* (Moore, 31, 78, 1897); *Manyfold†* (34, 140, 1900); *Hilderstone†* (Barns, 46, 117, 1912); *Beech; Willowbridge; Dovedale.*
- ✓ *M. ROTUNDIFOLIA*, L. DWARF MALLOW. Alien.
Occurs on waste ground and by outbuildings and walls. Garner (392) gives it as common. Although frequently found I should not term it common. *Uttoxeter†* (Bagnall, 14); *Biddulph†* (Painter, 22, 114, 1888);
M. parviflora var microcarpa Desf. *Burton Druce* BEC. 8391. 1927

Tilia cordata Newborough (Holly Bush Park) Yoxall (Stream near Woodmill
Narethlington (Forest Banks)

Denstone† (Edwards, 11, 51, 1877); Hilderstone† (Barns, 46, 117, 1912); Cheadle† (Heywood, 47, 94, 1913); Burslem; Bucknall; Silverdale; near Stafford.

TILIACEÆ.

- ✓ *TILIA VULGARIS*, Hayne. (T. EUROPÆA, L., T. INTERMEDIA, D.C.) LIME. Alien. *cordata x platyphyllos*
Has been planted in many parts of the area. Hilderstone; Biddulph; Knypersley; Rudyard; Trentham; Barlaston; Consall; Bucknall.
- ✓ T. *CORDATA*, Mill. (T. *PARVIFOLIA*, Ehrh.) SMALL LEAVED LIME.
Needwood Forest† (Garner 379).
- ✓ T. *PLATYPHYLLOS*, Scop. LARGE LEAVED LIME.
Madeley (Daltry in lit).

LINACEÆ.

- Ext ✓ *RADIOLA LINOIDES*, Roth. (R. *MILLEGRANA*, Sm.) THYME LEAVED FLAX SEED.
Barlaston Common (Garner, 350). I have failed to find it there.
- ✓ *LINUM CATHARTICUM*, L. PURGING FLAX.
Frequent on dry pasture. In every hilly pasture (Garner, 362); Denstone; Dovedale; Manyfold Valley; Biddulph; Barlaston; Cresswell; Madeley.
- ✓ L. *ANGUSTIFOLIUM*, Huds. NARROW LEAVED FLAX.
Burton (Brown in Garner, 362); Denstone (Edwards, 11, 51, 1877); I have not met with it in the north of the county.
- ✓ L. *USITATISSIMUM*, L. FLAX. Alien. *Spring Field (Stoke on Trent)*
Only occurs as a casual. Field between Betley and Madeley and once near Stoke (Garner, 362); Shelton Road, Stoke (Garner, 13, 89, 1879); Gipsy Lane, Stoke. Once near Consall; once on the canal side near Cheddleton, and on the road side at Madeley.

GERANIACEÆ.

- ✓ GERANIUM SANGUINEUM, L. BLOOD RED CRANE'S-BILL.
The only record given (Stanway, **42**, 87, 1908) is, I think, an error.
- ✓ G. PHÆUM, L. DUSKY CRANE'S-BILL. Alien.
Only occurs as an escape from cultivation. Oakamoor (Berrisford, **40**, 73, 1906); Belmont† (Garner, *Supplement*, 36); Darlaston† near Stone (**50**, 135, 1916). It has occurred here for many years and in abundance.
- ✓ G. SYLVATICUM, L. WOOD CRANE'S-BILL.
Burton (given but not confirmed by Garner, 391); Denstone (Edwards, **11**, 51, 1877); probably these records are erroneous: in any case the plant does not occur at either of these places now.
- ✓ G. PRATENSE, L. MEADOW CRANE'S-BILL.
Fairly frequent in damp meadows. Stoke† (Garner, 391); Weaver Hills†, Milton†, Barlaston† (Bagnall, 14); Dovedale† (**4**, 4, 1870); Denstone† (Edwards, **11**, 51, 1877); Stone† and Stafford† (Moore, **31**, 79, 1897); Manyfold† (**34**, 140, 1900); Tutbury† (Fraser in Bagnall, 14); Cheadle† (Carter, 72); Croxden Abbey† (Shaw, 105); Tean; near Chell; Knypersley; near Kidsgrove; near Mow Cop; Hilderstone. A variety with almost white flowers, beautifully marked with dark blue veins, occurs at Ilam (Garner, 391).
- ✓ G. PYRENAICUM, Burm. MOUNTAIN CRANE'S-BILL. Alien.
Walton, near Stone (Garner, 391); Swithamley†, (**4**, 4, 1870); rare, occasionally found near Stafford (Garner, **16**, 60, 1882); Cheadle† (Heywood, **47**, 94, 1913); Denstone (Brett, **53**, 97, 1919); Madeley (Daltry in lit). *Ramsborn Woolton (edge garden) Arley (church)*
- ✓ G. MOLLE, L. DOVE'S FOOT CRANE'S-BILL.
Common in pasture and waste places.
- ✓ G. PUSILLUM, L. SMALL FLOWERED CRANE'S-BILL. Alien.
Only occurs on waste or cultivated ground. Cheadle (Carter, 72); Shobnall (Brown, 249); Stafford† (Garner,

^{Hall Dale, Welton Hill}
16, 60, 1882); Dovedale† (**4**, 4, 1870); Denstone (Edwards, **11**, 51, 1877); near Whitmore; Sywnnerton; Cheddleton; Oakamoor; Barlaston. ^{Thor's Cave}

- ✓ **G. DISSECTUM**, L. JAGGED LEAVED CRANE'S-BILL.
 Fairly common on waste ground and hedge banks.
- ✓ **G. COLUMBINUM**, L. LONG STALKED CRANE'S-BILL.
 Common particularly on limestone. Dovedale†, Wetton†, Beeston Tor†, Thor's Cave† (Garner, 392); Weaver Hills† (Bagnall, 15); Oakamoor (Berrisford, **40**, 73, 1906).
- ✓ **G. LUCIDUM**, L. SHINING CRANE'S-BILL.
 General on limestone, frequent on sandstone (Garner, 391); Denstone†, (Edwards, **11**, 51, 1877); Waterfall† (**12**, 32, 1878); Longnor† (**25**, 36, 1891); Cheadle (Carter in Bagnall, 15); Croxden Abbey† (Shaw, 105); Coppenhall near Stafford (Moore, **31**, 78, 1897); Alton Towers† (Bagnall, 15); Manyfold† and Dove† valleys (Fraser in Bagnall, 15); Hilderstone (Barns, **46**, 117, 1912); Barlaston; near Leek; Cotton near Oakamoor; near Endon.
- ✓ **G. ROBERTIANUM**, L. HERB ROBERT.
 Common in hedge banks. A variety with white flowers at Madeley (Pinder in Garner, 391).
- ✓ **ERODIUM CICUTARIUM**. L'Hérit. HEMLOCK STORK'S-BILL.
 Garner (391) says common on sandy soil. It is not very common now. Dovedale† (Brown 244); Weaver Hills† (Bagnall, 15); Stafford† (Moore, **38**, 110, 1904); Oakamoor (Berrisford, **40**, 73, 1906); Denstone (Edwards **11**, 51, 1877); near Ashley.
- ✓ **E. MOSCHATUM**, L'Hérit. MUSKY STORK'S-BILL.
 Bishop's Woods (**25**, 32, 1891); Oakamoor (Berrisford, **40**, 73, 1906); probably errors. I have not found it at either of these places.

E. maritimum Barrow. } Springs near Welford found by P.P. Johnston in 1924
 Highgate Common

✓ OXALIS ACETOSELLA, L. WOOD SORREL.

Very common in woods and moist shady places.

VAR. SUBPURPURASCENS, D.C.

Bradley and Great Gate (Brett, 35, 71, 1901); Lion's Paw Wood† (Painter, 31, 79, 1897); Yarlet (Tylecote, 19, 27, 1885); Hazelhurst aqueduct† (Audley, 27, 63, 1893).

✓ IMPATIENS NOLI-ME-TANGERE, L. BALSAM. Alien.

Garner (355) says "In one or two spots in woods por-
fusely covering the ground; but originating from
gardens." I have only found it near Maer and at
Barlaston.

✓ *I. glandulifera* Royle Janbridge, Stafford Draca 62. 126. 1926. Symbrook (near
= *I. Roylei* Newton Road

AQUIFOLIACEÆ.

✓ ILEX AQUIFOLIUM, L. HOLLY.

Common in woods, hedges, etc.

CELASTRACEÆ.

✓ EUONYMUS EUROPÆUS, L. SPINDLE TREE.

Dovedale† and Wetton valley† (Garner, 355); Drakeford
(Brown, 245).

RHAMNACEÆ.

✓ RHAMNUS CATHARTICUS, L. BUCKTHORN.

Dovedale† (Garner, 355); Cheadle (Carter in Bagnall,
15); Walton (Brown, 245); Denstone† (Brett, 40, 78,
1906). Thore Cave (Manifold Valley)

R. FRANGULA, L. BERRY BEARING ALDER.

Craddocks Moss (Fraser in Bagnall, 15); Chartley Moss†,
Maer† (Garner, 355); Willowbridge† (Shaw, 112);
Golden Hill, Longton (Garner, 13, 87, 1879), not there
now. Bagnall† (Audley, 53, 97, 1919); Dydon Woods†
(55, 139, 1921); Barlaston; Oakamoor. Belley, near
Heakley (mill Dale W.) Muckstone (Cowleasow) Alderstone (N. Stone Heath, road)

ACERACEÆ.

- ✓ ACER PSEUDO-PLATANUS, L. SYCAMORE. Alien.
Planted abundantly in the district.
- ✓ A. CAMPESTRE, L. MAPLE. *Handsworth*
Frequent in woods and hedges.

LEGUMINOSÆ.

- ✓ GENISTA ANGLICA, L. PRETTY WHIN.
Not very frequent; it occurs on some of our moist heaths. Near Cheadle (Carter in Bagnall, 16); Grindon Moor†, Willowbridge, Fenton Park (Garner, 393). It does not occur at Fenton Park now. Needwood Forest† (Brown, 245); Chorlton Gate† (25, 11, 1891); Cheddleton† (27, 62, 1893); Stanton† (50, 134, 1916); Deep Haye, Wall Grange† (Taylor, 53, 97, 1919); Madeley† (Daltry, 51, 107, 1917).
- ✓ G. TINCTORIA, L. DYER'S GREENWEED.
Garner (393) says "Common and general." This is not quite the case. It occurs in many places on rough pasture land, but it is by no means common. Cheadle† (Carter in Bagnall, 16); Tutbury† (Brown, 248); near Stafford† (Douglas in Bagnall, 16); Ramshorn†, Hixon (Bagnall, 16); Hilderstone† (Barns, 46, 117, 1912); Stanton; Croxden; Madeley; near Willowbridge.
- ✓ ULEX EUROPÆUS, L. GORSE.
Common on heaths and sandy soils.
- ✓ U. GALLII, Planch. GORSE.
The records given by Garner (393) and by Barns (46, 117, 1912) as for U. NANUS, Forster, should apply to U. GALLII. The former species does not occur in North Staffordshire. Needwood†, Dovedale† (Garner, 393); near Stafford (Douglas in Bagnall, 16); Sandon† (Bagnall, 16); Biddulph† (Painter, 22, 115, 1888); Hilderstone† (Barns, 46, 117, 1912); Marchington.

- ✓ **CYTISUS SCORPARIUS**, Link. (GENISTA SCORP-
ARIA, Lam., SAROTHAMNUS SCORPARIUS, Kock).
BROOM.
Frequent in sandy places.
- ✓ **ONONIS REPENS**, L. REST HARROW.
Given by Garner (393) as *O. ARVENSIS*. var. *INERMIS*,
Huds. He says that it is common. It is by no means
common now. Denstone (Edwards, 11, 52, 1877);
Biddulph† (Painter, 31, 79, 1897); Happy Valley Alton
(Brett, 40, 78, 1906); *Cheadle (Masefield bot. 102. 1927) Lodge Lane n^r Thames.*
- ✓ **O. SPINOSA**, L. SPINY REST HARROW.
Given by Garner (393) as less common than the previous
species. I have only seen it once, and then on the road
side between Stone and Longton. *Thorp Constantine 1945*
- ✓ **MEDICAGO SATIVA**, L. LUCERNE. Alien.
Has been recorded several times as an escape from cul-
tivation. Cheadle†, Burton (Garner, 395); Oakamoor†
(Berrisford, 40, 74, 1906); Denstone (Edwards, 11, 52,
1877); Manyfold valley.
- ✓ **M. FALCATA**, L. YELLOW MEDICK. *North Street (Stoke) 1940*
Given by Garner (395) as occurring about Stafford and
Yarlet Hill. This is probably an error (Bagnall, 16). *Railway N of Canal (Smethwick)*
I have not seen the plant in either situation. Its dis-
tribution is limited in England, being found chiefly
in Norfolk and Suffolk, and it is unlikely to have been
found in North Staffordshire. *Burton (Druce 62. 126. 1928)*
- ✓ **M. LUPULINA**, L. BLACK MEDICK.
Frequent in waste places, roadsides and pasture land. *Newton R^d*
VAR. *SCABRA*, Gray.
Madeley (Daltry in lit); Endon; Manyfold valley.
- ✓ **M. DENTICULATA**, Willd. MEDICK. Alien.
There is only one record of this plant. Denstone
(Milford, 43, 100, 1909).
- ✓ **MELILOTUS ALBA**, Desr. WHITE MELILOT. Alien. *Railway (Smethwick N of canal. Wednesbury)*
It has only been recorded twice. Oakamoor (Berris-
ford, 40, 173, 1906) and near the canal at Stoke by

M. lupulina var. Willdenowiana Stanton. Roadside on Westlands Estate (Newcastle) near 1943

✓ M. arvensis Wallr (M. officinalis Lam.) Burton (Douce 62.126 1925)
North Street (Stoke) 1944

Melilotus indica Lock 1944

myself (41, 8, 1907). It occurred in the latter place for several years, but has now disappeared.

- ✓ M. OFFICINALIS, ^{Willd} Lam. (M. ALTISSIMA, Thuill).
MELILOT. Alien.

Sometimes found on waste places and roadsides. Tutbury, Yarlet Hill, Uttoxeter†, Stoke† (Garner, 394); near Cheddleton, Stockton Brook, Milton, Fenton (Bagnall, 16); between Chartley and Longdon (Shaw, ii, 7); Stafford Castle (Fraser in Bagnall, 16); near Wall Grange station† and near Hazellhurst aqueduct† (Audley, 34, 72, 1900); Denstone and Dimminsdale† (Brett, 35, 71, 1901); Hanford† (43, 101, 1909); canal near Leek gasworks; Froghall.

- ✓ TRIFOLIUM PRATENSE, L. RED CLOVER. ^{Wednesbury}
Common in meadows, pastures and roadsides.

- ✓ T. MEDIUM, L. ZIGZAG CLOVER.
Frequent in dry pasture. Brotley and Kingston Park (Brown, 246); Biddulph† (Painter, 22, 114, 1888); Stafford† (Moore, 31, 79, 1897); Denstone (Edwards, 11, 51, 1877); Whitmore; Hanchurch; Swynnerton.

- ✓ T. OCHROLEUCON, Huds. SULPHUR TREFOIL.
Manyfold valley† (Challinor, 50, 137, 1916); a small patch of this plant occurs on the embankment of the railway not far from the roadway at Waterhouses, probably introduced with ballast. It is practically confined to the eastern counties.

- ✓ T. INCARNATUM, L. CRIMSON CLOVER. Alien. ^{Lead Bridge}
Barlston (Garner, 395); Denstone (Edwards, 11, 51, 1877). I have not found it in North Staffordshire.

- ✓ T. ARVENSE, L. HARE'S FOOT TREFOIL.
Occasional in the north of the county. Betley (Garner, 395); Alton (Bagnall, 17); Stafford† (Moore, 40, 110, 1906).

- ✓ T. STRIATUM, L. SOFT KNOTTED TREFOIL.
Fields about Stafford (Shaw, 114); Denstone (Edwards, 11, 51, 1877). ^{Wetton Mill, Billock in front of Wetton Mill.}

- ✓ T. HYBRIDUM, L. *Wednesbury*
 VAR. ELEGANS, (Savi.) ALSIKE CLOVER. Alien.
 Occurs on cultivated ground. Biddulph (Painter, 22, 115, 1888); Alton (Bagnall, 17). I have found it in fields at Whitmore and Swynnerton. *Handsworth*
- ✓ T. REPENS, L. DUTCH OR WHITE CLOVER. *Wednesbury*
 Common on roadsides, waste ground and pasture land.
- ✓ T. RESUPINATUM, L. REVERSED TREFOIL. Alien.
 The only record (Berrisford, 40, 74, 1906) is probably an error.
- T. AGRARIUM, L. LARGE HOP TREFOIL. Alien.
 The record at Denstone (Edwards, 11, 52, 1877) is probably an error. It is not there now.
- ✓ T. PROCUMBENS, L. HOP TREFOIL.
 Frequent in meadows and pastures and sometimes by the roadside.
- ✓ T. DUBIUM, Sibth. LESSER HOP TREFOIL.
 Common in pastures and on roadsides.
- ✓ T. FILIFORME, L. LEAST YELLOW TREFOIL.
 Garner (395) gives it as common. This is an error. Brown (247) gives it as occurring at Barton. I have not found it in North Staffordshire.
- ✓ ANTHYLLIS VULNERARIA, L. LADY'S FINGERS.
 Dovedale†, Manyfold valley† (Fraser in Bagnall, 17); *Thors Cave*
 Glutton Dale† (25, 12, 1891); Swynnerton† (51, 108, 1917), it occurred here in one field evidently as a weed, for it died out the next year.
- ✓ LOTUS CORNICULATUS, L. BIRD'S FOOT TREFOIL.
 Common in pastures. *Willowworth Furnace*
- ✓ L. ULIGINOSUS, Schk. (L. MAJOR, Sm.) MARSH BIRD'S FOOT TREFOIL.
 Common in damp places.
- ✓ L. TENUIS, Waldst. and Kit. SLENDER BIRD'S FOOT TREFOIL.
 Dovedale, Willowbridge (Garner, 395). I have not found it in either place.

- ✓ *ext* L. AUGUSTISSIMUS, L. SLENDER BIRD'S FOOT TREFOIL.
The record at Oakamoor (Berrisford, 40, 73, 1906) is probably an error.
- ✓ ASTRAGALUS GLYCYPHYLLUS, L. WILD LIQUORICE OR SWEET MILK VETCH.
Coton Field, Stafford (Garner, 394); Wetton† (39, 140, 1905); Acton (Moore, 31, 79, 1897).
- ✓ ORNITHOPUS PERPUSILLUS, L. BIRD'S FOOT.
Fairly common on light soils. Cheadle; Trentham; Barlaston; Tittensor; Swithamley; Whitmore; Alton; Denstone; Stafford; Ladderidge Bank, near Wall Grange.
- ✓ HIPPOCREPIS COMOSA, L. HORSE SHOE VETCH. *Sugar Loaf*
On a rock in Wetton Valley (Garner, 394); Dovedale (Garner, 394, quoting from the *New Bot. Guide*). I have not seen it at either place. *Rocks behind Wetton mill.*
- ✓ ONOBRYCHIS VICIÆFOLIA, Scop. SAINFOIN. Alien.
The only records for it are on the embankments of railways. Cheadle† (Masefield, 38, 45, 1904); Oakamoor† (Berrisford, 40, 73, 1906); Manyfold valley† (Hassel's, 48 47, 95, 1913). *Keat Bridge*
- ✓ VICIA HIRSUTA, Gray. (ERVUM HIRSUTUM, L.) HAIRY TARE.
Fairly common in hedges. Denstone; Burton; Stafford; Manyfold valley; Ashley.
- ✓ V. TETRASPERMA, Mœnch. (V. GEMELLA, Crantz., ERVUM TETRASPERMUM, L.) SMOOTH TARE.
Rolleston (Brown, 247); Stafford† (Garner, 394); Burton† (Moore, 31, 80, 1897); Denstone (Edwards, 11, 58, 1877).
- ✓ V. CRACCA, L. TUFTED VETCH.
Common in hedges.
- ✓ VAR. INCANA, Thuil. Madeley (Daltry in lit.)
- ✓ V. SYLVATICA, L. WOOD VETCH.
Near Stone† and Oulton, frequently with white flowers, Tittensor, Moddershall†, Dovedale† (Garner, 394);
Reicester (Barnow Hill way)

Denstone (Edwards, **11**, 52, 1877); Wootton Wood (Goodall, **16**, 79, 1882); Wetton valley† (Fraser in Bagnall, 17); Manyfold valley.

- ✓ V. SEPIUM, L. HEDGE VETCH. *Widnesbury.*
Common in hedges.
- ✓ V. LUTEA, L. YELLOW VETCH. *Burton (Druce 62.126 1928)*
Needwood Forest (Curtis, *B.E.C.*, **6**, 120, 1920.)
- ✓ V. SATIVA, L. VETCH. Alien.
Occurs frequently as an escape from cultivation on waysides.
- ✓ V. ANGUSTIFOLIA, L. VETCH.
Frequent in dry fields and waysides.
- ✓ VAR. BOBARTII, Kock.
Near Stafford (Bagnall, 17).
- ✓ V. LATHYROIDES, L. SPRING VETCH.
Near Stafford (Douglas in Bagnall, 17); Oakamoor (Berrisford, **40**, 73, 1906); Denstone (Edwards, **11**, 52, 1877); Yarlet (Tylecote, **19**, 27, 1885).
- ✓ LATHYRUS APHACA, L. YELLOW VETCHLING. Alien.
Dilhorne† (Blake, **54**, 108, 1920). *Madeley Dally 60.155 1926*
- ✓ L. NISSOLIA, L. CRIMSON VETCHLING.
Coton Field, Stafford; Barton; Belmont (given but not confirmed by Garner, 394); Denstone (Edwards, **11**, 52, 1877); I have not found this plant in North Staffordshire.
- ✓ L. PRATENSIS, L. MEADOW VETCHLING.
Common in meadows and hedges and sometimes on canal banks.
- ✓ L. HIRSUTUS, L. HAIRY VETCHLING.
Needwood Forest (Curtis, *B.E.C.*, **6**, 120, 1920.)
- ✓ L. SYLVESTRIS, L. WILD PEA.
Red Hill, Stone Park (Foster in Shaw, 107); Garner (394) says it was there in 1840. I have not seen it there.
- ✓ L. PALUSTRIS, L. MARSH PEA.
The record Denstone (Edwards, **11**, 52, 1877) is probably an error.

- ✓ *L. MONTANUS*, Bernh. (*L. MACRORRHIZUS*, Wimm.,
OROBUS TUBEROSUS, L.) TUBEROUS BITTER VETCH.
Common in woods and thickets. Often found in hedges
and sometimes in pasture land if the soil be slightly acid.
- ✓ *VAR. TENUIFOLIUS*, Reich.
Weaver Hills (Bagnall, 18); Needwood Forest† (Nowers,
35, 74, 1901).

ROSACEÆ.

- ✓ *PRUNUS SPINOSA*, L. (*P. COMMUNIS*, Huds.) BLACK-
THORN.
Common in hedges and copses.
- ✓ *P. INSITITIA*, L. BULLACE. Alien.
Trent Meadows (Garner, 374); Madeley.
- ✓ *P. AVIUM*, L. WILD CHERRY.
Found occasionally. Madeley; Rushton; Willowbridge;
Trentham.
- ✓ *P. CÉRASUS*, L. CHERRY.
Frequently wild in woods (Garner, 374); Denstone†
(Edwards, 11, 53, 1877); Yarlet† (Tylecote, 19, 27, 1885);
near Rushton; Hanchurch.
- ✓ *P. PADUS*, L. BIRD CHERRY.
Fairly common in hedges and copses. Biddulph;
Stoke meadows; Yarlet; Dovedale; Leek, Ramshorn;
Bucknall; Cheddleton; Caverswall; near Endon;
Madeley.
- ✓ *SPIRÆA SALICIFOLIA*, L. WILLOW LEAVED SPIRÆA.
Alien.
Occurs in plantations. Needwood Forest (Miss Jackson
in Garner, 376); Trentham.
- ✓ *S. ULMARIA*, L. MEADOW SWEET.
Common in damp, open places, and by the side of water.
- ✓ *S. FILIPENDULA*, L. DROPWORT. *Dovedale (1863)*
Gradbatch, Weaver Hills† (Garner, 376); Denstone
(Edwards, 11, 52, 1877). 797
- Filipendula vulgaris (Moench)*
- Slam (Bunster)*

- ✓ *RUBUS IDÆUS*, L. RASPBERRY.
Frequent in damp bushy places. With white fruit at Clayton (Garner, 377).
- ✓ *R. FISSUS*, Lindl. BLACKBERRY. [*suberectus*]
Roadside, Rushton Spencer (Painter, 31, 80, 1897); Rudyard Lake†, Lask Edge†, Cliff Wood (Painter 26, 100, 1892; Dimminsdale near Alton†, Chartley† (Bagnall, 18).
- ✓ *R. SUBERECTUS*, Anders. BLACKBERRY.
Whitmore, Chartley Moss (Bagnall, 18); Thorny Edge, Bagnall (4, 5, 1870); Boothen (Garner, 13, 89, 1879).
- R. PLICATUS*, Wh. and N. BLACKBERRY.
One of the commonest brambles. Rudyard† and Biddulph† (Painter, 31, 80, 1897).
- R. CARPINIFOLIUS*, Wh. and N. BLACKBERRY.
Biddulph and Rudyard† (Painter, 31, 81, 1897); Longnor (Purchas in Bagnall, 18); Madeley (Daltry in lit.)
- R. LINDLEIANUS*, Lees. BLACKBERRY.
Frequent. Biddulph†, Knypersley and Horton† (Painter, 31, 81, 1897); near Flash†, Sandon, Weston (Bagnall, 19); near Ilam† (Purchas in Bagnall, 19); Madeley (Daltry in lit.)
- R. RHAMNIFOLIUS*, Wh. and N. BLACKBERRY.
Fairly common. Rudyard; Alton; Marchington; Bagot's Wood.
SUB-SPECIES *BAKERI* (F. A. Lees).
Madeley (Daltry in lit.)
- R. NEMORALIS*, P. J. MUELL. BLACKBERRY.
Chartley† (Bagnall, 19).
VAR. *GLABRATUS*, Bat.
Stowe near Chartley (Bagnall, 19).
- R. PULCHERRIMUS*, Neum. BLACKBERRY.
Hay Hill Farm Biddulph, Lask Edge† (Painter, 31, 81, 1897); Forest Banks Sudbury, Stowe, Weston-on-Trent (Bagnall, 19).

- R. LINDEBERGII, P. J. Muell. BLACKBERRY.
Between Gillow Heath and Congleton Edge, near Hay Hill farm (Painter, 25, 101, 1892); Biddulph (Painter 31, 81, 1897); near Alstonefield (Purchas in Bagnall, 19).
- R. VILICAULIS, Kœhl. BLACKBERRY.
Biddulph, Rudyard (Painter, 31, 81, 1897); Sudbury (Bagnall, 19).
VAR. CALVATUS, Blox.
Biddulph and Rudyard (Painter 31, 81, 1897).
- R. SELMERI, Lindeb. BLACKBERRY.
Biddulph† (Painter in Bagnall, 19); Alton, Hardwick†, near Stone (Bagnall, 19); Stowe (Evans in Bagnall, 19); Madeley (Daltry in lit.)
- R. GRATUS, Focke. BLACKBERRY.
Heathy Wood Rudyard (Purchas in Bagnall, 19).
- R. GODRONI, Lecoq and Lamotte. (R. ARGENTATUS, P. J. Muell). BLACKBERRY.
VAR. ROBUSTUS, (P. J. Muell).
Stowe near Chartley (Bagnall, 19).
- R. RUSTICANUS, Merc. BLACKBERRY.
Common and general† (Bagnall, 19).
- R. PUBESCENS, Weihe. BLACKBERRY.
Alton Common (Bagnall, 19).
- R. LENTIGINOSUS, Lees. BLACKBERRY.
Rudyard reservoir† (Painter in Bagnall, 20).
- R. MACROPHYLLUS, Wh. and N. BLACKBERRY.
Near Stone, near Salt (Bagnall, 20).
VAR. SCHLECHTENDALII, Weihe.
Hardwick, near Stone (Bagnall, 20); Madeley (Daltry in lit.)
VAR. AMPLIFICATUS, Lees.
Sudbury near Forest Banks, Dimminsdales, Alton, Chartley (Bagnall, 20).
- R. SPRENGELII, Weihe. BLACKBERRY.
Rushton and Rudyard† (Bailey in Bagnall, 20); near Warslow (Purchas in Bagnall, 20); Horton† (Carr in

- Bagnall, 20); Forest Wood near Gradbatch, Ramshorn, Dimminsdale, Weaver Hills† (Bagnall, 20); Biddulph† (Painter, 31, 81, 1897); Madeley (Daltry in lit.)
- R. HIRTIFOLIUS, Muell and Wirtg. BLACKBERRY.
Bemerton, Norton-in-the-Moors, Lask Edge†, Horton† (Painter 31, 81, 1897).
VAR. DANICUS, (Focke).
Madeley (Daltry in lit.)
VAR. MOLLISIMUS, (Rogers).
Madeley (Daltry in lit.)
- R. PYRAMIDALIS, Kalt. BLACKBERRY.
Biddulph, Bridestones, Rudyard (Painter, 31, 81, 1897).
- R. LEUCOSTACHYS, Schleich. BLACKBERRY.
Biddulph, Knypersley†, Rushton (Painter, 31, 81, 1897); Clamps Wood (Purchas in Bagnall, 20); Ludchurch†, Alton Towers, Dimminsdale, Weaver Hills†, Sudbury, Hanbury (Bagnall, 20); Madeley (Daltry in lit.)
VAR. CONSPICUUS, P. J. Muell.
Biddulph (Painter, 22, 115, 1888); probably non-British (*v. Journ. Bot.* 33 80, 1895).
- R. CRINIGER, Linton. BLACKBERRY.
Rudyard† (Painter in Bagnall, 20); Outwoods, Burton (Gibbs in Bagnall, 20); Chartley, Alton Common (Bagnall, 20).
- R. MUCRONATUS, Blox. BLACKBERRY.
Between the Longnor road and Brund Mill, near Overhurst Farm (Purchas in Bagnall, 20); Cheadle road from Alton†, Dimminsdale†, Chartley (Bagnall, 20).
- R. ANGLOSAXONICUS, Gelert. BLACKBERRY.
By the Churnet at Alton, near Marchington, Oakamoor (Bagnall, 20).
SUB-SPECIES CURVIDENS, A. Ley.
Hardwick Heath near Stone (Bagnall, 20).
SUB-SPECIES RADULOIDES, Rogers.
Lask Edge, Bridestones†, near Woodside colliery (Painter, 31, 81, 1897).

- R. MELANOXYLON, Muell and Wirtg. BLACKBERRY.
Norton, Lask Edge, plants dwarf due to exposed position
(Painter, **31**, 82, 1897); Madeley (Daltry in lit.)
- R. INFESTUS, Weihe. BLACKBERRY.
Near Rushton, Rudyard (Bailey in Bagnall, 21); Chartley
Moss (Bagnall, 21); Madeley (Daltry in lit.)
- R. DREJERI, G. Jensen. BLACKBERRY.
SUB-SPECIES LEYANUS, Rogers.
Alton Towers (Purchas in Bagnall, 21); Madeley
(Daltry in lit.)
- R. RADULA, Weihe. BLACKBERRY.
Not common, Biddulph, Bridestones, Lask Edge
(Painter **26**, 101, 1892); Rushton, Rudyard (Bailey in
Bagnall, 21); Dovedale (Rogers in Bagnall, 21); Alton
Towers, Sandon, Marchington (Bagnall, 21).
- R. ECHINATUS, Lindl. BLACKBERRY.
Road from Sudbury to Forest Banks, Sandon, Coton
(Bagnall, 21).
- R. OIGOCLADOS, Muell and Lefv. BLACKBERRY.
VAR. NEWBOULDII, Rogers.
Dimminsdale (Bagnall, 21).
VAR. BLOXAMIANUS, (Colem.)
Madeley (Daltry in lit.)
- R. PODOPHYLLUS, P. J. Muell. BLACKBERRY.
Lask Edge, Horton† (Painter in Bagnall, 21); Rudyard
Lake (Carr in Bagnall, 21); Alton†, Colton, Abbots
Bromley (Bagnall 21); Madeley (Daltry in lit.)
- R. BLOXAMII, Lees. BLACKBERRY.
Dimminsdale†, Alton, road from Alton to Cheadle,
Sandon (Bagnall, 21); Madeley (Daltry in lit.)
- R. FUSCUS, Wh. and N. BLACKBERRY.
Near Knypersley (Painter in Bagnall, 21).
- R. PALLIDUS, Wh. and N. BLACKBERRY.
Hanchurch Hills, near reservoir (Daltry in lit.)
VAR. LEPTOPETALUS, Rogers.
Madeley (Daltry in lit.)

- R. SCABER, Wh. and N. BLACKBERRY.
Rudyard (Painter in Bagnall, 21); Needwood Forest (Bagnall, 21).
- R. ROSACEUS, Wh. and N. BLACKBERRY.
Dimminsdale, near Alton (Bagnall, 22); Madeley (Daltry in lit.)
VAR. HYSTRIX, Wh. and N.
Roadside between Lask Edge and Rushton Spencer; not considered typical by Dr. Foche (Painter, 31, 82, 1897); Forest Banks Marchington, Stowe, Sandon (Bagnall, 22); Hanchurch (Daltry in lit.)
VAR. INFECUNDUS, Rogers.
Churnet Valley near Alton, Hardwick near Stone, Sandon (Bagnall, 22).
- R. FUSCO-ATER, Weihe. BLACKBERRY.
Near Colton (Bagnall, 22).
- R. KEHLERI, Wh. and N. BLACKBERRY.
Stoke (Garner, 11, 89, 1877). Curious form near Rudyard Hotel (Painter, 31, 82, 1897).
SUB-SPECIES DASYPHYLLUS, Rogers. (R. PALLIDUS, Bab).
Very common. Biddulph and Rudyard† (Painter, 31, 82, 1897); near Beresford, Longnor† (Purchas in Bagnall, 22); Ramshorn, Alton Towers†, Dimminsdale†, Sandon†, Weston (Bagnall, 22). Probably the one mentioned by Garner (377) as the commonest bramble in North Staffordshire. Hanchurch; Whitmore; Ashley; Madeley.
VAR. DISTRACTUS, Muell and Wirtg.
Rudyard (Painter in Bagnall, 22).
- R. BELLARDII, Wh. and N. BLACKBERRY.
Drive from Biddulph Grange to Knypersley Hall (Painter, 31, 82, 1897); Dimminsdale near Alton (Bagnall, 22).
- R. SERPENS, Weihe. BLACKBERRY.
Dimminsdale near Alton. Specimen authenticated by Moyle Rogers (Bagnall, 22).

- R. HIRTUS, Waldst and Kit. BLACKBERRY.
 VAR. ROTUNDIFOLIUS, Bab.
 Sandon, Hardwick near Stone (Bagnall, 22).
- R. DUMETORUM, Wh. and N. BLACKBERRY.
 Madeley (Daltry in lit.)
 VAR. DIVERSIFOLIUS, Lindl.
 Froghall†, Alton†, Sudbury (Bagnall, 23); Biddulph
 (Painter, 22, 118, 1888).
 VAR. TUBERCULATUS, Bab.
 Rudyard (Bailey in Bagnall, 23); Rushton (Bagnall, 23).
 VAR. CONCINNUS, Warren.
 Near Alstonefield (Purchas in Bagnall, 23); Ellaston,
 Weaver Hills, Ramshorn, Alton, Colton (Bagnall, 23).
 VAR. FASCICULATUS, P. J. Muell.
 Mill Hayes Lane (Painter, 31, 82, 1897); Ramshorn,
 Sudbury, Weaver Hills (Bagnall, 23).
- R. CORYLIFOLIUS, Sm. BLACKBERRY.
 Stone, Stafford, Mucklestone (Garner, 377); Boothon
 (Garner, 13, 89, 1879); Rushton (Painter, 31, 82, 1897);
 Biddulph† (Painter, 22, 114, 1888).
 VAR. SUBLUSTRIS, (Lees).
 One place in Biddulph (Painter, 26, 101, 1892); Longnor,
 Wetton Mill, Alstonefield (Purchas in Bagnall, 23);
 Alton, Weaver Hills (Bagnall, 23).
 VAR. CYCLOPHYLLUS, (Lindeb).
 Madeley (Daltry in lit.)
- R. BALFOURIANUS, Blox. BLACKBERRY.
 Hanbury, near Marchington, Chartley, (Bagnall, 23).
- ✓ R. CÆSIUS, L. DEWBERRY.
 Alton (Garner, 377); between Biddulph and Congleton
 Edge (Painter, 31, 82, 1897).
 VAR. TENUIS, Bell Salt.
 Alstonefield (Purchas in Bagnall, 23).
- ✓ R. SAXATILIS, L. STONE BRAMBLE.
 Valleys of the Hamps and Manyfold† (Garner, 377);
 Ape's Tor, Alstonefield (Purchas in Bagnall, 23); Dove-
 dale† (22, 68, 1888).

- ✓ GEUM URBANUM, L. HERB BENNETT.
Frequent in hedges and woods.
- ✓ G. RIVALE, L. WATER AVENS.
Local in its distribution; damp woods and by the side of water. *Leigh (roadside at Upper Leigh)*
Caverswall†, Onecote†, Morridge, Ilam† (Garner, 378); Waterhouses†, Ipstones†, Dovedale†, (Bagnall, 23); Hilderstone (Barns, 46, 117, 1912); Biddulph† (Painter, 26, 101, 1892); Knypersley† (Painter, 31, 82, 1897); Manyfold† (34, 73, 1900); Stanton† (37, 142, 1905); Weaver Hills† (Masfield, 38, 61, 1904); Cresswell† (Carter in Bagnall, 23); Stafford† (Fraser in Bagnall, 23). Variety with double flowers at Caverswall (Garner, 378).
- ✓ x URBANUM. (INTERMEDIUM, Ehrh.)
Between Ellaston and Stanton†; Madeley† (50, 134, 1916). *Behr: Warlow & Bottom House, Bullerton 1912*
- ✓ FRAGARIA VESCA, L. STRAWBERRY.
Frequent in woods and shady places.
- ✓ POTENTILLA STERILIS, Garcke. (P. FRAGARIAS-TRUM, Ehrh.) BARREN STRAWBERRY.
Common in woods and hedge banks.
- ✓ P. VERNA, L. SPRING CINQUEFOIL. *Full crest over Weston mill 1912*
Black Hill (Tylecote, 19, 28, 1885). A doubtful record. *Manifold & Manby Valley Waterhouses 1912*
- ✓ P. ERECTA, Hampe. (TORMENTILLA OFFICINALIS, Curt., P. TORMENTILLA, Scop., P. SYLVESTRIS, Neck.) TORMENTIL. *Above Weston mill*
Common on heaths and dry pasture. Sometimes found in hedge banks and by the roadside.
- ✓ P. PROCUMBENS, Sibth. CREEPING TORMENTIL.
Rather local in its distribution, but occurs in many *Audley 1912*
places in woods and hedge banks. Biddulph; Barlaston; Hilderstone; Weston Coyney; Cresswell; Ashley; Manyfold valley.
- ✓ P. REPTANS, L. CINQUEFOIL.
Frequent in hedge banks and by the roadside.

