



# WHAT HAPPENED TO FRANCIS ROSE'S FLORA OF KENT?

## WHAT HAPPENED TO FRANCIS ROSE'S FLORA OF KENT?

Between the Victoria County History (1908) account of the Kent Flora by E.S. Marshall (which may be regarded as a summary of the Flora of Kent (1899) by Hanbury and Marshall) and the Atlas of the Kent Flora (1982) by Eric Philp, there is a long gap without an overview of the Kent Flora. This gap would have been filled by Francis's Rose's Flora of Kent, but this work was never published and it seems now to have largely vanished.

In consequence, we have no county Flora which deals with the transformation from Victorian Kent - a period of major habitat changes in the countryside with increased mechanisation in agriculture; the beginnings of use of herbicides in quantity; the extension of cultivation in wartime and subsequent abandonment; and the effects of development generally, tempered by the introduction of town and country planning. Francis Rose undertook very extensive botanising in the 1940s, when there were still many areas of habitat with native flora which have since disappeared. However, although some record of these is maintained through his herbarium specimens (some 10,000), since absorbed into the Maidstone Museum herbarium, the loss of the unpublished Flora means that we have been deprived of the benefit of the views of an ecologist of considerable national standing. The Flora would have been of much more than just county significance; and we lack the acuity of many of his observations which would have been contained in it as regards the occurrence and distribution of species, their relationship to ecological factors and their wider significance in terms of the British and Continental flora.

What can be reconstructed of the lost Flora is given below.

### The writing of the Flora and its disappearance

In 1949, Francis Rose gave an address to the Botanical Section of the South-Eastern Union of Scientific Societies at the 1949 Congress at Canterbury. He said:

'since 1942 I have been engaged with Mr. J.B. Marshall and others too numerous here, on the preparation of a new County Flora of Kent.....It was hoped at one time to complete the Flora in time for the Canterbury Congress, but this proved quite impossible. Help is earnestly requested from everyone interested in the subject who can supply information on Kentish botany, whether past or present, from any aspect. The flora is intended to be ecological in approach, with an emphasis on the details of plant distribution considered scientifically. There will be a series of descriptive ecological articles on the various botanical districts of the county, in which typical areas of different vegetation types, such as heaths, downs, woodlands, etc., will be considered in detail. It is hoped to illustrate the Flora with about forty half-tone photographic plates of vegetation, and of interesting Kentish plants in their natural surroundings. It is not possible to give definite figures yet as to price or date of publication, but it is hoped to keep the price down to about two pounds or less by eliminating much material often included in local floras which is of interest only to very few people, such as very detailed historical notes, and excessive detail on critical groups.

It is hoped, too, to publish within three years from now.'

These aspirations proved to be optimistic in the extreme. Although by 1950, some of the distribution maps had been prepared<sup>1</sup>, the dots being 'sketched as accurately as can be judged by eye from the one-inch Ordnance survey map', fieldwork was still in progress. However, in 1954, he considered that fieldwork was almost complete, and that the manuscript might be ready for the press by about 1955; and, indeed, in that year he was outlining publication proposals. Nevertheless, by 1960<sup>2</sup>, he could only say that the manuscript

<sup>1</sup> Rose, F., Distribution maps of Kent Plants (Exhibit), in Lousley, J., ed. (1951) *The Study of the Distribution of British Plants* (1950 conference report), B.S.B.I, Arbroath

<sup>2</sup> Rose, F. (1960). Botanical records for Kent, 1955-58 – Vascular Plants. *Transactions of the Kent Field Club* **1(2)**: 56-65.

was, after many delays, about half completed. By 1966, he is quoted<sup>3</sup> as being in the process of reducing the book – then running to nearly 1,000 pages – to 600 pages. Peter Wilberforce remembers being shown the manuscript in Francis Rose's work room in the late 1960s: 'This consisted of thousands of foolscap sheets with hand-written notes scattered all over the place, together with herbarium sheets. To me it was in total chaos, but Francis seemed to know where everything was!'. In 1969, the Rose family moved to live at Liss in Hampshire, which would not have incentivised completion of the Kent project, quite apart from the distraction of Francis Rose's prodigious production of papers and contributions to publications on other subjects which he continued to sustain. Around that time the first steps were being taken by Eric Philp and the Kent Field Club towards production of an Atlas of the Kent Flora based on tetrad mapping and this was published in 1982. Eric Philp renewed surveying in 1991 and this developed towards the production of a second Atlas (the surveying period closed in 2005, and publication took place in 2010). It was therefore awkward in some respects that the prospect of completion of Francis Rose's Flora arose at the same time, although the two Floras would have been very different, and in some respects complementary – the Atlas being a survey directed towards tetrad mapping with relatively little species comment, but including all aliens; while Francis Rose's Flora would have been more ecological in scope, with vegetation studies and examination of significant species at greater length. There had been many other projects to engage his attention, not least in that between 1985 and 1995 the preparation of a Hampshire Flora gathered pace, and Francis Rose was one of the three principal authors.

By the late 1990s, he was seriously considering the revival of the Kent Flora. He began working on the manuscript again and secured the help of Owen Davis in having it typed up. Apparently, the Introduction was put into type (although this has not been found) and a start was made on the main part of the Flora, the species accounts. These in their manuscript form have a feel of a 1940s/1950s Flora, and Francis Rose evidently took much trouble over revising in conjunction with the typing up: grid references are introduced (only patchily present before) and many of the records in the manuscript were jettisoned, particularly for more common species, in favour of a more stream-lined approach. Although he had visited Kent on many occasions since moving to Hampshire, he recognised the need to update as regards current distributional status, particularly where plants recorded at old sites had not been seen for many years but there was a prospect of their survival. He accordingly circulated to Kent botanists in 2000 a list of plants and sites for following up. This resulted in more current data becoming available. However, the typing arrangements with Owen Davis were discontinued, in order to reduce the complications of liaison over a distance as regards typing and corrections; and it was intended that Francis Rose would obtain help nearer home. He died in 2006, and it is not known if any more of the manuscript or later typing survived, beyond what is given here. There is an eye-witness account of hundreds of pages of the manuscript lying on the floor of his study, with other writings, after his death; but these have not been traced with his archive, deposited at the National Museum of Wales.

### The planned contents of the Flora

The Flora was planned to be some 550 pages long, and a three-page synopsis was circulated from time to time over many years. From this, we have a clear understanding of what it would have covered.

After a preface with acknowledgements, the **introduction** was to set out the scope of the Flora and contain sections on the county and vice-county boundaries with some statistics; on climate; on the geology and structure of Kent; and on its soils. There was to be a brief historical sketch of earlier work on the Kent flora (apparently not to the same depth as had been undertaken in the 1899 Flora).

The Flora was then to contain a description, with boundaries, of 16 **botanical districts** based on natural regions of Kent, with some statistics of each district. This was a standard method of dealing with accounts of plant distribution before detailed mapping against overlays of geology or habitat types became the norm: the 1899

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<sup>3</sup> Unsourced newspaper cutting.

Flora has ten districts based on geology. The identity of the 16 botanical districts is likely to have been the same as employed in Francis Rose's county Bryophyte Flora<sup>4</sup>, namely **(1)** the Eocene soils of north-west Kent, west of the River Darent; **(2)** the alluvial marshes and coastline of the estuaries of the Thames and Medway, including the Isle of Sheppey and the lowlands between Watling Street and the Swale; **(3)** the wooded Eocene country north and east of Canterbury, usually known as the Blean, including the woods east of Canterbury as far as the Little Stour Valley at Littlebourne; **(4)** the alluvial marshes of the lower Stour from Canterbury to the coast at Sandwich and east of Reculver; **(5)** the Chalk west of the Darent; **(6)** the Chalk between Darent and Medway; **(7)** the Chalk between Medway and Stour; **(8)** the Chalk between the Stour and the coast; **(9)** the Isle of Thanet; **(10)** the Darent basin above Dartford (excluding the chalk); **(11)** the basin of the non-tidal Medway, as far south as the northern edge of the Hastings Beds; **(12)** the basin of the non-tidal Stour, above Canterbury; **(13)** the Hastings Beds of the Medway Basin (the Forest Ridge); **(14)** the Hastings Beds of the Rother Basin about Tenterden; **(15)** Romney Marsh (including Dungeness); and **(16)** the channel terrace, draining to the Channel, from Bilsington to Folkestone. The numbers of botanical districts are used in the species accounts, in order to group records together.

**The history of the flora and vegetation of Kent** since Late-Glacial times was to be described, including the problem of re-immigration of plants; the forest maximum; the fate of the open habitat species; early man in Kent; the historical period; and changes at the (then) present time.

Nearly half of the flora, excluding the species accounts, was to be devoted to an account of **the remains of the natural vegetation of Kent** in the mid-20<sup>th</sup> century, dealing with natural and semi-natural vegetation and with weed communities dependent upon man. Judging from Francis Rose's published work on similar topics for Sussex<sup>5</sup> and Hampshire<sup>6</sup>, this would have been a landmark description. It is unclear whether it was ever completed, but it may well have intended to be an expanded version of the habitat descriptions given in the county Bryophyte Flora, although there would of course have been a different emphasis in relation to the vascular plant flora and it was not to follow that work in being structured closely against the botanical districts.

The vegetation account was to cover ten different aspects, as follows.

It was to begin with the vegetation of the county coastline and estuaries. For the Thames-Medway estuary, consideration was to be given to its salt-marshes; the tidal marshes of the Upper Medway; brackish marshes and the effect of inking; sea-level changes; shell sand beaches; and the cliffs of Sheppey. Examples of each were to be cited and discussed in detail. Then the Stour estuary was to be dealt with, and its salt marshes and brackish marshes were to be compared with those of the Thames/Medway. The sand dune system of Sandwich and the shingle beaches of north east Kent were to be described and comparison made with other British dune systems. The Romney Marsh region would be mentioned for the Romney-Lydd dune system; and the development and vegetation of the largest shingle tract in Europe, Dungeness.

The second aspect of the account was as regards the habitat of the sub-littoral fresh-water marshes and fens, and their former conditions. This involved the drained alluvial flats of the Kent coast and the aquatic vegetation of their dikes; the relict fenlands of East Kent<sup>7</sup> (Ham, Wingham, Preston, Stodmarsh and Dungeness Open Pits); and the small inland spring fens of the chalk and ragstone springs.

The vegetation of the Eocene tracts of Kent would have covered the London clay areas of north west Kent with the woods and heaths of the lower Eocene (Keston, Hayes, Chislehurst, Joydens Wood, Farningham

<sup>4</sup> Rose, F. (1949). A Bryophyte Flora of Kent I, *Transactions of the British Bryological Society*, **1**(3): 202-210.

<sup>5</sup> Rose, F. (1995). *The Habitats and Vegetation of Sussex*. Brighton.

<sup>6</sup> Brewis, A., Bowman, P. & Rose, F. (1996). *The Flora of Hampshire*. Colchester.

<sup>7</sup> It is likely that this section would have drawn on Rose, F. (1950). The East Kent Fens. *Journal of Ecology* **38**(2): 292-302.

Wood, Darenth Wood, etc.), their vegetation in relation to land use history. Also, the Hoo Peninsula and its soil-vegetation complex; the brickearths of the Swale plain; the Isle of Sheppey; making comparisons with south Essex. The vegetation of the Blean district was to be compared as regards its resemblances and differences to that of the High Weald; and general consideration was to be given to the cultivated lands of the Eocene and their weed flora.

The vegetation of the chalk country of Kent would probably have provided a lengthy section. It was to begin with comment on the structure of the chalk country, noting the dry valleys with their valley-floor deposits and the presence of varied drift cover. The history, structure and flora<sup>8</sup> of the chalk grasslands (being a sheep-adapted plant community) were to be considered as a whole, with mention of what Francis Rose described as the calcicole problem. Then there were the chalk woodlands, beech forest and other woodlands, with issues of succession and the scrub communities; and the chalk woodland communities of East Kent were considered in some respects to be unique. The account would address variation in the vegetation of the chalk country from east to west, with the spread of the chalk grassland flora probably originating from three centres after forest clearance; also attention would be given to the drift-free chalk plateau of north east Kent and its vegetation, Thanet being compared with the South Downs. The vegetation of the drift-covered chalk plateau was to be related to its varied soils: clay-with-flints and Pliocene sands. Then there were the plant communities of the coastal cliffs and the arable weeds of the chalk lands.

The Gault clay belt and its damp oakwoods would prompt discussion as to the extent of their modification, resulting in the (then) present vegetation. Pasture and ponds would also be noted.

The next aspect of the vegetational account would relate to the Folkestone Sand belt of Kent, its former vegetation and present relics: oakwood, heath, grass heath and valley bog. Hothfield Common is the best remaining example of the semi-natural vegetation of the Folkestone Sand; and it would be compared with the Thursley area of Surrey. Then consideration would be given to the Folkestone Sand woodlands of the Wrotham-Sevenoaks area; and to the Sandgate Beds (to be compared with the Surrey Bargate Beds woodlands). It is likely that the changes in vegetation over time would have received detailed treatment<sup>9</sup> in relation to Willesborough Lees, Brabourne Lees and Charing Heath, against the background of what is still known to occur on the Folkestone Sands belt in west Sussex, still very rich.

The Hythe Beds escarpment provides Kentish ragstone scarps and acid drift soils; and the effect of lithological changes westward would be noted. The calcareous Kentish ragstone vegetation would be examined: ash-elm woodland, grassland and scrub and the effects of cultivation. The drift soils vegetation of the Hythe Beds plateau would also form part of this account, involving the West Kent 'Highlands' and changes over the Surrey border.

Coming to the Low Weald, there would be an account of the vegetation of the woodlands, pastures and ponds of the Weald Clay, and of the influence of river gravels, etc. on the vegetation.

The High Weald might be expected to generate an account of considerable interest, in view of Francis Rose's researches over a long period<sup>10</sup>. It would have dealt with the remarkable atlantic flora of the High

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<sup>8</sup> It is unclear how this would have fitted into the Flora as described in the synopsis, but one of the surviving items which Francis Rose had typed out, probably around 2000, was headed 'Flora of Kent: orchid-rich downlands'. This consists of a list of 18 locations, with the orchid species and varieties known for each, ranging from 5 to 21 in total.

<sup>9</sup> Mentioned *in litt.*, 2000.

<sup>10</sup> Rose, F. (1946). The vegetation of the Weald, with special reference to Tunbridge Wells district. *The South-Eastern Naturalist & Antiquary* 51: 1-6.  
Rose, F. (1952). "Atlantic" species in the flora of the Weald. *The South-Eastern Naturalist & Antiquary* 57: 18-23.

Weald of Kent and Sussex, associated with the microclimate of the sheltered wealden 'gills', many of which appear to demonstrate long-term continuity of woodland presence from a period of warmer and wetter climatic conditions. The vegetation of the acid plateau woodlands on Tunbridge Wells and Ashdown Sands would be described; as also that of the sandrocks of the Weald and the Wadhurst clay woodlands.

The final element of the vegetation account was to be the freshwater rivers of Kent, comparing their vegetation with that of the dikes and canals of the alluvial marshes and with other English rivers.

The Flora was then to include **a comparison of the vegetation and flora of south east England (Kent and Sussex) with that of north France** (Pas-de-Calais, Nord, Somme), with a discussion of factors that may be responsible for differences. The findings would presumably have reflected other publications by Francis Rose on this subject.<sup>11</sup>

There would be a **numerical comparison<sup>12</sup> of the flora of Kent with that of Surrey, Sussex, Essex and north France**, with a discussion of geographic elements in the flora, considering both 'native' and 'alien' species.

The next part of the Flora would relate to types of **species distribution patterns**, with reference to dot-distribution maps given with the species accounts.

Symbols and abbreviations cited would be explained in a section, **the plan of the Flora**.

The main part of the Flora, estimated to comprise some 200,000 words, was to be the **species accounts** – a systematic section with data on the distribution of the species 'given in such detail as appears justifiable', including up to 100 dot-distribution maps. Sample maps are included below: they would not necessarily be restricted to Kent. In 2000, he said that the maps would be for limited selected species at 10k square level, or finer. The original intention was to include marine algae and bryophytes as well as vascular plants, but none of the former accounts has been traced. In any event, as regards bryophytes, Francis Rose published separately a Kent bryophyte Flora in three parts over the period 1949-51. Also in 2000, he was contemplating the incorporation of a check-list of names of 'all plants recorded for Kent'. He was undecided as to whether this would be a separate section or would be combined with the species accounts so that, in effect, all the named species would be listed in systemic order (as in Stace and Kent<sup>13</sup>), but only those which were covered in more detailed 'case studies' (a term which appears to be equivalent to the concept of a species account) would receive more than brief mention. Casual aliens would be in a different font.

The Flora would have ended with a **bibliography, list of contributors, list of subscribers** and an **index**.

### The remaining species accounts

<sup>11</sup> Rose, F. & Géhu, J.M. (1960). Comparaison floristique entre les comtés anglais du Kent et du Sussex et le département français du Pas-de-Calais. *Bulletin de la Société de Botanique du Nord de la France*. 13(4): 125-130. This includes lists of species to be found in the English districts but lacking in the French; and vice versa.

Rose, F. & Géhu, J.M. (1964). Essai de phytogéographie compare, La vegetation du Sud-Est de l'Angleterre et ses analogies avec celle du Nord de la France. *Bulletin de la Société Botanique de France*. 111: 38-70.

Rose, F. (1965a) Comparaison phytogéographique entre les pelouses crayeuses du *meso-xerobromion* des vallées de la Basse-Seine, de la Somme, de L'Authie, de La Canche, de la Cuesta Boulonnaise du Pas-de-Calais et du Sud-Est de l'Angleterre. *Revue Sociétés Savantes de Haute-Normandie – Sciences*. No. 37: 105-109.

Rose, F. (1965b). Botany on two coasts. *New Scientist*, July 15, 1965 pp.158-161.