Alchemilla vestita Above Wetton Mill, Ossam's Hill, [Buse] Kraunk
A. pratensis Upper Eltstone Hollinsclough Manyfold Valley (1912) [Xanthochloa (Rothm.)
A. pseudonot N Clayton (Newcastle U.I.) [vestita]
A. alpestris Cotton, Blore, Swinscoe, Alton field, Manyfold V. Watton 1912 [glabra
 40 ROSACEÆ [Nygss]

✓ P. ANSERINA, L. SILVERWEED.

Common in sandy places and by the roadside.

✓ P. PALUSTRIS, Scop. MARSH CINQUEFOIL, Cannock (Redroot)

Handclough (Windgate)
 Madrop (main road)
 Consall† (Masfield, 37, 95, 1903); north end of Rudyard
 Lake† and between Newchapel and Brindley Ford
 (Painter 26, 102, 1892); near Cheadle† (Carter in Bagnall,
 24); marshy ground Downs Banks, Barlaston; Madeley.

✓ ALCHEMILLA ARVENSIS, Scop. PARSLEY-PIERT.

Fairly common in dry fields and sandy places. Stafford,
 Dovedale, Manyfold Valley, Madeley, Whitmore, Ashley,
 Barlaston, Swynnerton, fields near Bishop's Woods,
 Hilderstone, Cresswell, Cheddleton, Consall, etc.

✓ A. VULGARIS, L. LADY'S MANTLE.

Fairly common in moist pasture land and near water.

✓ AGRIMONIA EUPATORIA, L. AGRIMONY.

Fairly well distributed but not abundant; generally
 found in hedges by the roadside, or near the hedges in
 fields. Hollington, Swynnerton, Manyfold Valley,
 Dovedale, Stanton, Whitmore, Chartley, Barlaston,
 Trentham, Burton, Stafford, Hilderstone, Denstone, etc.

✓ POTERIUM SANGUISORBA, L. SALAD BURNET.

Common on limestone and confined to it (Garner, 408).
 Carter (Bagnall, 24) gives near Cheadle. I have not
 found it there. Manyfold Valley, Dovedale, Weaver
 Hills.

✓ P. OFFICINALE, A. Gray. (SANGUISORBA OFFICI-
 NALIS, L.) ROSE BURNET.

Garner (349) says "Common in all parts of Staffordshire".
 Such is not the case now. It occurs in many places in
 damp meadows, but is not by any means common.
 Knypersley; Horton; Denstone; Stafford; Clayton, near
 Stoke; Madeley. Oxhill Road

Ext ✓ ROSA SPINOSISSIMA, L. (R. PIMPINELLIFOLIA, L.)
 BURNET ROSE.

Garner (376) says that it has been found in the north of
 the county on sandy hills, but gives no definite places.
 I have not see it growing anywhere in the county.

Agrimonia odorata Blore, Watton + Wetton Mill
 (fowan) mill

- R. INVOLUTA, Sm. VAR. SABINI, (Woods). WILD ROSE.
Moorlands near Alstonefield (Purchas in Bagnall, 24).
- ✓ R. MOLLIIS, Sm. (R. VILLOSA, L.) VILLOUS ROSE.
Between Stone and Stafford (Garner, 376), Sandon†
(Bagnall, 24), Manyfold† (8, 156, 1874), Beech (1, 5,
1866).
- ✓ R. TOMENTOSA, Sm. DOWNY-LEAVED ROSE.
Thorny Edge Bagnall, (4, 5, 1870); Stafford (Garner, 16,
60, 1882), Manyfold Valley† (28, 156, 1894); Ecton
Hill† (Fraser in Bagnall, 24); Alton†, Ramshorn,
Oakamoor†, Cotton, Weaver Hills (Bagnall, 24).
VAR. SUBGLOBOSA, Sm.
Plentiful in the Biddulph district† (Painter, 22, 116,
1888); Star Wood, Oakamoor† (Bagnall, 24).
VAR. SCABRIUSCULA, Sm.
Forest banks, Marchington (Bagnall, 24).
- ✓ ~~R. EGLANTARIA~~, Huds. (R. RUBIGINOSA, L.) SWEET
BRIAR.
Darlaston, Willowbridge†, Whitmore, Hill Chorlton†,
Maer†, Belmont (Garner, 376); Cheadle (Masfield, 46,
95, 1912); Denstone (Edwards, 11, 52, 1877).
- ✓ R. MICRANTHA, Sm. SWEET BRIAR.
Cotton near Oakamoor (Bagnall, 25).
- ~~R. BORRERI~~, Woods. DOG ROSE. *R. obtusifolia* Desv.
VAR. ARVATICA, (Baker).
Farley near Alton†, Cotton†, Draycot-in-the-Clay,
Marchington (Bagnall, 25).
- ✓ R. CANINA, L. DOG ROSE.
VAR. LUTETIANA, (Léman). *Wandswoth Cnctory*
Common in hedges and thickets.
VAR. SENTICOSA, (Ach).
Lane near Rushton Spencer (Bagnall, 25).
VAR. SPHÆRICA, (Grenj).
North of Rudyard Lake† (Painter, 31, 83, 1897); Bid-
dulph, Rushton (Painter, 26, 102, 1892); Oakamoor
(Bagnall, 25).

- Rosa*
 ✓ VAR. DUMALIS, (Bechst). (R. SARMENTACEA, Woods.) = *glauca* (Vill.) = *coriifolia* (Fr.)
 Common in hedges.
 VAR. VERTICILLACANTHA, (Mérat).
 Drive from Biddulph Grange to Knypersley Hall† (Painter, 31, 83, 1897); Alton Towers†, Chartley, Sandon (Bagnall, 25).
 VAR. BISERRATA, (Mérat).
 Biddulph (Painter, 22, 117, 1888).
 VAR. VINACEA, (Baker).
 Oakamoor (Bagnall, 25).
- ✓ R. DUMETORUM, Thuill.
 Drive from Biddulph Grange to Knypersley Hall (Painter, 31, 83, 1897).
 VAR. URBICA, (Léman). (VAR. FOSTERI, Sm.)
 Biddulph, Horton and Rushton (Painter, 31, 83, 1897); Cotton, Oakamoor, Chartley (Bagnall, 25).
 VAR. PLATYPHYLLA, (Rau).
 Biddulph (Painter, 22, 117, 1888).
 VAR. FRONDOSA, (Baker).
 Knypersley Pool† (Painter, 31, 83, 1897); Biddulph (Painter, 22, 117, 1888); lane near Rushton Spencer (Bagnall, 25).
- ✓ R. GLAUCA, Vill. DOG ROSE.
 Rather common about Biddulph† (Painter in Bagnall, 25); moorland near Alstonefield†, Oakamoor, Chartley†, Sandon (Bagnall, 25).
 VAR. SUBCRISTATA, (Baker).
 Cotton near Oakamoor†, Chartley (Bagnall, 25).
- R. CORIIFOLIA, Fr. DOG ROSE. *R. dumalis* Bechst.
 Moderately common round Biddulph (Painter, 22, 117, 1888); Coton Hill (Bagnall, 25).
 VAR. WATSONI, (Baker).
 Coton Hill (Bagnall, 25).
- ✓ R. ARVENŠIS, Huds. FIELD ROSE.
 Common in hedges.
- R. CINNAMOMEA, L. ROSE. Alien.
 Occurs as a garden escape in hedges at Maer, Willow-bridge, Whitmore and Madeley (Garner, 377).

- ✓ *Sorbus*
 PYRUS TORMINALIS, Ehrh. WILD SERVICE TREE. (L)
 Not common. Some large and ancient trees in Trentham Park towards Nowall†, near Longton (Garner, 375); Rolleston (Mosley in Bagnall, 25); Uttoxeter (given but not confirmed by Garner, 375).
- ✓ *S. Aria*
 P. ARIA, Ehrh. WHITE BEAM. (L)
 Beeston Tor†, Bertesford Dale†, Mill Dale, Dovedale† (Garner, 376); Congleton Road Biddulph, near Cliff Hall† (Painter 31, 83, 1897); Denstone (Edwards, 11, 52, 1877); Hanchurch.
- ✓ *S. Rupicola*
 VAR. RUPICOLA, Syme. (Hedl.)
 Dovedale† (Fraser in Bagnall, 26).
- ✓ *S. Aucuparia*
 P. AUCUPARIA, Ehrh. (L) MOUNTAIN ASH.
 Fairly common in woods and hedges.
- ✓ P. COMMUNIS, L. WILD PEAR. Alien.
 Occasionally in hedges near houses. An escape from cultivation.
- ✓ *Malus sylvestris*
 P. MALUS, L. CRAB APPLE. *Sylvestris* (Mill) ssp. *Sylvestris*
 ✓ VAR. ACERBA, DC. (VAR. SYLVESTRIS, L.)
 Fairly common in hedges and woods.
- ✓ *M. mitis*
 ✓ VAR. MITIS, (Wallr.) Mansf.
 Not so common as the previous variety. Biddulph†, Knypersley, near Cliff Hall, Horton†, Rudyard† (Painter, 31, 83, 1897); Madeley (Daltry in lit.); Hanchurch; Consall; Whitmore; Endon; Wall Grange.
- ✓ *M. germanica*
 P. GERMANICA, Hook. MEDLAR. Alien. *Mespilus germanica* (L)
 Garner (13, 89, 1879) gives it as growing on the old race course at Stoke.
- ✓ CRATEGUS OXYACANTHA, L. (C. OXYACANTHODES, Thuill.) HAWTHORN.
 Perhaps this has been overlooked as there are few records of it. Barton-under-Needwood (Bagnall, 26); near Weston.
- ✓ C. MONOGYNA, Jacq. HAWTHORN.
 Common in hedges and woods.
- ✓ VAR. LACINIATA, Wallr.
 Between Horton and Rudyard† (Painter 31, 83, 1897)

Cotoneaster microphylla Bosc. [Wall ex (incl)]

SAXIFRAGACEÆ.

- ✓ *SAXIFRAGA UMBROSA*, L. LONDON PRIDE. Alien.
The only place I have seen this growing is near Marsh Hill, not far from Stockton Brook. It was very likely an escape from cultivation (47, 96, 1913). Garner (370) gives Belmont Woods and a rocky dell below Upper Cotton (Star Wood, Oakamoor). Bagnall (26) failed to find it in either of these places and my experience is similar. Denstone (Edwards, 11, 52, 1877). I have not found it there.
- ✓ S. *TRIDACTYLITES*, L. RUE LEAVED SAXIFRAGE.
General on limestone† and old ruins† (Garner, 370). Dovedale; Manyfold; Tutbury Castle; Abbey walls Burton; Croxden Abbey; Waterhouses; Barlaston.
- ✓ S. *GRANULATA*, L. MEADOW SAXIFRAGE.
Frequent on limestone, on banks, meadows and edges of woods. Rochest† (Garner, 370); Denstone† (Edwards, 11, 52, 1877); Garner (370) gives Mow Cop. I have not found it there. Near Stafford† (Bagnall, 26); Manyfold; Dovedale.
- ✓ S. *SPONHEMICA*, Gmel. MOSSY SAXIFRAGE.
Common on limestone.
- ✓ S. *HYPNOIDES*, L. MOSSY SAXIFRAGE.
Frequent on limestone. Near Cheadle (Carter in Bagnall, 26); Warslow (Parsons in Bagnall, 26); Manyfold and Dovedale.
- ✓ *CHRYSOSPLENIUM OPPOSITIFOLIUM*, L. OPPOSITE LEAVED GOLDEN SAXIFRAGE.
Common in marshy and shady places.
- ✓ C. *ALTERNIFOLIUM*, L. ALTERNATE LEAVED GOLDEN SAXIFRAGE.
Not so common as the preceding species.
Ramshorn†, Wootton Park†, Snowdon Pool, Madeley (Garner, 370); Crowborough Woods† (Painter, 31, 83, 1897); Biddulph Hall grounds† (1, 4, 1866); Dovedale† (Audley, 32, 102, 1898); Stanton† (Audley, 35, 68, *Dogden Wd (Stanton)*)

1901); Denstone (Edwards, **11**, 52, 1877); Wotton Brook† and Northwood (Brett, **35**, 71, 1901); Belmont Woods (Pitt in With., 393); Dimminsdale† (Carter in Bagnall, 27); Musden Woods.

✓ PARNASSIA PALUSTRIS, L. GRASS OF PARNASSUS. *Sp. Stones Edge 1920*
Weaver Hills†, below Alton Castle†, Calton Moor†, Maer, Willowbridge (Garner, 362); Ecton† (Fraser in Bagnall, 27); Coton and Whiston† (Carter in Bagnall, 27).

✓ RIBES ~~CROSSULARIA~~ ^{*uva-crispa*}, L. GOOSEBERRY. Alien.
Usually found in hedges or near ruins but occasionally in woods and thickets.
Rudyard; Hilderstone; Denstone; Alton Towers; Croxden Abbey; Stone; Sandon; Chorlton; Consall; Dovedale; Manyfold valley; Madeley.

✓ R. ALPINUM, L. ALPINE CURRANT.
In the Manyfold valley and in Musden Woods it appears to grow as a native.
Knypersley Hall†, planted (Painter, **22**, 112, 1888); Denstone (Edwards, **11**, 52, 1877); hedge at Ilam† (T. Sneyd in Shaw, 112); Needwood Forest (Carter in Bagnall, 27).

✓ R. RUBRUM, L. RED CURRANT. Alien.
Sp. Stones (ham) next Leek
The only published record is Denstone (Edwards, **11**, 52, 1877). I have not seen it there. Madeley (Daltry in lit.).

✓ R. NIGRUM, L. BLACK CURRANT. Alien.
Needwood Forest† (Nowers, **35**, 74, 1901); Denstone (Edwards, **11**, 52, 1877); swamps along the Trent† (Garner, 357); Consall.

CRASSULACEÆ.

✓ COTYLEDON UMBILICUS, L. Alien.
Rocks under Heighley Castle (Shaw, 102); Dovedale, Ilam (Garner, 372); I have not seen it in these places. On a bank between Endon and Leek† (Garner, 372); Basford, near Leek (Challinor, **51**, 109, 1917).

- ✓ **SEDUM TELEPHIUM**, L. ORPINE. *Thorn Cave*
Common on limestone. Wetton valley†, Dovedale†, Croxden Abbey (Garner, 372); Manyfold valley† (4, 4, 1870); near Cheadle (Carter in Bagnall, 27).
- ✓ **S. ANGLICUM**, Huds. STONECROP.
The only record (10, 7, 1876) is doubtless an error. This is usually found near the sea.
- ✓ **S. ACRE**, L. BITING STONECROP.
Fairly abundant on limestone. Betley†, Stone† (Garner, 372); near Cheadle (Carter in Bagnall, 27); Acton† and Stafford† (Moore 31, 84, 1897); Dovedale and Manyfold valley. *Handsworth Cemetery*
- ✓ **S. REFLEXUM**, L. LARGE YELLOW STONECROP. Alien.
Biddulph Hall†, planted (Painter, 31, 84, 1897); Tutbury Castle (Hewgill in Bagnall, 27); Biddulph Hall, Croxden Abbey, Burton Abbey walls (Garner, 372).
- ✓ **SEMPERVIVUM TECTORUM**, L. HOUSELEEK. Alien.
Is occasionally to be seen on the roofs of outhouses. I once saw it growing on a rock at Consall where it had evidently been planted.

DROSERACEÆ.

- ✓ **DROSERA ROTUNDIFOLIA**, L. COMMON SUNDEW.
Garner (362) says "Common and general in bogs". Although it occurs in many places I should hardly term it common now. Wetley Moor (Garner, 13, 89, 1879); not there now. Chartley Moss† (Tylecot, 20, 38, 1886); Craddock's Moss (Fraser in Bagnall, 27); not there now. Bishop's Woods† (25, 32, 1891); marsh near Down's Banks, Barlaston; Dimminsdale; Stanton.
- ✓ **D. LONGIFOLIA**, L. (D. INTERMEDIA, Hayne). LESSER LONG-LEAVED SUNDEW.
See Balterley, Chartley Moss† (Garner, 362); near Cheadle (Carter in Bagnall, 27); bog at Willowbridge (Shaw, 103). With the exception of Chartley Moss I have failed to find the plant in North Staffordshire. *Craddock Chase in Buxton*

HALORAGACEÆ.

- ✓ *Callitriche vernalis* Common, Garner 405
- ✓ HIPPURIS VULGARIS, L. MARE'S TAIL. *near Wednesbury*
About a mile from Stafford in ditches adjoining the foot road to Aston† (With., 5); Denstone (Edwards, 11, 52, 1877); Burton.
- ✓ MYRIOPHYLLUM SPICATUM, L. WATER MILFOIL.
Dove† (Garner, 407); Copmere (18, 73, 1884); Serpentine near Greenway bank (Painter, 26, 102, 1892); Knypersley Pool† (Painter, 31, 84, 1899); Trentham lake.
- ✓ CALLITRICHE STAGNALIS, Scop. WATER STARWORT.
Common in ponds, ditches and streams.
- C. INTERMEDIA, Hoff. (C. HAMULATA, Kütz.) WATER STARWORT.
See Burton (Brown, 280); stream near Harracles Mill, north end of Rudyard Lake†; Churnet near Rudyard Lake† (Painter, 26, 102, 1892); pond Knypersley Park (Painter, 31, 34, 1897); in the feeder near Rudyard.
- C. AUTUMNALIS, L. WATER STARWORT. *hermaphrodite L*
Whitmore (Garner, 405). *Canal Whitton 1943*

LYTHRACEÆ.

- ✓ PEPLIS PORTULA, L. WATER PURSLANE. *Charley moss. Uttoxeter (Corry Coffice)*
Garner (363) says "common in wet places." I have not found it often. Knypersley Reservoir, seen once in 1887 (Painter, 22, 118, 1888); Whitmore; Barlaston.
- ✓ LYTHRUM SALICARIA, L. PURPLE LOOSESTRIFE. *Prossall (ditch & outwoods) Church Eaton Bradley (Church Eaton Brook)*
Occurs occasionally by streams and in ditches. Copmere† (18, 33, 1884); near Stafford† (Douglas in Bagnall, 28); Barlaston.

ONAGRACEÆ

- Glanserton*
✓ EPILOBIUM ANGUSTIFOLIUM, L. *Scop.* ROSE BAY WILLOW
HERB.
Fairly common in woods, on railway embankments, refuse heaps and waste ground. Hilderstone; Wall Grange;

Endon; Bucknall; Knypersley; Cotton; Denstone; Copmere; Gradbatch; Whitmore; Keele; Silverdale; Trentham; Milton; Madeley.

- ✓ E. HIRSUTUM, L. HAIRY WILLOW HERB. *Hilderstone*
Common by streams and in ditches. Hilderstone; Barlaston; Trentham; near Stoke; Hanford; Biddulph; Wall Grange; Alton; Denstone; Cheddleton; Keele; Madeley.
- ✓ E. PARVIFLORUM, Schreb. HOARY WILLOW HERB. *Ham Hall*
Common in ditches and damp places. Hilderstone; Biddulph; Denstone; Hanford; Dimminsdale; Barlaston; Whitmore; Ashley; Stafford; Madeley.
- ✓ E. MONTANUM, L. SMOOTH LEAVED WILLOW HERB.
Common on roadsides, banks and walls; also often found in woods.
- ✓ E. ROSEUM, Schreb. PALE WILLOW HERB. *Canal Cheddleton 1941*
Uttoxeter, Moddershall pool† (Garner, 367); Dovedale†, near Sudbury (Bagnall, 29); Ashley; Whitmore; Sandon; near Leek.
- ✓ ~~E. TETRAGONUM~~, Curt. (E. ADNATUM, Griseb). SQUARE STALKED WILLOW HERB.
Garner (367) gives it as common. I think this is an error. I have not often seen it. Hilderstone† (Barns, 46, 117, 1912); Denstone (Edwards, 11, 52, 1877); Ashley.
- ✓ E. OBSCURUM, Schreb. SQUARE STALKED WILLOW HERB.
Probably Garner (367) confused this with the previous species as it is far more common. Knypersley†, Horton (Painter, 31, 84, 1897); Hilderstone† (Barns, 46, 117, 1912); Rushton, Rudyard (Bailey in Bagnall, 29); Sandon† (Bagnall, 29); Whitmore; Trentham; Barlaston; Cheddleton.
x ROSEUM.
Sandon (Bagnall, 29).
- ✓ E. PALUSTRE, L. MARSH WILLOW HERB.
Frequent in ditches and wet places.

✓ CIRCÆA LUTETIANA, L. ENCHANTER'S NIGHTSHADE. *Camp Lane (W.B.)*

Common in woods and shady places. Stafford; Hilderstone; Beech; Trentham; Oakamoor; Alton; Stanton; Dovedale; Manyfold valley; Whitmore; Madeley.

✓ C. ALPINA, L. ALPINE ENCHANTER'S NIGHTSHADE.

Cotton Dale, Oakamoor†, Heighley Castle, Froghall† (Garner, 341); between Hanchurch and Clayton by stream (Garner, 13, 88, 1879). *Church Chase*

VAR. INTERMEDIA, (Ehrh.)

Oakamoor, Froghall (Garner, 341). *Star Wood (Oakamoor) 1952*

CUCURBITACEÆ.

✓ BRYONIA DIOICA, Jacq. WHITE BRYONY.

I have only seen this once in North Staffordshire in 1897, near Hanchurch reservoir. It is not there now.

UMBELLIFERÆ.

✓ HYDROCOTYLE VULGARIS, L. MARSH PENNYWORT.

Common in marshes and bogs. Biddulph; Rudyard; Chartley Moss; Barlaston; Dimminsdale; Stanton; Whitmore; Ferny Hill near Leek; Morridge; Madeley.

✓ SANICULA EUROPÆA, L. WOOD SANICLE.

Common in woods. Dimminsdale; Oakamoor; Hilderstone; Burton; Stafford; Ravensclough; Dovedale; Denstone; Sandon; Beech; Draycot-in-the-Clay; Manyfold valley; Madeley.

✓ CONIUM MACULATUM, L. HEMLOCK. *Uttoxeter (R. Dove at Cambridge)*

Rare in the north of the county, and then not in natural habitats. Near Biddulph Hall (Painter 31, 84, 1897); Denstone (Edwards, 11, 52, 1877); Tutbury† (Brown, 257); Stafford† (Moore, 31, 84, 1897); Keele; Cheddleton.

✓ SMYRNIUM OLUSATRUM, L. ALEXANDERS. Alien.

Garner (360) says "Occasionally in and near old gardens" and gives Endon. I have not seen it in North Staffordshire.

- ✓ **BUPLÉURUM ROTUNDIFOLIUM**, L. HARE'S EAR. Alien.
Near Newcastle High School (Kitchener, **11**, 16, 1877); near Stone (Bostock, **29**, 97, 1895); Oakamoor (Berrisford, **40**, 74, 1906); Cheadle (Blagg, **52**, 121, 1918); Madeley (Daltry in lit.); Alton (Pimblett, **54**, 108, 1920); I have seen it on waste ground in Gipsy Lane, Stoke. These are all records of occasional appearances. It has failed to establish itself in our area.
- ✓ **APIUM GRAVEOLENS**, L. WILD CELERY.
Uttoxeter (Garner, 350).
- ✓ **A. NODIFLORUM**, Reich fil. (**HELOSCIADIUM NODIFLORUM**, L.) MARSHWORT.
Common in damp and marshy places.
- ✓ **VAR. REPENS**, (Kock). (**H. REPENS**, L.)
Oakamoor (Bagnall, 30); Hilderstone† (Barns, **46**, 117, 1912); Copmeref† (**18**, 33, 1884); Barlaston; Dovedale.
- ✓ **A. INUNDATUM**, Reich fil. (**H. INUNDATUM**, L.) LEAST MARSHWORT.
Knypersley Pool†, Rudyard lake† (Painter, **31**, 87, 1897); Wolstanton Marsh (Garner, 358), not there now; Needwood (Gisborne in Bagnall, 30).
- ✓ **CICUTA VIROSA**, L. COW BANE.
I have not found it in North Staffordshire. It has apparently disappeared from the places recorded, which are: Biddulph Hall (Painter, **31**, 84, 1899); Denstone (Edwards, **11**, 52, 1877).
- ✓ **AMMI MAJUS**, L. Alien.
Found in a field at Madeley (Daltry, **51**, 107, 1917). It did not ripen its seeds and so failed to establish itself.
- ✓ **CARUM PETROSELINUM**, Benth and Hooker fil.
(**PETROSELINUM SATIVUM**, Hoff.) ^{Crispum (Mull) Heyman} PARSLEY. Alien.
Croxden Abbey walls (Garner, 358). I have not seen it there.
- ✓ **P. C. SEGETUM**, ^{(L) Koch} Benth and Hooker fil. (**P. SEGETUM**, Kock.) CORN PARSLEY. Alien.
Denstone (Edwards, **11**, 52, 1877); I have not found it in our area.

- ✓ C. CARVI, L. CARRAWAY.
Endon, near Newcastle (Howitt in Garner, 358);
Oakamoor (Berrisford, 40, 75, 1906); not in either place
now.
- ✓ C. BULBOCASTANUM, Kock. GREAT EARTH NUT.
Denstone (Edwards 11, 52, 1877). I think this is an
error. I have not found the plant in North Staffordshire.
- ✓ SISON AMOMUM, L. STONEWORT. *Clepton, Crompton, near Haunton 1942*
Castle fields near Stafford (Moore, 31, 84, 1897). I
have not found this plant in our area.
- ✓ S. LATIFOLIUM, L. WATER PARSNIP.
Garner (358) says "Watery places. Common." This
is undoubtedly an error.
- ✓ S. ERECTUM, Huds. *Corville* (S. ANGUSTIFOLIUM, L.)
WATER PARSNIP.
Denstone (Edwards 11, 52, 1877); stream at Calton, *Wednesbury*
stream near Sudbury† (Bagnall, 30); Dovedale; Many-
fold.
- ✓ ÆGOPODIUM PODAGRARIA, L. GOUT WEED. Alien.
Occurs very frequently in hedges near farms and villages.
Trentham; Barlaston; Stone; Biddulph; Knypersley;
Dovedale; Bucknall; near Leek; Cheddleton; Hilder-
stone; Needwood; Stafford; Burton; Rushton; Stoke;
Clayton; Madeley.
- ✓ PIMPINELLA SAXIFRAGA, L. SMALL BURNET SAXI-
FRAGE.
Near Rushton† (Painter in Bagnall, 30); Dimminsdale†,
Alton (Bagnall, 30); Stoke (Garner, 358); Oakamoor†
(Berrisford, 40, 73, 1906); Hilderstone† (Barns, 46, 117,
1912); Manyfold † (34, 140, 1900); Denstone † (Edwards,
11, 52, 1877); Cresswell; Dovedale.
- ✓ P. MAJOR, Huds. (P. MAGNA, L.). LARGE BURNET
SAXIFRAGE.
Not rare on limestone or marl. Ilam†, Dovedale†,
Alton† (Garner, 358); Foxt, Froghall†, Hanbury,
Coton, Forest Banks, Sandon† (Bagnall, 30); Need-

wood Forest†, Burton (Brown, 256); Tutbury† (26, 155, 1892); Hilderstone† (Barns, 46, 117, 1912); Fenton (Garner, 13, 89, 1879); Stafford † (Moore, 31, 85, 1897); Oulton (32, 167, 1898); Manyfold † (28, 156, 1894).

✓ CONOPODIUM MAJUS, Loret. (C. DENUDATUM, Kock.

BUNIUM FLEXUOSUM, With.) FIG NUT.

Common on pasture land and in woods.

✓ MYRRHIS ODORATA, Scop. SWEET CICELY, Alien.

Frequent; generally near farms and old buildings.

Manyfold† (28, 156, 1894); Biddulph, between Horton and Rudyard† (Painter, 31, 85, 1897); Ludchurch† (4, 4, 1870); Baddeley Edge† (Garner, 13, 89, 1879); Cotton (11, 7, 1877); Wetley, Warslow†, Forsbrook†, Onecote, Bagnall† (Garner, 360); Star Wood Oakamoor†, Ramshorn†, Dovedale† (Bagnall, 31); Wall Grange; near Leek; Dane valley; Madeley.

✓ CHÆROPHYLLUM TEMULUM, L. ROUGH CHERVIL.

Common in hedges, fields and waste places.

✓ SCANDIX PECTEN-VENERIS, L. SHEPHERD'S NEEDLE. Alien.

Occurs occasionally as a weed in cornfields. Denstone (Milford, 43, 98, 1909); Oakamoor† (Berrisford, 40, 73, 1906); Whitmore† (56, 110, 1922).

✓ ANTHRISCUS VULGARIS, Bernh. (A. SCANDIX, Beck.

CHÆROPHYLLUM ANTHRISCUS, Lam.) BEAKED PARSLEY. Alien.

Occasionally on hedge banks. Stafford (Garner, 16, 60, 1882); near Cresswell; near Ashley.

✓ A. SYLVESTRIS, Hoff. (C. SYLVESTRE, L.) KECK or SCABS.

Very common in hedges, woods and fields.

✓ *var. latiseclum* Drice *Madeley* (Daltry 13EC 5, 108, 1917)
GENANTHE FISTULOSA, L. WATER DROPWORT.

Garner (358) says "frequent in ditches". This is not my experience. Madeley (Daltry in lit.).

✓ *Extⁿ*
Æ. PIMPINELLOIDES, L. WATER DROPWORT.

Denstone (Edwards, 11, 52, 1877). This record is an error.

- ✓ **Œ. CROCATÀ, L. WATER DROPWORT.**
Willowbridge (Shaw, 110); Oakamoor (Berrisford, 40, *Wednesbury Canal High Bridges* 73, 1906); Denstone (Edwards, 11, 52, 1877); I have not seen it growing in North Staffordshire.
- ✓ **Œ. AQUATICA, Poir. (Œ. PHELLANDRIUM, Lam.) WATER DROPWORT.**
Cheadle, Uttoxeter † (Garner, 359); Stone Park (Shaw, 110); near Stafford (Douglas in Bagnall, 31); Oakamoor (Berrisford, 40, 73, 1906); Coton Clanford (Adams, 57, 107, 1924).
- ✓ **ÆTHUSA CYNAPIUM, L. FOOL'S PARSLEY. Alien.**
Although not found abundantly in any one place it occurs very frequently as a weed on cultivated ground.
- ✓ **SILAUS FLAVESCENS, Bernh. (S. PRATENSIS, Bess.) PEPPER SAXIFRAGE.**
Very few records for this plant. Uttoxeter (Garner, 358); Branstone (Brown, 256); near Stafford (Douglas in Bagnall, 31). *Winson Green (Canal)*
- ✓ **ANGELICA SYLVESTRIS, L. ANGELICA.**
Frequent in damp places. Biddulph; Denstone; Hilderstone; Cheddleton; Wall Grange; near Leek; Consall; Whitmore; Trentham; Barlaston; Stafford; Cheadle; Oakamoor; Froghall; Madeley.
- ✓ **PEUCEDANUM OSTRUTHIUM, Kock. (IMPERATORIA OSTRUTHIUM, L.) MASTERWORT. Alien.**
Between Calton Moor House and Mayfield, Baddeley Edge, Endon (Garner, 359); Thorny Edge (Bagnall, 4, 5, 1870).
- ✓ **P. SATIVUM, Benth and Hooker fil. (PASTINACA SATIVA, L.) WILD PARSNIP. Alien.**
The few records of this plant are for places where it has escaped from cultivation. Longnor (Garner, 359); Tattershall (Brown, 256); Cheadle † (Heywood, 46, 94, 1912); Wrinehill † (T. W. Daltry, 23, 11, 1889); Denstone (Edwards, 11, 52, 1877); Aston near Pipe Gate † (Read, 34, 71, 1900).

- ✓ HERACLEUM SPHONDYLIIUM, L. HOG WEED.
Very common in hedges and moist places.
- ✓ VAR ANGUSTIFOLIUM, Huds.
Occurs occasionally. Barlaston; Milton; Cresswell;
Manyfold valley; Ilam; Bucknall.
- ✓ CORIANDRUM SATIVUM, L. CORIANDER.
The record for Oakamoor (Berrisford, 40, 74, 1906) is
an error. *Spongfields (Stoke)*
- ✓ DAUCUS CAROTA, L. WILD CARROT.
Met with occasionally. Knypersley and Biddulph†
(Painter, 31, 85, 1897); Madeley† (Daltry in lit.);
Whitmore; Willowbridge; Cresswell; Tean; near
Cheadle; Manyfold valley.
- ✓ CAUCALIS LATIFOLIA, L. BUR PARSLEY. Alien.
The records for this plant are very few. I have not
seen it in North Staffordshire. Oakamoor (Berrisford,
40, 74, 1906); Rocester (Milford, 42, 86, 1908); Dovedale
(Johnson in Garner, 359). *Burton (Druce 62.126.1928)*
- ✓ C. DAUCOIDES, L. BUR PARSLEY.
The record for Oakamoor (Berrisford, 40, 74, 1906) is
an error. *Burton*
- ✓ *Torilis* C. ARVENSIS, (Huds.) *Link* (TORILIS INFESTA, Spreng.)
SPREADING HEDGE PARSLEY.
Betley †, Uttoxeter (Garner, 359); Burton (Brown, 256);
Stafford† (Garner, 16, 60, 1882).
- ✓ *Torilis japonica (Houtt.) DC.* C. ANTHRISCUS, Huds. HEDGE PARSLEY.
Common in hedges and waste places.
- ✓ *Torilis* C. NODOSA, *L. Jacq.* KNOTTED HEDGE PARSLEY.
Tutbury Castle hill, rocks in Dovedale† (Garner, 360);
Oakamoor† (Berrisford, 40, 73, 1906); Willowbridge.

ARALIACEÆ.

- ✓ HEDERA HELIX, L. IVY.
Common in woods and on rocks and walls.

CORNACEÆ.

✓ CORNUS SANGUINEA, L. DOGWOOD.

Coton, Uttoxeter†, Tutbury†, Hanbury, Burton† (Bagnall, 31); Stafford† (Moore, 31, 85, 1897); Denstone† (Edwards, 11, 52, 1877); Stallington† (Audley, 27, 64, 1893); Barlaston; Dovedale; Madeley. *Manyfold*

CAPRIFOLIACEÆ.

✓ ADOXA MOSCHATELLINA, L. MOSCHATEL.

Frequent in damp hedges and in woods. Hilderstone; *Old Stone Pool*
Biddulph; Denstone; Cheadle; Burton; Stafford; *Chest.*
Stone; Barlaston; Beech; Trentham; Clayton; Sandon;
Hanchurch; Endon; Consall; Heighley Castle; Madeley;
Dovedale; Manyfold valley.

✓ SAMBUCUS NIGER, L. ELDERBERRY.

Common in hedges and thickets.

✓ S. EBULUS, L. DANE-WORT. Alien. *Chartley Castle*

Tutbury Castle (Pitt in With., 311); field near Tutbury† (26, 155, 1892); near Newcastle, waste places at Fenton (Garner 361); Branstone and Beeston (Shaw, 112).

✓ VIBURNUM OPULUS, L. GUELDER ROSE.

Fairly common in damp hedges and copses. Hilderstone; Biddulph; Rudyard; Denstone; Sandon; Dovedale; Manyfold valley; Coton; Calton; Stafford; Clayton; Cheadle; near Rushton; Consall; Dane valley; Madeley.

✓ LONICERA CAPRIFOLIUM, L. PERFOLIATE HONEYSUCKLE. Alien.

Near Denstone, on the confines of Derbyshire (Goodall, 16, 78, 1882); between Cheadle and Oakamoor.

✓ L. PERICLYMENUM, L. HONEYSUCKLE.

Common in woods and hedges.

✓ L. XYLOSTEUM, L. FLY HONEYSUCKLE. Alien.

Sinai Park (Brown, 258); Needwood Forest (Hewgill in Garner, 355); Knypersley Hall† (Painter, 31, 85 1897); Belmont Woods.

RUBIACEÆ.

- Ext^r ✓ GALIUM BOREALE, L. BEDSTRAW.
Cheddleton (Goodall, 16, 78, 1882). I think this record is an error. I have failed to find the plant there.
- ✓ G. CRUCIATA, Scop. CROSSWORT.
Common in hedges and woods. Painter (31, 86, 1897) states that it is absent in the Biddulph area.
- ✓ G. VERUM, L. LADY'S BEDSTRAW.
Common in sandy places. Absent in the Biddulph area. (Painter, 31, 86, 1897).
- Ext^r ✓ G. ERECTUM, Huds. UPRIGHT BEDSTRAW.
Burton (Garner, 348). I have failed to find it there.
- ✓ G. MOLLUGO, L. GREAT HEDGE BEDSTRAW.
Few records for this plant. Denstone (Edwards, 11, 52, 1877); Forest banks near Marchington (Bagnall, 32); Dovedale† (46, 96, 1913).
- ✓ G. SAXATILE, L. WHITE BEDSTRAW. *Meadow by river above Watton Mill.*
Very common in heathy places.
- ✓ G. ASPERUM, Schreb. (G. SYLVESTRE, Poll. G. PUSILLUM, Sm. not L.) MOUNTAIN BEDSTRAW.
Manyfold† (28, 14, 1894); Ape's Tor, near Alstonfield† (Bagnall, 32); Winhill and Shobnall (Brown, 258).
- ✓ G. PALUSTRE, L. MARSH BEDSTRAW.
Common in ditches and marshes.
VAR. ELONGATUM, (Presl.)
Near Rushton, near Rudyard (Bailey in Bagnall, 32).
- ✓ VAR. WITHERINGII, (Sm.)
Hardwick, near Stone† (Bagnall, 32); Biddulph† (Painter, 31, 86, 1897).
- Ext^r ✓ G. ANGLICUM, Huds. (G. PARISIENSE, L.) WALL BEDSTRAW.
Garner (348) says "Frequent on walls and rocks." This I think is an error. I have not seen the plant in North Staffordshire.
- ✓ G. APARINE, L. CLEAVERS.
Common in hedges and waste places.

- ✓ G. TRICORNE, Stokes. ROUGH FRUITED BEDSTRAW.
The two records for it are Oakamoor (Berrisford, **40**, 74, 1906); Denstone (Edwards, **11**, 53, 1877). Probably these are errors. I have failed to find it in either place.
- ✓ ASPERULA ODORATA, L. SWEET WOODRUFF.
Common in woods. Hilderstone; Manyfold valley; Chartley; Trentham; Denstone; Ravensclough; Swithamley; Cheadle; Alton; Rocester; Oakamoor; Marchington; Stone; Harwick; Sandon; Madeley; Ashley; Beech; Consall; Stanton. Painter (**31**, 86, 1897) states that it is absent from the Biddulph area.
- ✓ A. ARVENSIS, L.
The record Oakamoor (Berrisford, **40**, 74, 1906) is an error.
- ✓ SHERARDIA ARVENSIS, L. FIELD MADDER. Alien.
Common on sandy soils as a weed. Painter (**31**, 86, 1897) says it does not occur in the Biddulph area.

VALERIANACEÆ.

- ✓ VALERIANA DIOICA, L. MARSH VALERIAN.
Frequent in marshy places. Biddulph† (Painter, **31**, 86, 1897); Stafford† (Moore, **38**, 110, 1904); Hilderstone† (Barns, **46**, 117, 1912); Stanton† (**35**, 68, 1901); Dimmindalet†, Alton (Bagnall, 33); Wall Grange; marshy ground near Barlaston Downs; Madeley.
- ✓ V. OFFICINALIS, L. (V. MIKANII, Syme). VALERIAN.
Rushton, Rudyard† (Bailey in Bagnall, 33); Hilderstone† (Barns **46**, 117, 1912); Biddulph† (Painter, **22**, 118, 1888); Star Wood Oakamoor† (Bagnall, 33); Cresswell's piece near Caverswall; Barlaston; Wall Grange; Madeley.
- ✓ V. SAMBUCIFOLIA, Mikan. VALERIAN.
Frequent by water and in damp woods. Biddulph; Stafford; Consall; Barlaston; Oakamoor; Stanton; Whitmore; Trentham; Rudyard; Dane valley; Manyfold valley; Madeley. *Rushton R²*

- ✓ V. PYRENAICA, L. PYRENEAN VALERIAN. Alien.
 Star Wood Oakamoor† (Carter in Bagnall, 33); still
 there in abundance. *Hawthorn (opp. warden's college)*
- ✓ KENTRANTHUS RUBER, DC. RED VALERIAN. Alien.
 Old Walls, Burton† (Garner, 342).
- ✓ VALERIANELLA OLITORIA, Poll. CORN SALAD.
 Ecton Hill†, Beeston Tor†, Wetton valley† (Garner, 342);
 Cheadle† (Carter in Bagnall, 33); Stafford † (Moore, 31,
 86, 1897); Oakamoor† (Berrisford, 40, 74, 1906); Dove-
dale.
- ✓ V. ERIOCARPA, Desv. CORN SALAD. Alien.
 Dovedale, Cheadle (Garner, 343); Bagnall (33) queries
 these records. I have looked for it in both places, but
 failed to find it.
- ✓ V. DENTATA, Poll. CORN SALAD. Alien.
 Cheadle (Carter in Bagnall, 33); Wootton† (Garner, 345);
Shobnall (Brown, 249); Stafford† (Douglas in Bagnall,
 33); field near the Bishop's Woods and in a field at Ashley.
 VAR. MIXTA (Dufur.)
 Beeston Tor (Garner, 345). *Sugar loaf.*

DIPSACEÆ.

- ✓ DIPSACUS SYLVESTRIS, L. TEASEL.
 Barton Green, Eaton Woods near Uttoxeter, Houndshill,
 Tutbury Castle, Great Bridgeford (Garner, 347); Sud-
 bury† (Bagnall, 33); Manyfold valley† (46, 207, 1913);
 Stoke† (Audley, 29, 64, 1895); Stafford† (Douglas in
 Bagnall, 33).
- ✓ D. PILOSUS, L. LESSER TEASEL.
 Eaton Woods near Uttoxeter† (Garner, 348); Alton
 (Carter in Bagnall, 33); Shobnall (Brown, 259); near
 Stafford (Douglas in Bagnall, 33); Croxden† (Deacon,
 49 48, 155, 1914); Denstone (Goodall, 16, 79, 1882); be-
 tween Stone and Sandon (Garner, MS. notes in his
 own interleaved copy of the *Natural History of the County*
of Stafford.) *Ham (Pickard 60 155, 1926)*

DIPSACEÆ-COMPOSITÆ.

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- ✓ *Succisa pratensis* (Moench)
SCABIOSA SUCCISA, L. DEVIL'S BIT SCABIOUS.
Fairly common in pasture and open places. *Camp Lane.*
- ✓ S. COLUMBARIA, L. SMALL SCABIOUS. *Mori Lane*
Manyfold valley†, Dovedale† (Fraser in Bagnall, 33);
Weaver Hills† (Brown, 260).
- nautes* ✓ S. ARVENSIS, L. ^{*Coult.*} SCABIOUS.
Common in hedges and fields. Variety with white
flowers at Cotonfield, Stafford (Garner, 348).

COMPOSITÆ.

- ✓ EUPATORIUM CANNABINUM, L. HEMP AGRIMONY.
Churnet valley† (Bagnall, 34); Knypersley Park† (Painter,
31, 36, 1897); Dovedale; Manyfold valley; Madeley.
- ✓ SOLIDAGO VIRGAUREA, L. GOLDEN ROD.
Dingle at Cotton Hall, Alton†; Warslow† (Painter in
Bagnall, 34); Oakamoor† (Bagnall, 34); Burnt Wood
(Shaw, 114); Knypersley and Lion's Paw Wood†
(Painter, **31**, 86, 1897); Coomb's valley near Cheddleton.
- ✓ BELLIS PERENNIS, L. DAISY.
Common.
- ✓ ASTER TRIPOLIUM, L. SEA ASTER.
In a meadow between the Trent and canal at Stoke
(Bagnall, 34). Not there now. This is an unnatural
habit for the plant, which is characteristic of salt marshes.
- ✓ ERIGERON ACRE, L. BLUE FLEA BANE.
Tutbury Castle (Garner, 401); Whitmore† (Audley, **28**,
104, 1894).
- ✓ E. ALPINUM, L. ALPINE FLEA BANE.
I think the record, Cheddleton Heath (**40**, 172, 1906) is
an error. This plant is very rare and grows on alpine
rocks, not on heathy ground.
- ✓ FILAGO GERMANICA, L. CUDWEED.
Occurs as a weed in cultivated fields. Garner (400) gives
it as common. Although I have found it many times
as a weed I should hardly term it a common one.

- ✓ F. MINIMA, Fr. LEAST CUDWEED.
Near Cheadle (Carter in Bagnall, 34); Tittensor (Garner, 400).
- Ext ✓ ANTENNARIA DIOICA, Gærtn. MOUNTAIN CATSFOOT.
Limestone hills, Wetton valley (Garner, 400). I have not seen it there.
- ✓ ANAPHALIS MARGARITACEA, Benth and Hooker fil.
PEARLY EVERLASTING.
Morrige† (50, 134, 1915). Growing in a most unnatural habit on a heath moor.
- ✓ GNAPHALIUM ULIGINOSUM, L. MARSH CUDWEED.
Common in damp places. *Handsworth, Neston R.*
- ✓ G. SYLVATICUM, L. HEATH CUDWEED.
Lanes about Moddershall† (With., 698); Madeley (Daltry, in lit.). *Jarley, Ramsor (Pickard 60. 155. 1926)*
- Ext ✓ INULA HELENIUM, L. ELECAMPANE.
Biddulph Hall (Garner, 400). I have not seen it there.
- Ext ✓ I. SQUARROSA, Bernh. (I. CONYZA, DC.) PLOUGH-
MAN'S SPIKENARD. *Willingworth, Sumner*
Manyfold valley. I found it there in the summer of 1919.
- ✓ PULICARIA DYSENTERICA, Gray. FLEA BANE.
Common in wet places, particularly by sides of streams and canals.
- ✓ BIDENS CERNUA, L. NODDING BUR MARIGOLD.
Fairly frequent. Canal, Stafford† (Moore, 38, 110, 1904); Hilderstone† (Barns, 46, 117, 1912); Barlaston; Madeley; canal near Endon; near Uttoxeter; canal near Trentham.
VAR. RADIATA, DC.
In a rivulet at the bottom of Tittensor Common. (Stokes in With., 690).
- ✓ B. TRIPARTITA, L. TRIFID BUR MARIGOLD.
Fairly frequent. Knypersley† (Painter, 31, 87, 1897); Deep Haye, Wall Grange† (46, 115, 1912); Shobnall and

Bidens frondosa (Canal (Haastead), 1954. High Bridges (1958))

Rolleston† (Brown, 260); Wolstanton Marsh (Garner, 400); near Uttoxeter; near Endon.

- ✓ ACHILLEA MILLEFOLIUM, L. YARROW.
Common in hedges and in pasture land.
- ✓ A. PTARMICA, L. SNEEZEWORD.
Frequent but not so common as the previous species. Hilderstone; Biddulph; Wall Grange; Endon; Needwood Forest; Trentham; Leek; Whitmore; Madeley; Rushton. *Newton Rd*
- ✓ ANTHEMIS COTULA, L. MAYWEED. Alien.
Occurs very frequently as a weed in cultivated fields.
- ✓ A. ARVENSIS, L. CORN CAMOMILE. Alien.
~~Common as~~ A weed in cultivated fields and also in waste places.
- ✓ A. NOBILIS, L. CAMOMILE.
I have only seen this once near Sudbury and once near Stafford. Denstone (Edwards, 11, 53, 1877).
- ✓ CHRYSANTHEMUM SEGETUM, L. CORN MARIGOLD. Alien.
Often occurs as a weed in corn fields. Hayhill Farm Biddulph (Painter, 31, 87, 1897); Denstone (Edwards, 11, 53, 1877); Stafford† (Moore, 38, 110, 1904); Alton (Brett, 37, 95, 1903); Stoke† (Garner, 402); Ramshorn† (Bagnall, 35); Outwood Hill (Brown, 261); Dilhorne; Ashley; near Leek; Barlaston.
- ✓ C. LEUCANTHEMUM, L. OX EYE DAISY.
Common in fields, on railway embankments and waste places.
- ✓ C. PARTHENIUM, Bernh. (PYRETHRUM PARTHENIUM, Sm). FEVERFEW. Alien.
Only occurs as an outcast from gardens.
- ✓ MATRICARIA INODORA, L. (PYRETHRUM INODORUM, Gærtn). DOG DAISY. Alien. *Widansbury*
Common as a weed on cultivated ground and waste places.

- ✓ M. CHAMOMILLA, L. WILD CAMOMILE, Alien.
Common as a weed on cultivated ground, particularly cornfields.
- ✓ M. SUAVEOLENS, Buch. (M. DISCOIDEA, DC.) RAYLESS CAMOMILE. Alien.
Has spread in recent times throughout the north of the county, occurring on the roadside and waste ground especially. The first record by name is Betley (Daltry, 46, 113, 1912), although the record of a rayless form of *M. chamomilla*, near Burton (Parsons in Bagnall, 35), probably refers to this plant.
- ✓ *Chrysanthemum vulgare* (L.) Benth.
~~TANACETUM VULGARE, L.~~ TANSY. Alien.
Occurs occasionally in hedges and waste places. Garner (400) says "common in hedges". This is not so. Tutbury, Burton (Brown, 260); Forest Banks, near Sudbury (Bagnall, 35); between Barlaston and Stone by the canal; Whitmore; near Ashley; near Chartley; Uttoxeter; Madeley. *Handsworth Cemetery*
- ✓ ARTEMISIA ABSINTHIUM, L. WORMWOOD. Alien.
Only found near to and as an outcast from gardens, and then only in few places. Willowbridge (Garner, 400); near Sudbury; near Stafford. *Oakamoor 1939, Tatenhall, Anslow*
- ✓ A. VULGARIS, L. MUGWORT. Alien.
Occasionally found in hedges and on waste ground. Hilderstone; Stafford; near Ashley; Gipsy Lane, Stoke; near Cresswell; Madeley. *Camp Lane*
- ✓ TUSSILAGO FARFARA, L. COLTSFOOT.
Very common on clay and waste ground. Often found on old pit mounds. *Wednesbury*
- ✓ PETASITES OVATUS, Hill. (P. OFFINALIS, Moench. TUSSILAGO PETASITES, L.) BUTTERBUR.
Fairly common in wet places. Biddulph; Consall; Cheddleton; *Oakamoor*; Froghall; near Milton; Bucknall; Brown Edge; Hilderstone; Denstone; Draycot-in-the-Clay; Marchington; Moddershall; Sandon; Weston; Salt; near Stafford; Trentham. *Many fold V.*

S. squalidus Madeley. Fairfield Heath (road at Newton). Willingtonworth. Barnes
S. vulgare var. *radiatus*. Canal. Newton Road.

- ✓ P. ALBUS, Gærtn. BUTTERBUR. Alien.
Cotton Dale (Star Wood, Oakamoor)†. This is the place recorded as near Cheadle (Bostock, **24**, 11, 1890); Butterton (Evans, **24**, 11, 1890).
- ✓ DORONICUM PARDALIANCHES, L. LEOPARD'S BANE. Alien. *Washley*
Trentham wood (Garner, *Supplement*, 36) between Trentham and Barlaston† (**29**, 97, 1895); between Wootton and Farley† (Brett, **35**, 71, 1901); Dimmins-dale† (Garner, 401); near Ramshorn† (Bagnall, 36); between Keele and Whitmore† (**50**, 135, 1916); near Tean.
- ✓ SENECIO VULGARIS, L. GROUNDSEL. Alien.
Occurs abundantly as a weed on cultivated and waste ground. *Widnesbury*
- ✓ S. SYLVATICUS, L. HEATH GROUNDSEL.
Frequent in dry places, particularly where the soil has a tendency to be acid. Bagnall; Hilderstone; Wetley Moor; Knypersley; Stafford; Uttoxeter; Aston; Barlaston; Acton; Cresswell's piece, Caverswall; Rough Close near Longton; Willowbridge; Madeley.
- ✓ VAR. AURICULATUS, Meyer.
Madeley (Daltry in lit.) *Burslem*
- ✓ S. VISCOSUS, L. STINKING GROUNDSEL. *Draycott in the Clay (6 roads end)*
Garner (401) says "common." This is not the case now. Bagnall (36) says he has not seen it in Staffordshire. The records are Bagnall (**4**, 5, 1870); Alton (**34**, 72, 1900); Stoke (Garner, **11**, 89, 1877). I have not seen it at any of these places, but have seen it once at Bucknall and on some waste ground near Burslem. *Burslem (Druce 62. 127. 1928)*
- ✓ S. ERUCIFOLIUS, L. HOARY RAGWORT.
Madeley, Uttoxeter† (Garner, 401); Oakamoor (Berrisford **40**, 73, 1906); near Abbot's Bromley† (**51**, 108, 1917); Stanton † (**55**, 140, 1921).
- ✓ S. JACOBÆA, L. RAGWORT.
Common by the roadside and in pastures.

Lepo minima Trypall + Seesdon (flat near Seesdon gate).

- ✓ S. AQUATICUS, Hill. WATER RAGWORT.
Common in ditches, sides of rivers and canals.
VAR. PENNATIFIDUS, Gren and Godr.
Madeley (Daltry in lit.)
- Ext ✓ S. SARRACENICUS, L. BROAD LEAVED RAGWORT. Alien.
Needwood Forest (Garner, 401). I have not seen the
plant in North Staffordshire.
- ✓ CARLINA VULGARIS, L. CARLINE THISTLE.
Manyfold valley † (Fraser in Bagnall, 36); Weaver
Hills † (Bagnall, 36); Keele.
- ✓ ARCTIUM MAJUS, Bernh. BURDOCK. *lappa. Bates Milton & Plankridge 1943*
Kingston near Uttoxeter (Bagnall, 36); Manyfold
valley; near Kidsgrove.
- ✓ A. NEMOROSUM, Lej. BURDOCK.
Rudyard and Rushton (Bailey in Bagnall, 36).
- ✓ A. MINUS, Bernh. BURDOCK.
Biddulph † (Painter, 31, 87, 1897); near Bagot's Wood,
Sandon † (Bagnall, 36); Manyfold valley.
- ✓ A. NEWBOULDII, Ar. Benn. (A. INTERMEDIUM, Lange.)
BURDOCK.
Lane from Bagot's Wood to Kingston, Showl's Wood
Kingston (Bagnall, 36).
- Ext ✓ CARDUUS PYCNOCEPHALUS, L.
VAR. TENUIFLORUS (Curt.)
Oakamoor (Berrisford, 40, 74, 1906).
- ✓ C. NUTANS, L. NODDING THISTLE. *Consall Edge. Willington Linn*
Frequent on limestone. Near Stafford (Douglas in
Bagnall, 36); Sandon † (Bagnall, 36); Manyfold valley;
Dovedale; Weaver Hills.
- ✓ C CRISPUS, L. WELTED THISTLE.
Oakamoor † (Berrisford, 40, 73, 1906); Dovedale †, *Newton R*
Weaver Hills †, Weston † (Bagnall, 36); Manyfold valley;
Stanton.
VAR. ACANTHOIDES, (L.)
Near Chartley Castle, Stafford, Stone, Burton (Garner,
399).
- See

- ✓ **CNICUS LANCEOLATUS**, Willd. (**CARDUUS LANCEOLATUS**, L. **CIRSIIUM LANCEOLATUM**, Scop.) **SPEAR THISTLE.** *Wednesbury*
Common in fields, waste places and roadsides.
- ✓ **C. PALUSTRIS**, Willd. (**CARDUUS PALUSTRIS**, L. **CIRSIIUM PALUSTRE**, Scop.) **MARSH THISTLE.**
Common in damp meadows and ditches.
- ✓ **C. PRATENSIS**, Willd. (**CARDUUS PRATENSIS**, L.) = *Cirsium anglicum*
MEADOW THISTLE. *Stanton 1934*
Hanbury, Sudbury, Needwood Forest, Willowbridge (Garner, 399).
- ✓ **C. HETEROPHYLLUS**, Willd. (**CARDUUS HETEROPHYLLUS**, L.) **MELANCHOLY THISTLE.**
Frequent on limestone. *Church* *Jawfield head*
Mixon†, Longnor†, Warslow, Hamps valley† (Garner, 399); Wetton† (25, 5, 1891); *road school Clough*
Dovedale† and Thor's Cave† (47, 97, 1913); Ecton Hill† (Fraser in Bagnall, 37); Berrisford dale (Parsons in Bagnall, 37); Cheadle (Heywood, 46, 94, 1913); Stanton† (50, 134, 1916).
- ✓ **C. ARVENSIS**, Hoff. (**CARDUUS ARVENSIS**, L.) **FIELD THISTLE.** *Wednesbury*
Very common in fields, waste places, railway embankments and roadsides.
- ✓ **VAR. SETOSUS**, (Bess.)
Denstone (Milford, 43, 100, 1909); Alton; Rushton.
- ✓ **SILYBUM MARIANUM**, Gærtn. (**MARIANA LACTEA**, Hill. **CARDUUS MARIANUS**, L.) **MILK THISTLE.**
Alien.
Alton, near Stone, Burton (Garner, 399); Walton, Shobnall (Brown, 263).
- ✓ **SERRATULA TINCTORIA**, L. **SAW WORT.**
Met with only occasionally. Beech†, Cheddleton† (29, 97, 1895); Fulford † (32, 104, 1898); Rolleston, Henhurst (Brown, 262); Ecton Hill† (Fraser in Bagnall, 37); Swynnerton; Stanton.
- ✓ **CENTAUREA NIGRA**, L. **HARDHEAD.** *Wednesbury*
Very common in fields, by roadsides and on waste ground.

- ✓ C. SCABIOSA, L. GREAT Knapweed.
Near Tutbury† (Shaw, 399); Gluttondale† and near Stafford (Garner, 402); Cotonfield (Garner, 16, 60, 1882); Weaver Hills† (Bagnall, 37); Weston; near Ashley.
- ✓ C. CYANUS, L. CORNFLOWER. Alien. *Small Cornflower Hoop Cross Newchurch*
Occurs occasionally in cornfields as a weed. Betley; Maer; Ramshorn; Fenton; Dilhorne; near Burslem; Cocknage; near Swynnerton; Wall Grange.
- ✓ C. ASPERA, L. JERSEY STAR THISTLE.
The record for Oakamoor (Berrisford, 40, 74, 1906) is an error.
- ✓ C. SOLSTITIALIS, L. YELLOW STAR THISTLE. Alien.
Waste ground (Garner, 403); Oakamoor (Berrisford, 40, 74, 1906). I have not seen this plant in North Staffordshire. *Burton*
- ✓ C. MONTANA, L. Alien.
High pastures near Gradbatch (Garner, 403). I have not seen it there.
- ✓ CARTHAMUS TINCTORUS, L. Alien.
Sideway Fenton† (52, 121, 1918). One specimen only, and it did not establish itself.
- ✓ CICHORIUM INTYBUS, L. CHICORY. Alien. *Burton (Northampton)*
Aston near Willowbridge† (Read, 34, 72, 1900); Werrington (Garner, 18, 38, 1879); near Burton (Garner, 399); Stafford† (Douglas in Bagnall, 37); canal between Aston and Stone† (Edwards, 52, 122, 1918). Once seen at Shelton-under-Harley (Copeland, 56, 132, 1918).
- ✓ LAPSANA COMMUNIS, L. NIPPLEWORT.
Very common in hedges and on waste ground.
- ✓ PICRIS HIERACIOIDES, L. HAWKWEED OX TONGUE. Alien. *Harpfields (Stoke) Sedgley (Quarry)*
Manyfold† (1, 6, 1866); Tutbury, Ecton†, Dovedale† (Garner, 397); Rolleston (Brown, 264).
- ✓ CREPIS TARAXACIFOLIA, Thuill. HAWKSBEARD.
Cresswell's piece Caverswall†, Whitmore†, Cheadle† (53, 98, 1919); near Swynnerton.

✓ C. CAPILLARIS, Wallr. (C. VIRENS, L.) HAWKSBEARD.
Common on waste ground. Also as a weed on cultivated land. *Willingworth Furnaces*

VAR. AGRESTIS. (Waldst. and Kit.).

Madeley (Daltry in lit.) Barlaston, Consall, Whitmore, near Rushton, Ashley.

✓ C. PALUDOSA, Mœnch. MARSH HAWKSBEARD.
On the banks of a rivulet at Biddulph (Shaw, 399).
Between Whitmore and Acton† (Hurley, 23, 11, 1889);
Lion's Paw Wood and Cliff Wood Rudyard (Painter,
26, 102, 1892); Hilderstone † (Barns, 46, 117, 1912).

✓ HIERACIUM PILOSELLA, L. MOUSE EAR HAWKWEED.
Common on banks, waste ground and railway embank-
ments, particularly in sandy districts. *Willingworth Furnaces*

✓ H. AURANTIACUM, L. ORANGE HAWKWEED. Alien.
Oakamoor† (Berrisford, 40, 74, 1906). Railway em-
bankment between Endon and Stockton Brook, road-
side Barlaston.

H. ANGLICUM, Fr. HAWKWEED.
Dovedale† sparingly (Bagnall, 37); Manyfold.

✓ H. MURORUM, L. HAWKWEED.
Dovedale, rare (Bagnall, 37); Madeley (Daltry in lit.)
Manyfold; near Waterhouses.

H. CÆSIUM, Fr. (H. MURORUM, Sm.) HAWKWEED.
Garner (398) says "common on limestone rocks." It
is not so now. Dovedale.

✓ H. VULGATUM, Fr. (H. SYLVATICUM, Sm.) HAWK-
WEED.
Fairly common on banks and waste ground. Silverdale†,
Keele†, Dilhorne† (39, 92, 1905); Hilderstone† (Barns,
46, 117, 1912); Biddulph, Knypersley Park, Rushton†
(Painter, 31, 88, 1897); Stafford† (Moore, 31, 88, 1897),
Silverdale, Barlaston, near Longton, Fenton.

H. SCIAPHILUM, Uechtr. HAWKWEED.
Tower Hill, Mow Cop (Painter, 31, 88, 1897).

Hieracium pinnatifidum Churnet Bridge 1926

H. DIAPHANOIDES, Lind. HAWKWEED.
Mow Cop (Painter, 28, 103, 1894); specimen named
by Hanbury.

✓ H. TRIDENTATUM, Fr. HAWKWEED.
Alton (Bagnall, 38).

✓ H. BOREALE, Fr. (H. SABAUDUM, Sm.) HAWKWEED.
Fairly common in hedge banks, on waste ground, rail-
way embankments and pit mounds.

✓ H. UMBELLATUM, L. HAWKWEED.
Fairly common. Mow Cop†, Keele† (39, 92, 1905);
Gutter Lane, between Biddulph and the Trent, Woodside
Colliery (Painter, 31, 88, 1897); Madeley† (Daltry in lit.);
Etruria, Buckall, Silverdale.

Ext ✓ HYPOCHÆRIS GLABRA, L. SMOOTH CAT'S EAR.
Garner (398) says "Gravelly places." I have not
found it in North Staffordshire. The record "Hanford"
(43, 102, 1909) is an error.

✓ H. RADICATA, L. CAT'S EAR.
Very common in meadows and waste places. *Widdington*

✓ LEONTODON NUDICAULE, Banks and Soland. (L.
HIRTUS, L., THRINCIA HIRTA, Roth.) HAWKSBIT.
Local in its distribution. Biddulph† (Painter, 31, 88,
1897); Bagnall†, Wolstanton Marsh, Barlaston† (Garner,
398); Morridge, Swynnerton, near Whitmore, Ramshorn.

✓ L. HISPIDUS, L. (APARGIA HISPIDA, Willd.) ROUGH
HAWKSBIT.
Common in meadows, canal banks and the roadside.

✓ L. AUTUMNALIS, L. (APARGIA AUTUMNALIS, Willd.)
HAWKSBIT. *Widdington*
Common in pasture land, canal banks and waste places.

✓ TARAXACUM OFFICINALE, Weber. (LEONTODON
TARAXACUM, L.) DANDELION.
Common in meadows, pasture land, roadsides and waste
places.

✓ T. ERYTHROSPERMUM, Andrz. DANDELION.
Uttoxeter (Bagnall, 38).

- ✓ T. PALUSTRE, DC. MARSH DANDELION.
Horton†, Knypersley Mill, near Newpool Farm (Painter, 31, 88, 1897). Trentham, Churnet valley, near Leek.
- ✓ LACTUCA VIROSA, L. WILD LETTUCE. Alien.
Common about Tutbury (Garner, 397); near Chartley Castle (Shaw, 105); once found near Walton railway station (Brown, 264).
- ✓ L. MURALIS, Gært. (PRENANTHES MURALIS, L.) WALL LETTUCE. *Slam*
Occurs occasionally on old walls and sometimes on hedge banks. Knypersley†, Rudyard† (Painter, 31, 88, 1897); Hilderstone† (Barns, 46, 118, 1912); Denstone† (Edwards, 11, 53, 1877); Alton†, Oakamoor†, Fort, Coton-in-Clay (Bagnall, 38); Winhill, Tutbury (Brown 264); Consall, Dovedale, Dane valley, Leek, Ellastone. *Oxhill Rd*
- ✓ SONCHUS OLERACEUS, L. SOW THISTLE. Alien. *Handsworth*
Fairly common on canal banks, waste places and in fields. *Wednesbury*
- ✓ S. ASPER, Hill. ROUGH SOW THISTLE. Alien.
Common on canal banks and waste places.
- ✓ S. ARVENSIS, L. CORN SOW THISTLE. Alien. *Handsworth*
Frequent in cultivated fields and often by canal sides. *Handsworth*
Barlaston, Stanton, Rushton, Biddulph, Denstone, Hanford, Stone, Ashley, near Leek, Dilhorne, Stafford, Madeley.
- S. PALUSTRIS, L. MARSH SOW THISTLE.
Stafford (Garner, 397); Bagnall (39) considers this the large marsh form of S. ARVENSIS, which is abundant at Kingston Pool.
- ✓ TRAGOPOGON PRATENSIS, L. (T. MAJOR, Garner). GOATSBEARD. *Kingsford (roadsides n Kingsford) 1946*
Lime-kilns near Caudon Place, Stoke (Garner, 397); not there now. Stafford (Douglas in Bagnall, 39).
- ✓ T. MINUS, Mill. GOATSBEARD.
Common in pasture, waste places, roadsides and railway embankments. *Oxhill lane*

CAMPANULACEÆ.

- ✓ JASIONE MONTANA, L. SHEEP'S SCABIOUS.
 Garner (354) gives it as common. This is hardly accurate, as it is restricted in its distribution to light soils and heathy places. Biddulph†, Horton†, Rushton† (Painter, 31, 88, 1897); Longnor† (Yates, 25, 36, 1891); between Alton† and Denstone (Brett, 37, 95, 1903); Cheadle† (Carter in Bagnall, 39); Madeley (Daltry in lit.); Cheddleton, near Wall Grange.
- ✓ Ext CAMPANULA GLOMERATA, L. CLUSTERED BELL FLOWER.
 The record "Denstone" (Edwards, 11, 53, 1877), I think is an error. Its natural habitats are chalky pastures. I have failed to find it in the area.
- ✓ C. TRACHELIUM, L. NETTLED LEAVED BELLFLOWER.
Manyfold† (1, 6, 1866); Yoxall, Burton† (Moore, 31, 88, 1897); Cheadle (Heywood, 46, 94, 1912); Houndshill, Hamps valley† (Garner, 354); near Chartley Moss† (Bagnall, 39); Marchington (Brown, 266); Barton (Garner, M.S. notes in his own interleaved copy of the *Natural History of the County of Stafford*).
- ✓ C. LATIFOLIA, L. THROATWORT.
 Near Croxden Abbey† (Shaw, 101); Uttoxeter† (Parsons in Bagnall, 39); Cheadle (Carter in Bagnall, 39); Stoke, Darlaston†, Barton† (Garner, 354); Needwood Forest† (Brown, 266); Stafford (Fraser in Bagnall, 39); Manyfold† (1, 6, 1866); Waterfall† (12, 32, 1878); Ilam†, Oakamoor†, Ellaston† (Bagnall, 39); Tean, Consall, Kidsrove, Dovedale. A white variety occurs at Darlaston near Stone† (Foster in Shaw, 101). Wellon Hill
- ✓ C. ROTUNDIFOLIA, L. HAREBELL.
 Common on light soils and heathy places. Plants having white flowers are found occasionally. Newton Rd
- ✓ C. PATULA, L. SPREADING BELLFLOWER.
 Burton (Garner, 354).

Vaccinium x intermedium (Brindley Valley (N of Hednesford))

- ✓ **LEGOUSIA HYBRIDA**, Delarb. (SPECULARIA HYBRIDA, DC., CAMPANULA HYBRIDA, L.) CORN VENUS' LOOKING GLASS. Alien.
In turnip field near Stafford (Garner, 354). Found at Barlaston in 1891 (Litchfield, 40, 73, 1906).

VACCINIACEÆ.

- ✓ **VACCINIUM VITIS-IDÆA**, L. COWBERRY.
Fairly common on heaths. Bagnall† (Garner, 13, 89, 1879); Chartley Moss† (Tylecote, 20, 38, 1886); Bidulph†, Rudyard† (Painter, 31, 88, 1897); Trough Stone and Wickenstone Rock (Painter in Bagnall, 39); Oakmoor† (Brown, 266); Maer†, Belmont† (Shaw, 115); Roaches near Leek† (Parsons in Bagnall, 40); Cresswell's piece near Caverswall.
- ✓ **V. MYRTILLUS**, L. BILBERRY. *Star Wood*
Common in woods, on sandy or gritty soils and on heaths.
- ✓ **x. VITIS-IDÆA**. (V. INTERMEDIUM, Ruthe.)
Maer Woods (Garner, 367). *5. 7. 1871*
- ✓ **OXYCOCCUS QUADRIPETALA**, Gilib. (O. PALUSTRIS, Pers., VACCINIUM OXYCOCCUS, L., SCHOLLERA OXYCOCCUS, Roth.) CRANBERRY.
Wetley Moor† (Garner, 13, 89, 1879); between Endon and Wall Grange station† (Audley, 27, 64, 1893); Wickenstone Rocks (Painter, 31, 88, 1897); Chartley Moss† (Tylecote, 20, 38, 1886); near Cheadle (Carter in Bagnall, 40); Bishop's Woods† (With., 366); Madeley† (Daltry in lit.). Whitmore.

ERICACEÆ.

- ✓ **ANDROMEDA POLIFOLIA**, L. MARSH ANDROMEDA.
Chartley Moss † (Bagot in With., 389), there in 1897. Whitmore†, Craddock's Moss† (20, 38, 1886).
- ✓ **CALLUNA VULGARIS**, Hull. LING OR HEATHER.
Common on heaths. Sometimes found invading woods on sandy soils.

- ✓ ERICA TETRALIX, L. CROSS LEAVED HEATH.
Common on damp heaths. Hilderstone, Lask Edge, Biddulph, Knypersley, Rudyard, Gunn, Wetley Moor, Consall, Stafford, Manyfold, Madeley.
- ✓ E. CINEREA, L. HEATHER.
Common on dry heaths.
- ✓ PYROLA ROTUNDIFOLIA, L. ROUND LEAVED WINTER GREEN.
Wood near Cotton Hall (Dickenson in Bagnall, 40); Belmont (Sneyd in Shaw, 111); Chartley Moss† (Bagot in With., 391); near Stafford (Douglas in Bagnall, 40).
- ✓ P. MEDIA, Sw. WINTER GREEN.
Dimminsdale† (Audley, 34, 72, 1900); near Ramshorn† (50, 134, 1916).
- ✓ P. MINOR, L. SMALL WINTER GREEN.
Near Cheadle, Oakamoor (Carter in Bagnall, 40); Cotton Hall, Belmont, Basford near Leek, Alton (Garner, 369); near Denstone (Goodall, 16, 79, 1882).

PRIMULACEÆ.

- ✓ HOTTONIA PALUSTRIS, L. WATER VIOLET.
Pool at Hartshill Stoke (Garner, 13, 89, 1879); not there now. Between Braunston and Burton (Shaw, ii., 7); Newcastle (Spark in Bagnall, 40); Barton (Hewgill in Garner, 352.). *Stafford*
- ✓ PRIMULA VULGARIS, Huds. (P. ACAULIS, L.) PRIM-ROSE.
Common on hedgebanks and in woods. Sometimes found on railway embankments. Grows on heather moor near Croxden (51, 109, 1917).
- ✓ VAR. CAULESCENS, Kock.
Probably Garner's records given as P. ELATIOR refer to this. Croxden†, Hollington†, Oakamoor (Garner, 352); Weaver Hills† (Carter in Bagnall, 41); Pyre Hill near Stone (Moore in Bagnall, 41); Hanchurch, near Beech, Stanton.

Veris vulgaris Okonoi (Dove Bank n^o Little Park)

✓ P. VERIS, L. COWSLIP.

Often found in fields and sometimes on railway embankments. Biddulph, Knypersley, Denstone, Yarlet, Hilderstone, Barlaston, Beech, near Stone, Oakamoor. A plant with red flowers at Pyre Hill near Stone (Moore, 31, 89, 1897).

✓ P. ELATIOR, Jacq. OXLIP.

This does not occur in our area. The record "Denstone" (Edwards, 11, 53, 1877) is an error.

✓ LYSIMACHIA VULGARIS, L. YELLOW LOOSESTRIFE. *Acacia Forest*

Rudyard Lake† (Painter, 31, 89, 1897); below Clayton (Garner, 13, 89, 1879); Copmere† (18, 33, 1884); Trentham† (Garner, 351); Barlaston, near Willowbridge.

✓ L. NUMMULARIA, L. CREEPING JENNY.

Eccleshall†, Buttermilk Hill, Sideway,† Burton†, *High road n^o 5*
 Curbro' Woods (Garner, 351); Alton†, Ramshorn† *Lower Jean*
 (Bagnall, 41); Trentham† (Garner, 13, 89, 1879); *Abbott's Bromley*
 Stafford† (Moore, 31, 89, 1897); between Uttoxeter and *Buch. wa*
 Marchington†, Huntley, Oakamoor† (Brett, 37, 95, 1903); *Castall (Stream*
 Barlaston, Cheddleton, Consall. *n^o Woodmill)*

✓ L. NEMORUM, L. YELLOW PIMPERNEL.

Fairly common in woods and shady places. Hilderstone, Chartley, Biddulph, Denstone, Manyfold valley, Dove-dale, Consall, near Wall Grange, Trentham, near Willowbridge, Madeley, Rudyard, Dane valley, Oakamoor, Alton.

✓ ANAGALLIS ARVENSIS, L. SCARLET PIMPERNEL. Alien.

Common in fields on light soils. Sometimes found in hedge banks and waste places. Pale pink variety near Alton (Brett, 37, 95, 1903).

✓ A. FEMINA, Mill. (A. CÆRULEA, Schreb.) BLUE PIMPERNEL. Alien.

Burton, but rare (Brown, 276); Oakamoor (Berrisford, 40, 75, 1906); Alton (Brett, 52, 121, 1918). Stanton.

✓ A. TENELLA, Murr. BOG PIMPERNEL.

Chartley Moss†, Burton (Garner, 351); Needwood Forest (With., 235); marshy ground Downs Banks Barlaston† (53, 98, 1919).

- ✓ CENTUNCULUS MINIMUS, L. CHAFFWEED.
On the Stafford road one mile from the town (Massey in M.S. notes by Garner in his interleaved own copy of the *Natural History of the County of Stafford*.)
- ✓ SAMOLUS VALERANDI, L. BROOKWEED.
Mott's Well near Smallwood Manor (Brown, 276).

OLEACEÆ.

- ✓ FRAXINUS EXCELSIOR, L. ASH.
Common except in dry sandy places.
- ✓ LIGUSTRUM VULGARE, L. PRIVET.
Forest banks Marchington (Bagnall, 41); "Wild in the valley of the river Hamps" (Garner, 340); planted in many places as a hedge.

APOCYNACEÆ.

- ✓ VINCA MAJOR, L. GREAT PERIWINKLE. Alien.
Occurs as an escape occasionally near country houses. Croxden Abbey (Goodall, 16, 79, 1882); Denstone† (Edwards, 11, 53, 1877); Chapel Chorlton, near Endon, near Rudyard.
- ✓ V. MINOR, L. PERIWINKLE. *Audley. Alsager*
Denstone† (Edwards, 11, 53, 1877); Hanford† (Garner, 13, 89, 1879); Aston near Pipe Gate† (Read, 41, 87, 1907); Oakamoor (Berrisford, 40, 73, 1906); Yarlet (Tylecote, 19, 27, 1885); near Biddulph Old Hall, Uttoxeter (Garner, 354); Rolleston (Brown, 267); New-castle Road to Longton (Grove in Shaw, 95); not there now. Madeley (Daltry in lit.).

GENTIANACEÆ.

- ✓ BLACKSTONIA PERFOLIATA, Huds. YELLOW WORT.
Near Betley†, Apedale, Maer Heath† (Garner, 365);

Heighley Castle with white flowers (Wainwright in Shaw, ii, 1); Cauldon Low (Goodall, 16, 79, 1882); Manyfold valley, Dovedale. *Church Eaton (Canal) Little Don*

✓ **CENTAURIUM UMBELLATUM**, Gilib. (ERYTHRÆA *Clayton*)
CENTAURIUM, Pers.) **CENTAURY**.

Garner (357) says "common in dry pastures." Although often met with it is not common now. Drive from Biddulph Grange to New Pool (Painter, 31, 89, 1897); Hoar Cross and Weeping Cross (Moore, 31, 89, 1897); Madeley† (Daltry, 51, 107, 1917); Shobnall (Brown, 267); Alton†, Weaver Hills† (Bagnall, 42); with white flowers at Heighley Castle (Spink in Garner, 357); near Stone, near Caverswall, Manyfold valley, near Oakamoor.