Rose, F. (1972). Floristic connections between Southeast England and North France. In (Valentine, D.H. ed.) *Taxonomy, Phytogeography and Evolution*. London, Academic Press.

<sup>12</sup> Cf. the section in the Flora of Hampshire (1996) entitled 'A Comparison of Hampshire's Flora with those of some other southern counties'.

<sup>13</sup> At that time: (1) the second edition of Stace, C.A. (1997) *New Flora of the British Isles*. Cambridge University Press; and (2) Kent, D.H. (1992). *List of Vascular Plants of the British Isles*. London, B.S.B.I.

What is currently known to survive out of the species accounts for the vascular flora is fragmentary, and these fragments are set out below. The most complete section is that for ferns and fern allies, as this was typed up by Owen Davies and revised by Francis Rose in 1999. Some of this section exists both as an interim typing and a re-type, in addition to copies of the underlying manuscript. The revisions were quite extensive, adding and removing material, as well as re-structuring the accounts. Items removed included some historical data, multiple sites for relatively common species and (from the headings) the numbers of known and extinct locations and the numbers of Ordnance Survey map squares where present or extinct. Other sections apparently did not advance beyond manuscript, and many of these bear extensive crossings-out and interpolations. Most of those accounts which survive were preserved as photocopies taken by Rosemary FitzGerald in the mid-1980s, when the species accounts were lent to her for survey work on rare plants in South East England. At least some accounts seem not to have advanced since c. 1960.<sup>14</sup>

The accounts are laid out below in the systemic order of Stace (second edition) and Kent, as mentioned above, and it is assumed that Francis Rose would have adopted the approach which he was considering, of incorporating a check-list of Kent plants, so that where names of plants are set out here, they are taken from the check-list (unless otherwise indicated). Less than half of the check-list, however, survives. This is as a version typed up by Owen Davis in 2002 (annotated as ‘To accompany “The Flora of Kent”’) as far as the end of Aceraceae. Nomenclature after then is given in accordance with Stace (second edition), noting where the manuscript differs.

It was not Francis Rose’s intention to cover everything: ‘My book will not contain much detail on alien species except for those that form part (or are now beginning to form part) of the permanent flora. I have little taste for rubbish-tip or wool shoddy aliens which mostly do not persist (except for those that become importantly established!)’.<sup>15</sup>

Some of the conventions used in the species accounts are familiar in many Floras, such as exclamation marks for records seen by the author; square brackets around species which are doubtful or extinct, and these are also used for records for locations where the species now appears extinct. As regards other conventions:

- The references to numbers which group records (sometimes as plain numbers; sometimes with a bracket following, and in the manuscript enclosed in a circle) are to the botanical districts 1-16 (see above, ‘The planned contents of the Flora’). They are not to be confused with two-figure numbers which appear occasionally within the records, to identify the 10km Ordnance Survey grid squares.
- Grid references are given without any prefaced TQ or TR (except where supplied for non-transcript sections relating to district 15 – see below).
- The letter N. in a species heading signifies Native; H is of horticultural origin; C colonist; D denizen.
- The appearance in the heading of a number followed by ‘/52’ (or ‘/51’) – there seems to have been a change in mind as regards the total) indicates the number of Ordnance Survey squares in the county, where the species is present; this notation has been removed by Francis Rose in his most recently revised entries.
- A dagger symbol (†) marks an introduced species.
- An asterisk denotes first Kent record.
- In some cases abbreviated words have been expanded in the following transcription. References to Maidstone Herbarium as M have been converted to the standard MNE; references to the Herbarium

<sup>14</sup> For example, that for *Euphorbia platyphyllos* is laid out on the original framework: a short introduction and then a listing of all 16 botanical districts for records to be filled in (mostly blank in this case). The proportion of old literature or herbarium records is high, and there are no modern records after 1956.

<sup>15</sup> *In litt.*, 15 May 2000. Hence it is possible that where the checklist includes a alien plant name with a brief comment about it being naturalised or a garden escape, this may be the full extent of the species account which would have been given in the Flora. Where the comment is accompanied by a reference to E.P., the information is likely to have been derived from Eric Philp’s Atlas of the Kent Flora (1982).

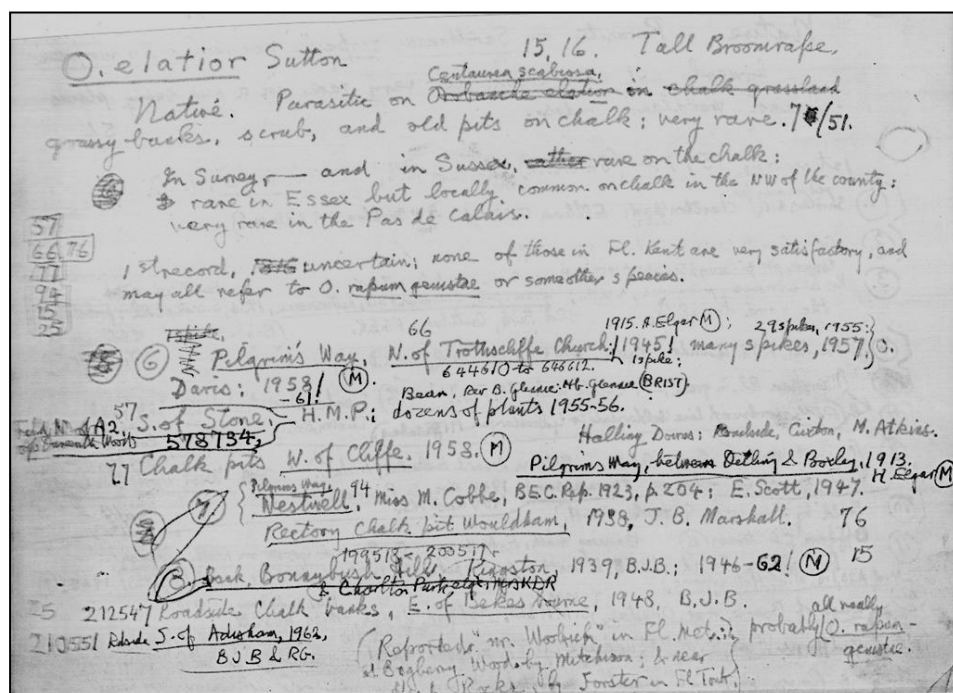
at the Natural History Museum have been converted to BM, where not already cited as this; TW becomes TLS; and Kew is K, all standard herbarium names citations. References to private herbaria remain unaltered (Hb. = herbarium [of]). Initials of contributors of records have been left; but it is intended eventually to provide a key to those identified.

The manuscript itself, particularly as regards the parts later in sequence, presents some difficulties in interpretation, with numerous crossings out and additions. As the revisions appear to have been made on a cumulative ad hoc basis, there is often little consistency within an account, let alone between accounts. Colons and semi-colons are often difficult to tell apart; and even when obvious, they are not necessarily employed consistently. Underlining may denote italics, bold or divisions between parts of the text, or may place emphasis on some locations, and sometimes it seems without any logic.

The species accounts up to and including *Azolla filiculoides*, are taken from a typescript prepared by Owen Davies in collaboration with Francis Rose, and are a corrected draft revised by the latter in 1999 (the earlier typed draft also exists, in part, as also a copy of the manuscript). The format/layout reflects guidance given by Rose as part of the typescript preparation process. Obvious errors in the typescript introduced in the process of typing are corrected here, after comparison with the manuscript, but a failure to follow consistently the prescribed format/layout has not always been corrected. The process of revision pruned down many records, so that the manuscript is often a richer source of raw data than the revised version. Footnotes are given here to highlight some of the changes, and what has not been carried through from the manuscript, but these are only a small proportion of the changes made.

Some accounts (flagged accordingly, **highlighted in grey**) are not an exact transcript, but are taken from notes made in summary form by Owen Mountford in 1981, when consulting the manuscript in Francis Rose's study. The information was extracted for use in relation to floristic change in the Romney and Walland Marshes and focussed on aquatic, wetland and grassland plants, disregarding information in the Flora outside botanical district 15 (Romney marsh including Dungeness). Tetrad details have been added by Owen Mountford. He also abstracted similar records from Francis Rose's notebooks, and these would have been capable of amplifying the Flora considerably, but the most recent revisions of the manuscript Flora show that Francis Rose was as likely to have reduced the number of records as to have added more.

Sample extract  
from manuscript





**FLORA OF KENT**  
**FRANCIS ROSE**

**[for the most part transcribed from copy manuscript extracts or copied from typescripts]**

**THE VASCULAR FLORA**

**Lycopodiopsida**

LYCOPODIACEAE<sup>16</sup>

**[Lycopodiella inundata (L.) Holub** MarshClubmoss. [15, 16].

Wet heaths, always rare, as such habitats have never been extensive in Kent, and extinct since at least 1930. [N].

1. Chislehurst Common, Martyn 1763; Keston Common, Pamplin c. 1855; 1 plant, 1930, S .E. Chandler, Hb. Glennie (BRIST). St .Paul's Cray Common, 1885, H & M (Hb. F.J. Hanbr.).

2. Hothfield Common G.E. Smith, FG EK, 1839; Hb. Glennie (BRIST). Reported by Miss Clarke 1931 ,but unconfirmed. Planted here experimentally by FR in 1947: it persisted until 1954, but has not been seen since].

Still on wet-heaths in Ashdown Forest, E . Sussex ,and on Lower Greensand in W. Sussex and in SW Surrey (still locally plentiful at Thursley Common). Extinct in Essex. Most plentiful now in S. England in Hampshire (Woolmer Forest, New Forest). One site in Pas de Calais (Foret de Desvres).

A declining species in Britain and Europe now, due to habitat change, and lack of grazing and peat paring on heaths, but still with strong holds in Hants and SW Surrey. Extinct as a native in E. Anglia since c. 1970, but it is now (1999) being re-introduced to some former Norfolk sites with proper management.

**Lycopodium clavatum** L. Common Clubmoss. [15, 16]. N.

Very rare now. Dry heaths, old sand-pits, and along rides in forestry plantations.

[1. Keston Mark (common?), Cooper *Fl Met.* 1836.]

10. Several sites found in rides between Kent Hatch on the Surrey Border, and a sandpit at Ightham Common 1948- 1980, several recorders (see Atlas). Now declining and no longer to be found in most of the former sites: 4252 Goodley Stock; 4452 Hosey Common; 4852 nr. Goudhurst; 5052 Whitley Forest; 5855 sandpit S W of Ightham, J. Felton 1948(!) (M) destroyed by run-off from a piggery close by, 1952. 6252 N. of Gover Hill, Mereworth Woods (E.P. Atlas). Oaken Wood, Barming, 1901, J .H. Allchin – not since.

12. Hothfield Common WRJ, H &M; 1960, F R & P. Wilberforce in heath by northern bog: not seen since 1970.

13. 5738 TunbridgeWells, 1849, Pryor (M); Tunbridge Wells Common WWR, c. 1880 (TLS). [7838 Brewers Wood, Cranbrook, among heather in ride, H &M]; 7234 Bedgebury Park, AHB 1944 (!)- gone by 1970; 7133 Bedgebury Pinetum, A.B. Jackson, 1945: several patches, 1964 FR. 7034 E. Philp (Atlas); 8236 Chittenden Wood, E P (Atlas) 19 [*sic*].

[14. Tenterden, H&M.].

*L. clavatum* had an extraordinary period of increase in localities in SE England between about 1948 and 1978, turning up mostly among *Calluna* in rides within conifer plantations, and also in a few sand and gravel pits. Since about 1985, it has gradually declined in SE England almost to the point of extinction. Its 19<sup>th</sup> century and earlier records were mostly from open *Calluna* heaths, many of which were planted up by the Forestry Commission, or private forestry concerns, from 1920 onwards. The majority of the sites, when examined today, are found to be covered with dense swards of *Agrostis canina* or *A .capillaris*, or with dense *Molinia* or *Pteridium*. Thus its phase of expansion suggests that, for establishment, it needs very open, sandy or gravelly skeletal soils. When natural succession occurs, the sites tend to become quite unsuitable for it and it is probably crowded out by competition and perhaps some degree of eutrophication, due to litter accumulation:

<sup>16</sup> The typescript omits, presumably deliberately, an entry for a species of dubious status:

[*L. selago* L. Reported at Sutton Valence in Fl. K., but this record is unreliable and most unlikely: it is extinct in Surrey, but still exists in one locality in the High Weald of E. Sussex!]

it: seems essentially to be a colonist of open habitats. The story is much the same throughout the English lowlands. When the present crops of conifers (now reaching maturity) are felled, and bare ground is created in the process, we may see a new development of *L. clavatum*, a species clearly adapted to very open, inorganic acidic substrates, both in lowland and montane areas.

## SELAGINELLACEAE

**Selaginella kraussiana** (Kunze) A. Braun. Krauss's Clubmoss. H.

Very rare. Naturalised in places, e.g. in (13) in a shrubbery, Ferndale, Tunbridge Wells, 1958 C AS. Surely elsewhere in and near gardens on acid soils.

## Equisetopsida

### EOUISETACEAE

**[Equisetum hyemale** L. Rough Horsetail.

Formerly N, not seen for c. 150 years. "I have specimens from South Kent, sent me by Rev .G.E. Smith"- W. Borrer', *Phytologist*, (1853) V, p.45. Smith lived at Sandgate, and suitable habitats (boggy flushes), still exist in that area, but it has never been refound. It occurred in a wooded flush on Fairlight undercliff in VC 14, until at least 1939, H .P. Sargent in a similar place at Wanborough Wood in Surrey, VC 17, until 1850: and still occurs in similar habitats near Crondall VC 12, and near Southampton, VC 11, so it may yet be refound in Kent.].

**E. fluviatile** L. Water Horsetail. 15, 16. .N.

Swamps, shallow lake margins, and marsh ditches, in waters of a wide range of pH and nutrient content. In places an important primary swamp colonist in the hydrosere. Widespread and locally common, but absent from the chalk districts 5) - 9). Commonest in the Low Weald, and in the Marsh districts 4) and 15). Over 70 sites known<sup>17</sup>.

Locally common in similar habitats in the adjacent counties: likewise the Pas de Calais and Flanders.

**E. arvense** L. Field Horsetail. 15, 16. N.

Roadside, rough fields, bare or waste open ground: common generally but very rare on chalk, except for a few sites on disturbed soil.

Ten sites in 8).<sup>18</sup> Common in all adjacent counties and in N. France.

**E. sylvaticum** L. Wood Horsetail. 15, 16. N.

In acidic flushes or on spring-lines in woodlands, especially in Alder carrs, on weakly acid, very wet, sandy or peaty soils where there is some horizontal movement of water.

Scattered in some ten sites in the High Weald 13) and 14), from Speldhurst E to SE of Biddenden, in one site in the Blean 3), and (formerly) on the Eocene strata SE of London 1).

This beautiful species has a largely northern distribution in Britain, where it is often in quite open situations, including railway banks: scarce in the southern counties

[.1 Charlton Wood, Merrett, 1666; Chislehurst, Ray.]. [ 2) Near Oare Mill , Jacob, 1777].

3) Flush in Hunstead Wood N.R., Chartham Hatch, 097568, 1956- 97 MNE. [Other old records for 3).].

13) Avery's Wood, Speldhurst 5440, JP. Roundabouts Wood, Tunbridge Wells, 593408, 1943-54<sup>19</sup>. Brokes Wood, Southborough 5842, 1953! MNE; W. of Sherwood Park 6040, 1955 CAS; [Colebrooke Park, H&M]; Brookland Wood, Lamberhurst Quarter, 659387, JRW (1978!) MNE; N. of Pembury Waterworks 626429, JEL 1962! MNE; S. end of Brenchley Wood N .R! 648417 MNE; Combwell Wood, Goudhurst, 7134 Lord Stirling TLS<sup>20</sup> but not refound recently;

<sup>17</sup> Listed or summarised according to district in the earlier manuscript.

<sup>18</sup> This sentence seems inappropriate; the ubiquity of the species is such that it serves limited purpose to single out the number of sites in botanical district 8. The manuscript does not include this; but refers to the plant growing 'mainly on clayey or sandy soils, 166 modern localities. \*1629: Grain to Cliffe. Johnson, *Iter*, p.8.'

<sup>19</sup> The attribution in the manuscript of this find to J.R.W. in alder carr has been omitted in the typescript.

<sup>20</sup> 1897 in manuscript.

14) Sandpits Wood, Biddenden, 855305 1963 MNE.  
In the Boulonnais and elsewhere in N. France.

**E. palustre** Marsh Horsetail. 15, 16 N.

Fens, wet peaty meadows, marsh dikes, dune slacks, in alkaline or weakly acid waters: common<sup>21</sup> in the alluvial districts 2), 4) & 15) and in the Holmesdale river valleys of 10), 11), 12) & 16) though now reduced by "improvements". Rarer in the Low Weald, more frequent in the High Weald 13) & 14). Absent from the chalk districts, except by the R. Dour above Dover. Frequent in the adjacent counties and in N. France and Belgium, but diminishing everywhere today.

**Equisetum telmateia** Ehrh. Great Horsetail. 15,16. N.

In flushes and along spring-lines, where pervious water-bearing strata overlie impervious strata (eg. clays) especially where the pH is high. Absent from dry strata (chalk and sands) and from uniform areas of little relief. Hence rare or absent in 5) to 9) and in 15); very local in 2), 3) and 4): fairly shade-tolerant.

1. Rare; Ravensbourne, Catford; Scadbury Park, Pond Wood and Petts Wood, Chislehurst, on Eocene spring-lines.
2. Local; osier beds by tidal Medway: abundant in flushes on the slipping clay cliffs on the N. coast of Sheppey.
3. Occasional on the spring-lines on the south of the central Blean plateau.
4. Here and there on spring-lines at the junction with chalk or Eocene strata, not on the flat alluvial areas. 10) to 14), 16). Locally abundant along the foot of the chalk and Ragstone scarps, and scattered in undrained places in the High Weald.  
Locally common through S E England and in N. France.