✓ **GENTIANA AMARELLA**, L. **AUTUMN GENTIAN**.

Garner (357) says "common in all hilly pastures"—not so common now. Cauldon quarries (1, 6, 1866); Thorncliffe near Leek† (Bennett, 47, 96, 1913); Oakamoor (Brown, 267); Weaver Hills, Morridge, Stanlowe near Endon. *Spitons Edge*

✓ **G. CAMPESTRIS**, L. **FIELD GENTIAN**.

Garner (357) gives this as "frequent with the above" This is not my experience. Thorny Edge, Bagnall (4, 5, 1870); near Weaver Hills (Carter in Bagnall, 42); Morridge, Swithamley, hills near Manyfold valley.

✓ **MENYANTHES TRIFOLIATA**, L. **BOG BEAN**.

Often bound in boggy places. Wood near Peakstone Road Alton (Brett, 35, 72, 1901); Oakamoor (Berrisford, 40, 74, 1906); Rudyard Lake† (41, 86, 1907); between Endon and Wall Grange† (Audley, 27, 64, 1893); Biddulph† (Painter, 31, 89, 1897); Copmere† (18, 33, 1884); Chartley Moss† (Tylecote, 20, 38, 1886); Cotton (Power in Bagnall, 42); Whiston (Carter in Bagnall, 42); near Burton (Brown, 268); Stanton† (50, 134, 1916); Madeley (Daltry in lit.); Warslow Common, Burnt Woods, Longsdon. *Biddulph (Biddulph Grange)*

✓ NYMPHOIDES PELTATUM, Rendle & Britton. (VILL-
ARSIA NYMPHEDIDES, Vent., LIMNANTHEMUM
PELTATUM, Gmel.). FRINGED WATERLILY. *Canal (Barton to Cullton) 1911*
Pool at Alton, introduced (Garner, 352).

POLEMONIACEÆ.

✓ POLEMONIUM CÆRULEUM, L. JACOB'S LADDER. *Alton field*
Wetton valley (Carter in Bagnall, 42); Thor's Cave, † *(Pleasland P.)*
Caverswall meadows, Ecton Hill, Dovedale, Needwood
Forest, † Glutton near Longnor † (Garner, 354); Oakamoor
(Berrisford, 40, 73, 1906); white variety at Froghall
(Brett, 41, 88, 1907); Quixhill Drive Alton (Brett, 35,
71, 1901); near Norbury.

BORAGINACEÆ.

✓ CYNOGLOSSUM OFFICINALE, L. HOUND'S TONGUE.
Betley, Madeley (Garner, 351); near Shelton lime kiln
(Garner, 13, 88, 1879), not there now.

✓ ASPERUGO PROCUMBENS, L. MADWORT. Alien.
Oakamoor (Berrisford, 40, 74, 1906); Rocester railway
embankment (Milford, 42, 86, 1908); once on waste
ground, Gipsy Lane Stoke.

✓ SYMPHYTUM OFFICINALE, L. COMFREY. *Balterley 1913*
Occurs generally as an escape from cultivation. March-
ington (Garner, 350); Burton (Shaw, 114); Stafford
(Moore, 31, 89, 1897); Dilhorne †, Keele † (29, 97, 1895);
Barlaston, near Ashley, Cheddleton, Bucknall.
VAR. PATENS, (Sibth.).
Occasional (Garner, 350); Biddulph (Painter, 31, 89,
1897); Madeley (Daltry in lit.)

✓ S. TUBEROSUM, L. TUBEROUS COMFREY. *Langton (W. stream on Beaudesert P.)*
Longnor, Wetton valley (Garner, 351).

✓ BORAGO OFFICINALIS, L. BORAGE. Alien.
Cheadle, Needwood Forest, Burton (Garner, 351);
garden weed at Barton (Brown, 268);

✓ ANCHUSA OFFICINALIS, L. ALKANET. Alien.
Chartley (41, 86, 1907); Denstone (Milford, 43, 103).

Cynophytum prostratum widespread in Staffs.

1909) ; Acton (Moore, **31**, 89, 1897) ; Oakamoor (Berrisford, **40**, 73, 1906).

- ✓ A. SEMPERVIRENS, L. ALKANET. Alien.
Acton (Moore, **31**, 89, 1897).

- ✓ LYCOPSIS ARVENSIS, L. ALKANET. Alien.
Occurs as weed in cornfields and sometimes in hedges. Stafford, Cresswell, Tean, Barlaston, Fenton Park, Dilhorne, Swynnerton, Manyfold valley.

- ✓ PULMONARIA ANGUSTIFOLIA, L. LUNGWORT. Alien.
Only as an escape from cultivation. Oakamoor (Berrisford, **40**, 73, 1906) ; Consall.

- ✓ P. OFFICINALIS, L. LUNGWORT. Alien.
Needwood Forest (Hewgill in Garner, 350) ; as an escape from cultivation at Consall.

- ✓ MYOSOTIS CÆSPITOSA, Sch. FORGET-ME-NOT.
Common in wet places.

- ✓ M. SCORPIOIDES, L. (M. PALUSTRIS, Hill.) FORGET-ME-NOT.
Common by stream sides and in ditches. Rudyard, Trentham, Stafford, Denstone, Dovedale, Manyfold valley, Willowbridge, Bucknall, near Leek, Wall Grange, Endon, Dilhorne, Madeley.

VAR. STRIGULOSA, (Reichb.).

Biddulph†, Lask Edge, Rudyard† (Painter, **31**, 90, 1897) ; Bucknall, Willowbridge.

- ✓ M. REPENS, G. and D. Don. FORGET-ME-NOT.
Horton (Painter, **31**, 90, 1897) ; Lask Edge (Painter, **26**, 103, 1892) ; Barlaston.

- ✓ M. SYLVATICA, Hoff. WOOD SCORPION GRASS.
Garner (351) says "Common in our woods." It is not so now. Needwood Forest (Nowers, **35**, 74, 1901) ; Manyfold valley†, Yarlet (Fraser in Bagnall, 43) ; Warslow† (Parsons in Bagnall, 43) ; Stafford† (Douglas in Bagnall, 43) ; Rolleston (Brown, 269) ; Musden Woods, Consall, Madeley.

- ✓ M. ARVENSIS, Hill. FIELD SCORPION GRASS.
Common in fields, waste places and sometimes in woods.
- ✓ VAR. UMBROSA, Bab.
Ramshorn†, Oakamoor†, Hanbury, Sudbury†, Chartley†
(Bagnall, 43); Barlaston, Consall, Trentham, Bucknall,
Swynnerton.
- ✓ M. COLLINA, Hoff. EARLY SCORPION GRASS.
Not rare on limestone (Garner, 351); Weaver Hills†
(Brown, 269); Manyfold valley, Dovedale, Waterhouses,
Cauldon Low, Consall.
- ✓ M. VERSICOLOR, Sm. SCORPION GRASS.
Common in dry sandy soil and waste places. Rushton,
Rudyard, Knypersley, Hanchurch, Barlaston, Swyn-
nerton, Whitmore, Ashley, Yarlet, Hilderstone, Stone.
- ✓ LITHOSPERNUM OFFICINALE, L. GROMWELL.
Tutbury Castle (Shaw, 107); walls of Alton Castle†,
Burton (Garner, 350); Croxden Abbey† (Bagnall, 43);
Oakamoor (Berrisford, 40, 73, 1906); Horningslow
(Brown, 269); near Cheadle (Carter in Bagnall, 43);
Stafford† (Garner, M.S. notes in his own interleaved
copy of the *Natural History of the County of Stafford*.)
- ✓ L. ARVENSE, L. GROMWELL. Alien.
Only occurs as a weed on cultivated ground or waste
places. Denstone (Milford, 40, 100, 1906); Oakamoor
(Berrisford, 40, 73, 1906); Wall Grange, near Leek.
- ✓ ECHIUUM VULGARE, L. VIPER'S BUGLOSS. Alien.
The records are for single specimens. Stafford (Shaw,
103); Stoke† (45, 108, 1911); Trentham Road (Garner,
13, 88, 1879); Oakamoor (Berrisford, 40, 73, 1906);
Madeley (Daltry in lit.)
- ✓ E. PLANTAGINEUM, L. BUGLOSS. Alien.
The record Trentham Road Stoke (Garner, 13, 89, 1879)
is probably an error. It occurs only in Jersey and
Cornwall.

CONVOLVULACEÆ

- ✓ CALYSTEGIA SEPIUM, Br. (VOLVULUS SEPIUM,
Junger). CONVOLVULUS OR BINDWEED. *Handsworth Cemetery (rare)*
Fairly common in hedges.
- C. silvatica (Kt) Frisch *Handsworth Cemetery (Common)*

Ext'

- ✓ CONVULVULUS ARVENSIS, L. SMALL CONVULVULUS or BINDWEED.
Fairly common in hedges and cornfields.
- ✓ CUSCUTA EUROPÆA, L. DODDER.
Garner (357) says "rare, but occurring occasionally." I have not found it in North Staffordshire. He found it at Uubberly in 1870 (M.S. notes in his own interleaved copy of the *Natural History of the County of Stafford*).
- ✓ C. EPITHYMUM, Murr. HEATH DODDER.
Cheadle (Heywood, 46, 94, 1912); Bucknall (Garner, 13, 88, 1879); Ramshorn† (Deacon, 51, 107, 1917).

SOLANACEÆ.

- ✓ SOLANUM DULCAMARA, L. WOODY NIGHTSHADE. *Willingworth Furnaces*
Common in hedges. *Oxhill R^d*
- ✓ S. NIGRUM, L. BLACK NIGHTSHADE. Alien.
Betley†, Burton (Garner, 353); Cheadle† (Masefield, 31, *Blymhill* 70, 1897); Oakamoor† (Berrisford, 40, 73, 1906); near Stafford; Froghall† (Smith, 58, 106, 1924); Stone (Clifford in M.S. notes in Garner's own interleaved copy of the *Natural History of the County of Stafford*); Madeley (Daltry in lit.). Weston.
- ✓ LYCIUM CHINENSE, Mill. TEA TREE. Alien.
Found occasionally in hedges. Near Sandon, Kidsgrove, Trentham.
- ✓ ATROPA BELLADONA, L. DEADLY NIGHTSHADE. *Casley (Hons Hill)*
Alton Castle grounds† (Shaw, 100); Tutbury Castle (Brown, 270).
- ✓ DATURA STAMONIUM, L. THORN APPLE. Alien. *W Bromwich*
Garden weed at Burton (Bagnall, 45); Stone (Stevens, 56, 110, 1922); once seen on waste ground at Bucknall and in Gipsy Lane Stoke.
- ✓ HYOSCYAMUS NIGER. HENBANE. Alien. *W Bromwich*
Single specimens only found in most cases. Tutbury Castle (Garner, 353); Mow Cop (Garner, *Supplement*, 36); Bucknall† (Audley, 46, 112, 1912); Burslem†

(Barrett, 45, 112, 1911); Cheadle (Masfield, 46, 94, 1912); Oakamoor (Berrisford, 40, 73, 1906); Gipsy Lane Stoke.

SCROPHULARIACEÆ.

✓ VERBASCUM THAPSUS, L. MULLEIN *Bethworthwood + Hanford*
Dovedale†, Manyfold† (47, 96, 1913); near Alton, Ramshorn† (Bagnall, 44); Sinai Park (Brown, 270); near Stafford (Douglas in Bagnall, 44); Kingsley (Stanway, 42, 87, 1908); Denstone (Edwards, 11, 53, 1877).

✓ V. LYCHNITIS, L. MULLEIN.

Burton (Garner, 353). *Whittington Common*

✓ *Cymbalaria muralis* (Gaertn.) Mey. + Scherb
✓ LINARIA CYMBALARIA, Mill. IVY LEAVED TOADFLAX.
Alien.

Gutter Lane Biddulph† (Painter, 31, 90, 1897); Stafford† (Moore, 31, 90, 1897); near Longnor† (Yates, 24, 36, 1890); Hilderstone† (Barns, 46, 118, 1912); Stanton† (Audley, 35, 68, 1901); Burton (Brown, 270); Cotton†, Oakamoor†, Dimmingdale† (Bagnall, 44); Trentham, Ellaston, Tean, Ilam, Barlaston.

Kickxia ✓ L. ELATINE, Mill. TOADFLAX. Alien.

Near Stoke (Garner, 18, 33, 1884); not there now.

Kickxia ✓ L. SPURIA, Mill. FLUELLEN. Alien.

Alton (Robinson, 37, 95, 1903); I have failed to find it there.

✓ L. VULGARIS, Mill. YELLOW TOADFLAX. Alien. *Wednesbury*
Common on waste ground, railway embankments and pit mounds.

Minors (Stange)
Chenopodium ✓ L. MINOR, Desf. Alien. *Burton Druce 62.127.1928*
On railway near Consall station† (Blake, 54, 108, 1920).

✓ ANTIRRHINUM MAJUS, L. SNAPDRAGON. Alien.
Burton Abbey walls (Garner, 386).

✓ A. ORONTIUM, L. WEASEL'S SNOUT. Alien.
Burton (Garner, 386).

✓ SCROPHULARIA AQUATICA, L. WATER FIGWORT.
Frequent on the edges of ponds, streams, etc. Hilderstone, Oakamoor, Trentham, Denstone, Alton, Stafford, Willowbridge, near Endon, near Leek.

✓ S. ALATA, Gilib. (S. UMBROSA, Dum.) FIGWORT.
Stafford (*Top. Bot.*, 295).

✓ S. NODOSA, L. FIGWORT. *Newton R^d*
Common in woods and damp shady places.

✓ MIMULUS LANGSDORFFI, Donn. MONKEY MUSK. Alien
Near Alton† (Yates, 25, 12, 1891); Ramshorn†, Weaver Hills†, Star Wood†, Oakamoor† (Bagnall, 44); Dovedale, Manyfold, Norton-in-the-Moors, Stanton, Wootton, Moddershall.

✓ LIMOSELLA AQUATICA, L. MUDWORT.
Rudyard Lake† (Painter, 28, 103, 1894); Knypersley reservoir (Painter, 31, 90, 1897). *Stafford (Pickard Co. 153 1926)*

✓ DIGITALIS PURPUREA, L. FOXGLOVE.
Common, especially in light, sandy soils. With white flowers at Bagnall (Garner, 386). *Newton R^d*

✓ VERONICA HEDERÆFOLIA, L. IVY LEAVED SPEEDWELL.
Alien.

Very common as a weed in cultivated ground, especially on light soils. Often found on hedge banks.

✓ V. DIDYMA, Ten. (V. POLITA, Fr.) GREY FIELD SPEEDWELL. Alien.

Near Alton Towers† (Bagnall, 44); cultivated field Burton (Brown, 272); Madeley (Daltry in lit.); turnip field near Swynnerton. *Handsworth*

✓ V. AGRESTIS, L. FIELD SPEEDWELL. Alien. *Very local*
A [very common] weed in fields and gardens, and also found on waste ground. *Behind Welton Mill*

✓ V. TOURNEFORTII, C. Gmel. (V. BUXBAUMII, Ten.) FIELD SPEEDWELL. Alien. *Handsworth*
Common as a weed in fields.

✓ V. TRIPHYLLOS, L. SPEEDWELL.
The record "Oakamoor" (Berrisford, 40, 74, 1906) is probably an error.

Knosella aquatica (L.) Stafford 1926 Pottall Reservoir

- ✓ V. ARVENSIS, L. WALL SPEEDWELL. Alien.
Common in dry sandy places.
- ✓ V. SERPYLLIFOLIA, L. THYME LEAVED SPEEDWELL.
Common in fields and damp places.
- ✓ V. OFFICINALIS, L. COMMON SPEEDWELL.
Common in banks and heathy places.
- ✓ V. CHAMÆDRYS, L. GERMANDER SPEEDWELL.
Very common in hedge banks.
- ✓ V. MONTANA, L. MOUNTAIN SPEEDWELL. *Wood by river above Wotton Mill*
Fairly common in damp woods. Cheadle, Ramshorn, Oakamoor, Consall, Alton, Biddulph, Hanford, Denstone, Trentham, Willowbridge, near Swithamley, Tittensor, Madeley.
- ✓ V. SCUTELLATA, L. MARSH SPEEDWELL.
Barton, Endon, Calf Heath, Whitmore† (Garner, 340); north end of Rudyard Lake† (Painter, 31, 90, 1897); Needwood Forest† (Brown, 271); near Cheadle (Carter in Bagnall, 45); Madeley (Daltry in lit.).
- ✓ V. ANAGALLIS-AQUATICA, L. WATER SPEEDWELL.
Stafford (Moore, 31, 91, 1897); Copmere† (18, 33, 1884); Denstone (Edwards, 11, 53, 1877); Dovedale, Manyfold valley. *V. aquatica (Dovedale) and var. diversicata Dovedale*
- ✓ V. BECCABUNGA, L. BROOK LIME.
Common at the edges of brooks, in ditches and wet places.
- ✓ EUPHRASIA OFFICINALIS, L. EYEBRIGHT.
Fairly frequent in pasture and heathy ground. Biddulph, Hilderstone, Froghall, Cauldon, Oakamoor, Trentham, Swithamley, Warslow, Alton, Ashley, Willowbridge, Consall, Caverswall, Dilhorne, Madeley.
- ✓ *E. brevipila* *Mortimer, Bennet BEC 5. 670. 1919*
BARTSIA ODONTITES, Huds. BARTSIA.
Fairly frequent in fields and on waste ground. Cresswell, Horton, Hilderstone, Tean, near Croxden, Hanchurch, Trentham, near Stone, Swithamley, Madeley. *near Stone*
- ✓ VAR. SEROTINA, (Dum.).
Road to Sudbury, Chartley (Bagnall, 45).

Euphrasia borealis Stanton (abundant in meadow)

E. brevipila Betw Winkhill & Cotton House Spinton 1945, Mortimer

E. brevipila x *remota* ditto

E. remota Betw Silverdale & Coct Hay (Newcastle) Broughton (Reservoir bank)

E. remota var. *off.* F. 19. 19. 19. 19. 19.

✓ **PEDICULARIS PALUSTRIS, L. MARSH LOUSEWORT.**

Betley, Stoke meadows†, Kingsley (Garner, 387);
Chartley Moss† (Tylecote, 20, 38, 1886); Denstone
(Edwards, 11, 53, 1877); Consall† (46, 96, 1912); near
Alton† (Bagnall, 45); marshy ground Downs Bank
Barlaston.

✓ **P. SYLVATICA, L. RED RATTLE or LOUSEWORT.**

Common on moist, heathy places.

RHINANTHUS MAJOR, Ehrh. GREAT YELLOW RATTLE.

Garner (385) says "not uncommon on peaty soils." It is
rare now. Wetley, Ashley (Garner, 385); near Stafford
(Douglas, *Top. Bot.*, 292).

✓ **R. CRISTA-GALLI, L. YELLOW RATTLE.** = *minor* Dartmouth Avenue Newcastle (1947)

Very common in meadows and pasture land.

✓ **MELAMPYRUM PRATENSE, L. COW WHEAT.** *Checkley (Muddale W)*

Fairly common in woods and on heaths. Hilderstone,
Biddulph, Manyfold, Swithamley, Oakamoor, Bucknall,
Willowbridge, near Mow Cop. *Cheadle (Shrapwood)*
Head Hollensclough
Green Washgate

✓ **VAR. MONTANUM, Johnst.** *forma lanceolatum Spreng.*
Congleton Edge and Wickenstone Rocks (Painter, 31,
91, 1897). *madeley (Duce) BEC. 8 411. 1927*

OROBANCHACEÆ.

✓ **OROBANCHE MAJOR, L. BROOMRAPE.**

Heighley Castle (Garner, 387); Cheadle (Blagg, 25, 11,
1891); Keele† (38, 108, 1904); near Stafford (Douglas in
Bagnall, 45).

✓ **O. ELATIOR, Sutton. BROOMRAPE.**

Alton (Carter in Garner, 382); Cheadle (Carter in Bagnall,
45).

✓ **LATHRÆA SQUAMARIA, L. TOOTHWORT.** *Waterhouses (by river)*

Woods below Castern on both sides of the river†, Cauldon
Lane (Carter in Garner, 386); Manyfold valley† (Fraser
in Bagnall, 46); Dydon Woods† (44, 131, 1910); Cheadle
(Blagg, 24, 12, 1890); Dovedale† (Audley, 34, 73, 1900);
Stanton† (37, 141, 1903); near Weaver Hills (Masefield,
38, 61, 1904). *Yoxall (Elliott) 59.157. 1925*

LENTIBULARIACEÆ.

- ✓ UTRICULARIA VULGARIS, L. BLADDERWORT.
Betley, Craddock's Moss, Maer, Whitmore (Garner, 341);
Woodford near Uttoxeter (Brown, 278); Catholme
Meadows (Brown, 278).
- ✓ U. MINOR, BLADDERWORT.
Craddock's Moss (Garner, 341); Betley (Acland in Purt.,
iii., 5.); Chartley Moss (Bagot in With., 19).
- ✓ PINGUICULA VULGARIS, L. BUTTERWORT.
At the foot of Axe Edge (Garner, 341).

VERBENACEÆ.

- ✓ VERBENA OFFICINALIS, L. VERVAIN. Alien.
Tutbury Castle (Garner, 387); near Stafford (Douglas
in Bagnall, 46); Oakamoor (Berrisford, 40, 74, 1906)

LABIATÆ.

- ✓ MENTHA ROTUNDIFOLIA, Huds. APPLE MINT. Alien.
Near Sudbury† (51, 108, 1917); between Froghall and
Cheadle† (54, 108, 1920).
- ✓ M. LONGIFOLIA, Huds. (M. SYLVESTRIS, L., M.
VILLOSA, Sole.) HORSE MINT. Alien. *(Petones (Petones Edge))*
Cheadle (Shaw, 109).
- ✓ M. SPICATA, L. SPEAR MINT. Alien.
Heighley Castle bank (Garner, 383); near Needwood
Forest.
- ✓ M. PIPERITA, L. PEPPER MINT. Alien.
Endon† (Garner, M.S. notes in his own interleaved copy *Weston on Trent*
of the *Natural History of the County of Stafford*);
Boothem, Clayton† (Garner, 383); near Marchington.

M. alopecuroides (L.) Jacq. (Oakamoor)

✓ *M. aquatica* × *arvensis* var. *ovalifolia* Briq. [*M. verticillata* var. *ovalifolia*
Dovedale Druce 62, 127, 1928
var. *subflabra* (Baker) Stafford (Druce 61, 103, 27)
var. *acutifolia* (Sm) Oakamoor
LABIATÆ.

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✓ **M. AQUATICA, L.** WATER MINT.

VAR. **HIRSUTA**, Huds.

Very common by canals, rivers and ditches.

VAR. **CITRATA**, Ehrh.

Barton under Needwood (Trimmer in Bagnall, 46);
Wichnor (Brown, 272).

✓ **x. ARVENSIS.** (**M. SATIVA, L.**)

Needwood (Bowers, 35, 74, 1901); Hilderstone† (Barns,
46, 118, 1912); Horton† (Painter in Bagnall, 46). Bar-
laston.

✓ **M. RUBRA, Sm.** RED MINT.

Onecote (Garner, 383).

✓ **M. ARVENSIS, L.** FIELD MINT. Alien.

Common in fields.

✓ **M. PULEGIUM, L.** PENNY ROYAL.

Craddock's Moss (Garner, 383).

✓ **LYCOPUS EUROPÆUS, L.** GIPSY WORT.

Fairly common by canals and in ditches. Marchington, ^{Wednesbury}
Knypersley, Cheddleton, Wall Grange, Endon, Kids-
grove, Barlaston, Trentham, Consall, Stoke, Madeley.

✓ **ORIGANUM VULGARE, L.** MARJORAM.

Frequent on limestone in the Manyfold valley and Dove-
dale. Heighley Castle, Croxden Abbey, Tutbury
(Garner, 385); Weaver Hills†, near Ilam† (Bagnall, 47).

✓ **THYMUS SERPYLLUM, L.** THYME.

Common in the Manyfold valley and Dovedale, and on
the Weaver Hills.

✓ **CLINOPODIUM VULGARE, L.** (**CALAMINTHA CLINO-
PODIUM, Spenn.**) WILD BASIL.

Near Stafford (Douglas in Bagnall, 47); Chartley†
(Bagnall, 47); Manyfold valley.

✓ **CALAMINTHA ACINOS, Clairv.** (**C. ARVENSIS, Lam.**)
BASIL THYME.

Beeston Tor† (Audley, 58, 106, 1924); Manyfold valley†, ^{Wotton Hill}
Dovedale† (Fraser in Bagnall, 47); near Stafford (Doug-
las in Bagnall, 47); Rocester (Milford, 42, 86, 1908); with
white flowers at Longnor† (Yates, 25, 12, 1891).

- ✓ C. MONTANA, Lam. (C. OFFICINALIS, Moench.) CALAMINT.
Heighley Castle†, Tutbury (Garner, 385); near Stafford† (Douglas in Bagnall, 47); Manyfold valley, Dovedale.
- ✓ SALVIA VERBENACA, L. CLARY.
Among ruins of Tutbury Castle (Shaw, 112); once seen near Endon in 1914†; Whitmore (Ball in Garner's M.S. notes in his own interleaved copy of the *Natural History of the County of Stafford*).
- ✓ NEPETA CATARIA, L. CAT MINT.
Heighley Castle†, Croxden (Garner, 384); Tutbury (Brown, 274); near Stafford† (Douglas in Bagnall, 47); Dovedale.
- ✓ N. HEDERACEA, Trev. (N. GLECHOMA, Benth.) GROUND IVY.
Common on hedge banks and in woods.
VAR. HIRSUTA, Benth.
Uttoxeter, Marchington (Bagnall, 47).
- ✓ SCUTELLARIA GALERICULATA, L. SKULL CAP.
Fairly common by rivers and on canal sides. Rudyard Lake, Knypersley, Trentham, Copmere, Barlaston, Wall Grange, Endon, Cheddleton, Stoke. Madeley.
- ✓ S. MINOR, Huds. LESSER SKULL CAP.
Consall (Masefield, 37, 95, 1903); Swynnerton (Garner, 385).
- ✓ PRUNELLA VULGARIS, L. SELF HEAL.
Common in pastures and on waste land.
- ✓ STACHYS OFFICINALIS, Trev. (S. BETONICA, Benth., BETONICA OFFICINALIS, L.) WOOD BETONY.
Common in woods and copses and sometimes on hedge banks.
- ✓ S. PALUSTRIS, L. MARSH WOUNDWORT. *Plan (by several feet of E)*
Common by rivers, canals and in damp ditches and often in wet fields.
- ✓ S. SYLVATICA, L. HEDGE WOUNDWORT. *Pelvic form (Wetton Hill)*
Common in hedges and shady places.
- ✓ *S. palustris* x *Sylvatica* = *S. ambigua* Sm.
Common (Garner 384), Manyfold Valley (Cobbe 66. 156 1926)

- ✓ S. ARVENSIS, L. FIELD WOUND WORT. Alien. *W. Bromwich (cornfield)*
Common as a weed, particularly in cornfields.
- Ext^t* S. ANNUA, L. Alien.
The only record is near Cheadle, 1839 (Carter in Bagnall, 47). This weed is only found occasionally in England.
- ✓ GALEOPSIS LADANUM, L. (G. ANGUSTIFOLIA, Ehrh.)
HEMP NETTLE. Alien.
In a bean field between Stone and Stafford, 1839 and 1841. Rocks in Dovedale (Garner, 384.)
- Ext^t* ✓ G. DUBIA, Leers. HEMP NETTLE. Alien.
Hedges, Stoke (Garner, 13, 89, 1879). Not there now.
- ✓ G. SPECIOSA, Mill. (G. VERSICOLOR, Curt.) HEMP NETTLE. Alien. *Bets Norton Green & Knipersley Pools, Newcastle.*
Appears occasionally as a weed in cornfields. Draycote (Carter in Bagnall, 48); Stafford† (Douglas in Bagnall, 48); Burton (Brown, 274); Stoke (Garner, 13, 89, 1879); Cheadle (Masefield, 35, 68, 1901). Near Ashley; Barlaston; Dilhorne; Madeley.
- ✓ G. TETRAHIT, L. HEMP NETTLE.
Common on waste places and as a weed in cultivated land. *Handsworth*
- Ext^t* ✓ LEONURUS CARDIACA, L. MOTHER WORT. Alien.
Once seen near the canal at Trentham. Not there now.
- ✓ LAMIUM AMPLEXICAULE, L. Alien.
Only occurs as a weed or on waste ground. Betley (Garner, 384); Cotonfield, Stafford† (Moore, 31, 91, 1897); Denstone (Edwards, 11, 53, 1877); Burton (Brown, 274); Madeley (Daltry in lit.). Ashley; Cheddleton; Barlaston.
- ✓ L. HYBRIDUM, Vill. RED DEAD NETTLE. Alien.
Stoke (Garner, 384); near Stafford (Douglas in Bagnall, 48).
- ✓ L. PURPUREUM, L. RED DEAD NETTLE. Alien.
Common on waste places and cultivated ground.
- ✓ L. MACULATUM, L. LARGE RED DEAD NETTLE. Alien.
Occasionally found in hedges and on waste ground near gardens. Rushton Spencer (Painter, 31, 91, 1897).

Naturalized in shrubberies, Burton (Brown, 274).
Endon; near Ashley; Barlaston; Bucknall; Caverswall;
near Cheadle.

- ✓ L. ALBUM, L. WHITE DEAD NETTLE. Alien.
Common on canal banks, road sides, waste places and
hedge banks. For an account of the origin of Dead
Nettles in Britain see *Jour. Bot.*, **40**, 360, 1902.
- ✓ L. GALEOBDOLOON, Crantz. YELLOW ARCHANGEL, OR DEAD
NETTLE.
General in woods and sometimes in hedges. Biddulph;
Stafford; Denstone; Manyfold Valley; Alton;
Chartley; Madeley; Consall.
- ✓ BALLOTA NIGRA, L. BLACK HOREHOUND. Alien.
Fairly common in hedgebanks and waste places. Tut-
bury; Oakamoor; Alton; Hilderstone; Madeley; Stone;
Caverswall; Ashley.
- ✓ TEUCRIUM SCORODONIA, L. WOOD SAGE.
Very common on heathy places and in woods and hedges
on sand or limestone. *Oxhell Road*
- ✓ AJUGA REPTANS, L. BUGLE.
Very common in woods, hedgebanks and pasture land.

PLANTAGINACEÆ.

- ✓ PLANTAGO MAJOR, L. PLANTAIN.
Very common in pastures and roadsides and on waste
ground.
VAR. INTERMEDIA, (Gilib). Biddulph, Rudyard,
Knypersley (Painter, **26**, 103, 1892).
- ✓ P. MEDIA, L. HOARY PLANTAIN.
Common on grassland on limestone. Manyfold Valley;
Dovedale; Weaver Hills; near Froghall; Caudon.
- ✓ P. LANCEOLATA, L. RIBWORT.
Very common on pasture land, roadsides and waste
places.
✓ VAR. SPHÆROSTACHYA, Röhl.
Tittensor† (**51**, 109, 1917).

PLANTAGINACEÆ—ILLECEBRACEÆ—CHENOPODIACEÆ 89

- ✓ P. CORONOPUS, L. PLANTAIN.
Near Cheadle (Carter in Bagnall, 48); Ramshorn†
(Bagnall, 48); Trentham (Garner, 349).
- ✓ LITTORELLA UNIFLORA, (L.)^(L) Aschers. (L. JUNCEA, Berg.,
L. LACUSTRIS, L.) SHOREWEED.
Rudyard Lake†, Trentham Lake† (Garner, 406); Kny-
persley Reservoir† (Painter, 31, 92, 1897).

ILLECEBRACEÆ.

- ✓ SCLERANTHUS ANNUUS, L. KNAWEL.
Occasionally found in fields or on waste ground. Bid-
dulph† (Painter, 31, 92, 1897). Barlaston; Ashley;
Madeley; Broughton; near Bishop's Woods; Cheddle-
ton; Tittensor; Heighley Castle.

CHENOPODIACEÆ.

- ✓ CHENOPODIUM POLYSPERMUM, L. *newton RP*
Anslow (Brown, 277).
- ✓ C. VULVARIA, L. (C. OLIDIUM, Curt.) STINKING GOOSE-
FOOT. Alien.
Between Burton and Branston (Brown, 276); Oakamoor
(Berrisford, 40, 74, 1906).
- ✓ C. ALBUM, L. GOOSEFOOT. Alien.
Common as weed in cultivated land and on waste land.
- ✓ VAR. VIRIDE, (L).
Madeley (Daltry in lit.); Ashley; Barlaston; Cheddleton;
Longton.
- ✓ VAR. PAGANUM, (Reich). = *viridescens*
Madeley (Daltry in lit.); Bucknall; Trentham; Bar-
laston; Consall.
- ✓ C. MURALE, L. GOOSEFOOT. Alien.
Oakamoor (Berrisford, 40, 73, 1906) *Burton (Druce 62.127. 1928)*
- ✓ C. URBICUM, L. GOOSEFOOT. Alien.
Oakamoor (Berrisford, 40, 73, 1906); Hilderstone (Barns,
46, 118, 1912).

C. hybridum Dudley. Miles Green

- ✓ C. RUBRUM, L.
Stoke (Garner, M.S. notes in his own interleaved copy of the *Natural History of the County of Stafford*).
- ✓ C. GLAUCUM, L. Alien.
Rocester (Dawson, 60, 156, 1926). *Burton (Druce 62.127 1928)*
- ✓ C. BONUS-HENRICUS, L. GOOD KING HENRY. Alien.
Found in hedges and on waste ground near farms and cottages. Rudyard† (Painter, 31, 92, 1897); Stafford† (Moore, 31, 92, 1897); Stoke (Garner, 360); Manyfold† (12, 33, 1878); Roches (17, 75, 1883); Tutbury† (Bagnall, 49); Swynnerton; near Leek. *Walton*
- ✓ ATRIPLEX PATULA, L. ORACH. Alien.
Common on cultivated soil and waste land. *Handsworth*
- ✓ VAR. ANGUSTIFOLIA, (Sm.)
Near Knypersley Hall (Painter, 31, 92, 1897); Barlaston; Dilhorne; Cheadle; Bucknall.
- ✓ A. HASTATA, L. ORACH. Alien. *Var. bracteata (Wester) Burton. Druce BEC 8.415.1927*
Common as a weed on cultivated ground. Common on cinder tip, Childer Play† (Painter, 31, 92, 1897); Burton (Brown, 277).
- ✓ A. PORTULACOIDES, L. SEA PURSLANE.
The record Oakamoor (Berrisford, 40, 74, 1906) is probably an error as this plant is found on marshes near the sea.

POLYGONACEÆ.

- ✓ POLYGONUM CONVULVULUS, L. BLACK BINDWEED.
Common in cornfields and on cultivated land. *Handsworth*
- ✓ P. AVICULARE, L. KNOT GRASS. *Handsworth*
Common in fields and waste places.
- ✓ P. HYDROPIPER, L. PEPPERWORT. *Old Forge Pool*
Common in wet places.
- ✓ P. MINUS, Huds. Persicaria.
Wolstanton (Garner, 368); Burton, Walton End, Ingleby (Brown, 278).

P. Seeboldii Endon 1903

Rumex conglomeratus x *patientia* Hybrid with parents. 1944

POLYGONACEÆ

- ✓ P. MITE, Schrank.
Oakamoor (Berrisford, 40, 74, 1906); Hilderstone†
(Barns, 46, 117, 1912).
- ✓ P. PERSICARIA, L. PERSICARIA.
Occurs abundantly on waste ground and as a weed on *Handsworth*
cultivated land.
- ✓ P. LAPATHIFOLIUM, PERSICARIA. *Handsworth*
Fairly common on cultivated land.
- ✓ P. AMPHIBIUM, L. WATER PERSICARIA.
Frequent in pools and damp fields.
- ✓ VAR. TERRESTRE, Leers.
Madeley (Daltry in lit.).
- ✓ P. BISTORTA, L. BISTORT.
Frequent in damp meadows. *Starwood*
- ✓ FAGOPYRUM SAGITTATUM, Gilib. (F. ESCULENTUM,
Moench.) BUCKWHEAT. Alien. *High One Wood*
Cheadle (Carter in Bagnall, 49).
- ✓ RUMEX CONGLOMERATUS, Murr. DOCK.
Common in damp meadows and ditches.
- ✓ R. SANGUINEUS, L. BLOOD DOCK.
Cheadle (Shaw, 112); Denstone (Edwards, 11, 54, 1877).
Garner (365) says "not rare". It is so now.
- ✓ VAR. VIRIDIS, (Sibth.).
Knypersley (Painter, 31, 92, 1897). *Rudyard*
- ✓ R. MARITIMUS, L. GOLDEN DOCK. *Enville (pool S of Highgate Common) 1945*
Near Stafford (Douglas in Bagnall, 49); Horninglow,
(Brown, 277); Branston (Nowers in Bagnall, 49).
- ✓ *Church Eaton (pool S of C. E. + Ince)*
R. LIMOSUS, Thuill. (R. PALUSTRIS, Sm.) MARSH DOCK.
Stafford, Burton (Garner, 365).
- ✓ R. PULCHER, L. FIDDLE DOCK. Alien.
Stoke (Garner, 365); Cheadle (Shaw, 112); Stafford†
(Douglas in Bagnall, 50).
- ✓ R. OBTUSIFOLIUS, L. DOCK.
Common in ditches and waste places.
VAR. SYLVESTRIS, (Wallr.).
Rolleston (Bloxam in Bagnall, 50).

✓ R. CRISPUS, L. DOCK.

Common in ditches and waste places.

✓ X OBTUSIFOLIUS (R. ACUTUS, L.)

Common.

24 ✓ R. AQUATICUS, L. (R. LONGIFOLIUS, DC., R. DOMESTICUS, Hartm.)

I think the only record we have, Oakamoor (Berrisford, 40, 74, 1906) is an error.

✓ R. HYDROLAPATHUM, Huds. WATER DOCK.

Common in pools and canals.

✓ R. ALPINUS, L. MONK'S RHUBARB. Alien. *Spalton, Redon Historical Edg*

Cestin Cliff Farm (Daltry, 46, 113, 1912); Rudyard, near Harracle's Mill (Painter, 26, 103, 1892); White Hough† (Blake, 54, 108, 1920); between Leek and Longton† (Parsons in Bagnall, 50); Madeley† (Daltry in lit.); Morridge† (McAldowie, 58, 106, 1924); Ashley.

✓ R. ACETOSA, L. SORREL.

Common in pastures and in ditches.

✓ R. ACETOSELLA, L. SHEEP'S SORREL.

Common in dry pastures. *Newton R.*

THYMELEACEÆ.

✓ DAPHNE MEZEREUM, L. MEZEREUM.

Dovedale†, and near Byrkley Lodge (Brown, 278); Needwood Forest (Pitt in With., 370); Bincliff thickets near Wetton† (Carrington in Garner, *Supplement*, 36); Beeston Tor (Audley, 58, 106, 1924.)

✓ D. LAUREOLA, L. SPURGE LAUREL.

Buttermilk Hill near Uttoxeter (Garner, 368); Marchington Cliffs, Beaumanor (Brown, 278); Needwood Forest† (Pitt in With., 371); near Stafford (Bagnall, 50); Eaton Woods Rocester† (Goodall, 16, 78, 1880). A variety with variegated leaves is recorded for Needwood Forest (Pitt in With., 371); Tixall (Garner, M.S. notes in his own interleaved copy of the *Natural History of the County of Stafford*).

LORANTHACEÆ.

VISCUM ALBUM, L. MISTLETOE.

Rolleston Gardens (Brown, 287); Needwood (Hewgill in Bagnall, 50); Madeley Vicarage gardens.

EUPHORBIACEÆ.

EUPHORBIA HELIOSCOPIA, L. SUN SPURGE. Alien. *Handsworth*

Common though not usually abundant as a weed on cultivated ground.

E. AMYGDALOIDES, L. WOOD SPURGE.

Abundant near Forest Church, Needwood†, Bagot's Park, Burton (Garner, 405); Hilderstone (Barns, 46, 118, 1912); Star Wood Oakamoor†, road to Sudbury (Bagnall, 150).

E. CHARACIAS, L. Alien.

"What I think is this, in a hedge between Newborough and Forest Church." (Garner, 405); Needwood (Garner, 405). I have not succeeded in finding it.

E. PEPLUS, L. SPURGE. Alien.

Common but not abundant on cultivated ground.

E. EXIGUA, L. SPURGE. Alien.

Frequent as a weed on cultivated ground. *Newton Rd*

E. LATHYRUS, L. Alien.

Needwood (Dr. Hewgill in Garner, 405). Not there now.

BUXUS SEMPERVIRENS, L. BOX.

Occasionally occurs as an escape.

MECURIALIS PERENNIS, L. DOG'S MERCURY. *Newton Rd*

Common in woods and hedges.

M. annua L. *Burton Druce BEC. 8. 417. 1927*

URTICACEÆ.

ULMUS GLABRA, Huds. (U. MONTANA, Stokes). WYCH

ELM.

Common.

U. CAMPESTRIS, *Sax* (U. SURCULOSA, Stokes., U.

SATIVA, Mill) ELM. Alien.

Common in hedges.

U. suberosa Ehrh. Common Garner 361

U. glabra x *Carpeneifolia* Cannock & near Whiteknave 1944

U. glabra x *Platanus* Betts & G. Bedford & Whiteknave

- ✓ HUMULUS LUPULUS, L. HOP. Alien.
Frequent in hedges.
- ✓ URTICA DIOICA, L. NETTLE.
Common in damp woods, hedgerows and waste places.
- ✓ U. URENS, L. SMALL NETTLE. Alien.
Fairly common in hedgerows and waste places.
- ✓ PARIETARIA RAMIFLORA, Mœnch. (P. OFFICINALIS, L.) PELLITORY OF THE WALL. Alien.
Occasional in ruins and old walls. Stanton; Croxden Abbey; Burton; Tutbury.

MYRICACEÆ.

- ✓ MYRICA GALE, L.
Planted near Biddulph Hall (Painter, 31, 93, 1897).

CUPULIFERÆ.

- ✓ BETULA ALBA, L. (B. VERRUCOSA, Ehrh.) BIRCH.
Common, especially in sandy and gravelly soils.
- ✓ B. TOMENTOSA, Reith & Abel. (B. PUBESCENS, Ehrh.) BIRCH.
Common, particularly in sandy and gravelly soils.
- ✓ ALNUS ROTUNDIFOLIA, Mill. (A. GLUTINOSA, Gærtn.) ALDER.
Common in wet places, on stream sides and canal banks.
- ✓ CARPINUS BETULUS, L. HORNBEAM.
Barlaston Common (Fraser in Bagnall, 51); Stone†; Stafford† (Moore, 31, 93, 1897); Bagnall† (Garner, 411); Wall Grange; Cheadle.
- ✓ CORYLUS AVELLANA, L. HAZEL. *Handsworth*
Common in woods and hedges.
- ✓ QUERCUS ROBUR, L. (Q. PEDUNCULATA, Ehrh.) OAK.
Common, especially on clay and loam.

- ✓ Q. SESSILIFLORA, Salisb. OAK.
Common, especially on sandy soils.
- ✓ CASTANEA SATIVA, Mill. SWEET CHESTNUT. Alien.
Occurs as a planted tree in woods.
- ✓ FAGUS SYLVATICA, L. BEECH.
Common in woods.

SALICACEÆ.

- ✓ SALIX PENTANDRA, L. BAY WILLOW. *Leek/Upper Leek Cheddleton (Combe's Valley) Stones (Stones Edge)*
Handford Bridge (Garner, 411); Lask Edge†, Rudyard† (Painter, 26, 103, 1892); Leek to Knypersley road (Painter, 31, 93, 1897); moorlands† (Garner, 13, 89, 1879); Thorny Edge†, Bagnall † (4, 54, 1870); Wetley Moor; Caverswall.
- ✓ S. TRIANDRA, L. WILLOW.
Osier beds Stoke (Garner, 411); Burton (Brown, 281); near Colton (Bagnall, 51); Knypersley Pools† (Painter, 31, 93, 1897).
- ✓ S. FRAGILIS, L. CRACK WILLOW. *Old Forge Pool*
Trent Valley Stoke† (Garner, 411); Hilderstone† (Barns, 46, 118, 1912) Biddulph† (Painter, 22, 120, 1888); Clayton; Caverswall; Churnet Valley; Madeley.
VAR. BRITANNICA, F. B. White.
Stoke Meadows (Garner, 411); Biddulph (Painter, 31, 93, 1897).
- ✓ S. ALBA, L. WHITE WILLOW.
Frequent. Uttoxeter; Coton-in-Clay; Sudbury; Cheadle; Denstone; Biddulph; Rushton; Wall Grange; Cheddleton; Stoke.
✓ VAR VITELLINA, (L.)
Biddulph Hall, planted (Painter, 31, 93, 1897).
X TRIANDRA. (S. UNDULATA, Ehrh.)
Knypersley Pools (Painter, 26, 103, 1892).
✓ X FRAGILIS. (S. RUSSELLIANA, Sm., S. VIRIDIS, Fries.)
Stoke meadows (Garner, 411).

- ✓ S. PURPUREA, L. WILLOW. *Ramsforth (ford below Woolton Lodge)*
 North end of Rudyard Lake† (Painter, **26**, 103, 1892);
 Handford (Garner, 413).
 VAR. HELIX, Rock (S. HELIX, L.)
 Trent side Stoke (Garner, 413).
- ✓ S. VIMINALIS, L. OSIER. *Wetton Mill*
 Handford† (Garner, 413); Knypersley†, Rudyard Lake†
 (Painter, **31**, 93, 1897); Hilderstone† (Barns, **46**, 118,
 1912); Alton Towers†, Coton, (Bagnall, 52); Trentham;
 near Wall Grange.
- ✓ S. CAPREA, L. GOAT WILLOW. *Wednesbury*
 Common in hedges.
 f. RUGOSA, (Leeffe).
 Knypersley (Painter in Bagnall, 52).
 X VIMINALIS.
 (a) x SMITHIANA, Wimmer. (S. SERICANS, Tausch).
 Near Knypersley Pools (Painter, **31**, 93, 1897);
 Biddulph (Painter, **26**, 103, 1892).
 (b) x ACUMINATA, Ander. (S. ACUMINATA, Sm.).
 Madeley (Garner, 413).
- ✓ S. AURITA, L. WILLOW.
 Often found on waste land. Road to Sudbury, land by
 Forest Banks, Needwood† (Brown, 281); Hilderstone†
 (Barns, **46**, 118, 1912); Biddulph† (Painter **31**, 93,
 1897); Hanchurch; Stone; Dilhorne; Cheadle; Cheddle-
 ton.
 X CINEREA. (S. LUTESCENS, A. Kern).
 Near Wickenstone Rocks (Painter, **31**, 93, 1897).
- ✓ S. CINEREA, L. WILLOW.
 Frequent. Trent meadows† (Garner, 413); Trentham†
 (Bagnall, 52); Biddulph† (Painter, **31**, 93, 1897); Ut-
 toxeter; Churnet Valley; Willowbridge; Madeley.
 VAR. AQUATICA, (Sm.)
 Common about the Trent (Garner, 413).
 X VIMINALIS.
 Needwood (Nowers, **35**, 25, 1901).

✓ S. REPENS, L. CREEPING WILLOW.

Near Stanton.

✓ POPULUS ALBA, L. WHITE POPLAR. Alien.

Occurs as a planted tree. The only form I have seen is that bearing pistillate flowers. Knypersley; Stafford; Denstone; Hanford; Betley; Madeley; Barlaston.

✓ X TREMULA. (P. CANESCENS, Sm.)

Handford Bridge (Garner, 414).

✓ P. TREMULA, L. ASPEN.

Common, particularly in moorlands and wet places† (Garner, 415); Knypersley; Stafford; Denstone; Handford; Betley; Cheadle; Biddulph; Cheddleton; Needwood; Congleton Edge.

VAR. VILLOSA, (Lange).

Rudyard (Painter, 31, 94, 1897).

✓ P. NIGRA. BLACK POPLAR. Alien.

Planted in many places. ^{deltoides} (2) Handsworth

EMPETRACEÆ.

✓ EMPETRUM NIGRUM, L. CROWBERRY.

Fairly abundant in our northern heather moors. Craddock's Moss; Ludchurch; Caverswall; Maer; near Rudyard Lake; Chartley; Morridge.

CERATOPHYLLACEÆ.

✓ CERATOPHYLLUM DEMERSUM, L. HORNWORT.

Garner (407) says "Common in all our streams and pools". It is not so now. Betley†, near Stafford (Douglas in Bagnall, 53).

HYDROCHARIDACEÆ.

✓ ELODEA CANADENSIS, Michx. (ANACHARIS ALSIN-
ASTRUM, Bab). CANADIAN POND WEED. Alien.

Common in pools, streams and canals.

✓ HYDROCHARIS MORSUS-RANÆ, L. FROGBIT.

Marsh near Madeley† (Fraser in Bagnall, 53) ; Balterley
(Garner, 415).

✓ STRATIOTES ALOIDES, L. WATER SOLDIER.

Field near Madeley† (Fraser in Bagnall, 53).

ORCHIDACEÆ.

✓ NEOTTIA NIDUS-AVIS, Rich. BIRD'S NEST ORCHID.

Manyfold Valley (Bagnall, 53) ; Cotton Valley (Yates,
11, 16, 1877).

✓ LISTERA OVATA, Br. TWAY BLADE.

Fairly frequent in woods and shady places. Needwood ;
Chartley ; Black Hill ; Manyfold Valley ; Cheadle ; Wall
Grange ; Stanton ; Cotton Dale.

✓ HELLEBORINE LATIFOLIA, Druce. (EPIPACTIS
LATIFOLIA, All.).

Knypersley† (Painter, 31, 94, 1897) ; Hilderstone†
(Barns, 46, 118, 1912) ; Stoke (Garner, 13, 89, 1879) ;
Madeley (Daltry, 12, 48, 1878) ; Cheadle (Carter in
Bagnall, 53) ; Barlaston† (Shaw, 113) ; Stafford ; Blurton ;
Trentham.

✓ VAR MEDIA, E. S. Marshall.

Oakamoor (Masefield, 43, 86, 1908).

✓ H. LONGIFOLIA, Rendle and Britten. (EPIPACTIS PALUS-
TRIS, Crantz.)

Fair Oak (Garner, 404).

✓ ORCHIS PYRAMIDALIS, L. ORCHID.

Manyfold valley† (48, 97, 1914) ; Denstone (11, 54, 1877) ;
plantation near Uttoxeter (Garner, 403).

✓ O. USTULATA, L. ORCHID.

Oakamoor (Walker, 44, 133, 1910).

Orchis fuscescens Thos Cart
Orchis fuscescens x *encicetorum* Moss Cart n. Hollinsclough
O. encicetorum Moss Cart. Stanton. Raafsthoek.

- ✓ O. MORIO, L. GREEN VEINED ORCHID.
Chesterfield (Power in Bagnall, 54). *Yosall (Elliott 59. 157. 1925)*
- ✓ O. MASCULA, L. EARLY PURPLE ORCHID.
Biddulph† (Painter, 31, 94, 1897); Needwood† (Nowers, 35, 75, 1901); Chartley† (Tylecote, 20, 38, 1898); Denstone (Edwards, 32, 54, 1898); Stanton† (35, 68, 1901); Marchington Woodlands, Oakamoor† (Bagnall, 54); Cheadle (Carter in Bagnall, 54); Wall Grange; Waterhouses; Calton; Manyfold Valley; Madeley.
- ✓ O. PRÆTERMISSA, Druce.
Barlaston; near Wall Grange.
- ✓ O. LATIFOLIA, L. MARSH ORCHID.
Chartley† (Tylecote, 20, 38, 1886). Froghall†, Barlaston, Willowbridge (Garner, 403); Cheadle (Carter in Bagnall, 45); Wall Grange.
- ✓ O. MACULATA, L. (O. FUCHSII, Druce) *near Wotton Hill. Thors Cave Stanton*
Common in damp grassland.
- ✓ ACERAS ANTHROPOPHORA, Br. *Fuchsii x encicetorum. Stanton* MAN ORCHIS.
The record Heighley Castle (Stanway, 42, 88, 1908) is an error.
- ✓ OPHRYS APIIFERA, Huds. BEE ORCHIS. *Cosley (Mans Hill) Daw End*
Alton (Shepherd, 34, 71, 1900). *Needwood Forest*
- ✓ O. MUSCIFERA, Huds. FLY ORCHIS.
Denstone (Edwards, 11, 54, 1877). I have failed to find it there.
- ✓ HABENARIA CONOPSEA, Benth. (GYMNADENIA CONOPSEA, Br.). FRAGRANT ORCHID.
Cheddleton† (Audley, 41, 86, 1907); Stanton† (Deacon, 49, 155, 1915); Manyfold† (28, 156, 1894); Oakamoor (Berrisford, 40, 73, 1906); Denstone (Edwards, 11, 84, 1877); Grindon, Cauldon†, Waterhouses† (Garner, 403); Cheadle (Carter in Bagnall, 54). *Ecton Hill*
- ✓ H. ALBIDA, Br.
Field near Hollington (Goodall, 16, 79, 1882).
- ✓ H. VIRIDIS, Br. FROG ORCHID. *Cocloglossum viride*
Manyfold† (1, 5, 1866); Thorny Edge, Bagnall (4, 5, 1870); Wall Grange† (Audley, 27, 63, 1893); Rudyard

(38, 108, 1904); near Weaver Hills (Masefield, 38, 61, 1904); near Three Lowes (Brett, 40, 78, 1906); Swithamley, Wetley, Froghall, Longnor†, Cheadle, Moddershall†, Barlaston, Needwood, Willowbridge (Garner, 403); Stanton; Croxden.

Patanthera ✓ H. BIFOLIA, Br. SMALL BUTTERFLY ORCHID.

Weaver Hills, Darlaston near Stone (Shaw, 114); Cheadle (Carter in Bagnall, 54); Glutton Dale† (Yates, 25, 36, 1891); Needwood† (Nowers, 35, 75, 1901); Wall Grange† (Audley, 27, 63, 1893); Dane Valley; Rudyard; near Rushton; Stanton; Madeley. *Reapia moor*

✓ H. VIRESCENS, Druce. (H. CHLOROLEUCA, Ridley) BUTTERFLY ORCHIS. *W. Thors Cave.*

Stanton† (Deacon, 49, 155, 1915); drive from Biddulph Grange, near Rudyard Lake (Painter, 22, 120, 1888); Goldsitch Moss† (Audley, 29, 96, 1895); Manyfold Valley (Fraser in Bagnall, 54); Madeley (Daltry, 54, 109, 1920).

IRIDACEÆ.

✓ IRIS PSEUDACORUS, L. IRIS.

Frequent by streams and pools. Biddulph; Stafford; Trentham; Willowbridge; Madeley.

✓ CROCUS OFFICINALIS, Huds. (C. VERNUS, All.) CROCUS. Alien.

Occasionally in the Trent meadows near Burton (Brown, 285).

✓ C. NUDIFLORUS, Sm. CROCUS. Alien. *(Newcastle) Betis church + colli*

Abundant in a field at Wolstanton (Garner, 343). ~~Not there now.~~ Cheadle (Goodall, 16, 72, 1882); Biddulph (Painter in Bagnall, 54). *Cotes Heath / Eccleshall*

AMARYLLIDACEÆ.

✓ NARCISSUS PSEUDO-NARCISSUS, L. DAFFODIL.

Frequently found in fields, sometimes planted. Madeley;

Biddulph; Hill Chorlton; Eaves Lane; Bucknall; Bagnall; Cheddleton; near Wall Grange; Ashley; Burton; Badderley Edge; Horton; Stoke meadows; Stanley; Denstone; Needwood; Willowbridge; Mucklestone; near the Roches. *Swynnerton, Uttoxeter* *Abbey's Brantley* *Lavers wall* *Hinley Park* *London* *Mucklestone*

✓ N. POETICUS, L. NARCISSUS. Alien.

In a field near Werrington adjoining an old house (Garner, 363); Uubberley (Garner, 13, 89, 1879).

✓ GALANTHUS NIVALIS, L. SNOW-DROP.

Checkley, Castern†, Eaves Lane (Garner, 363); Ilam† (Edwards, 57, 132, 1923); Denstone (Edwards, 11, 54, 1877); Madeley (Daltry, 54, 109, 1920); Stanton† (Deacon, 54, 109, 1920).

DIOSCOREACEÆ.

✓ TAMUS COMMUNIS, L. BLACK BRYONY.

Frequent in hedges. Dovedale; Manyfold Valley; Acton; Swynnerton; Willowbridge; Stafford; Hilderstone; Cocknage near Longton; Madeley; near Ashley. *Newton R^d*

LILIACEÆ. *Podostemum thickset below Thor's Cave*

✓ POLYGONATUM MULTIFLORUM, All (CONVALLARIA MULTIFLORA, L.) SOLOMON'S SEAL.

Woods at Belmont (Shaw, 102); Needwood Forest† (Shaw, ii, 7); Beeston Tor† (Audley, 58, 107, 1924).

✓ CONVALLARIA MAJALIS, L. LILY OF THE VALLEY.

Woods at Belmont†, Needwood Forest (Shaw, 102); Dovedale, Wetton Valley†, (Garner, 364); Chartley (Masefield, 20, 38, 1886); Bagot's Wood (Edwards, 11, 54, 1877); Beeston Tor† (Audley, 58, 106, 1924).

✓ ALLIUM VINEALE, L. GARLIC. *Redway (W. Bromwich)*

On limestone rocks at Wetton Mill and Beeston Tor (Garner, 364); Manyfold Valley† (Audley, 26, 104, 1894).

✓ A. OLERACEUM, L. GARLIC.

On a rock in Wetton Valley (Garner, 364).

- ✓ A. URSINUM, L. RAMSONS.
Common in woods and sometimes in hedges. Hilderstone; Denstone; Consall; Whitmore; near Cheddleton; Horton; Cotton Dale; Heighley Castle.
- ✓ SCILLA NON-SCRIPTA, Hoff. and Link. (S. NUTANS, Sm., S. FESTALIS, Salisb., HYACINTHUS NON-SCRIPTUS, L.) BLUEBELL.
Common in woods.
- ✓ VAR. BRACTEATA, Druce.
Madeley (Daltry, **50**, 137, 1916).
- ✓ ORNITHOGALUM UMBELLATUM, L. STAR OF BETHLEHEM. Alien.
Tixall (Bostock, **35**, 69, 1901).
- ✓ FRITILLARIA MELEAGRIS, L. SNAKE'S HEAD. *Active in Alton & near Alton Bm from Bly*
Uttoxeter (Garner, 364); Denstone (Goodall, **16**, 78, 1882); Ilam (Edwards, **11**, 54, 1877).
- ✓ TULIPA SYLVESTRIS, L. TULIP. *Stafford Hall (Jarrow)*
Near Alton† (**59**, 159, 1925). *once a year fl. In 1951 21 yellow flowers*
- ✓ GAGEA LUTEA, Gawler. YELLOW STAR OF BETHLEHEM.
Stanton† (Wilkins, **35**, 68, 1901); Cheadle (Heywood, **47**, 94, 1913); Ousel Cross near Dydon Woods. *Waterhouses*
- ✓ COLCHICUM AUTUMNALE, L. MEADOW SAFFRON.
Burton (Garner, 365). It is to be found in a field near Abbey Hulton. *Dilhome (Beckett 61.102.1927)*
- ✓ NARTHECIUM OSSIFRAGUM, Huds. BOG ASPHODEL. *Historical moorland & brown holes w*
Frequent in bogs. Flash†, Willowbridge, Ashley, Mow Cop (Garner, 364); Cotton and Whiston (Carter in Bagnall, 55); Leek and Warslow† (Fraser in Bagnall, 55); Chartley Moss† (Bagnall, 55); Swithamley† (Masefield, **31**, 71, 1897); Dimminsdale† (Brett, **35**, 72, 1901); Gunn.
- ✓ PARIS QUADRIFOLIA, L. HERB PARIS.
Near Cheadle (Carter in Bagnall, 55); Darlaston near Stone (Forster in Bagnall, 55); Stanton† (Deacon, **49**, 155, 1915); Needwood† (Nowers, **35**, 75, 1901); Oakmoor (Berrisford, **40**, 74, 1906); Chartley†, (Tylecote, **20**, 38, 1886); Cotton Dale (**11**, 7, 1877); near Croxden Abbey. *Angleson & Co. office*

J. diffusus with parents Great Barr. 1945
J. tenuis Bobbington 1945. Lockfield Canal

JUNCACEÆ.

- ✓ JUNCUS BUFONIUS, L. TOAD RUSH.
Common in moist places.
- ✓ J. SQUARROSUS, L. HEATH RUSH.
Common in heathy places.
- ✓ J. COMPRESSUS, Jacq.
Given by Garner (364) as common, not so now.
- ✓ J. GERARDI, Lois.
Between Tutbury and Burton (Brown, 287).
- ✓ J. INFLEXUS, L. (J. GLAUCUS, Ehrh.) RUSH.
Common in wet, stiff soils.
- ✓ J. EFFUSUS, L. RUSH.
Common in wet places.
- ✓ J. CONGLOMERATUS, L. RUSH.
Common in wet places.
- ✓ J. BULBOSUS, L. (J. SUPINUS, Moench.) JOINTED RUSH.
Common in boggy places.
✓ VAR. ULIGINOSUS, Sibth.
Common in boggy places.
- ✓ J. SUBNODULOSUS, Schrank., (J. OBTUSIFOLIUS, Ehrh.)
Burton, Scropton (Brown, 287).
- ✓ J. ARTICULATUS, L. (J. LAMPOCARPUS, Ehrh.)
Common in wet places.
- ✓ J. SYLVATICUS, Reich., (J. ACUTIFLORUS, Ehrh.)
WOOD RUSH.
Common in wet, shady places.
- ✓ J. BIGLUMIS, L. TWO FLOWERED RUSH.
There is only one record for this, Yarnfield (Garner, *Supplement*, 37), which is probably an error as this very rare plant is only found on mountains in Scotland.
- ✓ LUZULA FORSTERI, DC.
Dimminsdale (Hewgill in Garner, 365). Garner states that he looked for it in vain. There has been no sub-

sequent record of it, although the district has been searched thoroughly.

- ✓ L. PILOSA, Willd. (L. VERNALIS, DC.)
Common in woods.
- ✓ L. SYLVATICA, Gaud. (L. MAXIMA, DC.)
Frequent in woods. Knypersley† (Painter, 31, 95, 1897); Denstone (Edwards, 11, 54, 1877); Burnt Woods† (Shaw, 106); Biddulph, Star Wood Oakamoor†, Oulton near Stone† (Bagnall, 56); Manyfold Valley and Dove-dale.
- ✓ L. CAMPESTRIS, DC. FIELD WOOD RUSH.
Common on pasture land.
- ✓ L. MULTIFLORA, DC. (L. ERECTA, Desv.) HEATH WOOD RUSH.
Frequent in heathy places. Star Wood Oakamoor† (Bagnall, 56); Madeley; Cheddleton; Ashley; Swithamley; Willowbridge; Biddulph.
- ✓ VAR. CONGESTA, (Lej.)
Frequent. Oakamoor (Bagnall, 56); Knypersley† (Painter, 31, 95, 1897); Madeley (Daltry in lit.); near Barlaston; Lightwood.

TYPHACEÆ.

- ✓ TYPHA LATIFOLIA, L. GREAT REED MACE.
Frequent in pools and streams. Cheadle† (Masfield, 38, 48, 1904); Hilderstone† (Barns, 46, 118, 1912); Biddulph†, Rushton (Painter, 26, 104, 1892); Maer Pool (Yates, 22, 38, 1888); Oakamoor; Belmont; Madeley; Willowbridge; near Stone; Longton; Copmere.
- ✓ T. ANGUSTIFOLIA, L. NARROW LEAVED REED MACE.
Copmeref†, Betley, Whitmore†, Balterley (Garner, 405); pool near Rolleston (Bagnall, 56); Stafford† (Douglas in Bagnall, 56); near Chartley House† (With., 112); Needwood† (Brown, 289).

- ✓ SPARGANIUM ERECTUM, L. (S. RAMOSUM, Curt.)
BUR-REED.
Common in ditches.
VAR. MICROCARPUM, (Newman).
Near Harracle's Mill (Bailey in Bagnall, 56); plentiful
in Rudyard basin (Painter, 26, 101, 1892).
- ✓ S. NEGLECTUM, Beeby. BUR-REED.
Rushton, Alton† (Bagnall, 58); Rudyard† (Bailey in
Bagnall, 56); Madeley (Daltry in lit.); Trentham.
- ✓ S. SIMPLEX, Huds. BUR-REED. *Head Bridge*
Alton† (Bagnall, 56); Knypersley† (Painter, 31, 95,
1897); Cheadle (Masefield, 38, 48, 1904); Trentham†
(21, 51, 1887).
- ✓ S. AFFINE, Sch. (S. NATANS, L.) FLOATING BUR-REED.
Lin-pits Whitmore (Garner, 405).
The "lin-pits," as they are still called locally, are about
 $\frac{3}{4}$ m. along the bridle road leading due N. from Whitmore
station. On the ordnance maps they are marked "lime pits"
but as "lin" is a N. country dialect word for flax the pits
may have been used formerly for "retting" or steeping flax
to moisten it.
- S. MINIMUM, Fr.
Ditches in Bagot's Park (Brown, 289).

ARACEÆ.

- ✓ ARUM MACULATUM, L. CUCKOO-PINT.
Common in woods and hedges.
- ✓ VAR. IMMACULATUM, Gray.
Madeley (Daltry in lit.)
- ✓ ACORUS CALAMUS, L. SWEET FLAG. Alien. *Canal (Jong). Betley Mase*
Betley, Longton† (Garner, 364); Burton (Brown, 289);
Maer Pool (Yates, 22, 38, 1888); old race course Stoke
(Garner, 13, 38, 1879); Madeley (Daltry, 52, 122, 1918);
near Darlaston bridge (Clifford in Garner's M.S. notes in
his own interleaved copy of the *Natural History of the
County of Stafford.*) *Newborough (Betley Wash Park)*

LEMNACEÆ.

- ✓ LEMNA TRISULCA, L. DUCK-WEED.
Fairly common in pools. Cheadle† (Masfield, 38, 48, 1904); Hilderstone† (Barns, 46, 118, 1912); Copmere† (18, 33, 1884); Burton (Brown, 289); Stafford (Douglas in Bagnall, 57); Alton Towers (Bagnall, 57); near Stone; Madeley; Longton; Bucknall; Endon; Cheddleton; Dilhorne.
- ✓ L. MINOR, L. DUCK-WEED. *Wednesbury*
Common in ponds.
- ✓ L. GIBBA, L. DUCK-WEED. *Canal (Wednesbury)*
Copmere (Garner, 341); Stafford (Douglas in Bagnall, 57).
- ✓ L. POLYRRHIZA, L. DUCK-WEED.
Copmere† (Garner, 341); canal Stoke (Garner, 13, 89, 1879); Stafford† (Douglas in Bagnall, 57); between Kidmore Green and Bishop's Woods (Shaw, 107); Madeley (Daltry in lit.).

ALISMACEÆ.

- ✓ ALISMA PLANTAGO-AQUATICA, L. WATER PLANTAIN.
Common in ponds, streams and canals.
- ✓ A. RANUNCULOIDES, L.
Burton (Garner, 366).
- ✓ ALISMA NATANS, Buch. FLOATING WATER PLANTAIN.
Occurs in the canal at Kidsgrove.
- ✓ SAGITTARIA SAGITTIFOLIA, L. ARROWHEAD.
Fairly common in shallow water and in canals. Cheadle; Burton; Stafford; Newcastle; Stoke; Fouley Brook; near Trentham; Barlaston; Stone; Consall; Endon.
- Ext†* ✓ DAMASONIUM ALISMA, Mill.
Yarnfield (Garner, *Supplement*, 37). I have not succeeded in finding it there.
- ✓ BUTOMUS UMBELLATUS, L. FLOWERING RUSH.
Near Stafford† (Shaw, 100); near Stoke; Trentham Pools†, Burton†, Needwood (Garner, 369).
Canal (Cheddleton), Stafford (Pool on Newport Rd 1 mile)

NAIADACEÆ.

- ✓ **TRIGLOCHIN PALUSTRE**, L. ARROW GRASS.
 Garner (365) gives this as "common in wet places".
 It is not so now. Near Cheadle (Carter in Bagnall,
 57); Copmeref (18, 33, 1884); Madeley (Daltry in lit.)
- ✓ **T. MARITIMUM**, L. SEA ARROW GRASS.
 Braunston meadows (Brown, 288); marsh near
 Ingestre (Stokes in With., 352).
- ✓ **POTAMOGETON NATANS**, L. POND WEED.
 Common in pools and canals.
- ✓ **P. POLYGONIFOLIUS**, Pourr. POND WEED.
 Small pool near Oakamoor†, Stafford†, Hopton pool
 (Bagnall, 58).
- P. ALPINUS**, Balb. (**P. FLUITANS**, Sm.) REDDISH POND
 WEED.
 Pond near Biddulph, canal feeder and pools at Kny-
 persley (Painter, 31, 95, 1897).
- ✓ **P. HETEROPHYLLUS**, Schreb. POND WEED.
 Fenton pool (Garner, 350).
- ✓ **P. LUCENS**, L. SHINING POND WEED.
 Common in ponds, canals and streams.
- ✓ **P. PRÆLONGUS**, Wulf. POND WEED.
 Near Burton (Brown, 290); near Stafford (Douglas
 in Bagnall, 58).
- ✓ **P. PERFOLIATUS**, L. PERFOLIATE POND WEED.
 Common in canals and rivers.
- ✓ **P. CRISPUS**, L. CURLY POND WEED.
 Frequent in the Trent and in canals. Stoke; Wall
 Grange; Trentham lake; Stafford; Ingestre.
- ✓ **P. DENSUS**, L. POND WEED.
 Garner (349) says "Common." Bagnall (58) queries
 this, stating he has only seen it at Mayfield. I have
 not seen it in our area.
- ✓ **P. ZOSTERIFOLIUS**, Schum. (**P. COMPRESSUM**, L.)
 GRASS WRACK POND WEED.

P. X hentonii near pit near church West Bromwich

Canals at Stoke† (Garner, 349); Trent at Burton (Brown, 290); Stafford (Douglas in Brown, 58).

- ✓ P. OBTUSIFOLIUS, Mert & Kock. OBTUSE LEAVED POND WEED.

Knypersley pool (Painter, 31, 95, 1897).

- ✓ P. PUSILLUS, L. SMALL POND WEED. *hair pits Bradley 1929*
Canals at Stoke† (Garner, 349); Knypersley pool† (Painter, 31, 95, 1897); Rolleston (Brown, 290); (Madeley Daltry in lit.)

- ✓ P. PECTINATUS, L. FENNEL LEAVED POND WEED.
Canals at Stoke† (Garner, 349); Rudyard lake† (Painter, 31, 95, 1897); Knypersley pool (Thompson in Bagnall, 58).

- ✓ P. INTERRUPTUS, Kit. POND WEED. = *flabellatus*
Stafford (Fraser in Bagnall, 58); Burton (Brown, 290).

- P. FILIFORMIS, Nolte. SLENDER POND WEED. = *maritimus*
Copmere (27, 94, 1893).

- ✓ ZANNICHELLIA PALUSTRIS, L. HORNED POND WEED.
Near Stafford (Douglas in Bagnall, 58); Burton (Brown, 290).

CYPERACEÆ.

- Ext ✓ ELEOCHARIS ACICULARIS, Rœem. & Sch.
Garner (343) gives this as common. I have not found it in our area.

- ✓ E. PALUSTRIS, Rœem. & Sch. MARSH CLUB RUSH.
Common in marshes, ponds and sometimes in ditches.

- Ext ✓ E. MULTICAULIS, Sm.
Garner (343) gives this as common but I have not met with it in the district.

- ✓ SCIRPUS PAUCIFLORUS, Lightf.
Chartley Moss (Brown, 271).

- ✓ S. CÆSPITOSUS, L. (ELEOCHARIS CÆSPITOSUS, Reich.)
Wickenstone Rocks (Painter, 31, 96, 1897); Morridge; Biddulph; near Quarnford.

- ✓ S. FLUITANS, L. (ELEOCHARIS FLUITANS, Hook, ELEOGITON FLUITANS, Link). FLOATING CLUB RUSH.
Craddock's Moss (Garner, 343).
- ✓ S. SETACEUS, L. CLUB RUSH.
Fairly common in damp sandy places. Biddulph† (Painter, 31, 96, 1897); Madeley; near Swynnerton; Ashley; Cheddleton.
- ✓ S. LACUSTRIS, L. BULRUSH.
Frequent by streams and ponds.
- ✓ S. TABERNÆMONTANI, Gmel. (S. GLAUCUS, Sm.)
Braunston (Wells in Bagnall, 59).
- ✓ S. MARITIMUS, L.
Braunston meadows (Brown, 291). *Canal (Great Haywood)*
- ✓ S. SYLVATICUS, L. CLUB RUSH. *Asley*
Fairly common in marshy and damp shady places. *Oakham*
Rudyard, Trentham (Painter, 26, 104, 1892); Stoke *Dimmingsdale*
meadows (Garner, 343); Alton and Churnet valley *Fawfield Road*
(Bagnall, 51); Madeley; Endon; near Rushton. *(by Blake Brook)*
- ✓ S. COMPRESSUS, Pers. (BLYSMUS COMPRESSUS, Panz.)
Voxall Lodge (Garner, 343).
- ✓ ERIOPHORUM VAGINATUM, L. COTTON GRASS.
Common on boggy ground. Biddulph; Wetley Moor; Cheadle; Stafford; Caverswall; Hanchurch; Roches; Whitmore; Madeley; Barlaston; Craddock's Moss.
- ✓ E. ANGUSTIFOLIUM, Roth. COTTON GRASS.
Common on boggy ground. Biddulph; near Leek; Wetley Moor; Chartley; Roches; Willowbridge; Caverswall.
- ✓ RYNCHOSPORA ALBA, Vahl.
Craddock's Moss; Chartley Moss†; Whitmore† (Garner, 343).
- ✓ CLADIUM MARISCUS, Br. (C. JAMICENSE, Crantz.)
Chartley Moss (Garner, 342).
- ✓ CAREX DIOICA, L. SEDGE.
Chartley Moss (Brown, 292).

C. speciosa = *contigua* Eccleshall, Ashley 1942
C. divisa Anslow, hedge opposite church n Smallwood Manor (Marchington)
C. polyphylla = *leersii* Madeley
C. Paursei Symington, Colwich, Enson

Ext^h

- ✓ **C. PULICARIS, L. SEDGE.**
 Chartley Moss† (Garner, 405) ; Hilderstone† (Barns, 46, 112, 1912) ; Barlaston† (Blake, 56, 110, 1922).
- ✓ **C. DISTICHA, Huds. (C. INTERMEDIA, Good.) SEDGE.**
 Horninglow (Brown, 292).
- ✓ **C. DIANDRA, Sch. (C. TERETIUSCULA, Good.) SEDGE.**
 Garner (406) says common. I have not seen it in our area.
- ✓ **C. PANICULATA, L. SEDGE.**
 Fairly common in marshy places. Rudyard, Trentham (Painter, 26, 105, 1892) ; Stafford (Douglas in Bagnall, 60) ; feeder between Leek and Rudyard.
- ✓ **C. VULPINA, L. SEDGE.** Canal (High Anslow)
 Common in marshes, often by canal sides, and in damp copses.
- ✓ **C. MURICATA, L. SEDGE.** Fatenhill (Rangemore Park)
 Churnet valley† (Bagnall, 60) ; Willowbridge† (Garner, 406) ; Madeley (Daltry in lit.)
- ✓ **C. ECHINATA, Murr. (C. STELLULATA, Good.) SEDGE.**
 Biddulph† (Painter, 31, 96, 1897) ; Hilderstone (Barns, 46, 119, 1912) ; Cheadle (Carter in Bagnall, 60) ; Chartley† (Bagnall, 60). Near Stone ; Fulford ; Tean ; near Rochester.
- ✓ **C. REMOTA, L. SEDGE.**
 Whitmore (Garner, 406) ; Hilderstone† (Barns, 46, 119, 1912) ; Knypersley† (Painter, 31, 96, 1897) ; Needwood (Nowers, 40, 75, 1906) ; Anslow, Rolleston (Brown, 292) ; Star Wood Oakamoor†, Ramshorn†, Alton, Swithamley (Bagnall, 60) ; near Consall ; Madeley ; Eccleshall ; Trentham.
- ✓ **C. CURTA, Good. SEDGE.**
 Stoke meadows, Wetley Moor† (Garner, 405) ; Cheadle (Carter in Bagnall, 60) ; Chartley Moss† (Bagnall, 60) ; between Newchapel and Brindley Ford† (Painter, 26, 105, 1892).