## Pteropsida

### OPHIOGLOSSACEAE

#### **Ophioglossum** L.

**Ophioglossum vulgatum** L. Adder's-tongue 15, 16. N.

Dry or damp old pastures and meadows where unimproved, short-sward fens, old woodlands (especially on chalk); old quarries. Avoids acid soils.

Still widespread but decreased in last 100 years. 90 sites<sup>22</sup> in my records in all districts except 9. Occasional in adjoining counties and in N. France in unimproved sites.

#### **Botrychium** Sw.

**Botrychium lunaria** (L.) Sw. Moonwort 15, 16. N.

Formerly in ancient pastures or grass-heaths in short turf, on clay or loam soils. Never common, even in earlier recording times, now apparently extinct<sup>23</sup> (last record c.1960).

[Greenwich, L'Obel\*, 1570.

1. Blackheath; Chislehurst; SW of Dartford.
2. Graveney, Blackstone.
5. Hill Park, Westerham; Chevening Park, c.1930.
7. Small pasture on clay-with-flints, S. side A 249, top of Detling Hill, 1938, J.B.M. 1946-47! MNE (with *Orchis morio* and *Ophioglossum* etc.) Not refound since!
11. Coxheath, Gerard.
12. Ashford Warren, Miss L. West, before 1939 E.S.
13. Bedgebury Pinetum, 1960, F. R. Browning. Tunbridge Wells Common TLS; Combwell Farm, Goudhurst, 1900, Lord Stirling, TLS.]

Spores of this species were found in a peat-deposit SE of Wingham (Bronze Age) (Godwin). It would probably have been common in late Devensian and early Flandrian times, when there was much open terrain in Kent.

<sup>21</sup> Manuscript states 97 localities known, but does not list them; var. *polystachion* is said to be not infrequent.

<sup>22</sup> Manuscript says 91 in all districts except 9 and 10. Records (or totals) are cited in the manuscript for each district and reference is made to Late Bronze Age spores found near Wingham.

<sup>23</sup> Assessed in manuscript as extremely rare, and intermittent in appearance.

Not recently seen in England E. of N. Hants and S. of the Suffolk Breckland, but still in Sussex, Castle Hill W. of Lewes (1965!). Frequent in N and W Britain; very rare in N. France now.

#### OSMUNDACEAE

##### **Osmunda** L.

**O. regalis** L. Royal Fern. 15,16. N, H.

As a native, this fern was formerly widespread in S.E. England, but the Victorian "Fern Craze" largely wiped out the native populations in most places, as *Osmunda* was a special favourite to grow in conservatories as well as water-gardens. All this activity has long ago died away, and *Osmunda* (and most other ferns) have recolonised very widely in the 20<sup>th</sup> century. What however, we cannot be sure of, is whether existing large plants of *Osmunda* in natural-looking sites (wet carrs less acid bogs, pond margins, etc.), especially in former ornamental estates are 1) relict natives, 2) old 19<sup>th</sup> century plantings, or 3) more recent invaders from elsewhere; but today the question is a rather academic one! The simple facts are that *Osmunda* is recolonising suitable habitats in some parts of Kent.

The most likely natural sites are in boggy woods (it is moderately shade-tolerant), and the possibly natural re-invasions of damp walls and rocks, especially around Tunbridge Wells.

1) Keston Common, H&M: SE corner of Lower pond, Keston Common 1947 and since, MNE; Holwood Park estate, 1948-54 and to the present, MNE – possibly relict here in part; Ravensbourne estate, Keston, 1956 MNE; abundant by stream, Danson Park<sup>24</sup>, Welling, GMB.

[3. Old records for: Perry Woods, Selling; Bigbury Woods, Chartham to 1930 ,ECG; Chartham Hatch].

(4. Strangely it has never been recorded in the fens and marshes between Sandwich and Deal.).

[10. Rose Wood, Ightham Common, 1870, B .Harrison: not recorded since.].

12) .9835 Longrope Wood, Orlestone: (loc. plentiful), E. Smith.

13) 553414, wall, Speldhurst Church, KEB; 5840 railway cutting N of Tunbridge Wells station, CAS; 5639 Rusthall Common Rocks, 1949 KEB; 5740 Culverden Glen, 1947 FR; 6142 Pembury Woods ,M. McFarlane; 7233 Bedgebury Pinetum, 1947-50, MNE.

14) 8934 Knock Wood, E. of Tenterden, in Alder carr, E. Scott 1956, MNE: possibly native here.

16) 1635 Ditch by old railway, Saltwood, 1955 ,LJM.

Scattered in the Surrey and Sussex Weald, where most present localities may be due to earlier landscape gardening, but certainly native though rare, in Ashdown Forest, Sussex, and Thursley Common in Surrey. Frequent and native, however in New Forest bogs, and locally abundant still in carrs in the French Boulonnais.

#### ADIANTACEAE

##### **Adiantum** L.

†**A. capillus-veneris**. Maidenhair Fern 15, 16. H.

On damp stonework or old walls: alien in Kent, derived by spores from gardens or greenhouses, etc: very rare.

1. Damp stonework, Walmer Castle, D .H. Seth-Smith, *Gard. Chron.* 1962.

2. In an old well, Scotney Castle, 1960, KEB.

This is native in Britain as far east as Dorset only.

#### PTERIDIACEAE

##### **Pteris** L.

†**P. cretica** L. Ribbon Fern. 15, 16. H.

Old walls, etc. As an escape from cultivation at: 4857 Chevening; 5466 Farningham, and 3042 Dover (EP in Atlas) (from S. Europe).

#### MARSILEACEAE

##### **Pilularia** L.

[**P. globulifera** L. Pillwort. 15 - very doubtful.

<sup>24</sup> Assessed in manuscript as probably planted.

Reported in H&M (p.429) from 11) Sutton Valence (Mrs. Petley), but this is unconfirmed in that area and almost certainly an error, as no suitable habitats for it have existed in that area for a very long time. It could have occurred by acid water ponds in the past in the Weald (as in Sussex).]

#### HYMENOPHYLLACEAE

##### **Hymenophyllum** Smith

**H. tunbrigense** (L.) Smith. Tunbridge Filmy-fern. 16. N (extinct).

\*1688 — found by Mr. Dare, 'circa Tunbrigiam', Kent<sup>25</sup>. This probably refers to its former occurrence on the High Rocks (in Sussex) where it has not been seen since c. 1875, but it is almost certain that it formerly occurred on the Hungershall Rocks in Kent on the opposite side of the road to the High Rocks, and possibly elsewhere nearby in Kent, but no localised Kent specimens are known to exist. Forster (*Fl. Tonbr.*) only gives Sussex localities by name, but adds "and most of the other rocks" in the neighbourhood (p.121). Jenner (*Fl. Tunbridge Wells*) likewise only names Sussex localities. It was however, reported from Penshurst (in H&M) by Mr. John Cox.

Every sandrock outcrop of any size in the Kent High Weald has been searched for it over the last fifty years, but it has not been found. It is still, however, (1998) in eleven Sussex sites, the nearest being at Eridge Green Rocks and Saxonbury Hill. Westward, the nearest localities now are in the Quantocks and near Porlock in Somerset. It is also still S. of Cherbourg in Normandy. To the east today it persists at one site in Luxembourg. It is a plant that requires damp, lightly shaded acidic sandstone rocks to survive but it can occur on the lower parts of tree trunks rarely, in sheltered woodland. It is quite widespread in moist tropical forests, and in Britain it is presumably a relic of the extensive forests of the Atlantic period in pre-Neolithic times.

(*Trichomanes speciosum* Willd. (Killarney Fern) has been discovered in recent years on the Sussex sandrocks, but only as the gametophyte generation. This could be found on the Kent sandrocks; the gametophyte looks rather like a filamentous green alga, and is very easily overlooked.<sup>26</sup>)

#### POLYPODIACEAE

##### **Polypodium** L.<sup>27</sup>

**P. vulgare** L. Common Polypody. 15, 16. N.

As the aggregate, this is widespread in Kent. The segregate *P. vulgare* s. str. occurs mainly on tree boles or branches in woodland or on sheltered lane sides or hedgebanks in the Weald, and is rare or absent in the drier, less humid, north of the county and in the open flat districts.

**P. vulgare x P. interjectum (=P. x mantoniae** Rothm.).

In the Hawkhurst-Cranbrook area, rare, with both parents, E P in Atlas.

**P. interjectum** Shivas Intermediate Polypody. 15, 16. N.

This Polypody is found throughout Kent, mostly on walls and banks, but also in woodland. Many of the older churches and churchyards have it, especially on ragstone stonework.

**P. cambricum** L. (= **P. australe** Fee) Southern Polypody. 16. N.

Only so far reported in a wall at Penshurst Place; this very southern species may be found on more old buildings in the south of Kent, as it is scattered along the south coast into East Sussex.

#### DENNSTAEDTIACEAE

##### **Pteridium** Gled. ex Scop.

<sup>25</sup> It is unclear why Francis Rose thought it necessary to add 'Kent' here, since it is not in the original source (which he cites in the manuscript as Ray's *Fasciculatus*, although there the record is given in English; in Latin it is instead in Ray's *Historia Plantarum*).

<sup>26</sup> A prescient observation, as it was recorded in two Kentish areas in 2016.

<sup>27</sup> The *Polypodium* account has undergone major change from the earlier manuscript. This acknowledged that the *Polypodium vulgare* aggregate had 'recently' (giving literature references of 1961 and 1963, which afford some dating evidence for this part of the manuscript) been split into three species, 'but my records for these are very incomplete as most of my field recording was done before the segregates were recognised in Britain'. However, the manuscript gives a large number of records or record totals per district for *P. vulgare*, both s. l. and s. str., and for *P. interjectum*, albeit that the *P. cambricum* (as *P. australe*) account is blank.

**P. aquilinum** (L.) Kuhn Bracken. 15,16. N.

Heathland, open woodland, neglected grassland on well-drained, non-calcareous soil, also on damp walls and on waste ground. Abundant generally, except in the marsh districts 2), 4), & 15)<sup>28</sup>: unknown on the Denge Beach on leached fixed dunes at Sandwich Bay and Lydd. An agricultural pest which has become commoner with the lack of grazing in many grasslands. It has taken over many former *Calluna* heaths, being encouraged by heath fires and cessation of grazing. Chain-harrowing greatly reduces its vigour. It can be eliminated by specific herbicides such as Asulox, but these are expensive to use.

Common in all adjacent counties and in N. France.

#### THELYPTERIDACEAE

**Thelypteris** Schmidel.

**T. palustris** Schott Marsh Fern. 15, 16. N.

In fen and fen carr. Very rare and local now, but still plentiful at 4) Ham Fen, 11) by a pond E. of Edenbridge, 13) by lake in Angley Wood, Cranbrook<sup>29</sup>, and 15) by the Open Pits on Denge Beach. Formerly in 7) North Cray, and in 4) at Wingham<sup>30</sup> and Sturry.

**Oreopteris** Holub

**O. limbosperma** (Bellardi ex All.) Holub Lemon-scented Fern. 15, 16. N.

Damp heathy woodland rides on acid soils, and in boggy hollows in woods: frequent locally in the High Weald 13); also as follows:

- 1). [JoydensWood, one large plant in valley floor, 1945], MNE [Blackheath, Newman].
- 10). Parsons Marsh and Scords Wood. S. of Brasted, 1954-1963: not seen 1984. Seal Chart, SW corner, 1954 MNE. Lowest Pond, Ightham Common, 1955 MNE.
- 11). Ryarsh Wood, very rare in ride, 1945 MNE: not since.
- 12). 037426 Willesborough Lees, CPSK, 1829: 1944-55! In peaty ditch across bog remnants MNE.
- 13). Locally frequent from Redleaf Rocks W. of Penshurst, E. to Chittenden Wood: 18 sites<sup>31</sup>.
- 14). 8935 Knockheath, E. of Tenterden 1956 MNE, damp ride; 9535, Cole Wood, Woodchurch, ES.

Frequent over much of the High Weald of Sussex and on Lower Greensand in Surrey and Sussex. This is a "northern" species which is holding its own well in moist rides, etc, with intermittent horizontal water movement in the soil. Reported in the *Atlas* by EP in three sites in 8) on presumably acid superficial soils in plateau woodlands, but there is no very recent record in 8) since 1982 (grid refs. 1242, 1448, 1646).

#### ASPLENIACEAE

**Phyllitis** Hill

**P. scolopendrium** (L.) Newman. Hart's-tongue. 15,16. N (and sometimes H).

Woodlands, steep sheltered, shady, sometimes rocky banks, in humid but well-drained situations, on soils usually of fairly high Ph; also on old walls and in wells. Widespread and locally common. In the drier N. and N.E. of county mostly confined to stonework, but in the ragstone [and] chalk valleys and scarps abundant in ash, ash-maple, or ash-oak woods. Most plentiful on the ragstone scarp woods in 10), 11), and 16) in the chalk valley woods W. of Dover. 8), and in Folkestone Warren 16), about Hythe and the Isle of Oxney, 14). Otherwise very scattered on old walls.

\* 1632, near Faversham, Johnson, *Descriptio*. p.31. 116 localities recorded<sup>32</sup>. Common in the High Weald gills and on the western wooded chalk scarp in Sussex; less common in Surrey, rare in Essex, very local in the Boulonnais and Pas de Calais. It is as plentiful in the suitable part of Kent as in S.W. England.

**Asplenium** L.

<sup>28</sup> In the manuscript, records are given for these areas of comparative scarcity, plus district 9) (Ramsgate). There is also a reference to **Pteris cretica** L. 'naturalised in a few places in N.W. Kent'.

<sup>29</sup> In manuscript described as 'Fen on site of Tuckers Pond...1945-61, abundant!'.

<sup>30</sup> The manuscript entry is 'Fen N.W. of Wingham, 1947 MNE; D.A.C.L. 1963'.

<sup>31</sup> Given in the manuscript.

<sup>32</sup> The manuscript lists, or gives districts for, many of these records.

**A. adiantum-nigrum** L. Black Spleenwort 15, 16. N.

On old walls: widespread but not really common. On shingle under bushes on Denge Beach. Most common on old ragstone walls, from Westerham to Ashford. 10), 11), & 12): rarer elsewhere. About 70 sites recorded, mostly on old churches or in churchyards. Rare on natural ragstone outcrops on lane banks (eg Westerham and Sundridge), and on Wealden Sandstone (eg Cowden Furnace Pond).

\*1629: Gillingham, Johnson, *Iter*, p. 24. Sparsely in all adjacent counties and the Pas de Calais.

**[A. obovatum** Viv. Lanceolate Spleenwort. [16]. Extinct N.

Formerly on 13) Hungershall Rocks at Tunbridge Wells, and possibly then on other rocks in Kent nearby: Forster, *Fl. Tonbr.* Recorded (Herb. Buddle) at Tunbridge Wells as early as 1700, but no county is specified, and this may have referred to the High Rocks on the Sussex side. WW Reeves (c. 1885), said it was extinct on the Kent side by then (due to tree felling) at Hangershall (sic) Rocks, though formerly plentiful, but still existed on the Sussex side (i.e. on the High Rocks). Not reported reliably since then in either Kent or Sussex. It is long extinct in Dorset, and the nearest sites now are in W. Somerset and Devon.

These Wealden occurrences were strange ones so far east for this highly oceanic and maritime species, but are well authenticated by specimens from the Tunbridge Wells area].

**[A. marinum** L. Sea Spleenwort [15]. Extinct N.

Apparently native formerly on the cliffs at Dover (\*1633 ,Gerard *emaculatus*, T. Johnson, p. 1143.) No specimens are known to exist however. In H&M, Rev. C .H. Fielding reported it at Dover but it has probably been extinct for a very long time]. The nearest sites today are in the Isle of Wight and on the E. Dorset cliffs.

**A. trichomanes** L. ssp. **quadrivalens** D. Meyer. Maidenhair Spleenwort. 15, 16. N.

On old walls; rather common, on old churchyard stonework, and on other walls in the ragstone belt in 10), 11), & 12). (49 localities recorded in these three districts): rare in the High Weald 13) & 14), Romney Marsh 15) and in N. Kent 2): scattered elsewhere: 86 localities known in total. Not seen recently on natural rocks in Kent.

All the Kent specimens seem to be referable to the ssp. **quadrivalens** D. Meyer, ssp. **trichomanes**, a plant of more acidic rocks and walls, does not seem to occur in the S.E. of England, but in Wales and Cumbria.

\*1597, Gerard Herbal, p. 985.

Occasional in Surrey, Sussex and Hants: rare in Essex and Pas de Calais.

**A. ruta-muraria** L. Wall-rue. 15, 16. N.

On walls, both of stone and brick, and on ragstone rocks by lanes (e.g. Boughton Monchelsea). Rather common throughout the county: abundant, especially on stonework in the ragstone belt: all districts. Only unrecorded in 51/36, 37, 61/07 & 61/02.

\*1597: Dartford, Gerard *Herbal*, p. 983.

Frequent in the adjoining counties and in the Pas de Calais.

**A. septentrionale** (L.) Hoffm. Forked Spleenwort. 15. N.

One plant found on a brick bridge at 15) Brenzett by Mrs. B. Burt c. 1983; (1984!): no longer present in 1990. No doubt of natural origin from a spore which must have travelled a long way, but far beyond its normal western and northern range in Britain: a remarkable find by Mrs Burt.

**Ceterach** Willd.**C. officinarum** Willd. Rustyback. 15, 16. N.

On old walls; rather frequent on the ragstone belt in mid Kent, and in 8), rare elsewhere: 34 sites recorded in 1), 4), 6), 8), 10), 11), 12), & 13). It can occur in non-calcareous walls with mortared joints.

\*1640: Strood, Parkinson, *Theatrum Botanicum*, p. 1045.

Rare in adjacent counties, and in Pas de Calais on natural Devonian limestone (Vallée Heureuse, Rinxent).

## WOODSIACEAE

**Onoclea** L.**O. sensibilis** L. Sensitive Fern. 16. H

Alien, rarely naturalised in damp places.

10). St. John Jerusalem, naturalised by stream, Sir S. Tallents.

13). Redleaf Park, Penshurst, in damp woodland, FR 1947.

### **Athyrium** Roth

**A. filix-femina** (L.) Roth Lady-fern. 15, 16. N.

Damp or sheltered places in woodland, hedge-banks, fen carr; frequent to abundant as a whole S. of the chalk escarpment. Local in the Eocene woodlands of 1) and the S. part of 3): very rare in 2) and 4): in 15) only at the Open Pits on Denge Beach: absent in 9); scattered in valleys and in plateau woods in 5) - 8), especially where there are areas of acidic superficial soils: frequent in the damper woods on the Lower Greensand In 10), 11), 12) and 16), but scarce on Gault and Weald Clay except in sheltered valley woods: most abundant on the gills of the High Weald in 13) and 14). 124 localities recorded in total by me.

\*1746: Chislehurst, Blackstone p 21 *Spec.Bot.*

Frequent in suitable places in the adjoining counties and in Pas de Calais.

### **Gymnocarpium** Newman

**G. dryopteris** (L.) Newman .Oak-fern. 15. H or N?

\*1970, 8) West Wood, Lyminge Forest, 1343 and 1443. Mrs L. B. Burt: Mrs B Nash.

It is well established now (1980?)<sup>33</sup> in the valley in the conifer plantations here, on acid humus, and either introduced originally with young trees, or a long-distance colonist by a spore. Not yet found in any other county of S.E. England, nor in Pas de Calais: frequent locally in Wales and N. Britain.

(**G. robertianum** (Hoffm.) Newman: occurs on chalk scree in a ravine at Bignor in W. Sussex, but has never been reported for Kent).

### **Cystopteris** Bernh.

**C. fragilis** (L.) Bernh. Brittle Bladder-fern. 15, 16. H or N?

Either native, or more likely of horticultural origin, on damp mortared walls: rare.

5) Chevening Park, *K. Atlas.* 11). Ragstone walls, E Malling; Loose. 8) Olantigh Park, *K. Atlas.*<sup>34</sup>

## DRYOPTERIDACEAE

### **Polystichum** Roth

**P. setiferum** (Forsskaol) Moore ex Woynar. Soft Shield-fern 15, 16 N.

Steep banks, rocks, slopes in sheltered, humid woodlands: shaded hedge-banks and sides of deep sunken lanes, on base-rich, humus-rich soils.

Widespread, except in the drier, flatter, more open parts of Kent, but very rare N. of the North Downs. \*c. 1730: Holloway, E. of Chislehurst, Rand (BM). Locally frequent in 10) and 11) on ragstone scarps and lane banks, and in sheltered valleys and tracks in woodlands in the chalk valleys in 8). Local in 12) and 16). Occasional in the western High Weald in 13), commoner eastwards in 14). Locally common in Sussex, Surrey and Hants, rare in Essex and Pas de Calais.

**P. aculeatum** (L.) Roth Hard Shield-fern 15, 16. N.

In similar habitats to the last species, but usually in rather drier, better-lit situations, and often with it, but less frequent; occurs in less sheltered, less base-rich sites, and more often on churchyard walls and dry hedgebanks than the last (Map).

1) Hayes churchyard: S. of Locks Bottom: Scadbury Park. 3) S. of Fordwich; 6) Lane above Otford; 7) N. of Westwell; 8) frequent in area W. of Dover; 10) Crockham Hill; ragstone scarp W. of Plaxtol; 11) Elmstone Hole; Hever; Frittenden; 12) W. of Great Chart; E. of Bilsington; Sellindge churchyard. 13) and 14) High Weald, frequent, 21 sites; 16) Hythe: Saltwood.

A much more rigid and glossy fern than the last, with broader, more leathery pinnae curved towards the frond apex.

\*1700 — about Tunbridge Wells- Doody and Dubois. In all the adjoining counties, and in Pas de Calais.

<sup>33</sup> This suggests that Francis Rose had taken the status from Eric Philip's *Atlas of the Kent Flora* (1982) ('now well established'), and was seeking to confirm what this meant in terms of dates. The manuscript pre-dated the finding of this species in Kent, but refers to the possibility of its being found in alderwood flushes or stream banks in the High Weald – whereas the eventual find was, as indicated, not likely to be related to long-term native survival.

<sup>34</sup> The only record given in the manuscript is for 10) Darent Steps, Westerham, RAC.



**Cyrtomium** C. Presl**C. falcatum** (L.f.) C. Presl House Holly-fern. 15. H.Established on an old wall, Sheerness, 9274, *K. Atlas*.**Dryopteris** Adans.**D. filix-mas** (L.) Schott Male-fern. 15, 16. N.

Woodlands of all types, hedgebanks, scrub, and damp walls: very common throughout Kent. In flat, more cultivated areas it is largely confined to walls.

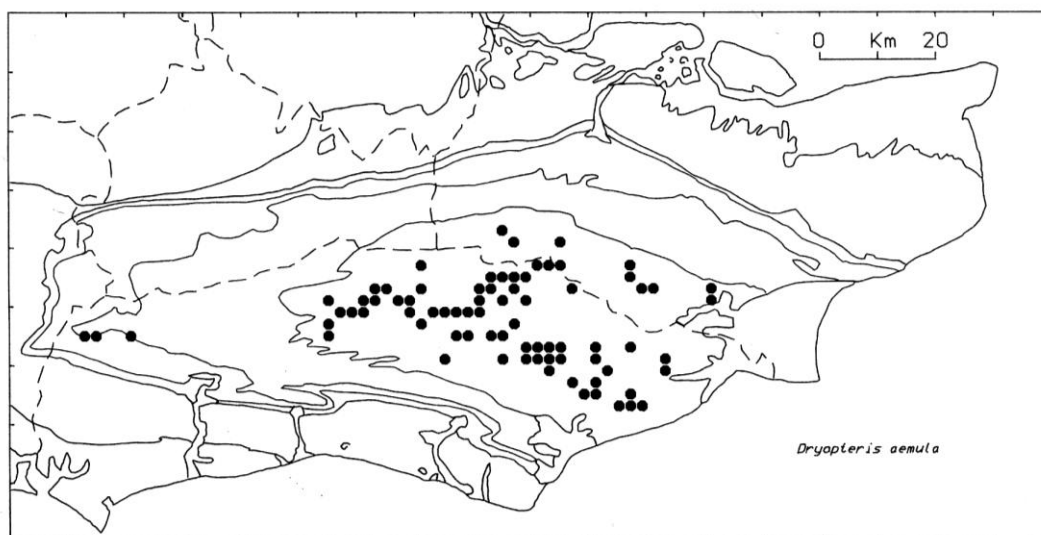
\*1629: near Hoo, Johnson, *Iter*, p.8. 380 recorded sites.**D. filix-mas x D. cristata?**

A plant resembling this occurred with the supposed parents at Denge Beach Open Pits in 1952 (MNE).

**D. affinis** (Lowe) Fraser-Jenkins ssp. **affinis**. 15, 16. N.The **D. affinis** complex is a series of hybrid forms derived from crosses between **D. oreades**, **D. caucasica**, and at least one other parent. The complex is variable, but has not been studied in depth in Kent. The complex is known through most of Kent, principally in sheltered woodlands on humus-rich soils: it includes, besides ssp. **affinis**, also ssp. **cambrensis** Fraser-Jenkins, and ssp. **borreri** (Newman) Fraser-Jenkins<sup>35</sup>. The complex is commonest in the High Weald, and is rare in 4), 5), and 9).**D. aemula** (Aiton) Kuntze Hay-scented Fern. 15, 16. N.

On steep, deeply-shaded banks on acidic sandy loam, or on sandstone rocks, in 13 localities in the gills of the High Weald in 13) and 14) ,usually on N or NW aspects; rare and local ,but sometimes locally abundant.

\*1899, Fishers' Castle, Tunbridge Wells, W.W.Reeves, H &amp;M, p.426.

This very interesting extreme oceanic (or Lusitanian) species attains its eastern European limit in the High Weald of Kent and Sussex, where it is now known in over 100 sites, mostly in deep gills, or on sheltered sandrocks on Tunbridge Wells or Ashdown Sand and also (much more rarely) on steep slopes in woodland on the acidic Hythe Beds in W. Sussex. On the High Weald it is now recorded from Warninglid in W Sussex, east to Brede in E. Sussex and near Tenterden in Kent. It occurs associated with such species as **Blechnum spicant**, **Dryopteris dilatata**, **Luzula sylvatica**, and the bryophytes **Mnium hornum**, **Dicranum scoparium**, **D. majus**, **Plagiothecium undulatum**, and **Diplophyllum albicans**, under the shade of oak, beech or birch, also often associated with holly or yew. Westward from the High Weald it occurs rarely in the New Forest and in S. Wiltshire, and then not again until Monkton Wyld is reached on the Dorset border with Devon. It is frequent in Devon, W. Somerset, and Cornwall. It is quite unknown in Surrey, Essex, or in any areas N. of the Thames until NE Yorkshire is reached, but frequent locally in Wales.

<sup>35</sup> The manuscript gives a full-length entry for **Dryopteris borreri**, as a plant of 'Woodlands, on moderately acid soils in sheltered, fairly humid situations: uncommon as a whole, though widespread, but locally very abundant in the gills of the High Weald in 13) and in 14) where it is often more abundant than *D. filix-mas*. 63 localities. \*1952, Dungeness, J. Pugh & F.R. Locally frequent in Surrey, common in the High Weald of Sussex, very rare in Essex and Pas de Calais. The truncate pinnules, shaggy rachises, and black spots beneath the pinnae at the junction with the rachis, distinguish this fern from *D. filix-mas*.' [Records or record totals are listed.]

**D. cristata** (L.) A. Gray Crested Buckler-fern. [15]. N.

In scrub on fen peat on one of the Denge Beach Open Pits only. One plant was found here, 1952-62 MNE. J.M. Cannon tells me he also found c. 12 plants in another fen in the Open Pits area in 1952. A very rare species now in Britain.<sup>36</sup>

**D. carthusiana** (Vill.) H.P. Fuchs Narrow Buckler-fern. 15, 16. N.

Alder and Willow carrs, flush areas in woodlands, flushed sphagnum bogs, fens, lakeside swamps, wet woodland generally, occasionally in drier woodlands. Frequent locally in suitable habitats in 1), 3), 12), 13), and 14), especially in the High Weald and on Folkestone Sand: present but rare elsewhere in 4), 5), 8), 10), 11), and 15). 92 sites known.

\*1816: Forster, *Flor. Tonbr.* p. 119.

Locally frequent in much of S.E. England but rare in Essex and Pas de Calais.

- 1) Holwood Park; Keston Bog; Ravensbourne Estate, Keston; Petts Wood; North Cray; Joydens Wood.
- 3) Frequent in the southern part of the Blean Woods.
- 4) Near Preston church.
- 5)<sup>37</sup> Valley bottom, Bombers Farm woods, Cudham: P. Greenfield; and N.W. of Westerham Hill on clay.
- 6) Very rare. 5660; 5862, Woodlands, Knockmill, Church Wood plateau gravels.
- 8) Covert Wood, Miss D.A.C.L. Wood on chalk loam, E. of Oulton Farm, Hougham. Fanscombe Wood, Wye, in bottom.
- 10) Parson's Marsh, P. Greenfield. Ightham Common Ponds. Seal chart, S.W. corner, MNE. Spring Hill, Whitley Forest, R.A.C.
- 11) Dike E. of Tonbridge; SE of 'Woolpack', Yalding, by pond; Starvecrow Hill Woods; Sandway Bog, Lenham.
- 12) 6 localities, Hothfield to Gibbons Brook.
- 13) 44 localities.
- 14) 12 localities.
- 15) Fen on Denge Beach.

**D. dilatata** (Hoffm.) A. Gray. Broad Buckler-fern. 15, 16. N. (map)<sup>38</sup>

Woodlands, hedgebanks and ditch-sides. Very common except in the most open, dry and treeless areas; in all districts but most abundant in hilly, wooded areas. Common in all adjoining counties and in N. France. Best distinguished from **D. carthusiana** by the more triangular frond outline, convex pinnules, and acute dark-centred rachis scales.

## BLECHNACEAE

**Blechnum** L.**B. spicant** (L.) Roth Hard-fern. 15, 16. 31/52.

Native. Woodlands of oak, beech, birch or pine, on acid or less podsolised soils, where humidity and soil moisture are relatively high but drainage good. In the drier districts on sheltered sites such as N. slopes, valleys, or streambanks: most abundant on steep banks, often with *Vaccinium*, *Calluna*, *Deschampsia flexuosa*, *Mnium hornum* or *Dicranum majus*. Abundant throughout the High Weald of 13) and 14) in at least 106 localities. Common on the plateau drifts over the Hvtthe Beds and on the Folkestone Sand in 10 and the western part of 11), becoming much rarer to the E. and in 12). Very rare in the chalk districts, but present in a few woods on Pliocene loams and Eocene gravels in 7) and 8). Now rather rare in 1); common in S.W. of 3), on the Eocene gravels and sands of the Blean.

Almost absent on heavy clay soils and in the marsh districts 2), 4), and 15), except for one locality in acid fen on Denge Beach. 174 localities recorded.

<sup>36</sup> The manuscript adds that 'It was rediscovered by me in a fen in the Some Valley near Abbeville in N. France in quantity in 1958; it had not been recorded in N. France before this since about 1864. The Kent plant may have been derived from a spore blown over from the Abbeville colony. The Kent habitat resembles some of the Norfolk ones in being fen that is acidifying and becoming invaded by *Sphagnum squarrosum*, possibly an incipient raised bog stage in succession.'

<sup>37</sup> At this point, the typed text becomes somewhat garbled, with the wrong district numbers assigned to this entry and the next, whose number (6) is not mentioned in the earlier lists where present. The account then stops. It is unclear why the records stop here, as this does not appear to be part of a revision to pass over areas where the species is common. Accordingly, the rest of this entry has been supplied here from the manuscript.

<sup>38</sup> No map has been found.

\*1725: Shooters Hill, *Herb. Dill.*

Common throughout the High Weald and Lower Greensand areas of Surrey and Sussex: very rare in Essex (? six localities now). Very local in the forests on the Wealden strata in the Pas de Calais. A species of western tendency in S. Britain.

(map)<sup>39</sup>

## AZOLLACEAE

†**Azolla** Lam.

†**A. filiculoides** Lam. 15. 452 H.

Alien, introduced from N. America: it occurred in Britain in an Interglacial period (Godwin, *Hist. Brit. Flora*, p. 287). Naturalised in ponds and dikes, plentifully in 4), rarely in 2). Rarely naturalised in Surrey, Sussex and Essex.

2). Pond and dike near R. Medway, below Aylesford, E.G. Philp, MNE.

4). Monkton, Lady Davy and Miss Vivian, B.E.C. Rep.\*1921, p. 404. Ditches E.N.E of Sandwich, Miss A. Stone, det. J.E. Little, B.E.C. Rep. 1925, p. 908: possibly introduced here as a deterrent to *Anopheles* breeding. Minster marshes, in dike, 1955. Dikes, Worth Minnis, 1946; Ham Fen, 1946-56 MNE; Woodnesborough marshes, 1946. Dike, Minnis Bay, 1960, Mrs. B. Dodds. Pluck's Gutter, 1962, KFC. Dike, Grove Ferry, 1961. J.E. Little comments (vide supra): "The Sandwich Entomological Laboratory has been experimenting on the possible use of **Azolla filiculoides** as a deterrent to *Anopheles* breeding: this may account for the appearance of the plant near Sandwich."

## Pinopsida<sup>40</sup>

### PINACEAE

[**Pseudotsuga menziesii** (Mirb.) Franco, **Picea abies** (L.) Karst, **P. sitchensis** (Bong.) Carrière, and **Larix decidua** Mill. are all widely planted in Kent, but none appears to have yet become naturalised (from self-sown seed).]

**Pinus** L.

**P. sylvestris** L. Scots Pine. 15, 16 D, (Natd.)

Possibly some populations are of native origin, though most are planted; the species is however thoroughly naturalised and common now on the acid sandy and gravelly soils in 1), 10), 11) (about Wrotham Heath, Platt, and Mereworth Woods), 13), and 14). Elsewhere it occurs widely as planted groups of trees, and more and more, as planted forests.

The first evidence from Kent is from peat deposits near Frogholt (Newington) and Wingham, in which the pollen is fairly abundant between horizons dated by Radiocarbon dating between about 1700 BC and 200 AD (Godwin, *Sonderdruck aus den Veröffentlichungen des Geobotanischen Institutes der Eidg. Techn. Hochschule, Stiftung Rübel, in Zürich*, Heft 37. It is clear that it occurred as a native in Kent until at least Roman times; Godwin suggests that the bulk of the pollen in these sites may have come from the acid sandy country of the High Weald. Some of the High Weald Populations of today may well be descended from native stock, but it now seems unlikely that the situation there can be fully sorted out, as so much planting has occurred over a long period. Abundantly naturalised, and possibly in part native, on the Sussex High Weald and the Sussex to Surrey Lower Greensand, and on the Bagshot Beds and Lower Greensand in Surrey, certainly not native in Essex or Pas-de-Calais. Seen in all districts except 2), 9) and 15).

## **Tsuga heterophylla**<sup>41</sup>

13) a few small plants, apparently self-sown from a plantation, Kildown Wood, Goudhurst, 1960, FR & CAS.

<sup>39</sup> No map has been found.

<sup>40</sup> From this point, there is no longer any revised typescript available, so the text given is taken first from Francis Rose's checklist intended for use in or with the Flora; and then the corresponding text from the manuscript which continues as a whole up to and including *Taxus baccata*. After then, only fragmentary parts of the manuscript are known and these are included in checklist sequence, as far as this goes. *Pseudotsuga menziesii* etc. and *Tsuga heterophylla*, however, are not given in the checklist.