- ✓ C. LEPORINA, L. (C. OVALIS, Good.) SEDGE.
Frequent in damp places. Hilderstone; Biddulph;
Knypersley; Trentham; Madeley; Endon; Barlaston;
Dilhorne; Cheadle; Stafford; Tean; Willowbridge;
Churnet valley; Rudyard.
- ✓ C. ELATA, All. (C. STRICTA, Good., C. HUDSONII, A.
Bennett). SEDGE. *Notbury (Skelton Wd)*
Grange Wood Anslow (Brown, 292).
- ✓ C. GRACILIS, Curt. (C. ACUTA, L.)
Stoke meadows† (Garner, 406); Madeley (Daltry in lit.);
near Willowbridge; near Stafford.
- ✓ C. GOODENOWII, Gay. (C. CÆSPITOSA, Sm.) SEDGE. *Rudyard (Lake)*
Common in marshes and damp meadows.
- ✓ C. FLACCA, Sch. (C. GLAUCA, Scop., C. RECURVA
Huds.) SEDGE.
Common in woods and pastures.
- ✓ C. PILULIFERA, L. SEDGE. *Osson's Hill*
Rudyard reservoir† (Painter, 26, 105, 1892); Cheadle
(Carter in Bagnall, 61); Needwood Forest† (Brown,
293).
- ✓ C. CARYOPHYLLEA, Latourr. (C. VERNA, Chaix., C.
PRÆCOX, Jacq.) SEDGE.
Common in moorlands and in pasture.
- ✓ C. PALLESCENS, L. SEDGE. *Waterhouses (Mosedon Wd)*
Wetley Moor (Garner, 406); Needwood (Brown, 294).
- ✓ C. PANICEA, L. SEDGE.
Common in damp grassland.
- ✓ C. PENDULA, Huds. SEDGE. *Walton Wd (Madeley) Springfield Wd (Whitmore)*
Belmont Woods†, Madeley Woods (Garner, 406); The *Tatenhill (1952)*
Clough Biddulph† (Painter, 31, 96, 1897) Cheadle *(Rangemore park)*
(Carter in Bagnall, 61); Consall† (Blake, 54, 108, 1920). *Arley*
- ✓ C. STRIGOSA, Huds. SEDGE. *Wood below Park Farm & the Lodge*
Garner (406) says "not rare". It has been recorded
only occasionally. Cheadle (Carter in Bagnall, 61);
Hilderstone† (Barns, 46, 119, 1912); Anslow, Tattenhill
(Brown, 292). *Springfield Wd (Whitmore) 1952 + Whitmore Wd*
Dingle below Arley Castle

- ✓ C. SYLVATICA, Huds. SEDGE. *Stanton*
Belmont†, Wetton, Cheadle† (Garner, 406); Star Wood
Oakamoor† (Bagnall, 61); Hilderstone† (Barns, 46, 119,
1912); Rudyard; Madeley; Caverswall.
- ✓ C. HELODES, Link. (C. LÆVIGATA, Sm.) *Walters' Madeley*
Garner (406) says "not rare". It has been recorded
only occasionally. Madeley (Daltry in lit.); Caverswall;
Barlaston. *Consall 1937*
- ✓ C. BINERVIS, Sm. SEDGE.
Wetley Moor† (Garner, 406); Cheadle (Carter in Bagnall,
61); Weaver Hills† (Bagnall, 61); wood on Congleton
Edge (Painter, 31, 96, 1897); Rudyard.
- ✓ C. DISTANS, L. SEDGE.
Weaver Hills (Garner, 406).
- ✓ C. FULVA, Host. SEDGE.
Wetley Moor (Garner, 406); Rudyard.
- ✓ C. FLAVA, L. SEDGE.
Bogs at Whitmore† (Garner, 406); Cheadle (Carter in
Bagnall, 61); Anslow (Brown, 293); Knypersley pool†
(Painter, 31, 96, 1897); Madeley (Daltry in lit.);
Chartley; Rudyard.
- ✓ C. CÆDERI, Retz. SEDGE.
Garner (406) says common in bogs. There are no de-
finite records of it.
- Ed†* ✓ C. LASIOCARPA, Ehrh. (C. FILIFORMIS, L.) SEDGE.
Madeley (Garner, 406). I have not seen it there.
- ✓ C. HIRTA, L. SEDGE. *Newcastle*
Common in Stoke meadows† (Garner, 406); wood on
Congleton Edge (Painter, 31, 96, 1897); Hilderstone†
(Barns, 46, 119, 1912); Knypersley† (Painter, 22, 120,
1888); Rudyard; Chartley; Willowbridge.
- ✓ C. PSEUDO-CYPERUS, L. SEDGE.
Whitmore, Ashley† (Garner, 406); Hilderstone† (Barns,
46, 119, 1912); Stafford† (Douglas in Bagnall, 61);
Showles Wood Kingston, near Uttoxeter (Bagnall, 61);
Madeley† (Daltry in lit.) *Sto. hall, Buckstone (Coulson's)*
Small (10) near Moreton in ditch

Walton's W^d (Madeley)

- ✓ C. ACUTIFORMIS, Ehrh. (C. PALUDOSA, Good.) SEDGE,
Common by water (Garner, 407); Rudyard; Madeley;
Cheadle; Uttoxeter; Burton; Stoke; Denstone; Tren-
tham; Stafford; Endon; Consall.
- ✓ C. RIPARIA, Curt. SEDGE.
Cheadle (Carter in Bagnall, 62); Needwood Forest.
- ✓ C. INFLATA, Huds. (C. AMPULLACEA, Good., C. ROS-
TRATA, Stokes). SEDGE. var *latifolia* Trentham Park, Consall. Chertley Moss
Belmont† and Stoke meadows† (Garner, 406); Brauns-
ton (Brown, 293); between Biddulph and Newchapel†
(Painter, 31, 96, 1897); Madeley (Daltry in lit.);
Willowbridge.
- ✓ C. VESICARIA, L. SEDGE. *Trentham Park 1937*
Belmont†, Stoke (Garner, 406); Trent near Burton
(Brown, 293); Madeley (Daltry, 54, 109, 1920).

GRAMINEÆ.

- ✓ PHALARIS CANARIENSIS, L. CANARY GRASS. Alien.
Occurs occasionally. Near Burton (Brown, 293); Stoke†
(Audley, 26, 64, 1892); Hanford on waste ground†
(Ridge, 41, 101, 1907); also seen at Ashley, Barlaston
and Consall.
- ✓ P. ARUNDINACEA, L. (DIGRAPHIS ARUNDINACEA,
Trin.) REED CANARY GRASS.
Alton†, Oakamoor† (Bagnall, 62); Hilderstone† (Barns, *haston R*
46, 119, 1912); Knypersley pool†, Rushton dingle†
(Painter, 31, 96, 1897); Stafford† (Moore, 31, 96, 1897);
Denstone† (Edwards, 11, 54, 1877); Weston-on-Trent
(Garner, 344); Madeley (Daltry in lit.); Belmont.
- ✓ ANTHOXANTHUM ODORATUM, L. SWEET SCENTED
VERNAL GRASS.
Common.
- ✓ ALOPECURUS MYOSUROIDES, Huds. (A. AGRESTIS,
L.) SLENDER FOXTAIL GRASS. Alien.
Abundant about Stone and Stafford (Garner, 344).

- ✓ A. *ÆQUALIS*, Sobol. (A. *FULVUS*, Sm.) ORANGE SPIKED
FOXTAIL GRASS.
Knypersley reservoir (Painter, 31, 97, 1897); near the
railway station Burton (Brown in Garner, 344).
- ✓ A. *GENICULATUS*, L. FLOATING FOXTAIL GRASS.
Common in damp places.
- ✓ A. *PRATENSIS*, L. MEADOW FOXTAIL GRASS.
Common in meadows.
- ✓ *MILIUM EFFUSUM*, L. SPREADING MILLET GRASS.
Common in woods. Trentham woods; Star Wood
Oakamoor; Denstone; Madeley; Willowbridge; Tit-
tensor.
- ✓ *PHLEUM PRATENSE*, L. TIMOTHY GRASS.
Common.
- ✓ *AGROSTIS CANINA*, L. *var arida* Ossons Hill
Garner (344) says common. It does not appear to be so
now. Denstone (Edwards, 11, 54, 1877).
- ✓ A. *ALBA*, L. (A. *PALUSTRIS*, Huds.) BENT GRASS.
Common.
- ✓ VAR. *STOLONIFERA*, (L.)
Oakamoor† (Allen, 45, 110, 1911).
- ✓ A. *TENUIS*, Sibth. (A. *VULGARIS*, With.)
Common.
- ✓ A. *NIGRA*, With.
Churnet valley† (Bagnall, 63). *Handsworth*
- ✓ *CALAMAGROSTIS EPIGEIOS*, Roth. WOOD SMALL REED.
Collingwood (Brown, 294); Lower Elkstone. *W. Hatherston 1944*
Stanhope Valley / Waterhouse
Beasts
- ✓ C. *LANCEOLATA*, Roth.
Kingston pool Stafford (Bagnall, 63). *Charley Moss*
- ✓ *AIRA CARYOPHYLLEA*, L. SILVER HAIR GRASS.
Ashley †, Tittensor†, Whitmore (Garner, 345).
- ✓ A. *PRÆCOX*, L. EARLY HAIR GRASS. *Kemmer Edge*
Trentham (Garner, 345); Oakamoor† (Allen, 45, 110,
1911).

- ✓ *DESCHAMPsia cÆSPITOSA*, Beauv. (*AIRA cÆSPITOSA*, L.) TUFTED HAIR GRASS.
Common in damp places.
- ✓ *D. FLEXUOSA*, Trin. WAVED HAIR GRASS.
Common in heathy places. *Handsworth Cemetery*
- ✓ *HOLCUS MOLLIS*, L. SOFT GRASS.
Common in hedges and on pasture land.
- ✓ *H. LANATUS*, L. MEADOW SOFT GRASS. *Wednesbury Oxhill Lane*
Common in woods and fields.
- ✓ *TRisetum FLAVESCENS*, Beauv. (*T. PRATENSE*, Pers.,
AVENA FLAVESCENS, L.) YELLOW OAT GRASS.
Fairly common.
- ✓ *AVENA PUBESCENS*, Huds. DOWNY OAT GRASS.
Fairly common on limestone. Stafford† (Moore, 31,
97, 1897); Burton (Brown, 295).
- ✓ *A. PRATENSIS*, L. NARROW LEAVED OAT GRASS.
Near Calton on limestone (Garner, 346).
- ✓ *A. STRIGOSA*, Schreb. Alien.
In fields at Burton (Brown, 295).
- ✓ *A. FATUA*, L. WILD OAT. Alien.
Near Stoke† (Garner, 346); Denstone (Edwards, 11, 54,
1877).
- ✓ *ARRHENATHERUM ELATIUS*, Mert. and Koch. (*A.*
AVENACEUM, Beauv.) FALSE OAT. *Handsworth*
Common in fields and hedgerows. *Wednesbury*
- ✓ VAR. *NODOSUM*, Reichb. *Wednesbury*
Gillow Heath, Wickenstone Rocks, Norton-in-the-Moors
(Painter, 31, 97, 1897).
- ✓ *SIEGLINGIA DECUMBENS*, Bernh. (*TRIODIA DE-*
CUMBENS, R.Br. HEATH GRASS.
Mow Cop, Cat's Edge (Garner, 346); Biddulph† (Bagnall,
63); Needwood (Brown, 295); Horton† (Painter, 31,
97, 1897); Oakamoor† (Allen, 45, III, 1911); Madeley†
(Daltry in lit.); Caverswall; Ashley.

- ✓ PHRAGMITES COMMUNIS, Trin. (ARUNDO PHRAGMITES, L.) COMMON REED.
Common in pools and canals.
- ✓ CYNOSURUS CRISTATUS, L. CRESTED DOG'S TAIL GRASS.
Common in fields and hedgerows.
- ✓ KÆLERIA GRACILIS, Pers. *Blore, Linscot on limestone 1942*
VAR. BRITANNICA, Domin. (K. CRISTATA, Pers.,
ARIA CRISTATA, L.)
Limestone rocks Dovedale and Wetton (Garner, 345);
Thor's Cave (Audley, 28, 104, 1894).
- ✓ MOLINIA CÆRULEA, Mœench. (M. VARIA, Sch.) PURPLE
MOOR GRASS.
Oakamoor† (Allen, 45, III, 1911); Hilderstone† (Barns,
46, 119, 1912); Whitmore, Maer† (Yates, 25, II, 1891);
Mow Cop, Wickenstone Rocks†, Lask Edge (Painter,
31, 97, 1897); Bagot's Wood, Chartley Moss† (Bagnall,
64).
- ✓ CATABROSA AQUATICA, Beauv. WATER WHORL GRASS.
Needwood Forest† (Brown, 297); Stafford† (Moore, 31,
97, 1897); Tillington (Garner, 16, 60, 1882). *Whitmore (Delltry 61.1020
near Old Street, Topley) 1948. Bredley (Church Eaton Brook) 1927.*
- ✓ MELICA NUTANS, L. MOUNTAIN MELIC GRASS.
Abundant on broken limestone in bushy spots in the *waterhouses*
valleys of the Hamps and Manyfold (Garner, 345).
- ✓ M. UNIFLORA, Retz. WOOD MELIC GRASS.
Fairly common in woods. Trentham; Oakamoor;
Hilderstone; Denstone; Consall; near Stanton; Made-
ley; Tittensor.
- ✓ DACTYLIS GLOMERATA, L. COCK'S FOOT GRASS.
Common in fields.
- ✓ BRIZA MEDIA, L. QUAKING GRASS.
Fairly frequent in meadows and pasture land and often
by canal banks. Knypersley; Oakamoor; Froghall;
Hilderstone; Denstone; Manyfold valley; Madeley;
Endon; Wall Grange; Consall; Barlaston; Stafford.

Glyceria fluitans x *plicata* = *ductuata* (Pentstemon pond Stanton, field n^o the Lymes (White more) with fluitans 1948 Dovedale. Aldenfield. Rappes Moor n^o Towfield Head.

GRAMINEAE

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Puccinellamaritima Salt marsh betw Canals river at pasture fields (Stow) 1948

- ✓ POA ANNUA, L. ANNUAL MEADOW GRASS.
Exceedingly common in pastures and waste ground and as a weed on cultivated ground.
- ✓ P. NEMORALIS, L. WOOD MEADOW GRASS.
Oakamoor† (Allen, 45, III, 1911); Denstone† (Edwards, 11, 54, 1877); Belmont† (Shaw, 101); Rolleston Grange (Brown, 296); Caverswall; Croxden; near Stanton; near Rushton.
- ✓ P. COMPRESSA, L. *Forton Wednesbury*
Abbey walls Burton (Brown, 296).
- ✓ P. PRATENSIS, L. SMOOTH MEADOW GRASS.
Common in meadows, pastures and open places.
VAR. ANGUSTIFOLIA, (L.)
Madeley (Daltry in lit.)
- ✓ P. TRIVIALIS, L. ROUGH MEADOW GRASS.
Common in woods, meadows and damp shady places.
- ✓ GLYCERIA FLUITANS, Br. (POA FLUITANS, Scop.)
FLOATING MEADOW GRASS.
Common in pools and wet places.
- ✓ X P. PPLICATA (G. PEDICELLATA, Towns.)
East end of Rudyard lake† (Painter, 31, 98, 1897); Dovedale (Bagnall, 64).
- ✓ G. PPLICATA, Fr. FLOATING MEADOW GRASS.
Rudyard lake (White in Bagnall, 64); near Stafford (Douglas in Bagnall, 64).
- ✓ G. AQUATICA, Wahlb. REED MEADOW GRASS. *Wednesbury*
Common in canals, rivers and wet places.
- ✓ FESTUCA RIGIDA, Kunth. (POA RIGIDA, L.) *Hall Dale*
HARD MEADOW GRASS.
Tutbury Castle walls (Garner, 345); oak plantations Shobnall (Brown, 296); Garner (345) says "Common in dry places:" It is not so now.
- ✓ F. MYUROS, L.
Garner (346) says "Common". It is not so now.
- ✓ F. BROMOIDES, L. (F. SCIUROIDES, Roth.)
Common on walls and in dry sandy places.

- ✓ F. OVINA, L. SHEEP'S FESCUE GRASS.
Common in limestone and in dry hilly places.
VAR. DURIUSCULA, Hackel.
Common.
- ✓ F. RUBRA, L.
Gutter Lane Biddulph (Painter, 31, 98, 1897).
- Ext ✓ F. SYLVATICA, Vill. (F. CALAMARIA, Sm.)
Garner (346) says "occasional in woods". Bagnall (65) considers this an error, with which I agree, as I have not found it in our area.
- ✓ F. PRATENSIS, Huds.
Common on river banks, canal banks and damp places.
x LOLIUM PERENNE, L. (F. LOLIACEA, Curt.)
Occasional in moist places (Garner, 346).
- ✓ F. ELATIOR, L. TALL FESCUE GRASS. Canal (Molton & Burslem) 1936
Bushy places by the Trent (Garner, 346); Oakamoor† (Allen, 45, 111, 1911); Knypersley† (Painter, 26, 105, 1892); Stafford (Moore, 31, 98, 1897); Denstone† (Edwards, 11, 54, 1877); Burton (Brown, 296); Consall; near Rocester. Handsworth Cemetery
- ✓ BROMUS GIGANTEUS, L. TALL BROME GRASS.
Frequent. Trent Bridge Stoke (Garner, 346); Lion's Paw Wood† (Painter, 31, 98, 1897); Oakamoor † (Allen, 45, 111, 1911); Tutbury, Alton Towers† (Fraser in Bagnall, 65); Froghall. Oxhill Lane
- ✓ B. RAMOSUS, Huds. (B. ASPER, Murr.)
Frequent in damp woods and hedges.
- ✓ B. STERILIS, L. BARREN BROME GRASS.
Common in fields, hedges and waste places.
- ✓ B. SECALINUS, L. SMOOTH RYE BROME GRASS. Alien.
Burton (Brown, 297); in cornfields Penkhill (Garner, 346); not there now. I have not seen it in our area.
- ✓ B. RACEMOSUS, L.
Brown (298) says "Common in the Burton district". Bagnall (65) queries this. I have only seen it once there. Dovedale† (Bagnall, 65).

Bromes lepidus Jy. lay
Zerna erecta Canal n^o Steelton St. ^{Sidney} Winc. Canal. Canal. Canal. Harbury

GRAMINEÆ.

- ✓ B. COMMUTATUS, Schrad.
Brown (298) gives this as common in the Burton district. Bagnall (65) queries this. I have not seen it there. Stafford† (Moore, 31, 98, 1897).
- ✓ B. HORDEACEUS, L. (B. MOLLIS, L.) SOFT BROME GRASS.
Common in fields and hedges and on waste ground.
- B. ARVENSIS, L. Alien.
Denstone (Edwards, 11, 54, 1877) ; I have failed to find it there.
- ✓ BRACHYPODIUM SYLVATICUM, Rœm. and Schult. (B. GRACILE, Beauv.) SLENDER FALSE BROME GRASS.
Frequent. Stafford ; Oakamoor ; Uttoxeter ; Mill Meece ; Stone ; Manyfold valley ; Dovedale ; Denstone.
- ✓ B. PINNATUM, Beauv.
Denstone (Edwards, 11, 54, 1877) ; I have failed to find it there.
- ✓ LOLIUM PERENNE, L. RYE GRASS.
Common in fields, roadsides, hedges and waste ground.
- ✓ VAR. MULTIFLORUM, (Lam.) (L. ITALICUM, Braun.)
Oakamoor (Allen, 45, 111, 1911) ; Knypersley (Painter, 31, 98, 1897).
- ✓ L. TEMULENTUM, L. DARNEL. Alien.
Near Blythe Bridge (Goodall, 16, 78, 1882).
- ✓ VAR. ARVENSE, With.
Commonly sown with clover (Garner, 347).
- ✓ AGROPYRON REPENS, Beauv. (TRITICUM REPENS, L.) COUCH GRASS.
A common, troublesome weed in cultivated ground.
- ✓ VAR. ARVENSE, Schrank.
Madeley (Daltry in lit.)
VAR. GLAUCUM, Dœll.
Madeley (Daltry in lit.)
- ✓ A. CANINUM, Beauv. (TRITICUM CANINUM, Huds.)
Garner (347) says "Common". Not so now. Chartley (Bagnall, 65) ; Oakamoor† (Allen, 45, 11, 1911) ; Madeley (Daltry in lit.) ; Bucknall ; Caverswall ; Dilhorne.

cut

Knives
Asley

- ✓ **NARDUS STRICTA**, L. MAT GRASS.
Common on heaths and dry pasture. Ludchurch;
Oakamoor; Wetley Moor; Biddulph; Hilderstone;
Caverswall; Needwood Forest; Chartley; Morridge;
Madeley. *Exhillstone*
- Ext[†]* ✓ **HORDEUM EUROPÆUM**, All.
Denstone (Edwards, 11, 54, 1877); I have failed to find
it there.
- ✓ **H. NODOSUM**, L. (H. PRATENSE, Huds., H. SECAL-
INUM, Schreb.) MEADOW BARLEY. *Kenner*
Uttoxeter†, Stone, Stafford (Garner, 347); Oakamoor†
(Allen, 45, III, 1911).
- ✓ **H. MURINUM**, L. WALL BARLEY.
Waste places but rare (Garner, 347); Tutbury Castle,
Braunston (Brown, 208). *Burton. Handsworth*

CONIFERÆ.

- ✓ **JUNIPERUS COMMUNIS**, L. JUNIPER.
“Old trees frequent about very ancient houses”†
(Garner, 415).
- ✓ **TAXUS BACCATA**, L. YEW.
Wild on limestone near Dovedale† (Garner, 405).
Occurs as a planted tree in woods, hedges and church-
yards.
- ✓ **PINUS SYLVESTRIS**, L. SCOTS PINE.
Frequent in woods and heathy places. Doubtful if
native.
- ✓ **LARIX DECIDUA**, Mill. LARCH. Alien.
Planted in many places. Some very fine specimens in
Belmont Woods.

FILICES. *wilsonii. Hook*

- ✓ **HYMENOPHYLLUM PELTATUM**, Desv. (H. UNIL-
ATERALE, Bory, H. WILSONI, Hook.) FILMY FERN.
Clefts of rocks at Gradbatch near Flash (Hewgill in
Garner, 419); near Wootton.

- Self ✓ **H. TUNBRIDGENSE**, Sm. FILMY FERN.
 Given in the *Botanical Guide* as found in a spot near
 Gradbatch (Garner, 419); not there now.
- ✓ **PTERIS AQUILINA**, L. BRACKEN. *Pteridium aquilinum* (L.) Kuhn
 Common in sandy and heathy places. Also in dry
 woods. (L) Roth
- ✓ **BLECHNUM SPICANT**, With. (B. BOREALE, Sw.,
LOMARIA SPICANT, Desv.) HARD FERN.
 Garner (419) says "Common on stony moors". Bid-
 dulph† (Painter, 31, 98, 1897); Needwood Forest†
 (Nowers, 35, 75, 1901); Hilderstone† (Barns, 46, 119,
 1912); Cat's Edge; near Ludchurch.
- ✓ **ASPLENIUM ADIANTUM-NIGRUM**, L. SPLEENWORT.
 Formerly frequent on rocks and walls. Heighley Castle
 (Garner, 419); Stone (32, 103, 1898); Dovedale† (Mase-
 field, 43, 105, 1909); Manyfold valley.
- Self ✓ **A. VIRIDE**, Huds. GREEN SPLEENWORT.
 Dovedale (Garner, 419); I saw a specimen there in 1894
 but not since.
- ✓ **A. TRICHOMANES**, L. BLACK MAIDEN HAIR SPLEENWORT.
 Heighley Castle (Garner, 419); Weaver Hills (Shaw, 99);
Dovedale† (Garner, 419); Manyfold valley† (Fraser in
 Bagnall, 66); Longnor (25, 36, 1891); Swynnerton
 (Masefield, 43, 105, 1909); Denstone (Edwards, 11, 54,
 1877).
- ✓ **A. RUTA-MURARIA**, L. WALL RUE.
 Frequent on walls and rocks. Madeley; Weaver Hills;
 Tutbury Castle; Burton; Manyfold valley; Dovedale;
 near Stanton; Longnor; Waterhouses; near Wootton;
 Cheadle.
- ✓ **ATHYRIUM FILIX-FEMINA** (L) Roth. (ASPLENIUM
FILIX-FEMINA, Bernh.) LADY FERN.
 Star Wood Oakamoor† (Carter in Bagnall, 66); Madeley,
 one plant (Daltry in lit.); Biddulph†, Knypersley†,
 Rudyard† (Painter, 31, 98, 1897); Hilderstone (Barns,
 46, 119, 1912); Denstone† (Edwards, 11, 54, 1877);

Caverswall; near Dilhorne.

✓ VAR. ERECTUM, Syme.

Star Wood Oakamoor† (Bagnall, 66).

✓ CETERACH OFFICINARUM, Willd. (GRAMMITIS CETERACH, Sw.) RUSTY BACK FERN.

Wetton†, Glutton Dale†, Berresford, Beeston Tor†, Dovedale† (Garner, 418); Hamps valley (Fraser in Bagnall, 66); near Stone (Masefield, 43, 105, 1909).

✓ *Phyllitis scolopendrium* (L.) Newm.
SCOLOPENDRIUM VULGARE, Symon. (PHYLLITIS SCOLOPENDRIUM, Newm.) HART'S TONGUE FERN.

Garner (419) says "Common in damp places". Almost exterminated now. Stapenhall near Burton (Shaw, 99); Needwood Forest† (Nowers, 31, 75, 1897); Denstone (Edwards, 11, 54, 1877); near Stanton; Ludchurch.

✓ CYSTOPTERIS FRAGILIS, Bernh. BLADDER FERN.

Butterton Park walls (Garner, 419); on wall between Oakamoor and Cotton Hall (Shaw, 111); near Cheadle (Carter in Bagnall, 66); Ecton Hill † (Fraser in Bagnall, 66); Longnor† (25, 36, 1891); Knypersley† (Painter, 31, 98, 1897); Manyfold valley† (28, 156, 1894); Dovedale (Masefield, 43, 105, 1909).

✓ POLYSTICHUM ACULEATUM, Roth. (ASPIDIUM ACULEATUM, Sw.) PRICKLY SHIELD FERN.

Near Cheadle (Carter in Bagnall, 66); Hamps valley (Fraser in Bagnall, 66); common in dingles near Burton (Brown, 300); Stone (Masefield, 43, 105, 1909); Denstone (Edwards, 11, 54, 1877).

✓ VAR. LOBATUM, Presl. (ASPIDIUM LOBATUM, Sw.)

Common.

✓ P. ANGULARE, Presl. (ASPIDIUM ANGULARE, Willd.)

Needwood Forest† (Nowers, 35, 75, 1901); Star Wood Oakamoor† (Bagnall, 66); near Stafford (Douglas in Bagnall, 66); Cheadle, Stone (Masefield, 43, 106, 1909) Manyfold valley; Dovedale.

- Thelypteris (Schott)*
 ✓ **LASTREA THELYPTERIS**, Bory. (ASPIDIUM THELYPTERIS, Sw.) MARSH FERN.
 Chartley (Brown, 299); Offley Hay (Garner, 418);
 Rolleston (Masefield, 43, 106, 1909). *Cannock Chase*
- Thelypteris*
 ✓ **L. MONTANA**, T. Moore. (L. OREOPTERIS, Presl., ASPIDIUM OREOPTERIS, Sw.) MOUNTAIN FERN. *(Schott) Lessou*
 Froghall†, Offley Hay (Garner, 418); near Cheadle
 (Carter in Bagnall, 67); Byrkley Park, Needwood†,
 Farley (Brown, 299); Rudyard†, Biddulph (Painter,
 31, 98, 1897); Knypersley (22, 121, 1888); Hilderstone†
 (Barns, 46, 119, 1912).
- Aspidium (Schott)*
 ✓ **L. FILIX-MAS**, Presl. (ASPIDIUM FILIX-MAS, Sw.)
 MALE SHIELD FERN.
 Common in woods and hedges.
- ✓ **VAR. PALEACEA**, T. Moore.
 Marchington Forest Banks (Bagnall, 67).
- Aspidium (Schott)*
 ✓ **L. CRISTATA**, Presl. *(L.) Gray*.
 Madeley (Masefield, 43, 106, 1909); Chartley Moss
 (20, 38, 1886). I have not seen it at either place.
 x **SPINULOSA** (L. ULIGINOSA, Newm.)
 Chartley Moss (20, 38, 1886). Probably an error.
- Aspidium (Hollm) Alston*
 ✓ **L. SPINULOSA**, Presl. (ASPIDIUM SPINULOSUM, Sw.)
 Frequent in damp woods. Cheadle (Carter in Bagnall,
 67); Marchington Forest Banks† (Bagnall, 67); Byrkley
 Park and Needwood Forest† (Brown, 299); Chartley Moss†
 (20, 38, 1886); Bishop's Wood† (Masefield, 25, 32, 1891);
 Hilderstone† (Barns, 46, 119, 1912).
- (Hollm) Gray*
 ✓ **L. ARISTATA**, Rendle and Britten. (L. DILATATA, Presl.)
 Near Cheadle (Carter in Bagnall, 67); Alton† (Parsons
 in Bagnall, 67); Biddulph† and Rudyard (Painter, 31,
 98, 1897).
- (alt) Kuntze*
 ✓ **L. ÆMULA**, Brackenridge.
 Cheadle (Blagg, 43, 106, 1909). I have not succeeded in
 finding it.
- ✓ **POLYPODIUM VULGARE**, L. POLYPODY.
 Fairly common on walls, banks and trees.

Thelypteris dryopteris (L.) Slosson
✓ PHEGOPTERIS DRYOPTERIS, Fée. (POLYPODIUM DRYOPTERIS, L.) OAK FERN.

Trentham, Basford, Quarnford†, Oakamoor, Alton (Garner, 418); between Oakamoor and Cotton Hall (Shaw 110); near Cheadle, Weaver Hills (Carter in Bagnall 67); Forest Banks† (Brown, 299); Knypersley Park (Painter, 31, 99, 1897); Knowl Wood† (Woodforde, 32, 103, 1898); Needwood Forest† (Nowers, 35, 75, 1901); Ludchurch (Masefield, 43, 107, 1909); Denstone (Edwards, 11, 54, 1877); Kingsley Wood.

Thelypteris robertiana (Hoffm.) Slosson
✓ P. ROBERTIANA, Braun. (P. CALCAREA, Fée).
Alton (Carter in Bagnall, 67); I have failed to find it.

Thelypteris phegopteris (L.) Slosson
✓ P. POLYPODIOIDES, Fée. (P. PHEGOPTERIS, L.) BEECH FERN.

Madeley Manor (Garner, 418); Bishop's Wood† (Woodforde, 32, 103, 1898); Needwood Forest† (Nowers, 35, 75, 1901); Cheadle (Masefield, 43, 107, 1909).

✓ OSMUNDA REGALIS, L. ROYAL FERN.
Willowbridge, Chartley (Garner, 419).

✓ OPHIOGLOSSUM VULGATUM, L. ADDER'S TONGUE.
Near Cheadle† (Carter in Bagnall, 67); Shobnall (Brown, 301); Knypersley† (Painter, 31, 99, 1897); Berry Hill near Fenton, Oakamoor†, Leek, Swynnerton Old Park† (Masefield, 43, 107, 1909); Madeley† (Daltry in lit.); Dovedale† (34, 73, 1900); Trentham; Hanchurch.

✓ BOTRYCHIUM LUNARIA, Sw. MOONWORT. *Ossoni Hill.*
Whiston, Mow Cop, Maer (Garner, 419); Wootton†, Cheadle Common†, Dilhorne† (Carter in Bagnall, 67); Belmont Woods† (Shaw, 110); Weaver Hills, Coombes valley† (Masefield, 43, 107, 1909).

EQUISETACEÆ.

✓ EQUISETUM MAXIMUM, Lam. (E. FLUVIATILE, Sm.)
Garner (420) says common. Not so now. Knypersley

Park† (Painter, 26, 105, 1892); Madeley† (Daltry in lit.);
Needwood Forest† (Nowers, 35, 75, 1901). *Wedgebury*

- ✓ E. ARVENSE, L. HORSETAIL. *Wedgebury*
Common in fields and on hedge banks and waste ground.
VAR. NEMOROSUM, Braun.
Madeley (Daltry in lit.)
- ✓ E. SYLVATICUM, L. WOOD HORSETAIL.
Fairly common in woods and hedge banks. Often found
on refuse from coal pits.
VAR. CAPILLARE, (Hoffm.)
Madeley (Daltry in lit.)
- ✓ E. PALUSTRE, L.
Common in wet places.
- ✓ E. LIMOSUM, Sm. *fluviatile L.*
Common in wet places.
✓ VAR. FLUVIATILE, (L.)
Near Harracle Mill Rudyard, Knypersley pool (Painter,
31, 99, 1897).
- ✓ E. HYEMALE, L.
Rolleston Hall (Brown, 299),

LYCOPODIACEÆ.

- ✓ LYCOPODIUM SELAGO, L.
Needwood Forest (With., 742); Offley Hay and Maer *Nof Drocton*
Heath (Garner, 420); wood near Cheadle.
- ✓ L. INUNDATUM, L.
Dimminsdale (Carter in Bagnall, 68); Offley Hay
(Garner, 420).
- ✓ L. CLAVATUM, L.
Cheadle, Mow Cop, Wetley, Whiston (Garner, 420).

MARSILEACEÆ.

- ✓ PILULARIA GLOBULIFERA, L.
Offley (Garner, 420).

CHARACEÆ.

- ✓ CHARA FRAGILIS, Desv.
Knypersley pool† (Thompson, 31, 99, 1897).
- C. HISPIDA, L.
Betley (Garner, 434).
- C. VULGARIS, L.
Fairly common in ponds.
- C. TOMENTOSA, L.
Needwood (Shaw, ii,^R7).
- NITELLA FLEXILIS, Agardh.
Ditches Stoke-on-Trent (Garner, 434); near Rushton.

ADDENDA AND ANALYTICAL DATA.

The following is a list of the records made too late for inclusion in this Flora together with those which have been inadvertently omitted from it. A * denotes the sole record of a plant for North Staffordshire, and such are consequently additions; plants marked † are aliens. It will be noticed that the majority are of alien origin and few of them will in all probability form a permanent constituent of our local flora.

LIST I.

- ✓ **THALICTRUM MINUS*, L. MEADOW RUE.
Weaver Hills (Pickard, 60, 155, 1926).
- ✓ **RANUNCULUS FLAMMULA*, L. VAR. *ANGUSTIFOLIUS*, Walhr.
Belmont (Garner, 381).
- ✓ †**GLAUCUM CORNICULATUM*, Curt.
Burton (Druce, *B.E.C.* 8, 385, 1927).
- †**ALYSSUM MONTANUM*, L.
Burton (Druce, *B.E.C.* 8, 104, 1926).
- ✓ *HESPERIS MATRONALIS*, L. DAME'S VIOLET.
Langot Lane (Copeland, 57, 132, 1922); Ecton.
- ✓ †**SISYMBRIUM PANNONICUM*, Jacq. (S. *ALTISSIMUM*, L.)
Burton (Druce, 62, 126, 1928).
- ✓ †**S. COLUMNÆ*, Jacq. (S. *ORIENTALE*, L.)
Burton (Druce, 62, 126, 1928).
- ✓ †**S. LÆSELII*, L.
Burton (Druce, 62, 126, 1928).
- ✓ †**BRASSICA JUNCEA*, Coss.
Burton (Druce, 62, 126, 1928).
- †**B. INCANA*, F. Schultz.
Burton (Druce, 62, 126, 1928).
- ✓ †**CAPSELLA CONCAVA*, (E. At.) SHEPHERD'S PURSE.
Burton (Druce, 62, 126, 1928).

- ✓ †*C. GALLICA, (E. At.), Druce. SHEPHERD'S PURSE.
Stafford, (Druce, **62**, 126, 1928).
- †*C. GERMANICA, (E. At.) SHEPHERD'S PURSE.
Burton (Druce, **62**, 126, 1928).
- †*C. TURONIENSIS, (E. At.) SHEPHERD'S PURSE.
Burton (Druce, **62**, 126, 1928).
- †*C. MEDITERRANEA, (E. At.) SHEPHERD'S PURSE.
Burton (Druce, *B.E.C.* **8**, 387, 1927).
- †*LEPIDIDIUM DENSIFLORUM, Schrad. CRESS.
Burton (Druce, **62**, 126, 1928).
- ✓ †*L. CHALEPENSE, L. CRESS
Burton (Druce, *B.E.C.* **8**, 387, 1927).
- ✓ †*RAPHANUS SATIVUS, L.
Burton (Druce, *B.E.C.* **8**, 388, 1927).
- ✓ *VIOLA DÉSEGLISEI, Jord. VIOLET.
Burton (Druce, **62**, 126, 1928).
- ✓ *SILENE ANGLICA, L. CATCH FLY.
Madeley (Daltry, **59**, 157, 1925). *Burton*
- ✓ HYPERICUM DUBIUM, Leers.
Alton (Pickard, **60**, 155, 1926).
- †*MALVA PARVIFLORA, L. VAR. MICROCARPA, (Desf.)
Burton (Druce, *B.E.C.* **8**, 391, 1927).
- ✓ †*IMPATIENS GLANDULIFERA, Royle.
Tamebridge, Stafford (Druce, **62**, 126, 1928).
- ✓ ONONIS REPENS, L.
Cheadle (Masefield, **61**, 102, 1927) ; Lodge Lane near
Charnes.
- ✓ MEDICAGO FALCATA, L.
Burton (Druce, **62**, 126, 1928).
- ✓ †*MELILOTUS OFFICINALIS, Lam. (M. ARVENSIS,
Wallr.) MELILOT.
Burton (Druce, **62**, 126, 1928).
- †*M. INDICA, All. VAR. TOMMASINI, Rouy, modif.
SEPTENRIONALIS, Reincourt. SMALL MELILOT.
Burton (Druce, *B.E.C.* **8**, 22, 1926).
- *TRIFOLIUM ARVENSE, L. VAR. BRITTINGERI,
Weitenw.
Burton (Druce, *B.E.C.* **8**, 303, 1927).

- ✓ †**LOTUS TETRAGONOLOBUS*, L.
Burton (Andrews, **62**, 126, 1928).
- **L. ANGUSTISSIMUS*, L. f. *ABERRANS*, Reincoirt.
Burton (Druce, *B.E.C.* **8**, 22, 1926).
- †**CORONILLA SCORPIOIDES*, Koch.
Burton (Druce, **62**, 126, 1928).
- ✓ *VICIA LUTEA*, L. YELLOW VETCH.
Burton (Druce, **62**, 126, 1928).
- ✓ *LATHYRUS APHACA*, L. YELLOW VETCHLING.
Madeley (Daltry, **60**, 155, 1926).
- ✓ †**L. TUBEROSUS*, L.
Burton (Druce, **62**, 126, 1928).
- †**LUPINUS ALBUS*, L.
Burton (Druce, *B.E.C.* **8**, 392, 1927).
- ✓ †**POTENTILLA NORVEGICA*, L.
Burton (Druce, *B.E.C.* **8**, 394, 1927).
- **ROSA DESEGLISEI*, (Bor.) VAR. *MERCICA* (W.-D.)
Manyfold valley (Bailey, *B.E.C.* **3**, 396, 1927).
- ✓ †**COTONEASTER MICROPHYLLA*, Wall.
Blore (Druce, **62**, 126, 1928).
- ✓ **CALLITRICHE VERNALIS*, Koch. WATER STARWORT.
Common (Garner, 405).
- ✓ **LYTHRUM HYSSOPIFOLIA*, L. HYSSOP LEAVED LOOSE-
STRIFE.
Burton (Druce, **62**, 126, 1928).
- ✓ †**ASTRANTIA MAJOR*, L.
Burton (Druce, **62**, 126, 1928).
- **ANTHRISCUS SYLVESTRIS*, Hoff. VAR. *LATISEC-*
TUM, Druce.
Madeley (Daltry, *B.E.C.* **5**, 108, 1917).
- CAUCALIS LATIFOLIA*, L.
Burton (Druce, **62**, 126, 1928).
- ✓ *DIPSACUS PILOSUS*, L.
Ilam (Pickard, **60**, 155, 1926).
- ✓ *GNAPHALIUM SYLVATICUM*, L.
Farley, Ramsor (Pickard, **60**, 155, 1926).
- ✓ †**AMBROSIA TRIFIDA*, L.
Burton (Druce, *B.E.C.* **8**, 399, 1927).