<sup>41</sup> Authority and status not given; not in checklist, but if it had been, then Stace 2<sup>nd</sup> edition (applicable when checklist was prepared) would have placed it before *Pinus sylvestris*.

## CIJPRESSACEAE

**Juniperus L.****J. communis L. subsp. communis** 15, 16 12/52 N Juniper

Native. Old chalk grassland and scrub, dry acid heathland. Formerly very common and widespread on the downs and heaths of Kent, this species has become much rarer this century, in numbers both of localities and of individuals, and since 1944 it has been seen in only 23 recorded localities (21 on chalk, 2 on heathland on acid soils). In most of these even it is unhealthy and appears to be dying out, and may before many years have passed be extinct in the county, unless effective conservation measures can be found and implemented.

Its disappearance from heathland habitats is probably partly due to cultivation and repeated heath fires; on the chalk, spread of coarser grasses and scrub on cessation of grazing, with consequent failure of regeneration, as well as fire, are undoubted contributory causes. At present, however, the senescent or dying condition of nearly all the remaining small colonies, and their failure to regenerate or even to produce much seed or even cones, can be correlated with the abundant presence of the parasitic fungus *Lophodermium juniperinum* on the bushes; but whether this is cause and effect is not yet definitely proved. The bushes on the seacliffs, though stunted, possibly by exposure, appear to be still healthy and free from any obvious disease. \*1562: "growth most plenteously in Kent" Turner, *Herball*, pt. 2, p.25.

It is still locally plentiful at a number of sites on the chalk in Surrey and W. Sussex, but in these counties the colonies are similarly senescent in appearance for the most part and do not appear to be regenerating effectively. It is now very rare indeed on the Surrey heaths, and has apparently now become extinct in Ashdown Forest, its only recent E. Sussex locality. It has long been extinct in Essex. In Pas de Calais and elsewhere on the N. French chalk downs it is still abundant and appears to be fairly healthy and regenerating well. It is worth noting that two Hertfordshire colonies near Hemel Hempstead are still healthy and regenerating freely: these are not far from the main line to Birmingham and the local gas works; is it possible that chemicals present in the fumes from these sources have a toxic effect on the *Lophodermium*, or whatever other pathogenic organism may be killing the plants elsewhere? The matter needs much more close study.

5) Hangrove, S.E. of Downe, 4 bushes, 1963.

6) Whitehill, Shoreham, c.40 bushes, 1952. Purvil Wood, E. of Harvel, about 6 bushes, 1964, and several dead ones. Down N. of Crookhorn Wood, Snodland, 1946, 8 bushes: 1958, 2 bushes.

7) Burham Downs above Church, 2 bushes, 1946; ½ mile to N.W., 2 bushes, 1963. Bluebell Hill, one bush, 1964. Westfield Wood E. of Lower Bell, 3 bushes, 1944: not refound, 1950. Queendown Warren, several bushes, 1946: 1963, 1 bush. Above Westwell, one bush, 1962, E.S.

8) Juliberry Downs, Chilham, rare, 1945: gone, 1960. N. of Crundale Church, about 6 bushes, 1958. Longport, Crundale, 1 bush, 1954. Fanscombe Wood, Wye, several bushes becoming overgrown, 1959. Yockletts Bank, Waltham, 2 old bushes in dense scrub, 1947; 1963. S.W. of Petham, 1949-59, 3 bushes. St Margarets Bay, cliff edges to S., 1945; to N., 1958. Langdon Bay cliff top, 7 bushes, 1953. Shakespeare's cliff edge, 1955.

10) Toys Hill, 2 bushes in heathland, 1952-61.

13) Southborough Common! 33 healthy bushes, 8 dying, 10 dead, all infected, 1960, C.A. Stace.

[Old records for the Juniper Pug moth (*Eupithecia sobrinata* Hubn.) exist for 1) Blackheath; 6) Shoreham; 7) Westwell; 8) Crundale; 11) Watlington; 14) Sandhurst. It is still found at Shoreham, Westwell and Crundale, so I understand.]

## TAXACEAE

**Taxus L.****T. baccata L.**<sup>42</sup> 15, 16 38/52 (as a native, or probably so) Yew.

Native. Woodlands on well-drained soils on chalk, sand, or sandy loam; abundant on the chalk as far east as the Wye area, on which substratum it forms pure woods about Otford, Snodland, Borley, and Crundale, and an important colonist of chalk grassland and scrub in many places: also common as a sub-dominant beneath the beech canopy in chalk woodlands; much rarer and scattered E. of Wye and possibly not native east of the Canterbury-Dover road, although not uncommon in plantations: quite common on the Lower Greensand in 10) and 11), both on the ragstone escarpment and on the podsolised soils on "head" on the Hythe Beds plateau: rare on the Folkestone Sand. Common in the High Weald of 13), in gills and on steep rocky banks on

<sup>42</sup> Not in checklist.

sandstones, much rarer in 14). It occurs quite frequently even in woodlands on the Gault and Weald Clay as scattered trees, but probably always where patches of lighter drifts or seams of sandstone occur. Not uncommon on the Eocene Sands and Gravels in 1), 3) 5)–8), 10)–14), and very much at home in Kent: but equally certainly planted in many places. The churchyards of Kent contain many huge specimens, no doubt originally planted: those at Ulcombe and Newington near Folkestone are noteworthy.

It is common on the chalk of west Sussex and of Surrey, forming pure woodlands as at Kingley Vale and about Boxhill, but rarer on the eastern South Downs. It is common on the Sussex High Weald, especially in gills on the sandstone, and in many localities on the Lower Greensand in both those counties. In Essex and East Anglia it does not appear to occur except as a planted tree. It is unknown today, surprisingly, in Northern France, in spite of the extensive chalk areas, north of the Seine Valley cliffs about Rouen.

Only apparently natural localities are listed below, unless stated.

- 1) Keston Common: Hayes Common: Scadbury Park: Holwood Park: Spring Park Wood: Crofton Heath: Roundabout Wood: Shooters Hill Woods: Abbey Wood: Bourne Wood, W. of Swanley: Farningham Wood.
- 2) Self-sown on ruins, S. of Oare Mill Pond. Love Lane, Minster, OD; probably planted.
- 3) 16 Church Wood: 04<sup>43</sup> Holly Hill, Dunkirk: 05 W. of Radar Stn., Dunkirk: 26 Shelvingford Wood.
- 5), 6), 7) Very common, forming pure woods in places.
- 8) 04 S. of Longport, Crundale. 04 The Junipers, Wye, rare. 15 Whitehill Wood. 15 Gorskey Wood. 14 Harts Wood, Upper Hardres<sup>44</sup>. 05 & 15 Denge Woods, Petham. 15 Bridge Hill. 14 Yocketts Bank. 24 E. of Wolverton. 13 Wood N. of Beachborough. 24 Staffords Wood. †Tilmanstone; †Goodnestone Park. †Temple Ewell. 14 E. side Lynsore Bottom. 34 Eastling Wood.
- 10) 45 N.W. Slope of Toys Hill. 55 Scarp, Hubbards Hill. Rooks Hill; Wilmott Hill. Bitchet Common.
- 11) Scarp N.W. of Plaxtol. Comp Woods plateau. Swanton Valley. Oaken Wood. Allington Wood. Kings Wood plateau. Scarp N. of Hunton.  
W. Wood on Weald Clay 2m N. of Tonbridge. Underriver.
- 12) Park Wood, Bilsington.
- 13) Frequent: 22 localities.
- 14) 73 Robins Wood, Cranbrook; Parsonage Wood, Netterhall Gill, Benenden and Babbs Gill, Beneden. 83, 93.

## Magnoliopsida

### MAGNOLIIDAE (Dicotyledonsr)

#### LAURACEAE

##### **Laurus** L.

†**L. nobilis** L. (Garden outcast). Bay. H. [no surviving account]

#### ARISTOLOCHIACEAE

##### **Aristolochia** L.

†**A. clematitis** L. Birthwort. D. [no surviving account]

†**A- rotunda** L. Smearwort. D. [no surviving account]

#### NYMPHAEACEAE

##### **Nymphaea** L.

**N. alba** L.<sup>45</sup> White Water-lily. N.

Localised records for district 15:

Royal Military Canal at Hythe (tetrads **TR13M** and/or **13S**) [L.J. Margetts]; Royal Military Canal, Kenardington (tetrads **TQ93Q** and/or **93V**) [E.S.]; Appledore (tetrads **TQ92P** and/or **92U**).

##### **Nuphar** Smith

**N. lutea** (L. ) Smith Yellow Water-lily. N.

<sup>43</sup> In error for [TR]06.

<sup>44</sup> Queried in text.

<sup>45</sup> This account – as with all the following highlighted accounts – is not a transcript, but it is taken from notes made from the Flora, and is limited to botanical district 15. See p.7.

## Localised records for district 15:

Surprisingly rare in this district and not recorded for the main Marsh area. Recorded: west of Appledore (tetrads **TQ92J** and/or **92P**); southwest of Small Hythe – possibly same record as “west of Wittersham” in 1955 and 1956 (**TQ888296**).

## CERATOPHYLLACEAE

**Ceratophyllum** L.

**C. demersum** L. Rigid Hornwort. N

## Localised records for district 15:

Largely replaced by *C. submersum* in this district:

**TQ82:** levels northwest of Wittersham toward Small Hythe in 1958 (tetrads **TQ82U** and/or **82Z**)

**TQ83:** dykes east of Friezingham (tetrad **TQ83Q**)

**TQ92:** east of Appledore in 1946 (tetrad **TQ92U**)

**TQ93:** ditch by Royal Military Canal, Kenardington (tetrads **TQ93Q** and/or **93V**) [E.S.]

**TR01:** Long Lake, Dungeness in 1950 (**TR0818**) [MNE]

**TR02:** west of Dymchurch (tetrad **TR02Z**); and 2) disused swimming pool, St Mary's Bay (tetrad **TR02Y?**)

**TR03 :** Orgarswick in 1946 (tetrad **TR03V?**); dyke south of Aldington Knowle in 1958 (tetrad **TR03S**) [MNE]; and Royal Military Canal at Ham Street (tetrad **TR03B**) [Clive A. Stace]

**TR13 :** dyke, Palmarsh (tetrad **TR13G**) [L.J. Margetts]; and Royal Military Canal west of Hythe in 1935 (tetrad **TR13M**) [MNE].

**C. submersum** L. Soft Hornwort. N

## Localised records for district 15:

Often filling the dykes where the water is periodically brackish:

**TQ83:** ditches by the Windmill Channel east of Rolvenden in 1959 (tetrad **TQ83Q**) [MNE]

**TQ92:** dykes east of Appledore in 1946 and 1954 (tetrad **TQ92U**) [MNE]; Snargate in 1939 (tetrad **TQ92Z**) [E.C.W. in B.E.C. Report 1939-1940 p. 294]; commonly fruiting in dyke at Fairfield in 1954 (tetrad **TQ92T**) [J.P.M. Brenan – K]

**TQ93:** Dyke by lane 1 mile south-east of Kenardington Bridge in 1959 (tetrad **TQ93V**) [MNE]

**TR01:** Dungeness, Hoppen Pits and gravel pits in 1946 (tetrad **TR01U** etc)

**TR02:** Ditch west of New Romney in 1945 and 1950 (tetrad **TR02M?**); ditch north of Ivychurch (**TR031281**); and moat north of Old Romney (**TR033254**)

**TR03:** Dykes south of Aldington Knowle in 1958 (tetrad **TR03S**) [MNE]; and 2) Orgarswick (tetrad **TR03V?**).

## RANUNCULACEAE

**Caltha** L.

**C. palustris** L. Marsh-marigold. N. [no surviving account]

**Helleborus** L.

**H. foetidus** L. Stinking Hellebore. N. [no surviving account]

**H. viridis** L. ssp. **occidentalis** (Reuter) Schiffner Green Hellebore. N. [no surviving account]

**Eranthis** Salisb.

†**E. hyemalis** (L.) Salisb. Winter Aconite. H. [no surviving account]

**Aconitum** L.

**A. napellus** L. († in Kent). Monk's-hood. H. [no surviving account]

**Consolida** (DC.) Gray

**C. ajacis** (L.) Schur Colonist formerly, now †. Larkspur. C. [no surviving account]

**Anemone** L.

**A. nemorosa** L. Wood Anemone. N. [no surviving account]

†**A. apennina** L. Blue Anemone. H. [no surviving account]

**Clematis** L.

**C. vitalba** L. Traveller's -joy. N. [no surviving account]

† **C. flammula** L. Virgin's-bower. H. [no surviving account]

**Ranunculus** L.

**R. acris** L. Meadow Buttercup. N. [no surviving account]

**R. repens** L. Creeping Buttercup. N. [no surviving account]  
**R. bulbosus** L. Bulbous Buttercup. N. [no surviving account]

**R. sardous** Cranz Hairy Buttercup. N

Localised records for district 15: Probably in marshes at Fairfield (**tetrad TQ92T**). Also at the Midrips (**TR0018**) and west of Hythe (**TR03** or **TR13**).

**R. parviflorus** L. Small-flowered Buttercup. N. [no surviving account]

**R. arvensis** L. Corn Buttercup. N. [no surviving account]

**R. auricomus** L. Goldilocks Buttercup. N. [no surviving account]

**R. sceleratus** L. Celery-leaved Buttercup. N.

Localised records for district 15: Surprisingly infrequent and only listed for Appledore, by the canal (tetrad **TQ92P?**); Shirley Moor (**TQ93**); Sandhurst Levels (**TQ82**); Small Hythe (tetrad **TQ82Z**); and west of Hythe (**TR03** or **TR13**).

**R. lingua** L. Greater Spearwort. N (& H).

Localised records for district 15: in all the Hoppen Pits (**TR0718**) and natural fens of Denge Beach, locally abundant in 1962 (!) and previously noted in 1956. Also in shingle workings near the Old School, Dungeness in 1961 (**TR01**).

**R. flammula** L. Lesser Spearwort. N.

Localised records for district 15: surprisingly very rare, [though Francis Rose stated the account was incomplete] - mainly off the Romney and Walland Marshes proper, at Hexden Channel in 1954 (**TQ82**); ditches southeast of Rolvenden (tetrad **TQ83Q**); and shingle pits near Old School, Dungeness (**TR01**).

**R. ficaria** L. Lesser Celandine. N. [no surviving account].

**R. ficaria** L. ssp. **ficaria** N. [no surviving account]

**R. ficaria** L. ssp. **bulbifer** Lambinon N [no surviving account]

**R. hederaceus** L. Ivy-leaved Crowfoot. N [no surviving account]

Localised records for district 15: Royal Military Canal at Appledore (tetrad **TQ92P?**) [R.G.W. – recent]; Ham Street (*off Romney Marsh?*) [E.S. Marshall]

**R. omiophyllus** Ten. Round-leaved Crowfoot. N. [no surviving account]

**R. tripartitus** DC. Three-lobed Crowfoot. N. [no surviving account]

**R. baudotii** Godron Brackish Water-crowfoot. N.

Locally common in district 15:

**TQ92:** Appledore in 1947 (!) [E.S. Marshall]

**TR01:** Dungeness in 1947 (!) [det. R.W. Butcher – MNE]

**TR02:** Pit on Romney Warren in 1947 (!) (**TR0826**) [W.J.L.S.]. Dymchurch in 1947 (!) [F.J. Hanbury]. Northwest of Greatstone in 1950 (tetrad **TR02R**) [F.R. det. R.W. Butcher – MNE]. South of Littlestone in old estuary in 1946 (tetrads **TR02S** and/or **02X**) [F.R. det. R.W. Butcher – MNE]. Ditches near Lydd in 1891 [E.S. Marshall – det. as var. *marinus* by H. & J. Groves – BM]. Ditches near Lydd in 1901 [C.E.G.; det. H. & J. Groves as “*godronii*” and by W.H. Pearsall as “*radians* var. *godronii*”, though only *baudotii* fide F.R. (!) SLB]

**TR03:** South of Bilsington (tetrad **TR03L?**); and Newchurch (**TR0531?**)

**TR13:** Royal Military Canal west of Hythe in 1880 (tetrad **TR13M?**) [A. Bennett – BM]; and Palmarsh pits in 1956 (tetrad **TR13G**) [L.J. Margetts det. R.W. Butcher as forma *marinus*].

**R. trichophyllus** Chaix Thread-leaved Water-crowfoot. N.

Unlocalised record for TR03; otherwise, localised records for district 15: at:

**TQ82:** Small Hythe (**TQ894298**) [David McClintock]

**TQ92:** west of Appledore in 1949 (tetrads **TQ92J** and/or **92P**) [P.R.B. and F.R. det. R.W. Butcher – MNE]

**TR01:** Dungeness

**TR02:** in ditches northeast of New Romney in 1946 [det. R.W. Butcher – MNE]; ditches at Brenzett in 1945 (TR02D) [F.R.]; gravel pits on Romney Warren in 1959 (TR02S); dyke at St Mary's in 1946 (D.H. Kent); and ponds south of Ivychurch (tetrad TR02I)

**TR13:** Dyke south of Lympne (tetrads TR13B and/or 13G)  
Subsp. *drouetii* recorded: gravel pits on Romney Warren in 1945 (TR02S); and ditch near Selby Farm, south of Lympne (TR1033).

**R. aquatilis** L. Common Water-crowfoot. N.

Localised records for district 15: fairly common, with sites at Northeast of Romney (TR02) [Flora of Kent (1899); R.G.W. in ca 1950]; east of Hythe (TR13) [Flora of Kent (1899)]; west of Hythe in 1958 (TR03 or 13) [MNE]; north-east of Brenzett in 1958 (tetrads TR02D and/or 02E); west of Old Romney (tetrad TR02H); northeast of Old Romney (tetrad TR02H); Ham Street (TR03B) [C.N.P.]; and east of Appledore station in 1956 (tetrads TQ92U and/or 92Z).

**R. peltatus** Shrank Pond Water-crowfoot. N. [no surviving account]

**R. pencillatus** (Dumort.) Bab. ssp. **pseudofluitans** (Syme) S. Webster Stream Water-crowfoot. N.  
[no surviving account]

**R. fluitans** Lam. River Water-crowfoot. N. – to refind in Medway. [no surviving account]

**R. circinatus** Sibth. Fan-leaved Water-crowfoot. N.

Localised records for district 15: locally frequent:

**TQ82:** Sandhurst Levels in 1954 [det. R.W. Butcher – MNE]

**TQ92:** 1 mile east of Appledore in 1954 (!) (tetrad TQ92U) [Flora of Kent (1899)]; and northwest of Fairfield (tetrad TQ92T?)

**TQ93:** Shirley Moor

**TR01:** Hoppen Pits, Denge Beach (tetrad TR01U)

**TR13:** South of Lympne in 1958 (tetrads TR13B and/or 13G) [det. R.W. Butcher – MNE].

**Adonis** L.

**A. annua** L. Pheasant's-eye. 15, 16 5/52 C.

Colonist. Cornfields and waste ground, mainly on chalk soils; formerly common in 6), and frequent in 1), 5), 7) and 8); recorded also for 2), 3), 4), 9) 10) and 11). Now very rare and confined to a few localities in 2), 5), 6) and 8). It is pointless to cite the many old records in detail: only recent ones are quoted.

2) Stone Marshes, 1957, H.M.P. Murton Fm., Graveney, 1950, R. Theobald & R.E.W. Warden Point, 1951, Mrs. Bryson.

5) Chelsfield, G. Spooner. 6) S.W. of Cobham, 1946, J.T. Dodd. S.E. of Cobham, H.M.P. Mounts Road, Greenhithe, 1954, MNE. Cornfield nr. Darenth Wood, 1951, H.M.P. Fawkham, 1953, Mrs. D. Woods.

8) St Margaret's Bay, Radar Station, E.S. N. of Charlton Wood, Bishopsbourne, 1942, B.J.B. & F.R. Kingston, 1950, L.W.W.

**Myosurus** L.

**M. minimus** L. Mousetail. 15, [16] 1/52 N, C

Native. Damp arable fields, mostly on sandy soils, and damp sandy or loamy banks near the sea: formerly widespread and locally frequent along the north Kent coastal plain, and recorded for numerous localities in 1)-4), 7)-9), 11)-13) and 16); now extremely rare and only recently recorded in 3) and 4). Similarly rare and decreasing in Surrey, Sussex and Pas de Calais, but still known at a number of places near or along the coast in Essex. \*1670; Deptford to Eltham, Ray, *Cat. Angl.*, p. 210.

Recent records:

3) Sandy arable field, Highams Farm, Fordwich, 1950, R.E. Wood; 1951! MNE.

4) Deep sandy hollow of dunes near Downs Farm, Sandwich, 1960, Mrs. E. Carlton; not refound in spite of several searches and subject to some slight doubt in the absence of a specimen.

(12) Reported about 1954 by a farm worker at Sellindge to Prof. H. Miles of Wye College, but unconfirmed.)

**Aquilegia** L.

**A. vulgaris** L. Columbine. N, H. [no surviving account]

**Thalictrum** L.

**T. flavum** L. Common Meadow-rue. N. [no surviving account]



**T. minus** L. Lesser Meadow-rue. H. [no surviving account]

#### BERBERIDACEAE

##### **Berberis** L.

- †**B. vulgaris** L. Barberry. D. N? [no surviving account]  
 †**B. darwinii** Hook. Darwin's Barberry. H. [no surviving account]  
 †**B. x stenophylla** Lindley Hedge Barberry. H. [no surviving account]

##### **Mahonia** Nutt.

- †**M. aquifolium** (Pursh) Nutt. Oregon Grape. H. [no surviving account]

#### PAPAVERACEAE

##### **Papaver** L.

- P. orientale** L. Oriental Poppy. H. [no surviving account]  
 †**P. atlanticum** (Ball) Cosson Atlas Poppy. H. [no surviving account]  
 †**P. somniferum** L. ssp. **somniferum** Opium Poppy. H. [no surviving account]  
**P. rhoeas** L. Common Poppy. N or C. [no surviving account]  
**P. dubium** L. ssp. **dubium** Long-headed Poppy. N or C. [no surviving account]  
**P. dubium** L. ssp. **lecoqii** (Lamotte) Syme C. [no surviving account]

##### **P. hybridum** L. Rough Poppy. C.

Colonist. Cornfields and waste ground on chalk: not uncommon in parts of 6), 7) and 8), rare in 5) and 9), a very rare casual in 4) and 11). Local on chalk in Surrey and Sussex, rare in Essex, local in Pas de Calais. \*1597: Southfleet, J. Gerard, *Herbal*, p.300.

- 4) Sandwich Bay, Miss J. Moore. 5) [Nr. Swanley, 1877, J. Groves (BM).] Chalky track N. of Franks, Horton Kirby, PCH. W. of Sutton-at-Hone, WCRW.
- 6) Frequent in the N. part: 11 localities recorded from Darenth to Snodland.
- 7) Wouldham: Burham: Bluebell Hill: Borstal: Boxley Warren: Hollingbourne: Westwell.
- 8) 19 localities from Chartham and Bridge to Mongeham and St. Margarets, but not in the S.W. half of district.
- 9) W. of Cleve Court, Minster, 1963. Northdown, L.W.W. [old records at Ramsgate and Margate].
- [11) Hadlow, 1877, W.E. Shrivell (TLS).]

##### **P. argemone** L.<sup>46</sup> Prickly Poppy. C.

Colonist. Arable land and waste ground on chalky and sandy soils: widely but thinly distributed and rather uncommon.

Locally common in Sussex and Essex, rather common in Surrey and Pas-de-Calais. \*1597: Southfleet, J. Gerard, *Herbal*, p.300.

- 1) Eltham: Orpington, W.C.R.W.
- 2) Faversham.
- 4) Sandwich Bay: N. of Deal.
- 6) 11 localities.
- 7) Wouldham: Borstal, H.A.S.: Chatham, B. Carter: Westwell, E.S.
- 8) 8 localities, all in E. half of district.
- 9) Westgate: Birchington, L.W.W.
- 11) Wrotham Heath: Ryarsh Sandpits: Allington: Beasted: Hollingbourne: Betersden, C.N.P.
- 12) Hothfield, C.N.P.: Potters Corner, C.N.P.: Sturry, Mrs. J.O.
- 14) Tenterden Station: Dungeness, near Lighthouse, Mrs. B.D.

##### **Meconopsis** Viguiier

- †**M. cambrica** (L.) Viguiier Welsh Poppy. H. [no surviving account]

##### **Glaucium** Miller

<sup>46</sup> This account is taken from a typed copy, probably made in the 1980s and extending to no more than this.

**G. flavum** Crantz Yellow Horned-poppy. N [no surviving account]

[The checklist continues through FUMARIACEAE, PLANTANACEAE, ULMACEAE, MORACEAE to CANNABINACEAE, which includes:]

**Humulus** L.

**H. lupulus** L. Hop. N

Probably absent as a native and very rare as an introduction. In district 15: in a hedge at Maytham Wharf in 1958 (TQ867277)

[The checklist continues through URTICACEAE, JUGLANDACEAE, MYRICACEAE, FAGACEAE to BETULACEAE, which includes:]

**Alnus** Miller

**A. glutinosa** (L.) Gaertner Alder. N

Localised records for district 15: Very rare, if not gone, from the Romney and Walland Marshes. Recorded for Shirley Moor in 1955 (TQ940320).

[The checklist continues through the rest of BETULACEAE, PHYTOLACCACEAE, AIZOCEAE, CHENOPODIACEAE as far as:]

**Chenopodium** L.

....

**C. rubrum** L. Red Goosefoot N

Localised records for district 15:

**TQ92:** on border of Royal Military Canal, ½ mile south of Appledore in 1959 (tetrad TQ92P); and by saline dyke at Fairfield in 1962 (tetrad TQ92T) [Mrs Rowlands].

**TR02:** Littlestone promenade in 1946 (tetrad TR02X) [MNE].

**C. chenopodioides** (L.) Aellen Saltmarsh Goosefoot N.

[In manuscript given as:]

**Chenopodium botryodes** Sm. 15, 16. 10/51

Native. On mud, in brackish marshes and in dikes: rare, but locally very common in 2) in the Lower Thames estuary and the marshes adjoining the Swale E. to Graveney; rare in 4) and 15). This plant is characteristic of drying brackish mud, exposed in late summer by the fall of water level in dikes of the alluvial marshes, and in natural brackish marshes. In wet summers often few individuals can be found, as the seeds do not appear to germinate unless the mud is exposed to the air: in dry summers, the crimson-red fruits may colour the exposed mud over wide stretches.

1<sup>st</sup> record, 1864: Gravesend, Syme, *J. Bot.* p.253.

- 2) [Gravesend, Syme] (67 Denton Marshes, abundant, 1949!) 67 Shorne Marshes A.H.W.D. (1944 MNE! 1945!). 77 Higham: and 77 Cliffe Marshes A.H.W.D. (abundant 1945-1955! MNE). 77 Egypt Bay, N. of High Halstow 1950, MNE. 87 St May Hoo, 1952-61. 87 Grain Creek abundant, 1948 MNE. 87 Wallsend. 87 Grain Crossing, 1945 MNE. 87 Stoke Junction. 87 Port Victoria A.H.W.D. 96 Isle of Elmley, abundant all along coast, 1950-54 MNE: 96/97 Minster Marshes (Smith) MNE. 06 Isle of Harty, abundant E. of ferry, 1946: 06 Shellness. 06 Capel fleet N. of Harty 1959 MNE. 07 Muddy pond, Warden Point, 1949. 96 E. of Conyers Creek, 1956, R.W. Butcher & F.R. MNE. Graveney Marshes, 1949, J. Libbey. 06 Ditch near Oare Creek, 1962, H.M.W. 87 North Chetney Marshes, 1961, E.G.P., L.G.M. S. Chetney Marshes (87, 86) 1962, v[ery] a[bandant] in fleets, 86.

- 4) [Pegwell Bay, H.C. Watson; Stonar, Syme.] 26 Brackish dike N. of Shuart, St. Nicholas, 1962.

- 15) 02 Brackish marsh S. of Littlestone, 1950 MNE (site of the old Rother estuary). 92 Brackish meadows by Fairfield Church, 1962, Mrs K.D.R[owlands]. (sp!).

This species is probably far commoner in N. Kent than elsewhere in Britain, though further search in S. Essex may reveal that it is equally common there; I have seen it myself in Essex at Leigh marshes; and at Stansgate Abbey, E. of Maldon. It also occurs, very rarely, in E. Sussex (Rye Harbour), W. Sussex (Clymping!); on the S. Hampshire marshes; and near Yarmouth in E. Suffolk. In N. France I have observed it in brackish "pans" near the mouth of the Somme.

Seed identified as that of this species was found, together with that of *Atriplex littoralis* and fruit of *Ceratophyllum submersum*, in a Roman occupation site at Finsbury Circus, London; Reid, 1921 (Godwin, p.169):

this suggests that it may have extended up the Thames in tidal marshes as far as London in Roman times, though the seeds may of course have been introduced from down stream.

....

**C. vulvaria** L. Stinking Goosefoot. N

Native on dunes and beaches on the coast: alien in cultivated fields and waste ground inland....[*The MS included reference to:*] Woolwich Common St.J.M....Old shingle, Willow Tree Farm, Burmarsh Road, Hythe. LJM....Near Boathouse Cafe Seabrook. Mis V. Day....Dungeness CN-P...New Romney JSM]<sup>47</sup>

[*The checklist continues through CHENOPODIACEAE, to:*]

**Salicornia** L.

....

**S. ramosissima** J. Woods Purple Glasswort N

Localised records for district 15:

**TQ92:** Fairfield saline meadows by church in 1962 (**TQ968264**) [Mrs K.D. Rowlands]

**TR01:** Midrips in 1946 (**TR0018**) [MNE]; Wicks (tetrad **TR01E**)

**TR02:** Old Rother estuary between Littlestone and Greatstone in 1950 (tetrad **TR02W**).

**S. nitens** P. Ball & Tutin (= **S. emerici** Duval-Jouve) Shiny Glasswort N

Localised records for district 15: **TQ92:** Fairfield saline meadows by church in 1962 (**TQ968264**) [Mrs K.D. Rowlands det. T.G. Tutin].

....

**Suaeda** Forsskå ex Gmelin

....

**S. maritima** (L.) Dumort. Annual Sea-blite. N

Localised records for district 15:

**TQ92:** Fairfield saline meadows by church in 1962 (tetrad **TQ92T**) [Mrs K.D. Rowlands]

**TR01:** Midrips (**TR0018**); Wicks (tetrad **TR01E**); South Brooks (tetrads **TR01I** and/or **01J**)

**TR02:** Dymchurch, south of village between main road and sea wall (**TR0928**)

**TR13:** north of village by sluice, Dymchurch (**TR127319?**); Seabrook (tetrads **TR13S** and/or **13X**).

[*The checklist continues through the rest of CHENOPODIACEAE, AMARANTHACEAE, PORTULACACEAE, to:*]

CARYOPHYLLACEA

[*genera and species continue to:*]

**Holosteum** L.

[**H. umbellatum** L. (walls of St. Mary's Barracks, Chatham, & casemates of St. Mary's Barracks years ago.). (J. Hepworth, Rochester & District Sketch Guide, 1913)]. Jagged Chickweed

....

**Lychnis** L.

†**L. coronaria** (L.) Murray Rose Campion H [no surviving account]

**L. flos-cuculi** L. Ragged Robin N

Localised records for district 15: Hoppen Pits, Dungeness in 1946 (**TR0718**) [MNE] – also present at Dungeness in 1955. Also recorded for the Sandhurst Levels (**TQ82**).

**Silene** L.

**S. italica** (L.) Pers. (Introduced originally?). Italian Catchfly. ?N or H

[*The MS included reference to:* ....Roadside, Dartford to Green Street Green [J.S. Mill 1863]...Abundant on banks of Mounts Road [Greenhithe], and on adjacent quarry cliffs [F.R. 1945-54]....]<sup>48</sup>

<sup>47</sup> Taken from Rosemary FitzGerald's notes of the species account.

<sup>48</sup> As above.

**Silene nutans** L.<sup>49</sup>

This species has been the subject of immense confusion in the past, both with *Silene italica* Pers. and *S. paradoxa* L., and also with regard to its own (actually very distinct) varieties. Much of this confusion was sorted out by F.N. Hepper in 1951 (The variations of *Silene nutans* L. in Great Britain, *Watsonia*, II, pt. II, 1951, pp. 80-91) but experimental work is still needed. Only the main conclusions, as they affect Kent, are discussed here.

It appears that there are two very distinct taxa in Kent (and in Britain); Heppner gives these varietal status, but these taxa could, in my opinion, equally well be regarded as sub-species or even as species, by analogy with other groups of plants. I have tested plants from Kent populations of the two taxa in cultivation, and they maintain their distinctness.

The two varieties, with their main distinguishing characters, the 1<sup>st</sup> records and distributions in Kent are given below.

**Silene nutans** L. var. **salmoniana** F.N. Hepper 15

Plant slender, radical leaves narrow-lanceolate, acute, attenuated gradually into the petiole, shortly pubescent to very glandular. Capsule 11-14 mm long, carpophores 3-4 mm long, flowers cream or rose-pink.

Synonyms: **S. dubia** Herbich sec. Salmon (1905, J. Bot. Vol. 43: 1918, J. Bot. Vol. 56) non Herbich.

**S. nutans** L. sec. Moss, non L. in sensu strict.

**S. nutans** L. var. *vulgaris* Moss (1920, Cambridge Brit. Flora).

Native. Shingle beaches and sandy cliffs.

First recognised as a distinct plant by E.S. Marshall, who collected it at Dungeness beach in 1890; it was however recorded wrongly as **S. italica** Pers. in Fl. Kent, 1899. On chalk downs in Sussex, and in a gravel pit in Surrey.

12) Roadside of A20, E. of Willesborough, C.N.P.

15) Dungeness beach, from near Greatstone and just west of the lighthouse inland to Boulderwall and S. of Lydd: not on the newest shingle where there is no turf or soil. It is very abundant over several square miles, associated with *Teucrium scorodonia*, *Jasione*, *Festuca ovina* ssp. *tenuifolia*, *Sedum anglicum*, *Dicranum scoparium* and *Cladonia* spp. There are several gatherings from here in BM and in MNE.

13) Hythe shingle beach, 1895, Dickinson: J. Walton, old shingle, Willow Tree Farm, Burmarsh Road, Hythe, LJM 1957.

16) Abundant on cliffs of Folkestone Sand, Shorncliffe, 1955. [Sandgate castle, Dillwyn, Fl. Brit. (probably this)]

This is common in stony hollows of sand-dunes in the Pas-de-Calais and at Harelolot, and on the Belgian coast: I have seen very similar plants on gravelly glacial rubble by a stream in Klein Walsertal, Allgauer Alps, Austria.

**Silene nutans** L. var. **smithiana** Moss 15 Dover Catchfly

Plant much stouter and hairier than var. **salmoniana**, radical leaves broader, ovate-lanceolate to elliptical, blunter, more abruptly tapering into the petiole. Capsule 8-10 mm long. Carpophore 2.0-2.5 mm long. Flowers usually pure white.

Synonyms: **Cucubalus viscosus** L. sec. Huds. excl. diag. et syn.

**Silene paradoxa** L. sec. Smith, non L.

**S. nutans** L. sec. Salmon, in sensu strict, non L.

Native. Chalk sea-cliffs and short turf on their summits, very local. First reported in Kent in 1690 at Dover by Mr. Newton in Ray, Synopsis, ed. 1, p.15, as "Lychnis major noctiflora Dubrensis perennis".