- ✓ †*XANTHIUM SPINOSUM, L.
Burton (Druce, **62**, 127, 1928).
- †*HEMIZONIA KELLOGGII, Greene.
Burton (Druce, **62**, 127, 1928).
- †*ARTEMISIA BIENNIS, Willd.
Burton (Druce, **62**, 127, 1928).
- ✓ SENECIO VISCOSUS, L.
Burton (Druce, **62**, 127, 1928).
- ✓ *S. SQUALIDUS, L. X VULGARIS, L. = *Baxterii*
Burton (Druce, *B.E.C.* **8**, 401, 1927).
- ✓ †*CENTAUREA MELITENSIS, L.
Burton (Druce, **62**, 127, 1928).
- *HIERACIUM PRENANTHOIDES, Vill. HAWKSWEED.
Churnet Bridge (Cobbe, **60**, 156, 1926).
- *TARAXACUM NORDSTEDTII, Dahlst. DANDELION.
Needwood (Curtis, *B.E.C.* **6**, 736, 1922).
- *T. NÆVOSUM, Dahlst. DANDELION.
Burton (Druce, *B.E.C.* **8**, 403, 1927).
- *T. FULVUM, Raunk. DANDELION.
Burton (Druce, *B.E.C.* **8**, 404, 1927).
- ✓ †*TRAGOPOGAN PORRIFOLIUM, L. SALSIFY.
Rolleston (Moseley in Bagnall, 39).
- †*GILIA ACHILLEÆFOLIA, Benth.
Burton (Druce, **62**, 127, 1928).
- †*LAPPULA LAPPULA, (L.)
Burton (Druce, **62**, 127, 1928).
- ✓ †*LINARIA MINOR, Desf.
Burton (Druce, **62**, 127, 1928).
- ✓ *VERONICA AQUATICA, Benquerel.
Dovedale (Druce, **62**, 127, 1928).
VAR. DIVERICATA, C. E. Britton.
Dovedale (Druce, *B.E.C.* **8**, 313, 1927).
- ✓ LIMOSELLA AQUATICA, L.
Stafford (Pickard, **60**, 155, 1926).
- ✓ *EUPHRASIA BREVIPILA, Burnat and Greml.
Morridge (Bennett, *B.E.C.* **5**, 670, 1919).
- ✓ *MELAMPYRUM PRATENSE, L. VAR. MONTANUM,
Johnst. f. LANCEOLATUM, Spenn.
Madeley (Druce, *B.E.C.* **8**, 411, 1927).

- ✓ LATHRÆA SQUAMARIA, L.
Yoxall (Elliot, 59, 157, 1925).
- ✓ *MENTHA AQUATICA, L. X ARVENSIS, L. VAR.
OVALIFOLIA, Briq. (M. VERTICILLATA, L.
VAR. OVALIFOLIA, Briq.)
Dovedale (Druce, 62, 127, 1928).
*VAR. SUBGLABRA, Baker.
Stafford (Druce, 61, 103, 27).
*VAR. ACUTIFOLIA, Sm.
Oakamoor (Carter in Bagnall, 46).
- ✓ †*MELISSA OFFICINALIS, L.
Offley Hay (Druce, 60, 157, 1926).
- ✓ *STACHYS PALUSTRIS, L. X SYLVATICA, L. (S.
AMBIGUA, Sm.)
Common (Garner, 384); Manyfold valley (Cobbe,
60, 156, 1926).
- ✓ †*HERNIARIA HIRSUTA, L.
Burton (Druce, 62, 127, 1928).
- ✓ †CHENOPODIUM MURALE, L.
Burton (Druce, 62, 127, 1928).
- ✓ †*C. OPULIFOLIUM, Schrad.
Burton (Druce, 62, 127, 1928).
†*VAR. OBTUSATUM, Gaud.
Burton (Druce, 62, 127, 1928).
†*VAR. MUCRONATUM, Beck.
Burton (Druce, 62, 127, 1928).
- ✓ †*C. ALBUM, L. VAR. PAUCIDENS, (Murr.)
Burton (Druce, 62, 127, 1928).
†*VAR. SUBFICIFOLIUM, (Murr.)
Burton (Druce, 62, 127, 1928).
✓ †*VAR. GLOMERULOSUM, (Reich.)
Burton (Druce, 62, 127, 1928).
✓ †*VAR. LANCEOLATUM, (Muhl.)
Burton (Druce, 62, 127, 1928).
†*VAR. LANCEOLATIFORME, (Murr.)
Burton (Druce, 62, 127, 1928).
†*X ZSCHACKEI, Murr.
Burton (Druce, B.E.C. 8, 35, 1926.)

✓ †***X** FICIFOLIUM, Sm.

Burton (Druce, *B.E.C.* 8, 35, 1926).

✓ †*C. LEPTOPHYLLUM, Nutt.

Burton (Druce, 62, 127, 1928).

✓ C. GLAUCUM, L.

Burton (Druce, 62, 127, 1928).

✓ †*C. URBICUM, L. VAR. INTERMEDIUM, Moq.

Branston (Garner, 360).

✓ †*ATRIPLEX PATULA, L. VAR. BRACTEATA, Wester.

Burton (Druce, *B.E.C.* 8, 415, 1927).

✓ †*POLYGONUM PATULUM, M.B.

Burton (Druce, 62, 127, 1928).

✓ †*P. PULCHELLUM, Lois. = *arsenarium*

Burton (Druce, *B.E.C.* 8, 35, 1926).

✓ †*RUMEX DENTATUS, L. [Annual]

Manyfold valley (Cobbe, 61, 103, 1927).

✓ †*R. SALICIFOLIUS, Weinm.

Burton (Druce, 62, 127, 1928).

✓ R. SANGUINEUS, L. VAR. VIRIDIS, (Sibth.)

Rudyard (Painter in Bagnall, 49).

✓ *MERCURIALIS ANNUA, L.

Burton (Druce, *B.E.C.* 8, 417, 1927).

✓ *ULMUS SUBEROSA, Ehrh.

Common (Garner, 361).

✓ ORCHIS MORIO, L.

Yoxall (Elliot, 59, 157, 1925).

✓ †*ASPHODELUS FISTULOSUS, L.

Burton (Druce, 62, 127, 1928).

✓ COLCHICUM AUTUMNALE, L.

Dilhorne (Beckett, 61, 102, 1927).

✓ †*SETARIA GLAUCA, Beauv.

Burton (Druce, 62, 127, 1928).

✓ †*POLYPOGON MONSPELIENSIS, Desf.

Burton (Druce, 62, 128, 1928).

✓ CATABROSA AQUATICA, Beauv.

Whitmore (Daltry, 61, 102, 1927).

✓ †*AVENA FATUA, L. VAR. GLABRATA, (Petersm.)

Burton (Druce, *B.E.C.* 8, 423, 1927).

†*CYNOSURUS ECHINATUS, L. VAR. PURPURASCENS,
Ten.

Burton (Druce, *B.E.C.* 8, 57, 1926).

†*FESTUCA LIGUSTICA, Bert. *Annual*

Burton (Druce, 62, 128, 1928).

†*F. DANTHONII, A. and G. = *ciliata = barbata*

Burton (Druce, *B.E.C.* 8, 424, 1927).

✓ *BROMUS RIGENS, L. = *maximus*

Burton (Druce, 62, 128, 1928).

✓ †*B. TECTORUM, L.

Burton (Druce, 62, 128, 1928).

✓ †*B. RUBENS, L.

Burton (Druce, 62, 128, 1928).

†B. ARVENSIS, L. *Annual*

Burton (Druce, 62, 128, 1928).

✓ *HORDEUM MARINUM, Huds.

Burton (Druce, 62, 128, 1928).

In the preceding pages as complete an account as possible has been given of the plants recorded up to the present time for North Staffordshire. Many of these records are of ancient date, and in those cases, where, after much search extending over a number of years, modern confirmation of them is wanting, I feel we cannot now include these plants in our flora. In some cases habitats, which in former times were the homes of certain plants, have now ceased to be such due to changes in the environment: this particularly applies to places on the borders of Stoke-on-Trent where the growth of the city has naturally destroyed many habitats. In a few cases faulty determination has, perhaps, been responsible for certain records. In the following list I have given the names of those plants which, for one or other of the above reasons, I consider as not forming part of the North Staffordshire flora, together with a few which have only been recorded as growing in lawns or other places where they have been obviously planted.

Plants removed from the N. Staffs list.

LIST II.

- ~~ANEMONE RANUNCULOIDES, L.~~
- ~~MYOSURUS MINIMUS, L.~~
- ~~TROLLIUS EUROPÆUS, L.~~
- ~~ERANTHIS HYEMALIS, Salisb.~~
- ~~DELPHINUM AJACIS, L.~~
- ~~EPIMEDIUM ALPINUM, L.~~
- ~~PAPAVER SOMNIFERUM, L.~~
- ~~MECONOPSIS CAMBRICA, Vig.~~
- ~~CORYDALIS BULBOSA, DC.~~
- ~~C. LUTEA, DC.~~
- ~~FUMARIA VAILLANTII, Lois.~~
- ~~ARABIS GLABRA, Bernh.~~
- ~~CARDAMINE BULBIFERA, Crantz.~~
- ~~IBERIS AMARA, L.~~
- ~~HELIANTHEMUM CANUM, Baumg.~~
- ~~CERASTIUM TETRANDRUM, Curt.~~
- ~~C. ARVENSE, L.~~
- ~~HYPERICUM MONTANUM, L.~~
- ~~ALTHÆA OFFICINALIS, L.~~
- ~~RADIOLA LINOIDES, Roth.~~
- ~~GERANIUM SANGUINEUM, L.~~
- ~~G. SYLVATICUM, L.~~
- ~~ERODIUM MOSCHATUM, L'Hérit.~~
- ~~TRIFOLIUM INCARNATUM, L.~~
- ~~T. RESUPINATUM, L.~~
- ~~T. AGRARIUM, L.~~
- ~~T. FILIFORME, L.~~
- ~~LOTUS TENUIS, Waldst. and Kit.~~
- ~~L. ANGUSTISSIMUS, L.~~
- ~~HIPPOCREPIS COMOSA, L.~~
- ~~LATHYRUS NISSOLIA, L.~~
- ~~L. PALUSTRIS, L.~~
- ~~POTENTILLA VERNA, L.~~
- ~~ROSA SPINOSISSIMA, L.~~
- ~~PYRUS GERMANICA, Hooker *fil.*~~
- ~~BRYONIA DIOICA, Jacq.~~
- ~~SMYRNIUM OLUSATRUM, L.~~

- CICUTA VIROSA, L.
- AMMI MAJUS, L.
- CARUM PETROSELINUM, Benth. and Hooker *fil.*
- C. SEGETUM Benth. and Hooker *fil.*
- C. CARVI, L.
- C. BULBOCASTANUM, Koch.
- SIUM LATIFOLIUM, L.
- CENANTHE PIMPINELLOIDES, L.
- CORIANDRUM SATIVUM, L.
- CAUCALIS DAUCOIDES, L.
- GALIUM BOREALE, L.
- G. ERECTUM, Huds.
- G. ANGLICUM, Huds.
- G. TRICORNE, Stokes.
- ASPERULA ARVENSIS, L.
- VALERIANELLA ERIOCARPA, Desv.
- ASTER TRIPOLIUM, L.
- ERIGERON ALPINUM, L.
- ANTENNARIA DIOICA, Gærtn.
- INULA HELENIUM, L.
- I. SQUARROSA, Bernh.
- SENECIO SARRACENICUS, L.
- CARDUUS PYCNOCEPHALUS, L. VAR. TENUIFLORUS,
(Curt.)
- CENTAUREA ASPERA, L.
- C. SOLSTITIALIS, L. *Burton*
- C. MONTANA, L.
- CARTHAMUS TINCTORIUS, L.
- HYPOCHÆERIS GLABRA, L.
- SONCHUS PALUSTRIS, L.
- CAMPANULA GLOMERATA, L.
- PRIMULA ELATIOR, Jacq.
- ECHIUM PLANTAGINEUM, L.
- LINARIA ELATINE, Mill.
- L. SPURIA, Mill.
- VERONICA TRIPHYLLOS, L.
- STACHYS ANNUA, L.
- GALEOPSIS DUBIA, Leers.

- ~~LEONURUS CARDIACA, L.~~
- ~~ATRIPLEX PORTULACOIDES, L.~~
- ~~RUMEX AQUATICUS, L.~~
- ~~EUPHORBIA CHARACIAS, L. [Sand Pans near Weston S.M.]~~
- ~~E. LATHYRUS, L.~~
- ~~HELLEBORINE LONGIFOLIA, Rendle and Britten.~~
- ~~ACERAS ANTHROPOPHORA, Br.~~
- ~~OPHRYS MUSCIFERA, Huds.~~
- ~~JUNCUS BIGLUMIS, L.~~
- ~~LUZULA FORSTERI, DC.~~
- ~~DAMASONIUM ALISMA, Mill.~~
- ~~ELEOCHARIS ACICULARIS, Rœm. and Sch.~~
- ~~E. MULTICAULIS, Sm.~~
- ~~CAREX DIANDRA, Sch.~~
- ~~C. CEDERI, Retz.~~
- ~~C. LASIOCARPA, Ehrh.~~
- ~~FESTUCA SYLVATICA, Vill.~~
- ~~BRACHYPODIUM PINNATUM, Beauv.~~
- ~~HORDEUM EUROPEUM, All.~~
- ~~HYMENOPHYLLUM TUNBRIDGENSE, Sm.~~
- ~~ASPLENIUM VIRIDE, Huds.~~
- ~~LASTREA CRISTATA, Presl.~~
- ~~X SPINULOSA, Presl.~~
- ~~L. ÆMULA, Brackenridge.~~
- ~~PHEGOPTERIS ROBERTIANA, Braun. TOTAL, 100.~~

List No. III. consists of the records contained in Garner's *Natural History of the County of Stafford*, Bagnall's *Flora of Staffordshire*, Reader's *Flora of Hawkesyard*, and the *Transactions of the North Staffordshire Field Club*, of plants given as growing in the south of Staffordshire and which are not found now in the northern area.

In S Staffs + not in N Staffs

LIST III.

- MYOSURUS MINIMUS, L.
- RANUNCULUS FLUITANS, Lam. VAR. BACHII, (Wirtg.)
- R. PSEUDO-FLUITANS, Baker and Foggett.
- R. TRICHOPHYLLUS, Chaix.
- VAR. DROUETII, (F. Schultz.)
- f. GODRONII, (Gren.)

- CALTHA PALUSTRIS, L. VAR. GUERANGERII, (Bor.)
PAPAVER SOMNIFERUM, L.
P. RHŒAS, L. VAR. STRIGOSUM, (Bœenn.)
FUMARIA MURALIS, Sonder.
F. BORÆI, Jord.
CARDAMINE BULBIFERA, Crantz.
EROPHILA VERNA, E. Meyer, VAR. STENOCARPA,
(Jord.)
ALYSSUM CALYGINUM, L.
BRASSICA RAPA, L. VAR. BRIGGSII, Wats.
CAPSELLA DRUCEANA, (E. At.)
C. BRITTONII, (E. At.)
DIPLLOTAXIS TENUIFOLIA, DC.
D. MURALIS, DC.
VIOLA RURALIS, Jord.
DIANTHUS ARMERIA, L.
CERASTIUM ARVENSE, L.
STELLARIA MEDIA, L. VAR. BORÆANA, Jord.
SAPONARIA VACCARIA, L.
SAGINA CILIATA, Fr.
S. PROCUMBENS, L. VAR. DAVIESII, Druce.
SPERGULARIA SALINA, Presl.
ELATINE HYDROPIPER, L.
E. HEXANDRA, DC.
HYPERICUM PERFORATUM, L. VAR. ANGUSTIFOL-
LIUM, DC.
MALVA MOSCHATA, L. VAR. HETEROPHYLLA, Lej.
LINUM PERENNE, L.
ERODIUM MOSCHATUM, L'Hérit.
E. MARITIMUM, L' Hérit.
ACER CAMPESTRE, L. VAR. LEIOCARPON, Wallr.
GENISTA PILOSA, L. VAR. MICROPHYLLA, Druce.
MELILOTUS INDICA, All.
TRIFOLIUM FILIFORME, L.
LOTUS TENUIS, Waldst. and Kit.
RUBUS NITIDUS, Wh. and N. VAR. HAMULOSUS, Ler.
and Muell.
R. INCURVATUS, Bab.

- R. ERYTHRINUS, Genev.
 R. THYRSOIDEUS, Wimm.
 R. PUBESCENS, Wh. VAR. SUBINERMIS, Rogers.
 R. COLEMANNI, Bab.
 R. MICANS, Gren. and Godr.
 R. BORÆANUS, Genev.
 R. RADULA, Wh. VAR. ANGLICANUS, Rogers.
 R. BABINGTONII, Bell-Salt.
 R. ERICETORUM, Lefv.
 R. FUSCUS, Wh. and N. VAR. NUTANS, Rogers.
 R. FOLIOSUS, Wh. and N.
 R. ADORNATUS, P. J. Muell.
 R. BELLARDI, Wh. and N. VAR. DENTATUS, Bab.
 R. HIRTUS, Waldst. and Kit.
 R. MINUTIFLORUS, P. J. Muell.
 R. VELATUS, Lefv.
 R. DUMETORUM, Wh. and N. VAR. FEROX, Wh.
 POTENTILLA ARGENTEA, L.
 AGRIMONIA ODORATA, Mill.
 POTERIUM POLYGAMUM, Waldst. and Kit.
 ROSA CANINA, L. VAR. SURCULOSA, Hook.
 VAR. LATEBROSA, (Déségl.)
 VAR. HEMITRICHA, (Rip.)
 R. TOMENTELLA, Lem. VAR. BORRERI, (Woods).
 VAR. OBTUSIFOLIA, (Desv.)
 R. TOMENTOSA, Sm. VAR. FÆTIDA, (Bast.)
 R. CORIIFOLIA, Fr. VAR. CÆSIA, (Sm.)
 PYRUS INTERMEDIA, Ehrh.
 P. DOMESTICA, Ehrh.
 CRATÆGUS MONOGYNA, Jacq. VAR. INCISIFOLIA,
 Druce.
 VAR. QUERCIFOLIA, (Loud).
 VAR. MICROPHYLLA, Druce.
 SEDUM ALBUM, L.
 DROSERA ANGLICA, Huds.
 MYRIOPHYLLUM VERTICILLATUM, L.
 M. ALTERNIFLORUM, DC.
 CALLITRICHE OBTUSANGULA, Le Gall.

- OENOTHERA BIENNIS, L.
BRYONIA DIOICA, Jacq.
BUPLÉURUM LANCIFOLIUM, Hornem.
CICUTA VIROSA, L.
CARUM SEGETUM, Benth.
C. CARVI, L.
ANGELICA SYLVESTRIS, L. VAR. DECURRENS,
Lallemant.
CORNUS STOLONIFERA, Michx.
GALIUM ULIGINOSUM, L.
ERIGERON CANADENSE, L.
INULA HELENIUM, L.
I. SQUARROSA, Bernh.
ANTHEMIS TINCTORIA, L.
ARTEMISIA VULGARIS, L. VAR. COARCTATA, For-
selles.
SENECIO SARRACENICUS, L.
S. SQUALIDUS, L.
S. AQUATICUS, Hill, VAR. DISCOIDEUS, Druce, f.
AURANTICUS, Druce.
CNICUS ERIOPHORUS, Roth.
ONOPORDUM ACANTHIUM, L.
CENTAURIA JACEA, L.
C. NEMORALIS, Jord.
VAR. SUBINTEGRA, C. E. Britton.
C. OBSCURA, Jord.
C. DRUCEI, C. E. Britton.
CREPIS VIRENS, Wallr. VAR. ANGLICA, Druce and
Thellung.
HIERACIUM MACULATUM, Sm.
TARAXACUM LACISTOPHYLLUM, Dahlst.
T. UDUM, Jord.
SONCHUS OLERACEUS, L. VAR. TRIANGULARIS, Wallr.
S. ASPER, Hill, VAR. PUNGENS, Bisch.
VAR. INTEGRIFOLIUS, Lej.
WAHLENBERGIA HEDERACEA, Reich.
CAMPANULA RAPUNCULOIDES, L.
C. ROTUNDIFOLIA, L. VAR. LANCIFOLIA, Mert. and
Koch.

- C. RAPUNCULUS, L.
 CALLUNA VULGARIS, Hull, VAR. INCANA, Reich.
 MONOTROPA HYPOPITYS, L.
 GLAUX MARITIMA, L.
 BENTHAMIA MENZIESII, Druce.
 SYMPHYTUM PEREGRINUM, Ledeb.
 CUSCUTA TRIFOLII, Bab.
 VERBASCUM NIGRUM, L.
 V. BLATTARIA, L.
 LINARIA REPENS, Mill.
 L. ELATINE, Mill.
 EUPHRASIA NEMOROSA, Pers.
 UTRICULARIA NEGLECTA, Lehm.
 MENTHA GENTILIS, L.
 M. AQUATICA, L. VAR. SUBGLABRA, Baker.
 MARRUBIUM VULGARE, L.
 LEONURUS CARDIACA, L.
 PLANTAGO LANCEOLATA, L. VAR. TIMBALI, (Jord.)
 CHENOPODIUM POLYSPERMUM, L. VAR. CYMOSUM,
 Moq.
 C. ALBUM, L. VAR. VIRDESCENS, St. Amans.
 VAR. SUBFICIFOLIUM, Murr. f. SERRATIFRONS,
 Murr.
 C. STRIATUM, Murr. VAR. EROSUM, Murr.
 C. VIRGATUM, Ambrose.
 ATRIPLEX PATULA, L. VAR. ERECTA, Lange.
 A. DELTOIDEA, Bab.
 POLYGONUM AVICULARE, L. VAR. ARENASTRUM,
 Bor.
 P. ÆQUALE, Lindman.
 P. MACULATUM, Trim and Dyer.
 P. CUSPIDATUM, Sieb. and Zuce.
 EUPHORBIA CYPARISSIAS, L.
 ULMUS PLOTII, Druce.
 QUERCUS ROBUR, L. VAR. INTERMEDIA, R. Don.
 SALIX TRIANDRA, L. sub. sp. HOFFMANNIANA,
 (Sm.)
 X VIMINALIS, L. VAR. TREVIRANI, (Sprengel).

- S. DAPHNOIDES, Villars.
 S. FRAGILIS, L. X TRIANDRA, L. (S. ALOPECUROIDES, Tausch).
 VAR. BRITANICA, F. W. White.
 S. PURPUREA, L. f. WOOLGARIANA, (Borr.)
 f. LAMBERTIANA, (Sm.)
 X VIMINALIS, L. (S. RUBRA, Huds.)
 f. FORBYANA, (Sm.)
 S. VIMINALIS, L. VAR. LINEARIFOLIA, Wimmer.
 S. CINEREA, L. f. OLEIFOLIA, (Sm.)
 X PHYLICIFOLIA, L. (S. LAURINA, Sm.)
 POPULUS MONILIFERA, Ait.
 P. TACAMAHACCA, Mill.
 SPIRANTHES AUTUMNALIS, Rich.
 CÉPHALANTHERA ENSIFOLIA, Rich.
 NARCISSUS BIFLORUS, Curt.
 ALLIUM VINEALE, L. VAR. COMPACTUM, (Thuill.)
 JUNCUS TENUIS, Willd.
 ALISMA LANCEOLATUM, With.
 POTAMOGETON CRISPUS, L. VAR. SERRATUS, (Huds.)
 P. FRIESII, Rupr.
 P. TRICHOIDES, Cham. and Schlecht.
 ELEOCHARIS ACICULARIS, Roem. and Schult.
 E. MULTICAULIS, Sm.
 SCHÆNUS NIGRICANS, L.
 SCIRPUS LACUSTRIS, L. X TRIQUETER, L.
 CAREX DIANDRA, Sch.
 C. DIVULSA, Stokes,
 C. GOODENOWII, Gay, VAR. JUNCELLA, Fr.
 C. LIMOSA, L.
 C. EXTENSA, Good.
 C. CÆDERI, Retz.
 SETARIA VIRIDIS, Beauv.
 ANTHOXANTHUM PUELI, Lecoq and Lam.
 ALOPECURUS GENICULATUS, L. VAR. PRONUS, Mitt.
 CYNOSURUS ECHINATUS, L.
 POA PRATENSIS, L. VAR. SUBCÆRULEA, (Sm.)
 P. CHAIXII, Vill.

GLYCERIA MARITIMA, Mert. and Koch.
 G. DISTANS, Wahlb.
 G. PROCUMBENS, Dum.
 FESTUCA CAPILLATA, Lam.
 F. GLAUCA, Lam.
 LASTREA FILIX-MAS, Prest. VAR. AFFINIS, Bab.
 EQUISETUM PALUSTRE, L. VAR. NUDUM, Newm.
 CHARA FRAGILIS, Desv. VAR. HEDWIGII, Kütz.
 NITELLA TRANSLUCENS, Agardh.
 N. OPACA, Agardh.

List No. IV. contains the names of plants recorded for North Staffordshire, but of which I have not found records for South Staffordshire.

In N Staffs & not in S Staffs

LIST IV.

- THALICTRUM MINUS, L. *Weaver Hills*
 ADONIS AUTUMNALIS, L. *Talbury Oakmoor*
 HELLEBORUS VIRIDIS, L. *R. Dove below Thospe Manyfold & Eastern*
 H. FŒTIDUS, L.
 ACONITUM NAPELLUS, L. *Churnet 2 m. below Cheddleton. Dunningdale*
 PAPAVER DUBIUM, L. VAR. LÉCOQII, Lamotte. *Mill Dale & Alstonefield*
~~GLAUCIUM CORNICULATUM, Curt. *Burton*~~
 FUMARIA CAPREOLATA, L. *Stafford*
 BARBAREA PRÆCOX, Br. *Bakemoor*
~~ARABIS HIRSUTA, Scop. *Dove Dale Manyfold*~~
 ALYSSUM MONTANUM, L. *Burton*
 DRABA INCANA, L. *Thos Cave. Dove Dale*
~~SISYMBRIUM PANNONICUM, Jacq. *B*~~
~~S. COLUMNÆ, Jacq. *B*~~
 S. LŒSELII, L. *B*
 BRASSICA INCANA, F. Schultz. *B*
 CAPSELLA GALLICA, (E. At.) *Stafford*
 C. GERMANICA, (E. At.) *B*
 C. MEDITERRANEA, (E. At.) *B*
 LEPIDIUM DENSIFLORUM, Schrad. *B*
~~L. DRABA, L. *Cheddle*~~
~~L. CHALEPENSE, L. *B*~~

- ~~HUTCHINSIA PETRÆA~~, Br. ^{Dovedale} ~~Benford~~, ~~Wotton Hill~~, ~~Weaver Hills~~, ~~Beeston Tor~~
~~RAPHANUS SATIVUS~~, L. B.
~~HELIANTHEMUM CHAMÆCISTUS~~, Mill. ^{Dovedale}, ^{Manifold}
~~VIOLA HIRTA~~, L. ^{Eaton}, ^{Wotton Valley}, ^{Dovedale}, ^{W Beeston Tor}, ^{Manifold}
 V. CANINA, L. VAR. PUSILLA, Bab.
~~V. DÉSEGLISEI~~, Jord. B
~~V. LUTEA~~, Huds. ^{Manifold}, ^{Roche} etc
 VAR. AMCENA, Symons. ^{Dovedale}
~~SILENE NUTANS~~, L. ^{Dovedale}, ^{How's Cave}, ^{Alstonfield}
~~STELLARIA NEMORUM~~, L. ^{Alton}, ^{Oakmoor}.
~~ARENARIA VERNA~~, L. ^{Dovedale}, ^{Eaton Hill}
 A. TENUIFOLIA, L. ^{Weaver Hills}, ^{Dovedale}, ^{Froghall}, ^{Cauldon}
 A. SERPYLLIFOLIA, L. VAR. VISCIDULA, Roth. ^{Stenson}
 SAGINA SUBULATA, Presl. ^{Stenson} ^{Wolstone Heath}, ^{Weaver Hills}
 S. NODOSA, Fenzl. VAR. GLANDULOSA, (Bess.) ^{Stones}
 CLAYTONIA SIBERICA, L. ^{Knyffersley} ^{Greenway Banks}, ^{Maer}
 MALVA PARVIFLORA, L. VAR. MICROCARPA, Desf. B
 TILIA PLATYPHYLLUS, Scop. ^{Manley}
 OXALIS ACETOSELLA, L. VAR. SUBPURPURASCENS,
 DC. ^{Leon's Paw Wood}
 MEDICAGO LUPULINA, L. VAR. SCABRA, Gray. ^{Manley}, ^{Endon}
 MELILOTUS INDICA, All. VAR. TOMMASINI, Rouy,
 modif. SEPTENRIONALIS, Reincourt. B
 TRIFOLIUM ARVENSE, L. VAR. BRITTINGERI,
 Weitenw. B
 LUPINUS ALBUS, L. B
 LOTUS TETRAGONOLOBUS, L. B
 L. ANGUSTISSIMUS, L. f. ABERRANS, Reincourt. B
 CORONILLA SCORPIOIDES, Koch. B
 VICIA CRACCA, L. VAR. INCANA, Thuill. ^{Manley}
 V. LUTEA, L. ^{Redwood Forest} ^{Burton}
 LATHYRUS HIRSUTUS, L. ^{Redwood Forest}
 RUBUS GRATUS, Focke.
 R. GODRONI, Lecoq and Lamotte, VAR. ROBUSTUS,
 (P. J. Muell.)
 R. LENTIGINOSUS, Lees.
 R. MACROPHYLLUS, Wh. and N. VAR. SCHLECHTEN-
 DALII, Weihe.

R. HIRTIFOLIUS, Muell. and Wirtg. VAR. DANICUS, Focke.

VAR. MOLLISIMUS, (Rogers).

R. LEUCOSTACHYS, Sm. VAR. CONSPICUUS, P. J. Muell.

R. ANGLÓSAXONICUS, Gelert, sub. sp. RADULOIDES, Rogers.

R. MELANOXYLON, Muell and Wirtg.

R. PALLIDUS, Wh. and N. VAR. LEPTOPETALUS, Rogers.

R. DUMETORUM, Wh. and N.

R. CORYLIFOLIUS, Sm.

R. SERPENS, Wh.

R. SAXATILIS, L. *Stamps. Many fold. Apistor (alstonefield) Dovedale*

POTENTILLA NORVEGICA, L. *B*

ROSA INVOLUTA, Sm. VAR. SABINI, Woods. *N. alstonefield*

R. CANINA, L. VAR. SPHÆRICA, (Gren.) *N. of Rudyard lake. Oakmoor*

VAR. SENTICOSA, Baker.

VAR. BISERRATA, (Mérat.) *Biddulph*

VAR. VINACEA, Baker. *Oakmoor*

R. DESÉGLISEI, (Bor.) VAR. MERCICA, (W.-D.) *Manyfold*

R. CINNAMOMEA, L. *near Willowbridge. Whitmore & Madeley*

R. DUMETORUM, Thuill. VAR. PLATYPHYLLA, (Rau.)

— PYRUS ARIA, Ehrh. *Boston. Dor. Censford Dale. Mill Dale Dovedale*

VAR. RUPICOLA, Syme. *Dovedale*

COTONEASTER MICROPHYLLA, Wallich. *Blone*

SAXIFRAGA UMBROSA, L.

S. SPONHEMICA, Gmel. *Dovedale & on limestone*

— S. HYPNOIDES, L. *Manyfold. Dovedale. Haslow*

— RIBES ALPINUM, L. *Manyfold valley*

COTYLEDON UMBILICUS, L.

CALLITRICHE AUTUMNALIS, L. *Whitmore*

CIRCÆA ALPINA, L. *Cotton Dale (Oakmoor) Keyley Castle (Hophall)*

— VAR. INTERMEDIA, (Ehrh.) *Oakmoor. Hophall*

ASTRANTIA MAJOR, L. *B.*

SISON AMOMUM, L. *N. Stafford*

PEUCEDANUM OSTRUTHIUM, Koch.

ANTHRISCUS SYLVESTRIS, Hoff. VAR. LATISECTUM,
Druce. *Madeley*

HERACLEUM SPONDYLIIUM, L. VAR. ANGUSTIFOLIUM,
Huds. *Manifold, Slam etc*

CAUCALIS LATIFOLIA, L. *B*

LONICERA CAPRIFOLIUM, L. *N. Denstone on Derby border. Cheslet to Oakmoor*

GALIIUM SYLVESTRE, Poll. *Manifold, Apis Tor (alstonefield)*

VALERIANA OFFICINALIS, L. *Star W (Oakmoor) etc*

V. PYRENAICA, L. *do.*

KENTRANTHUS RUBER, DC. *Burton (old walls)*

BIDENS CERNUA, L. VAR. RADIATA, DC.

AMBROSIA TRIFIDA, L. *B*

XANTHIUM SPINOSUM, L. *B*

HEMIZONIA KELLOGGII, Greene *B*

ARTEMISIA BIENNIS, Willd. *B*

PETASITES ALBUS, Gærtn. *Star Wood Oakmoor (Colton Dale)*

SENECIO SYLVATICUS, L. VAR. AURICULATUS, Meyer.

S. VISCOSUS, L. *B*

S. AQUATICUS, Hill, VAR. PENNATIFIDUS, Gren. and
Godr. *Madeley*

S. SQUALIDUS, L. X VULGARIS, L. *B*

ARCTIUM MAJUS, Bernh. *Kington n. Uttoxeter Manifold.*

CARDUUS CRISPUS, L. VAR. ACANTHOIDES, (L.) *Charley Castle, Stafford Stone. B.*

CNICUS ARVENSIS, Hoff. VAR. SETOSUS, (Bess.) *B*

CENTAUREA MELITENSIS, L. *B*

CREPIS TARAXACIFOLIA, Thuill. *Whitmore, Cheslet*

C. CAPILLARIS, Wallr. VAR. AGRESTIS, (Waldst. and
Kit.) *Madeley, Whitmore etc*

C. PALUDOSA, Moench. *Whitmore to Acton. Lion's Paw W. + Cliff W. Rudyard*

HIERACIUM ANGLICUM, Fr. *Dove Dale*

H. CÆSIUM, Fr. *Dove Dale*

H. DIAPHANOIDES, Lind. *Mow Cop*

H. PRENANTHOIDES, Vill. *Chumet Bridge*

TARAXACUM NORDSTEDTII, Dahlst. *Reedwood*

T. NÆVOSUM, Dahlst. *B*

T. BRACHYGLOSSUM, Dahlst.

T. FULVUM, Raunk. *B*

ANDROMEDA POLIFOLIA, L. *Charley Moss, Whitmore*

- PYROLA ROTUNDIFOLIA, L. *Charkey Moss*
 P. MINOR, L. *Cheddle. Oakmoor. N. Denstone*
 ANAGALLIS FEMINA, Mill. *B. Oakmoor*
 NYMPHOIDES PELTATUM, Rendle and Britten. *Allton*
 GILIA ACHILLEÆFOLIA, Benth. *B*
 ASPERUGO PROCUMBENS, L. *Oakmoor Railway (Rocester)*
 LAPPULA LAPPULA, (L.) *B*
 SYMPHYTUM OFFICINALE, L. VAR. PATENS, (Sibth.) *Tradeley*
 PULMONARIA ANGUSTIFOLIA, L. *Oakmoor*
 P. OFFICINALIS, L.
 CUSCUTA EPITHYMUM, Murr. *Cheddle, Ramshorn*
 LYCIUM CHINENSE, Mill. *Sandon Trentham*
 SCROPHULARIA ALATA, Gilib. *Stafford*
 VERONICA AQUATICA, Benth. VAR. DIVERICATA,
 C. E. Britton. *Dovedale*
 EUPHRASIA BREVIPILOSA, Burnat and Gremli. *Horridge*
 MELAMPYRUM PRATENSE, L. VAR. MONTANUM,
 Johnst. *Coxleton Edge*
 VAR. DIGITATUM, (Schm.) f. LANCEOLATUM, Spenn. *Tradeley*
 OROBRANCHE ELATIOR, Sutton. *Allton, Cheddle*
 MENTHA ROTUNDIFOLIA, Huds. *N. Sandbury, Inghall to Cheddle*
 M. AQUATICA, L. VAR. CITRATA, Ehrh. *Barton under Needwood*
 X ARVENSIS, L. VAR. OVALIFOLIA, Briq. *Dovedale*
 X ARVENSIS, L. VAR. ACUTIFOLIA, (Sm.) *Oakmoor*
 ORIGANUM VULGARE, L. *Manifold, Dovedale, Weaver Hills, N. Blam*
 NEPETA HEDERACEA, Trev. VAR. HIRSUTA, Benth. *Uloxeter, March*
 PLANTAGO LANCEOLATA, L. VAR. SPHÆROS-
 TACHYA, Röchl. *Intensor*
 P. MAJOR, L. VAR. INTERMEDIA, Syme. *Biddulph, Rudyard*
~~HERNIARIA HIRSUTA, L. *B*~~
 CHENOPODIUM VULVARIA, L. *B. Oakmoor*
 C. ALBUM, L. VAR. LANCEOLATIFORME, (Murr.) *B*
 X ZSCHACKEI, Murr. *B*
 X FICIFOLIUM, Sm. *B*
~~C. LEPTOPHYLLUM, (Moq.) *B*~~
 C. OPULIFOLIUM, Schrad. *B*
 VAR. OBTUSATUM, Gaud. *B*
 VAR. MUCRONATUM, Beck. *B*

- ~~C. MURALE, L. *Oakmoor. B*~~
~~C. GLAUCUM, L. *B. Rochester*~~
~~ATRIPLEX PATULA, L. VAR. BRACTEATA, Wester. *B*~~
 POLYGONUM MITE, Schrank. *Oakmoor. Hedderstone*
 P. PATULUM, M.B. *B*
 P. PULCHELLUM, Lois. *B*
 RUMEX SANGUINEUS, L. VAR. VIRIDIS, (Sibth.) *Rudyard*
 R. PULCHER, L. *Stafford. Cheadle*
 R. OBTUSIFOLIUS, L. VAR. SYLVESTRIS, (Wallr.) *Rollleston*
 R. ALPINUS, L. *Rudyard (w. Harraek's mill) Leak to Longdon Morridge*
 R. DENTATUS, L. *Manifold. V*
 R. SALICIFOLIUS, W. *B*
 DAPHNE MEZEREUM, L. *Dovedale. W. Wotton. Beeston Jct*
 D. LAUREOLA, L. *Needwood Forest. Rochester*
~~MERCURIALIS ANNUA, L. *B*~~
 SALIX AURITA, L. X CINEREA, L.
 S. CINEREA, L. X VIMINALIS, L. *Needwood*
 POPULUS TREMULA, L. VAR. VILLOSA, (Lange.) *Rudyard*
 STRATIOTES ALOIDES, L.
 HELLEBORINE LATIFOLIA, Druce, VAR. MEDIA,
 E. S. Marshall. *Oakmoor*
 CROCUS OFFICINALIS, Huds. *Trent meadows w. Burton*
 ASPHODELUS FISTULOSUS, L. *B*
~~ALLIUM VINEALE, L. *Manifold. Gotton hill. Beeston Jct. Railway to Cromwich*~~
 A. OLERACEUM, L.
 SCILLA NON-SCRIPTA, Hoff. and Link. VAR. BRAC-
 TEATA, Druce. *Madeley*
 ORNITHOGALUM UMBELLATUM, L. *Jexall*
 GAGEA LUTEA, Gawler. *Stanton. Cheadle*
 JUNCUS COMPRESSUS, Jacq.
 SPARGANIUM RAMOSUM, Huds. VAR. MICROCAR-
 PUM, (Neuman). *Rudyard. W. Harraek's mill*
 ARUM MACULATUM, L. VAR. IMMACULATUM, Gray. *Madeley*
 POTAMOGETON HETEROPHYLLUS, Schreb. *Fenton Pool*
 P. OBTUSIFOLIUS, Mert. and Koch. *Knyfawley Pool*
 P. FILIFORMIS, Pers. *Copners*
 SCIRPUS PAUCIFLORUS, Lightf. *Charley moss*
 S. COMPRESSUS, Pers. *Yoxall Lodge*

- ~~RYNCHOSPORA ALBA~~, Vahl. *Craddock's Ness, Chartley Moss, Whitmore*
 SETARIA GLAUCA, Beauv. *B*
 ALOPECURUS FULVUS, Sm. *Knyfensley Res^t, W^t Station (Burton)*
 POLYPOGON MONSPELIENSIS, Desf. *B*
 AVENA STRIGOSA, Schreb. *B*
 A. FATUA, L. VAR. GLABRATA, Peterm. *B*
 ARRHENATHERUM ELATIUS, Mert. and Koch. VAR.
 NODOSUM, Reichb. *Norton in the woods*
~~KOELERIA GRACILIS~~, Pers. VAR. BRITANNICA,
 Domin. *Dovedale, Wotton, Shors Cave*
 MELICA NUTANS, L. *Manyfold*
 CYNOSURUS ECHINATUS, L. VAR. PURPURASCENS,
 Ten. *B*
 POA PRATENSIS, L. VAR. ANGUSTIFOLIA, (L.) *Madeley*
 FESTUCA LIGUSTICA, Bert. *B*
 F. DANTHONII, A. and G. *B*
 BROMUS SECALINUS, L. *B*
 B. RIGENS, L. *B*
 B. TECTORUM, L. *B*
 B. RUBENS, L. *B*
 B. ARVENSIS, L. *B*
 AGROPYRON REPENS, Beauv. VAR. ARVENSE, Schrank. *Madeley*
 VAR. GLAUCUM, Dœll. *Madeley*
 HORDEUM MARINUM, Huds. *B*
 CYSTOPTERIS FRAGILIS, Bernh. *Manyfold, Ecton Hill, Knyfensley, Dovedale*
 PHEGOPTERIS POLYPODIOIDES, Fée. *Bishop's C^o, Needwood Forest*
 EQUISETUM ARVENSE, L. VAR. NEMOROSUM, Braun *Madeley*
 E. SYLVATICUM, L. VAR. CAPILLARE, (Hoff.) *Madeley*
 LYCOPODIUM SELAGO, L.