8) Abundant on the chalk cliffs, and on the short turf on top within a few yards of their edges, from Folkestone Warren to Dover West Cliff, and from Dover East Cliff to just S. of Oldstairs Bay, Kingsdown, more or less continuously. Many specimens in BM, K and MNE, from 1828 onwards.

1) naturalised on old wall, Lessness Abbey, 1948, R.A.B.

This plant grows with *Crithmum maritimum* and *Limonium binervosum* on the ledges of the cliff faces, and in turf of *Festuca rubra* and *ovina* or *Brachypodium pinnatum* on the cliff-tops. A plant apparently identical with this (reputably endemic) British variety is abundant on limestone rocks in open woodland at Urach, Swabia Gura, S.W. Germany. Elsewhere in Britain similar plants occur on the chalk cliffs at Beer in Devon,

<sup>49</sup> Given in the checklist as:

**S. nutans** L. ssp. **smithiana** (Moss) Jeanm. & Bocq Nottingham Catchfly. N.

**S. nutans** L. ssp. **salmoniana** Hepper N.

and in Derbyshire, Denbigh, Caernarvon (Great Orme's Head), Dorset, Knaresborough in Yorks, and on the cliffs on the E. Scottish coast.

|  |                        |
|--|------------------------|
| <b>S. vulgaris</b> Garcke ssp. <i>vulgaris</i> Bladder Campion. N                                | [no surviving account] |
| <b>S. uniflora</b> Roth (= <i>S. maritima</i> With) . Sea Campion. N                             | [no surviving account] |
| <b>S. noctiflora</b> L. Night-flowering Catchfly. C  | [no surviving account] |
| <b>S. latifolia</b> Poiret (= <i>S. alba</i> (Miller) E. H. Krause nom. illeg.) White Campion. N | [no surviving account] |
| <b>S. dioica</b> (L.) Clairv. Red Campion. N   | [no surviving account] |
| † <b>S. coeli-rosa</b> Godron Rose-of-Heaven. H  | [no surviving account] |
| <b>S. conica</b> L. Sand Catchfly. N   | [no surviving account] |

#### Saponaria L.

|  |                        |
|--|------------------------|
| † <b>S. officinalis</b> L. Soapwort. D     | [no surviving account] |
| † <b>S. ocymoides</b> L. Roack Soapwort. H | [no surviving account] |

#### Vaccaria Wolf

|  |                        |
|--|------------------------|
| † <b>V. hispanica</b> (Miller) Rauschert Cowherb <sup>50</sup> | [no surviving account] |
|--|------------------------|

#### Petrorhagia (Ser. ex DC.) Link

|  |                        |
|--|------------------------|
| <b>P. nanteuillii</b> (Burnat) P. Ball & Heyw. Childling Pink. (? extinct) N | [no surviving account] |
| † <b>P. saxifraga</b> (L.) Link Tunic-flower                                 | [no surviving account] |

#### Dianthus L.

|  |                        |
|--|------------------------|
| † <b>D. caryophyllus</b> L. Clove Pink. D                  | [no surviving account] |
| † <b>D. plumarius</b> L. Pink.                             | [no surviving account] |
| <b>D. deltooides</b> L. Maiden Pink N (? Now extinct as N) | [no surviving account] |
| † <b>D. barbatus</b> L. Sweet-William H                    | [no surviving account] |

#### **D. armeria** L. 15, 16 Deptford Pink.

Native. Dry banks and fields on sand and gravel, usually in full sun: formerly locally common, now quite rare. 1<sup>st</sup> record, 1629: E. of Gillingham, Johnson, *Iter*, p.5.

1) railway bank (E. side) N. of Orpington Station, R.W. Hale (1944-1949! MNE). [Elmers End, Beckenham, A.G. Davis, 1906 (MNE).] S. facing bank on Thanet Sand, S. side of Farningham Wood, 1948, R.A. Boniface (1949! 1950! 1952 H.M.P.) MNE (1982! 20 plants. On dump of debris from bombed sites, 495652, 12 plants 1964, S. of Crown Wood Chelsfield, C.A. Vick.

2)

3) Near Canterbury, Hb. Harvey. [Near Harbledown Windmill by Pilgrims Way, 1946, Miss L—. Ploughed, 1948.] Fishpool Hill Wood, in open grassy area by track on sand, near Johnson's record of 1632. 1954-1960! MNE.

4)

5)

6) Fawkham, Mrs D.G. Woods. [Coast Guard Stn, Greenhithe, 1862, Hb. Lamb MNE.] {Cobham, Maidstone N.H.S. 1848, MNE, several old localities.] Luddesdown, 678689 S. of Cobhambury Wood by lane, D.V.S. Woods. 598676 Culery Down Broke, near Fawkham Ch., D.V.S. Woods.

7) By Rainham Park Wood in open grassland on sandy loam, 650810, Mrs. V. Bramby 1951; B. Carter, 1952

8) Hedgebank by church, Lower Hardres, F.M. Webb: Miss J. Kisbet, 1939: L.W.W. 1949: 1958! MNE. Also by S.E. corner of Whitehill Wood, → 16/53, 1950, L.W.W.

10) Ightham, F.W.E. Shrivell, 1879 MNE. ?Introduced – Wood in garden, Sevenoaks, F.R. Weley.

11) 683492, on gravel bank by Pond W. of railway, E. of Hale Street, E. Peckham, D.E. Kimming 1954; MNE. Reported at Straight Mile, Leigh, H.S. Vere-Hodge. [Two colonies S. of W. Malling, Gray, now apparently gone.] [Malling Woods, 1837, C.A. Stevens Hb. Coll. Marlb.] Between Bethersden and Great Chart, J.E. Chambers, 1924.

12)

13)

<sup>50</sup> Status not given for this, nor for *P. saxifraga* and *D. plumarius* below.

- 14) Copse S.W. of Susans Hill, N.W. of Woodchurch, 927349 after coppicing, 1955 C. Skinner, 1956 E.S.  
15)  
16) On sandy cliff, W.end of Folkestone Leas, G. Walton: 1947-58! MNE. Roadside, Radnor Cliff head to Rivera, Sandgate, 1958, Miss V. Day.

## POLYGONACEAE

**Persicaria** Miller

....

**P. amphibia** (L.) Gray Amphibious Bistort. N

Localised sites for district 15: in the Royal Military Canal but only west of Hythe (**TQ92, TQ93, TR03, TR13**) and at Dungeness in 1955 (**TR01**). Also off the Romney and Walland Marshes in the Hexden Channel in 1954 (**TQ82**).

....

**P. hydropiper** {L.} Spach Water-pepper N

Localised sites for district 15: in a ditch south of the road at Potman's Heath in 1956 and 1958 (tetrads **TQ82T** or **82S**); by Hexden Channel at Newenden in 1956 (tetrads **TQ82J** or **82P**); and dyke east of Windmill Channel in 1959 (tetrad **TQ83Q?**).

**P. laxiflora** (Weihe) Opiz Tasteless Water-pepper. N

[*In manuscript given as:*]

**Polygonum mite** Schrank

Wet open ground, ditches, ponds, etc.: extremely rare in Kent. 1<sup>st</sup> record,<sup>51</sup>

- 1) [Lewisham, A.A. BM.] Chislehurst Common, F.J.H. Wet path, Pokeridden Wood Orpington, 1954, C. Swain. MNE.
- 2) Near Minster-in-Sheppey F.J.H.
- 11) (Hadlow, Miss Peers "spring field". Is this a reliable record?)
- 13) Marsh below Fishers Castle, Tunbridge Wells, 1 plant, A.C. More. Phytol. N.S. 1. p. 294. Wet ride in Angley Wood, J.P.M. Brenan.

**P. minor** (Hudson) Opiz Small Water-pepper. N

[*In manuscript given as:*]

**Polygonum minus** Huds.

Native. Wet open ground, especially on gravel soils, ditches and ponds: extremely rare.

1<sup>st</sup> record,<sup>52</sup>

- 1) roadside, Blackheath, 1802, M.S. note on drawing for *Engl. Bot.* 1043: Blackheath, Cooper, Fl. Met., p.48. Chislehurst Common, 1946 MNE. 1965.
- 2)
- 10) Seal Chart, Roper, 1874.
- 11) By Medway near Haysden, Tonbridge, G.E. Shaw, 1938 TLS: MNE.
- 12) [Willesborough Leas, rare, 1863, J.S.M.]
- 15) Halfway Bush, Dungeness, in fresh water, 1946. MNE.

[*Genera and species continue through Fagopyrum and Polygonum to:*]

**Fallopia** Adams

[*Various Fallopia species follow, no surviving accounts*]

**F. dumetorum** (L.) Holub Copse-bindweed N

[*In manuscript given as:*]

**Polygonum dumetorum** L. 15, 16 Copse Buckwheat

Native. Dry woods on sand and gravel, particularly in coppice of chestnut, birch, etc. where it may only appear at long intervals of years. Rare. It is an annual: after the coppice is cut, the light appears to stimulate germination, of a fair number of seeds and the plants may appear in abundance from seeds which have lain

<sup>51</sup> Nothing given, but presumably it is the Tunbridge Wells record (1855).

<sup>52</sup> Nothing given: it is presumably the 1802 note cited, although the 1899 Flora of Kent gives Cooper's record (1836).

dormant for 10 years or more. This plant should be checked experimentally: its capacity for delayed germination seems to be remarkable and precise factors causing break of dormancy should be investigated.

1<sup>st</sup> record, 1857, Bysing Wood, Stowell, in Phytol. N.S. II, p.154.

1) Abbey Wood, 1862, Hb. Lamb MNE; 1863, J.S. Mill; 1927, St. J. Marriott, on a "shell bed" in Blackheath Beds; 1948 G.E. Matthews. Behind Woolwich Cemetery, 1894, A.H.W.D.

[3] N. side of Bysing Wood, towards Luddenham vicarage, Stowell, loc. cit. Hedge, E. end of Trenley Park Wood, 1875, F.M. Webb, not refound L.W.W., 1948.

11) Cuckoo Wood, Sandking, near Maidstone, C. West, 1948 (1948!) MNE.

12) Potters Corner Woods, Ashford, W.R. Jeffrey; J.G. Baker; E. Scott; C.N.P. 1950; 1950 et seq. (1952), locally abundant! MNE. 1960 Mrs B. Dodds. Hedge of lane N.E. of Little Chart, Forstal, 957457, E. Scott, 1952.

[Genera and species continue through POLYGONACEAE, to:]

#### Rumex L.

**R. acetosella** L. ssp. **acetosella** (**R. tenuifolius** (Wallr.) A. Löve is scarcely a good species). Sheep's Sorrel N  
[no further surviving account]

....

**R. hydrolapathum** Hudson Water Dock N

Localised sites for district 15: Dyke by the Windmill Channel southwest of Tenterden (tetrad **TQ83Q?**)  
and ca 1 mile east of Appledore in 1954 (tetrad **TQ92U**).

[Genera and species continue through the rest of POLYGONACEAE, to:]

#### PLUMBAGINACEAE

#### Limonium Miller

**L. vulgare** Miller Common Sea-lavender. N [no surviving account]

**L. binervosum** agg. (G.E. Smith) Salmon Rock Sea-lavender. N [no surviving account]

ssp. **binervosum**. (S.E.Kent, Dover Cliffs). N

ssp. **cantianum** Ingrouille (Thanet cliffs & saltmarshes). N

#### Armeria Willd.

**A. maritima** (Miller) Willd. ssp. **maritima** Thrift. N [no surviving account]

[Genera and species continue through ELATINACEAE to CLUSIACEAE as far as:]

**Hypericum maculatum** Crantz ssp. **obtusiusculum** (Tourlet) Hayek N

Localised sites for district 15: grassland on the golf course north of Littlestone in 1950 (**TR0825**).

**H. tetrapterum** Fries Square-stalked St John's-wort N

Localised sites for district 15: Shirley Moor at and south from **TQ940320** in 1954; and stream by bridge, Potman's Heath in 1956 (**TQ872281**).

[Genera and species continue through the rest of CLUSIACEAE to:]

#### TILIACEAE

#### Tilia L.

**T. platyphyllos** Large-leaved Lime (?N)

[In manuscript given as:]

**T. platyphyllos** Scop. 16

Possibly native in one Woodland: extremely rare. The pollen of this species has been found in peat sealing a Mesolithic site at Addington, by J.P.T. Burchell (see Godwin, H. (1957) The History of the British Flora, p.98) and see Burchell & Erdtman (1950) *Nature, Lond.*, **165**, p.411. Indigenous *T. platyphyllos* in Britain. *Tilia* pollen (probably all *T. cordata*) has been found at Halstow (Interglacial), Burchell, 1921 and at Neolithic / Mesolithic levels at Northfleet, Burchell & Pigott, 1939.

1) Chislehurst, Planted GMB

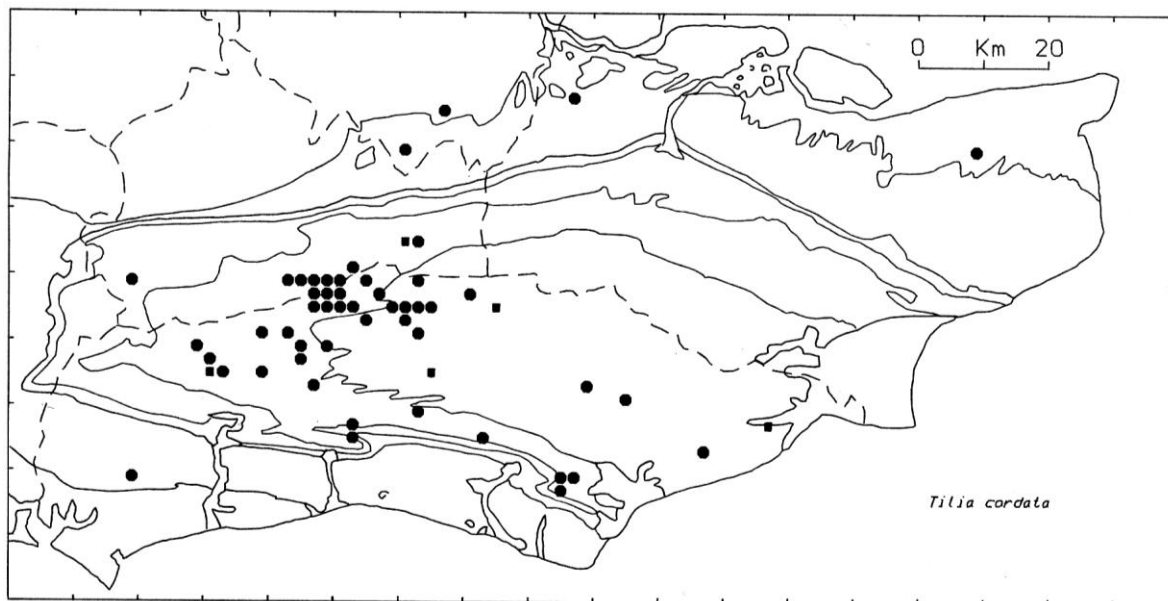
6) Eynsford Village, Planted, GMB

8) Planted, Broome Park, Denton, Miss D.A.C.L., 1960.MNE.

13) W.) About 7 trees, scattered along a stream in a small valley, remote from houses, among native vegetation, Combwell Wood, 1959, MNE, 703337, F. Rose. It is just possible that this is a native relic here; the situation is a very natural-looking wood. 1954, MNE, Goudhurst. Roundabout Woods, Tunbridge Wells, CAS.

†**T. x vulgaris** Hayne (= *T. europea* auct., non L.) **T. platyphyllos x T. cordata**. Common Lime [no surviving account]

**T. cordata** Miller Small-leaved lime. N  
[no surviving account, but map exists]



[Genera and species continue through MALVACEAE as far as:]

#### Althaea L.

**A. officinalis** L. Marsh-mallow N

[In relation to district 15:] Abundant in the Romney Marsh and plentiful in adjacent alluvial marshes. Old records: Appledore in 1871 (**TQ92**) [R. Pryor – MNE; Romney Marsh (**TR02**) [R. Pryor – MNE]; and marsh at New Romney in 1909 (**TR02**) [MNE]

Localised (more recent) records:

**TQ82:** south of Small Hythe (tetrad **TQ82Z**); west of Wittersham (tetrad **TQ82T?**); and south of Wittersham (**TQ82X**)

**TQ92:** west and east of Snargate (tetrad **TQ92Z**); southwest of Appledore (tetrad **TQ92P?**); east of Appledore in 1954 (tetrad **TQ92U**) [MNE]; west of Brenzett in 1945 (tetrad **TQ92Y**) [MNE]; and south of Brookland (tetrad **TQ92X**)

**TQ93:** S. of Kenardington in 1959 (tetrads **TQ93Q** and/or **93V**) [MNE]; and Shirley Moor, both 1 mile east of Reading Street (**TQ9330**) and at **TQ940320** etc.

**TR02:** Ivychurch (tetrad **TR02I** etc); Old Romney in 1959 (tetrad **TR02H**) [MNE]; and southeast of New Romney Church (tetrad **TR02S**) [R.A.C. i.e. Ray Clarke]

**TR03:** south of Ham Street in 1946 (!) (tetrads **TR03A** and/or **TR03B**) [J.S. Mill]; Newchurch (tetrad **TR03F?**); west of Burmarsh (tetrad **TR03V?**); south of Bilsington (tetrads **TR03G** and/or **TR03L**); and south of Aldington (tetrad **TQ03R?**)

**TR13:** dykes near Redoubt, Dymchurch Road, Hythe (tetrad **TR13G**) [L.J. Margetts]; north of Dymchurch (tetrad **TR13A**); south of Lympe (tetrads **TR13B** and/or **13G**); and sea-front at Seabrook in 1944 (tetrads **TR13S** and/or **13X**) [D.H. Kent].