The annexed table gives an analysis of the North Staffordshire flora as shown by this work, *i.e.* in the enumerations those plants have been counted which are given in the preceding pages together with the additional ones given in list I, but not those which are given in list II. In the table the columns are arranged as follows:—

I. The names of the families. II. The number of genera represented in each family. III. The number of species.

IV. The number of varieties, hybrids, etc. V. The number of species, varieties, etc., recorded by Garner. VI. The number of species, varieties, etc., given in Bagnall's *Flora of Staffordshire*. VII. The number of plants recorded for North Staffordshire, but not for the south. VIII. The number of plants recorded for the south of Staffordshire but not for the north. IX. The number of Annuals. X. The number of Biennials. XI. The number of Perennials. XII. The number of Shrubs. XIII. The number of Trees. XIV. The number of Aliens.

For the Angiosperms these numbers come to :—

Families	80	
Genera	375	
Species	955	} Total plants 1105.
Varieties, etc.	150	
Recorded by Garner	763	
,, ,, Bagnall	920	
Northern only	213	
Southern ,,	188	
Annuals	256	
Biennials	60	
Perennials	594	
Shrubs	147	
Trees	48	
Aliens	248	

The number of shrubs is great through the large number of species in the genera, *Rubus* and *Rosa*.

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV
RANUNCULACEÆ	9	27	3	21	28	5	7	5		24	I		3
BERBERIDACEÆ	1	1		1	1							I	
NYMPHÆACEÆ	2	2		2	2						2		
PAPAVERACEÆ	2	5	2	4	5	2	2	6		1			7
FUMARIACEÆ	2	3		3	3	1	2	3					2
CRUCIFERÆ	22	57	1	37	42	16	8	32	13	13			37
RESEDACEÆ	1	2		1	2				2				
CISTACEÆ	1	1		1	1	1					1		
VIOLACEÆ	1	10	3	9	10	5	1	1		12			1
POLYGALACEÆ	1	2		1	2						2		
CARYOPHYLLACEÆ	11	34	2	31	32	7	7	17	1	18			5
PORTULACEÆ	2	3		1	3	1		3					2
ELATINACEÆ							2						
HYPERICACEÆ	1	8		8	8		1				8		

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV
MALVACEÆ	I	3	I	3	3	I	I			4			3
TILIACEÆ	I	3		2	2	I						3	2
LINACEÆ	I	3		3	3		I	2		I			I
GERANIACEÆ	4	13	I	12	13	I	2	8	I	5			5
AQUIFOLIACEÆ	I	I		I	I							I	
CELASTRACEÆ	I	I		I	I							I	
RHAMNACEÆ	I	2		2	2						2		
ACERACEÆ	I	2		2	2		I					2	I
LEGUMINOSÆ	15	44	9	32	38	10	4	19	3	26	5		14
ROSACEÆ	13	82	48	36	103	26	34	I		16	99	14	4
SAXIFRAGACEÆ	4	12		12	11	4		I		7	4		4
CRASSULACEÆ	3	5		5	4	I	I	I		4			3
DROSERACEÆ	I	2		2	2		I			2			
HALORAGACEÆ	3	6		4	4	I	3			6			
LYTHRACEÆ	2	3		2	2			2		I			
ONAGRACEÆ	2	10	2	10	10	2	I			12			
CUCURBITACEÆ							I						
UMBELLIFERÆ	23	33	3	30	30	6	5	7	8	21			9
ARALIACEÆ	I	I		I	I							I	
CORNACEÆ	I	I		I	I		I					I	
CAPRIFOLIACEÆ	4	7		7	6	I				2	4	I	3
RUBIACEÆ	3	9	2	9	12	I	I	2		9			I
VALERIANACEÆ	3	7	I	7	8	3		3		5			4
DIPSACEÆ	2	5		5	5					5			
COMPOSITE	41	96	6	75	80	25	22	22	20	60			27
CAMPANULACEÆ	3	6		6	6		4	3		3			I
VACCINIACEÆ	2	3	I	4	4						4		
ERICACEÆ	4	7		7	7	3	2			3	4		
PRIMULACEÆ	6	11	I	11	12	I	I	3	I	8			2
OLEACEÆ	2	2		2	2							I	I
APOCYNACEÆ	I	2		2	2					2			I
GENTIANACEÆ	5	6		6	5	I		2	2	2			
POLEMONIACEÆ	2	2		I	I	I				2			I
BORAGINACEÆ	11	21	3	18	19	5	2	8	3	13			10
CONVOLVULACEÆ	3	4		3	3	I	I	2		2			
SOLANACEÆ	5	6		5	5	I		2	I	2	I		4
SCROPHULARIACEÆ	13	35	4	27	34	5	5	18	3	18			11
OROBANCHACEÆ	2	3		3	3	I				3			
LENTIBULARIACEÆ	2	3		3	3		I			3			
VERBENACEÆ	I	I		I	I					I			I
LABIATÆ	17	38	6	36	39	6	4	8		36			15
PLANTAGINACEÆ	2	5	2	5	6	2	I	I		6			
ILLECEBRACEÆ	2	2		I	I	I		2					I
CHENOPODIACEÆ	2	12	14	4	9	11	7	25		I			24
POLYGONACEÆ	3	25	4	19	23	9	4	10		19			7
THYMELEACEÆ	I	2		2	2	2					2		
LORANTHACEÆ	I	I		I	I							I	
EUPHORBIACEÆ	3	7		5	6	I	I	4		2	I		3
URTICACEÆ	4	7		7	6		I	2		2		5	5
MYRICACEÆ	I	I		I	I						I		
CUPULIFERÆ	7	9		8	9		I					9	I
SALICACEÆ	2	14	12	19	22	3	14				13	13	2
EMPETRACEÆ	I	I		I	I							I	
CERATOPHYLLACEÆ	I	I		I	I					I			
HYDROCHARIDEÆ	3	3		I	3	I				3			I

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV
ORCHIDACEÆ ...	6	16	1	10	12	1	2			17			
IRIDACEÆ ...	2	3		2	3	1				3			2
AMARYLLIDACEÆ ...	2	3		3	3		1			3			1
DIOSCOREACEÆ ...	1	1		1	1					1			
LILIACEÆ ...	12	14	1	9	11	6	1			15			1
JUNCACEÆ ...	2	15	2	12	15	1	1	1		16			
TYPHACEÆ ...	2	7	1	5	8	1				8			
ARACEÆ ...	2	2	1	2	2	1				3			1
LEMNACEÆ ...	1	4		4	4			4					
ALISMACEÆ ...	4	5		4	4		1			5			
NAIADACEÆ ...	3	18		10	18	3	3			18			
CYPERACEÆ ...	6	46		46	46	3	10			46			
GRAMINEÆ ...	32	75	13	61	73	20	11	26	2	60			15
Totals, Angiosperms ...	375	955	150	763	920	213	188	256	60	594	147	48	248
CONIFERÆ ...	4	4		3	3							4	1
FILICES ...	15	23	3	24	25	2	1			26			
EQUISETACEÆ ...	1	6	3	6	6	2	1			9			
LYCOPODIACEÆ ...	1	5		3	5	1				3			
MARSILEACEÆ ...	1	1		1	1					1			
CHARACEÆ ...	2	5		3	5		3			5			
Totals, all plants ...	399	997	156	779	963	218	193	256	60	638	147	52	249

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NOTES ON THE FLORA.

In considering the nature and distribution of our local flora, and the causes which determined its original character, together with those which have modified it in the past and are even now producing changes in it, we find that the most potent factor influencing its formation was the nature of the soil. The study of ecology has shown that distinct associations of plants are to be found on such different types of soils as the old siliceous, the new siliceous, clay and calcareous, all of which are to be found in our area. Climate, although varying slightly in different parts of North Staffordshire, does not do so to an extent sufficient to play an important part in deciding the constitution of the flora.

Man has also had a potent influence. The whole of the district was originally woodland; this has gradually been swept away during historic times, until now it is of small extent. This destruction of woodland has been due to the formation of clearings, its use as fuel and for building purposes but, perhaps, most of all to military needs. The

clearing of the forest land has brought in its wake a profound change in the character of the herbaceous vegetation. Shade-loving plants have diminished in numbers, while those adapted to grow and flourish in open sunlight have increased. Moreover, the introduction of plants for the purpose of cultivation and the subsequent escape of some of these to the uncultivated land have caused additions to the flora. Again, many plants have been, and still are being, accidentally introduced and finding the district suitable have become firmly established as constituent parts of the flora. On the other hand, the rearing of sheep and cattle has had a marked effect in certain portions of the area since many of the original plants, unable to withstand the continual process of being eaten down, have died out.

These changes have been taking place through long periods of time, and over the whole of the district, so that now only very small sections, if any, can be considered as representative of the primitive flora.

As the nature of the soil has so profound an influence in determining the character of the vegetation, and since the kind of soil is dependent upon the type of rock from which it is derived, it is necessary to consider the distribution of the different geological strata in the district. The northern portion of our area is formed, to a large extent, of Carboniferous rocks having here and there outliers of the Trias series while the southern is primarily composed of Triassic rocks with a small patch of Rhætic beds in the Needwood Forest area. Taking the strata, their distribution and the kinds of soils produced by them, we have :—

A. The Carboniferous Series represented by :—

1. The Mountain Limestone in the north-east, present in the following places :—the Manifold valley, Dovedale, Waterhouses, Cauldon Low, Butterton, Mixon and the Weaver Hills. The character of the soil formed is determined in these places largely by the form and slope of the rocks. In those places where the slope is steep the products of disintegration are carried away and, consequently, we get bare rocks exposed.

Any soil which may collect on these slopes will be very rich in calcium carbonate. On more gentle gradients, and in the valleys, the soil will be deeper and will possess a smaller percentage of lime. In some cases the leaching of the upper layers may result in the bulk of the lime being removed, the soil will then be found to lose its characteristic whitish tint and become reddish in colour due to the iron compounds present.

In the wooded areas, the ash and wych elm are the dominant trees and associated with them are the hazel and especially in the drier situations the hawthorn. Ericaceous shrubs which are so often present in our woods in non-calcareous soils are entirely absent, since, as Rayner has shown, they are calcifuge species.

In the drier woods the complementary society of dog's mercury and moscatel, spoken of by Tansley, is a marked feature. The following are some of the commoner species forming the ground vegetation in the woods:—*Anemone nemorosa*, *Lychnis dioica*, *Fragaria vesca*, *Saxifraga hypnoides*, *Hypericum hirsutum*, *Myosotis sylvatica*, *Teucrium scorodonia*, *Mercurialis perennis*, *Listera ovata*, *Melica nutans*.

The soil of the grassland is usually shallow and varies considerably in the amount of lime it contains; it bears a rich and varied flora, many calcicole species occur. Some of the plants which are characteristic of it as distinct from the non-calcareous grassland are:—*Anthyllus vulneraria*, *Helianthemum chamæcistus*, *Poterium sanguisorba*, *Scabiosa columbaria*, *Origanum vulgare*, *Plantago media*, *Kæleria gracilis*, *Carduus nutans*.

2. The Pendleside. This is well developed in North Staffordshire and is present in the following areas: the Hamps valley from its source to Waterhouses; the Manyfold valley; part of the Dane valley; north and east of Leek; Morridge, Stanley, Endon and part of Biddulph Moor. It consists of black limestones, shales, sandy shales, ironstones and grits.

The calcareous strata produce soils and bear vegetation similar to the limestone series already dealt with, while the

non-calcareous strata, as pointed out by Moss, form soils having essentially similar physical and chemical features to the Millstone Grit and Coal Measures, and are characterised by a similar flora which will be mentioned later.

3. The Millstone Grit. This is to be found from the north end of Rudyard Lake to Wall Grange, and north to the Dane Valley ; at the Roaches ; forming part of the Biddulph area and extending to Cloud End ; at Wetley ; round the Cheadle coalfield and in the neighbourhood of Ipstones. It consists of grits, coals and shales. The soils produced by these and the vegetation borne on them are essentially similar to those of the Coal Measures. (*v. infra.*)

4. The Coal Measures. There are four distinct coalfields in our area, the Potteries, the Cheadle, the Shaffalong and the Goldsitch Moss, the last two being small in area. They consist of sandstone, marls, grits, ironstone bands and coal seams. The Potteries coalfield is in parts overlaid by glacial deposits, especially in the Trent valley area.

As already pointed out the floras of the non-calcareous Pendleside, the Millstone Grit and the Coal Measures are similar and, though differences may be found locally, these are not sufficient to warrant separate treatment, consequently, they will be treated collectively.

In our area there is little woodland in these series, except plantations of which those of pine and larch are the most abundant. The soils are in many places shallow and, as a natural result, the trees are stunted in growth. There is a very low percentage of calcium carbonate in the soil and consequently there is a marked tendency to the formation of an acid humus, with the result that on land not under cultivation, heather, ling, bilberry and silver hair grass readily establish themselves.

The ground vegetation in the woods varies in abundance from practically none in the pine woods to a fairly luxuriant growth in the more open woods such as those at Consall. The commoner species found are :—*Anemone nemorosa*, *Lychnis dioica*, *Stellaria holostea*, *Oxalis acetosella*, *Geum urbanum*, *Sanicula europæa*, *Campanula latifolia*, *Lysimachia nemorum*,

Scrophularia nodosa, *Veronica montana*, *Ajuga reptans*, *Mercurialis perennis*, *Scilla non-scripta*, *Allium ursinum*, *Arum maculatum*, *Milium effusum*.

The bulk of the uncultivated grassland found on these strata is situated in the moorland area north and north-east of Leek, and in many localities heather moor has developed abundantly.

The most prevalent species found on the grassland are : *Ranunculus acris*, *Viola lutea*, *Geranium molle*, *Cytisus scoparius*, *Ulex gallii*, *Vicia sepium*, *Lathyrus montanus*, *Potentilla erecta*, *Conopodium majus*, *Gallium saxatile*, *Scabiosa succisa*, *Centaurea nigra*, *Bellis perennis*, *Taraxicum officinale*, *Crepis virens*, *Hieracium pilosella*, *Veronica officinalis*, *Plantago lanceolata*, *P. major*, *Agrostis vulgaris*, *Nardus stricta*, *Deschampsia flexuosa*. The last three species are marked constituents.

B. The Trias.

1. The Bunter. This occurs in the following localities, from Rushton to Leek; a narrow strip bordering the Tern, where it forms part of the western boundary of the county, and extending north to Linley Wood and at the following places running along the southern extremity of the Potteries and Cheadle coalfields Ashley; Maer Heath; Whitmore; Swynerton; Sandon; Barlaston Downs; Caverswall; Dilhorne; Cheadle.

The soils formed from the Bunter are of a coarse-grained sand, are poor in quality, and where uncultivated heather moor is found the woods are invaded by ericaceous plants and show a marked tendency to degenerate to heather moor as described by Græbner. The Bishop's Wood is a semi-natural oak wood characteristic of this type of soil. Many plantations of pine trees occur some of which are visibly degenerating. The silver birch is fairly abundant and in some localities, e.g., Tittensor Chase and near Beech, it freely spreads from seeds. In many parts the beech tree has been planted and flourishes. Most of the woods have been invaded by bracken and in some cases the bracken-bluebell society is formed.

The chief members of the ground vegetation in these woods are:—*Anemone nemorosa*, *Viola riviniana*, *Hypericum pulchrum*, *Epilobium angustifolium*, *Digitalis purpurea*, *Melampyrum pratense*, *Teucrium scorodonia*, *Scilla non-scripta*, *Holcus mollis*, *Pteris aquilina*.

The grassland, where uncultivated, shows the association typical of coarse sand the following being the characteristic plants found:—*Ranunculus bulbosus*, *Cardamine hirsuta*, *Polygala vulgare*, *Cerastium triviale*, *Spergularia rubra*, *Arenaria serpyllifolia*, *A. trinerva*, *Sagina procumbens*, *Stellaria graminea*, *Geranium molle*, *Medicago lupulina*, *Bellis perennis*, *Hieracium pilosella*, *Veronica officinalis*, *Rumex acetosella*, *Agrostis tenuis*, *Deschampsia flexuosa*.

2. The Keuper Waterstones. These are found in small patches near Broughton, Maer, Standon, Stone, Fulford, Cresswell, Caverswall, Checkley, Bradley, Alton Towers, Ellastone and Mayfield.

The soil produced and the plant life inhabiting it are similar to those described for the Bunter.

3. The Keuper Marls. These occupy the southern part of our area roughly from an irregular line drawn through Adbaston, Copmere, Ashley, Chorlton, Standon, Stone, Blythe Bridge Cresswell, Croxden, Alton and Rocester.

The soils formed from these marls are rich in food and the whole area not occupied by woods and parks, or not too swampy, is under cultivation; rich meadow and pasture land being the characteristic features. The great Needwood Forest extended into eastern Staffordshire on this formation, and the remains of it are still in existence near Abbots Bromley and Marchington.

4. The Rhaetic Beds. Small exposures of these are to be found on the high ground of Needwood Forest, at Buttermilk Hill, Marchington Hill and on the roadside between Hoarcross and Christchurch.

C. Glacial Deposits. A considerable portion of the Potteries coalfield and of the strata to the west are covered with Boulder Clay, sands and gravel. The flora in these areas is modified to the extent that on the clays typical associations

of such soils are found while, on the sand, associations similar to those of the Bunter are dominant.

As pointed out in the introduction, North Staffordshire presents many interesting and varied physiographical features, embracing sub-alpine table land, moorland, river valleys and plains. The industrial area of the Potteries coal-field has a dense population, the rest of the area, when not occupied by woods, parks and marshes, is mainly under cultivation. Where this is the case, the surviving woodland species of the indigenous flora are relegated to the hedgerows while the remains of the original grassland flora now form the vegetation found in meadows and pastures. During the late war much woodland was denuded of trees for military purposes, especially in the Cheadle, Stanton, Maer, Congleton Edge, Willowbridge and Musden areas. In those places where the soil is of a sandy nature, unless precautions are taken, there will be a tendency to form heather moor.

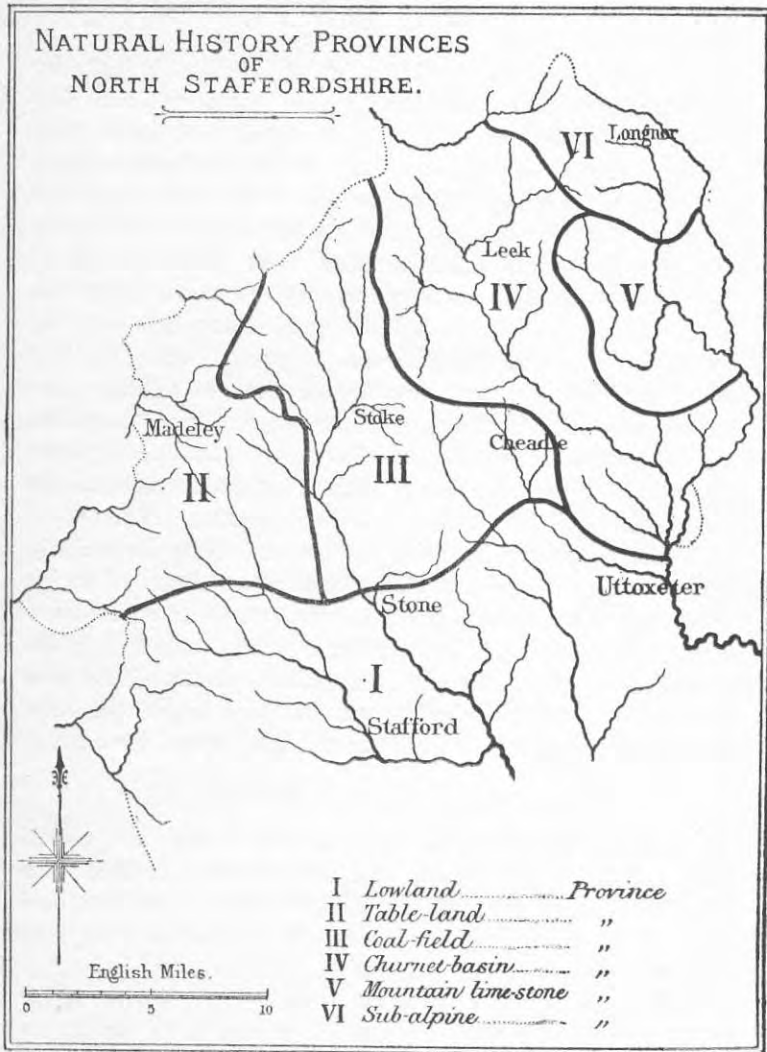
Round each manufacturing centre and along the railway embankments numbers of alien plants appear, some of which have succeeded in establishing themselves, while others have died away. It is particularly noteworthy that during the last quarter of a century three alien plants, *Matricaria suaveolens*, *Claytonia siberica* and *Mimulus langsdorffi*, have spread to a great extent throughout large parts of the area.

NATURAL HISTORY PROVINCES.

A. M. McAlldowie (25, 70, 1891) has shown that North Staffordshire may be easily and conveniently divided into six well defined natural history provinces. The botanical features of these are given below, and annexed is a copy of his map.

I. THE LOWLAND PROVINCE.

It occupies the southern portion of our area, being co-extensive with the Keuper Marls. It has the richest and most fertile soil in the district and provides the home for many parks and plantations containing numbers of fine trees. Bishop's Wood and the remains of Needwood Forest are within its bounds, the latter having some of the most notable



of English oaks, amongst which are the Swilcar Lawn oak, the Squitch oak, the Walking-stick oak and the Beggar's oak. The rivers have deposited much alluvial matter and, as is to be expected the low-lying land, is in places swampy and in wet seasons it is liable to become flooded. Many of the typical marsh plants are to be found here. The vegetation is luxuriant and varied, meadows and pasture land predominate and the whole area is well-known for its dairy produce.

2. THE TABLELAND PROVINCE.

This is the Staffordshire portion of the tableland which forms part of the watershed of Great Britain. It is in the extreme west of our area, bounded on the south by the lowland province, and on the east by a range of hills for the greater part of its length. It is elevated and undulating, the Burnt Woods and Blore Heath are well marked features. In many places extensive pine woods have been planted. The soil is largely of the coarse sand type, the plant associations of such soils being prevalent. There is some heather moor and the woods are in many cases invaded by ericaceous plants, thus showing a tendency to degenerate into heather moor.

3. THE COALFIELD PROVINCE.

This includes the Potteries and Cheadle coalfields, and contains the most populous area of our district. Over a large portion the soil is a cold, heavy clay. The vegetation is not very luxuriant, nor is it of a very varied character, especially in the northern portion. The enormous quantity of smoke ejected into the atmosphere from the numerous factories and furnaces in this area, by reducing the actinic value of the sunlight and by settling on the leaves and so destroying the efficiency of the stomata, is no doubt partly responsible for this want of luxuriance. In the province are to be found many waste heaps on which the rose bay willow herb, colts-foot, bladder campion, groundsel, yellow toad flax, dog daisy, shepherd's purse, chickweed and various kinds of hawkweed grow in large numbers.

4. THE CHURNET VALLEY PROVINCE.

This extends from the Dane in the north to near Uttoxeter in the south, and from the Potteries coalfield in the west to

the Roaches and Morridge in the east, and is drained by the river Churnet. It is well wooded, plantations of conifers being numerous, especially in the north. The north and north-eastern portion is the least cultivated area. The moorland district north and east of Leek possesses grassland plant associations characteristic of old siliceous rocks. The more sheltered valleys further south have a much more varied flora, some of our more interesting plants being found in the delightful little dales which lead into the main valley.

5. THE MOUNTAIN LIMESTONE PROVINCE.

This province is well defined, as it is on the Carboniferous Limestone. It includes Dovedale and the Manyfold valley. The plant associations are those typical of such areas, many of our locally rare plants are found within this province.

6. THE SUB-ALPINE PROVINCE.

This province is at the extreme north-eastern portion of the county and consists of an elevated tract of mostly bleak and barren moorland, ling, heather, mat grass and associated plants are characteristic. The highest elevation in the county, 1658 feet, is attained in the Roaches.

RIVERS.

North Staffordshire is well watered, streams from it flowing into the Trent, the Severn and the Weaver. The Trent and its tributaries, the Fowlea Brook, the Lyme, the Sowe and the Blythe, drain the western area, while the Dove with its tributaries the Manyfold and the Churnet drain the eastern half. Since the Dove is itself a tributary of the Trent this river ultimately forms the main drainage system of our district. It and all the tributaries mentioned, in addition to many smaller ones, rise within the county boundaries as may be seen from the map (p. 158).

The Dane forms the county boundary between Staffordshire and Cheshire from Three Shire Heads to Bosley, and it drains the extreme northern part of the county, including Flash, Quarnford, the Roaches, Gradbatch, Swithamley, Rushton, parts of Biddulph and Mow Cop.

The Tern, which for a short distance separates Staffordshire from Shropshire, together with its tributary the Meece, drains the extreme western part of the northern half of the county.

CLIMATE.

On account of the shelter given by the Pennine range from the full effect of the colder winds the whole district has a much milder climate than its position, measured by degrees of latitude, would warrant. The 50°F. isotherm passes through it from S.E. to N.W., so that the mean annual temperature is as high as that of the London area, at the same time our extremes of heat and cold are considerably less, so that we enjoy a much more equitable temperature.

The average rainfall for the whole area, calculated on a thirty-five year basis, ranges between thirty and forty inches per annum.

The mean rainfall in inches for the period 1920-28 at nine representative stations is as follows:—Burton-on-Trent 27.45; Market Drayton 29.50; Stafford 29.72; Stone 31.84; Hatton 32.60; Meir 33.46; Oakamoor 36.92; Wall Grange 36.96; Leek 39.81; with an average fall of 33.14 inches.

From these figures it is evident that the lowest rainfall is in the extreme east and the highest in the moorlands. The mean annual temperature at Mayfield for the same period was 47.2°F and the average number of hours of bright sunshine was 1270.1.

In conclusion I should like to express my grateful thanks to Mr. H. V. Thompson, honorary secretary of the Field Club, for the very generous help he has given in proof reading and for frequent advice during the publication of this little work.

APPENDIX I.

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 Sowerby, J. E. "British Botany," 1887.
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 Withering, W. “ Systematic Arrangement of British
 Plants,” 1776—1796.

APPENDIX II.

WORKERS ON THE FLORA OF NORTH STAFFORDSHIRE.

- John Ray (1627-1705) the eminent naturalist was the first apparently to publish records of North Staffordshire plants. He mentions: *Campanula latifolia*. *Empetrum nigrum* and *Thlaspi arvense*.
- William Withering (1741-1799) born at Wellington, practised as physician for a time at Stafford Infirmary. His magnum opus “ The Systematic Arrangement of British Plants ” (1776-1796) was a pioneer work on the British Flora. In this were included records of Staffordshire plants.
- Jonathan Stokes (1755-1831), for a time on terms of friendship with Withering, many of the records in the latter’s work being made by him as shown in the second edition.
- Stebbing Shaw (1762-1802) published in “ The Antiquities of Staffordshire ” (1798-1801) lists of plants found in the county compiled by various workers.
- Rev. Thomas Gisborne (1758-1846) supplied lists of plants from the Weaver Hills area for Shaw’s work.
- John Sneyd (1734-1809), of Belmont Hall, provided lists for Shaw of plants found in the Hamps and Manyfold valleys, and also from his own district.
- Richard Forster, surgeon of Stone, gave lists of the plants from that area to Shaw.
- Edward Bourne, of Cheadle, supplied Shaw with records from that area.
- John Power (1778-1851) made many records which have been incorporated in Bagnall’s “ Flora of Staffordshire.”
- Rev. William Thomas Bree (1787-1863) published lists of plants in the Dovedale area in Purton’s “ Midland Flora.”

James Carter published in 1839 in the "Magazine of Natural History" (N.S. Vol. III, 72) a list of plants growing in the neighbourhood of Cheadle.

Robert Garner (1807-1890) in his "Natural History of the County of Stafford" (1844) gave the first attempt at a complete Flora of Staffordshire. I should like to pay tribute to the careful and accurate manner in which he made his records. In preparing the present work I have carefully investigated his records relating to North Staffordshire and am filled with admiration for the thoroughness of his work. The great bulk of the plants forming our local flora were recorded by him for the first time, many very interesting and rare species being included.

See Edwin Brown (1819-1876) published in Mosley's "Natural History of Tutbury" a Flora of the district round Tutbury and Burton.

Rev. Robert C. Douglas provided a list of plants found round Stafford. This was published in Watson's "Topographical Botany."

John Fraser (1820-1909), of Wolverhampton, supplied records to Bagnall which are incorporated in his Flora.

Rev. W. H. Painter published in our "Transactions" accounts of the Flora of the Biddulph area.

Rev. T. Barns (1856-1925) contributed to our "Transactions" a list of the plants found in the Hilderstone district.

Rev. Thomas W. Daltry (1832-1904) for thirty-eight years the indefatigable honorary secretary of the North Staffordshire Field Club did much valuable work in recording plants from different parts of our area, the results of which are to be found in the various volumes of the Club.

James E. Bagnall (1830-1918), of Birmingham, published in 1901 a "Flora of Staffordshire" as a supplement to the "Journal of Botany." He also wrote the Botanical account for the "Victoria County History of Staffordshire." He was a careful and painstaking botanist and

added much to the knowledge of our local Flora, especially with reference to the species of Rubi and Rosa.

APPENDIX III.

Literature relating to the North Staffordshire Flora published in the *Transactions and (or) Annual Report of the North Staffordshire Field Club*.

A. PAPERS AND REPORTS.

- “ The Wild Flowers of North Staffordshire ” : Rev. D. Edwardes, **11**, 48, 1877.
- “ The Autumn Wild Flowers of North Staffordshire ” : Rev. D. Edwardes, **12**, 77, 1878.
- “ The Staffordshire Flora ” : R. Garner, **12**, 95, 1878.
- “ The Wild Flowers of North Staffordshire ” : R. W. Goodall, **16**, 77, 1882.
- “ Zoological and Botanical Notabilia, 1882 ” : R. Garner, **17**, 74, 1883.
- “ The Botany of the Valley of Biddulph ” : Rev. W. H. Painter, **22**, III, 1888.
- “ Notes upon the Plants in Biddulph ” : Rev. W. H. Painter, **26**, 95, 1892.
- “ Staffordshire Ferns ” : J. R. B. Masefield, **43**, 102, 1909.
- “ Report on Botany ” (1865-1915) : W. T. Boydon Ridge, *Jubilee Volume*, 167, 1916.
- “ The Origin of the North Staffordshire Flora ” : W. T. Boydon Ridge, **50**, 179, 1916.
- “ The Alien Flora of North Staffordshire ” : W. T. Boydon Ridge, **51**, 147, 1917. *Refer to 51*
- “ The Plant Distribution in North Staffordshire ” : W. T. Boydon Ridge, **52**, 156, 1918.
- “ Variation in the Flower of *Primula Vulgaris*, Huds. ” : W. T. Boydon Ridge, **55**, 106, 1921.
- “ The Flora of Hawkesyard ” : Rev. H. P. Reader, **57**, 105, 1923 ; **60**, 118, 1926. *[along list]* *[yellow contains ferns, vaccaria etc]*
- “ Notes on Observations on *Primula Vulgaris*, Huds. ” : Miss E. M. Blake, **57**, 153, 1923.

- "The Saline Flora of Staffordshire": Rev. H. P. Reader, **58**, 40, 1924.
 "Reports of Sections. C—Botany." **24**, 1890 to **26**, 1892, J. Yates; **27**, 1893 to **35**, 1901, J. A. Audley; **36**, 1902 to **37**, 1903, J. Blaikie; **38**, 1904 to date (**63**, 1929), W. T. Boydon Ridge.

B. LISTS.

- Plants found near Denstone: Rev. D. Edwardes, **11**, 51, 1877.
 Plants found in Stoke Parish: R. Garner, **13**, 88, 1879.
 Plants found around Stafford: R. Garner, **16**, 59, 1882.
 Plants of Stone, Yarlet, Weston and Sandon: J. H. Tylecote, **19**, 26, 1885.
 See — Plants on Chartley Moss: E. T. Tylecote, **20**, 38, 1886.
 Early Flowering Plants: J. A. Audley, **28**, 106, 1894: **30**, 69, 1896: **32**, 108, 1898.
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 Plants found near Biddulph Church: Rev. W. H. Painter, and
 Plants found in the Stafford district: C. Moore, **31**, 74, 1897.
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 Plants found in Needwood Forest: J. E. Nowers, **35**, 74, 1901.
 Late Flowering Plants: C. Brett, **36**, 73, 1902: **37**, 94, 1903: and Mrs. A. Brett, **40**, 78, 1906.
 Stafford Plants: C. Moore, **38**, 110, 1904. [of village]
 Plants found at Oakamoor: S. Berrisford and A. Walker, **40**, 73, 1906. [alien on railway]
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 Grasses at Oakamoor: W. S. Allen, **45**, 110, 1911. [rod]
 Plants at Hilderstone: Rev. T. Barns, **46**, 117, 1912. [a list]

CORRIGENDA.

- Page 7 head-line for "NYMPHÆCEÆ" read "NYMPHÆACEÆ"
 " 7 line 2 for "NYMPHÆCEÆ" read
 "NYMPHÆACEÆ."

- „ 7 „ 3 for “ NYMPHÆEA ” read “ NYMPHÆA.”
 „ 12 „ 27 for “ THLAPSI ” read “ THLASPI.”
 „ 22 „ 5 for “ TILLA ” read “ TILIA.”
 „ 28 „ 3 for “ Lam.” read “ Willd.”
 „ 30 „ 1 for “ AUGUSTISSIMUS ” read
 “ ANGUSTISSIMUS.”
 „ 30 „ 21 for “ 47, 95, 1913 ” read “ 48, 95, 1914.”
 „ 38 „ 17 for “ CORYFLIFOLIUS ” read
 “ CORYLIFOLIUS.”
 „ 45 „ 29 for “ 357 ” read “ 356.”
 „ 51 „ 11 for “ S.” read “ SIUM.”
 „ 51 „ 14 for “ SIUM ” read “ S.”
 „ 53 „ 33 and 34 for “ 46, 94, 1912 ” read “ 47, 94,
 1913.”
 „ 56 „ 16 for “ 46, 96, 1912 ” read “ 47, 96, 1913.”
 „ 58 „ 25 for “ 46, 207, 1912 ” read “ 47, 207, 1913.”
 „ 58 „ 32 for “ 48, 155, 1914 ” read “ 49, 155, 1915.”
 „ 65 „ 18 for “ 46, 94, 1912 ” read “ 47, 94, 1913.”
 „ 66 „ 20 for “ TINCTORUS ” read “ TINCTORIUS.”
 „ 66 „ 28 for “ 56, 132, 1918 ” read “ 57, 132, 1923.”
 „ 70 „ 16 for “ 46, 94, 1912 ” read “ 47, 94, 1913.”
 „ 71 „ 18 for “ 367 ” read “ 5, 7, 1871.”
 „ 79 „ 10 for “ 46, 94, 1912 ” read “ 47, 94, 1913.”
 „ 79 „ 35 for “ 45, 112, 1911 ” read “ 46, 112, 1912.”
 „ 83 „ 4 for “ 46, 96, 1912 ” read “ 47, 96, 1913.”
 „ 86 „ 14 for “ HEDERACEÆ ” read
 “ HEDERACEA.”
 „ 90 „ 4 for “ G. GLAUCUM ” read “ C. GLAUCUM.”
 „ 93 „ 32 for “ L.” read “ Sm.”
 „ 130 „ 23 for “ ACHILLEÆFOLIA ” read
 “ ACHILLÆFOLIA.”
 „ 151 „ 17, column 5 insert “ 26.”
 „ 151 „ 22, column 5 for “ 77 ” read “ 805.”

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