[Genera and species continue through the rest of MALVACEAE, then DROSERACEAE, CISTACEAE, VIOLACEAE, TAMARICACEAE, FRANKENIACEAE, CURCUBITACEAE to SALICACEAE, which includes:]



**Populus L.**

- †**P. alba** L. White Poplar. [no surviving account]  
 prob. † **P. canescens** (Aiton) Smith (**P. alba** x **P. tremula**) Grey Poplar [no surviving account]  
**P. tremula** L. Aspen. [no surviving account]  
**P. nigra** L. ssp. **betulifolia** (Pursh) W. Wettst. (by Hothfield Lake, J.Pitt.). N [no surviving account]  
 †**P. nigra** L. var. **italica** Münchh. (much planted). [no surviving account]

†**Populus x canadensis** Moench (much planted in various forms)

Localised records for district 15: The form "*Serotina*" was recorded: one mile northeast of Ivychurch in 1955 (**TR037285**); and east of Brenzett in 1959 (tetrad **TR02D**).

....

**Salix fragilis** L. Crack-willow N

Generally planted. Localised records for district 15:

In a meadow west of Appledore in 1956 (either tetrads **TQ92P** or **93K**); on Shirley Moor in 1955 (**TQ940320**).

**S. x rubens** Schrank (**S. alba** x **S. fragilis**). Hybrid Crack-willow.

Localised records for district 15:

Royal Military Canal in 1956 [probably southeast of Appledore, tetrad **TQ92P?**].

**S. alba** L. White Willow ?N

Often planted. Present on the Burmarsh road south of Hythe and also south of Ham Street. In Shirley Moor in 1955 (**TQ940320**).

....

**S. cinerea** ssp. **oleifolia** Macreight N

In relation to district 15: Here and there in the district, quite common in central area *e.g.* Selby Farm (**TR1033**). Also on Shirley Moor in 1955 (**TQ940320** etc).

.....

†**S. laurina** Smith (**S. cinerea** x **S. phylicifolia** in Stace); (Philp: "*S. caprea* x *viminalis*"). [no surviving account]

**S. aurita** L. Eared Willow N

On Dungeness (and in the Weald).

[Genera and species continue through the rest of SALICACEAE, and then BRASSICACEAE, which includes:]

**Rorippa** Scop. (incl. **Nasturtium** R. Br.)

**R. nasturtium-aquaticum** (L.) Hayek Water-cress N

Localised records for district 15: ditch ½ mile west of Appledore Station in 1954 and 1959 (tetrad **TQ92U**); Boulderwall (tetrad **TR01U**); and moat north of Old Romney in 1959 (**TR033254**)

**R. x sterilis** Airy Shaw (**R. nasturtium-aquaticum** x **microphylla**) [no surviving account]

**R. microphylla** (Boenn.) N. Hylander ex A. & D. Love Narrow-fruited Water-cress H

Localised records for district 15: ditch at Fairfield (**TQ92T**) [MNE det. F.H. Perring]; and ditch north of Snave (tetrads **TR02E** and/or **TR03A**) [MNE det. F.H. Perring]

....

**R. palustris** (L.) Besser Marsh Yellow-cress N

Localised records for district 15: by B2080 east off Reading Street in 1956 (tetrad **TQ93F?**)

....

**R. amphibia** (L.) Besser Great Yellow-cress N

Localised records for district 15:

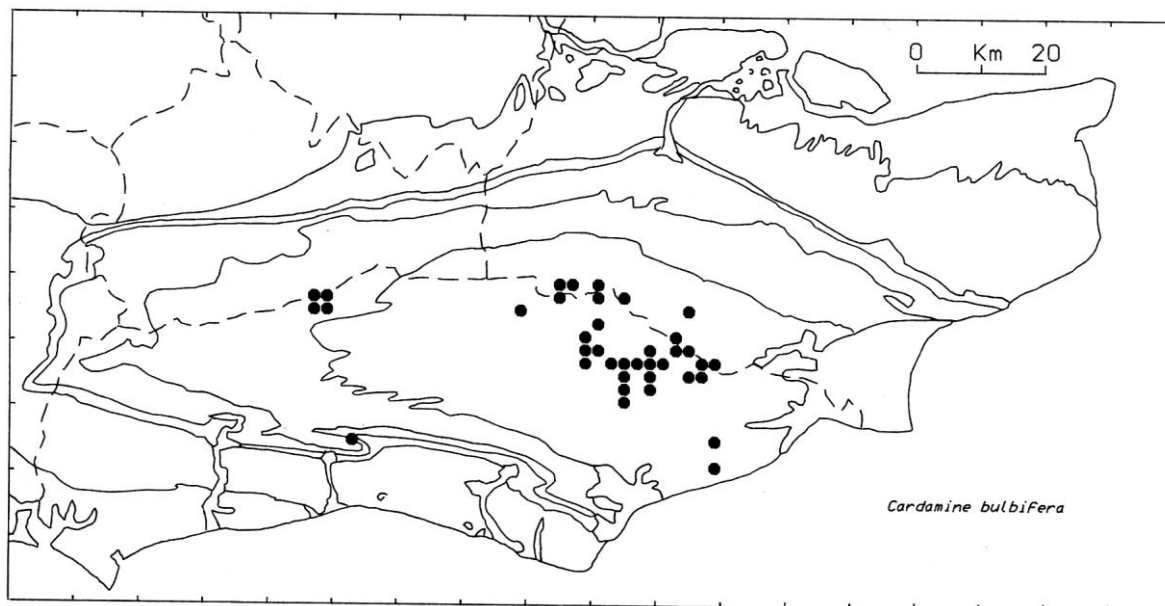
**TQ83:** near Tenterden in 1897 [R.R. Hutchinson – Hb. Croydon N.H.S.]

**TQ93:** ditch bank by B2080, Shirley Moor west of Appledore in 1954 (tetrad **TQ93F**) [E. Scott; also 1957 (!) – both in MNE]; Kenardington Bridge in 1950 (**TQ9731**) (E.S.)

[Genera and species continue through the BRASSICACEAE, to:]

**Cardamine L.**

**C. bulbifera** (L.) Crantz (= **Dentaria bulbifera** L.) Coralroot N [no surviving account, but map exists]



**C. amara** L. Large Bitter-cress N [no surviving account]

**C. pratensis** L. Cuckooflower N

Localised records for district 15:

**TQ82:** Sandhurst Levels

**TQ92:** By road north of Oxney in 1954; and northeast of Old Romney church by dyke 59 (TR0325)

**TQ93:** Shirley Farm, north of by-road 62 (TQ9332)

**TR01:** Halfway Bush (tetrad TR01U)

**TR02:** Dymchurch in 1882 [J.F.D.P.]

[Genera and species continue through the rest of BRASSICACEAE, RESEDACEAE, to ERICACEAE, which includes:]

**Vaccinium L.**

(**V. oxycoccus** L. Extinct, if indeed really found). Cranberry [no surviving account]

[Genera and species continue through the rest of ERICACEAE, then PYROLACEAE, MONOTROPACEAE, PRIMULACEAE as far as:]

**Hottonia L.**

**H. palustris** L. Water-violet N

In relation to district 15: Most common along north side of Marsh. Old record at Dymchurch in 1839

[Herbarium Glennie BRIST]. Localised records:

**TQ82:** abundant in marsh dykes on Sandhurst Levels south of Ethnam in 1954 (TQ811265) [MNE]

**TQ92:** abundant in dykes ½ mile west of Appledore Station in 1959 (TQ969299); and Shirley Moor in 1943 [MNE], also at TQ940320 and to south in 1955 (tetrads TQ93F and/or 93K)

**TQ93:** abundant in dykes between Appledore Station and Kenardington canal bridge in 1959 (TQ972302) [MNE]; and dyke parallel to Royal Military Canal, Kenardington in 1959 (TQ975310)

**TR03:** ditch west of Newchurch in 1954 (tetrad TR03K?); and dyke south of Ham Street canal bridge (tetrads TR03A and/or 03B)

**TR13:** Dyke southeast of Burmarsh in 1957 (TR102318) [L.J. Margetts]

**Cyclamen L.**

†**C. hederifolium** Aiton D. since 1778. Cyclamen H [no surviving account]

**Lysimachia L.**

**L. nemorum** L. Yellow Pimpernel N [no surviving account]

**L. nummularia** L. Creeping Jenny N

In relation to district 15: Recorded from **TQ82, TQ93, TR02, TR03** and **TR13**. Localised records: ditch sides on Shirley Moor in 1943 (**TQ93**); Brenzett (tetrad **TR02D**); ditches, Appledore (tetrad **TQ92U**); dykes at Bonnington (tetrads **TR03L** and/or **03R**), Ruckinge (tetrad **TR03G**) and Ham Street (tetrad **TR03B**); and Small Hythe in 1956 (**TQ888296**).

**L. vulgaris** L. Yellow Loosestrife N

In relation to district 15: Largely unrecorded from the Marsh except: Dungeness fen southeast of Hamilton Farm, in 1952 (**TR01**); and dyke near Galloways, Dungeness in 1953 (tetrad **TR01J**).

Other contemporary records: Shirley Moor at **TQ940320** and to south (tetrads **TQ93F** and/or **93K**) [E.S.]; Royal Military Canal, Kenardington bridge in 1959 (tetrad **TQ93Q**); dyke, Ruckinge (tetrad **TR03G**) ["Mrs M.J. Compn."]; and Small Hythe in 1956 (**TQ888296**)

....

**Anagallis L.**

**A. tenella** (L.) L. Bog Pimpernell N [no surviving account]

**A. arvensis** L. ssp. **arvensis** Scarlet Pimpernell N [no surviving account]

**A. arvensis** ssp. **coerulea** Hartman Blue Pimpernell N

[In manuscript given as:]

**A. arvensis** ssp. **foemina** (Mill.) Schinz & Thell.

This sub-species is frequently confused with the blue variety of ssp. **arvensis**: it has the fruiting pedicels equalling or shorter than leaves (not longer as in ssp. **arvensis**): flowers always blue, up to 12 mm diameter (up to 14 mm in ssp. **arvensis**): narrow-obovate corolla-lobes, which are very sparingly (not densely as in ssp. **arvensis**) fringed with 4-celled glandular hairs (5-celled in ssp. **arvensis**). It is a rare plant of cornfields on the chalk in Kent. Fl. Kent does not distinguish clearly between this ssp. and the blue variety of ssp. **arvensis**.

Authentic records include the following: 3/51.

5) Downe, W.C.R. Watson, Cornfield W. of Salt box, Biggin Hill, 1950, J.D. Lovis. Leaves Green, 1956, Miss C.A. Swain.

6) Cornfields below Great Wood, N.W. of Cuxton, Hb. J.S. Mill: one plant, 1943! MNE ? Cobham, Ridley (probably) the same locality. Darenth Wood, A.A. BM.

7) Cornfield, Westwell: 1 plant, 1947, E.S.

10) Near Ide Hill, J.H. Woodhead. (? correct).

Very rare in Surrey and Sussex; in Essex?; rare on chalk in the Pas de Calais; commoner in Somme.

Reported at 4) W. side golf course, Sandwich Bay, 1955, Mrs. Brickenden: "seed caps. 5-veined".

**A. minima** (L.) E.H. Krause (***Centunculus minimus*** L.). Chaffweed. N [no surviving account]

**Glaux L.**

**G. maritima** L. Sea-milkwort N

In relation to district 15: Romney (**TR02**) and Hythe (**TR13**) with localised records at: Dymchurch, behind sea-wall (tetrad **TR02Z** etc); the Wicks west of Dungeness in 1946 (tetrads **TR01D** and/or **01E**) [MNE]; and 3) brackish meadows by church, Fairfield (tetrad **TQ92T**).

**Samolus L.**

**S. valerandi** L.

Localised records for district 15:

**TQ82**: dykes on levels, Sandhurst in 1954 [MNE]

**TQ92**: dyke east of Appledore in 1945 (tetrad **TQ92U**); and Snargate in 1954 (tetrad **TQ92Z**)

- TQ93:** dykes on Shirley Moor near Farm in 1945 (**TQ9332**)  
**TR01:** old pits near school, Dungeness in 1946  
**TR02:** dyke west of Brenzett in 1945 (**TQ9927** and/or **TR0027**) [MNE]; and Brenzett in 1954  
**TR03:** dyke south of Ruckinge in 1956 (tetrad **TR03G**) [MNE]  
**TR13:** canal southeast of Burmarsh in 1958 (tetrad **TR13A**) [L.J. Margetts].

[Genera and species continue through HYDRANGEACEAE, GROSSULARIACEAE, to CRASSULACEAE:]

**Crassula** L.

[**C. tillaea** Lester-Garl.] Mossy Stonecrop. ext N (Sandwich c.1900) [no surviving account]

....

**Sedum** L.

....

†**S. album** L. (possibly native on shingle & chalk cliffs). White Stonecrop. ?N, C, H [no surviving account]

....

†**S. rosea** (L.) Scop. (Garden relic or escape). Roseroot. H [no surviving account]

[Genera and species continue through CRASSULACEAE to SAXIFRAGACEAE. In this family lies the following species:]

**Chrysosplenium oppositifolium** L. [no surviving account, but it is likely to have included comment on these lines:]

Occurs only in those areas where permanently moist but well-drained stream banks or springs occur, and thus is widespread in the dissected, well watered Hastings Beds country of the Weald. It also occurs elsewhere along the springlines at the junction of pervious and impervious strata. Its distribution map is very complex as a result; besides the dry chalk and sand, both the low-lying Weald Clay and the alluvial marshlands of the coast are avoided, for in both there is a lack of permanently damp, well-drained, shaded habitats.<sup>53</sup>

[Genera and species continue through the rest of SAXIFRAGACEAE, then:]

ROSACEAE

**Sorbaria** (Ser. ex DC.) A. Braun

†**S. tomentosa** (Lindley) Rehder (natd. in N.W. Kent.). Himalayan Sorbaria H [no further surviving account]

†**S. grandiflora** (Sweet) Maxim (natd. in W. Kent.). H [no further surviving account]

**Spiraea** L.

†**S. billardii** Herincq (**S. alba** x **S. douglasii**). (natd. in W. Kent). Billard's Bridewort. H [no further surviving account]

†**S. douglasii** Hook. (natd. in W. Kent.). Steeplebush. H [no further surviving account]

†**S. canescens** D. Don (natd. Longfield). Himalayan Spiraea. H [no further surviving account]

†**S. x arguta** Zabel (natd. Darenth Wood). H [no further surviving account]

**Holodiscus** (K. Koch) Maxim.

†**H. discolor** (Pursh) Maxim. (natd. Wall, Knowle [sic] Park). Ocean-spray. H [no further surviving account]

**Filipendula** Miller

**F. vulgaris** Moench Dropwort N [no surviving account]

**F. ulmaria** (L.) Maxim Meadowsweet N

<sup>53</sup> Rose, F., Distribution maps of Kent Plants (Exhibit), in Lousley, J., ed. (1951) *The Study of the Distribution of British Plants* (1950 conference report), B.S.B.I, Arbroath.

Localised records for district 15: very rare in this district and confined to the edge of the Romney and Walland Marshes e.g. west of Pigeon Hoo Farm, Tenterden [*probably off the levels in TQ9083*]; and by marsh dyke north of Oxney (TQ92).

....

#### Sanguisorba L.

- †**S. canadensis**. (an escape, J. Wallis, 1943.) [no surviving account]  
**S. minor** Scop. ssp. **minor** H&M> Salad Burnet. N [no surviving account]  
 †ssp. **muricata** (Gremli) Briq. (= *Poterium polygonum* Waldst. & Kit.). H&M Fodder Burnet [no surviving account]

#### Acaena Mutis ex L.

- †**A. novae-zelandiae** Kirk (introd. (?with shoddy) natd.). Pirri-pirri-burr.

#### Alchemilla L.

Lady's Mantles.

- [**A. glabra** Neyg. (SW of Snodland, 1947).] [no further surviving account]  
**A. xanthochlora** Rothm. Lyminge Forest, R Gorer. N [no surviving account]  
**A. filicaulis** Buser ssp. **vestita** (Buser) Bradshaw (Cobham Gt. Wd., Oaken Wd. Barming). N [no surviving account]  
 †**A. mollis** (Buser) Rothm. (Garden escape). [no further surviving account]  
**A. cf venosa?** Juz. (Sevenoaks, in garden, natd-1972). [no further surviving account]

....

#### Rosa L.

- †**R. multiflora** Thunb. ex Murray Rare escape (E.P.) Many-flowered Rose. H [no surviving account]  
 †**R. luciae** Franchet & Rochebr. In Stace (1991) (not in E.P.). Memorial Rose. H [no surviving account]

....

- (**R. mollis** Smith – reported by EP (northern species- -not likely to occur). (Culverston - Green - garden escape?) Soft Downy-rose. [no surviving account]

....

- R. agrestis** Savi (H&M - not recently). (Syn. **R. elliptica** auct. non Tausch.), and **R. sepium** Thuill- non L. auct. Needs re-finding. Small-leaved Sweet-briar. (N ? ext.) [no surviving account]

#### Prunus L.

- †**P. persica** (L.) Batsch (planted - rare escape). Peach. H [no surviving account]  
**P. dulcis** (Miller) D.Webb (ditto) Almond. H [no surviving account]  
 †**P. cerasifera** Ehrh. (planted and now well naturalised). Cherry Plum. H [no surviving account]  
**P. spinosa**. Abundant. N. H&M> Blackthorn. N [no surviving account]  
**P. x fruticans** Weihe – (**P. spinosa** x **P. domestica**). Common now.  
 †**P. domestica** L. (old introduction - now common). Wild Plum H [no surviving account]  
**P. avium** (L.) L. Wild Cherry. N [no surviving account]  
 †**P. cerasus** L. Introduced Dwarf Cherry. [no surviving account]  
 †**P. mahaleb** L. (Introduced and well-naturalised esp. by railways; N. France native) St. Lucie Cherry. H [no surviving account]

....

#### Cydonia Miller

- †**C. oblonga** Miller (rare escape, hedges and waste ground E. P.) Quince. H [no surviving account]

#### Chaenomeles Lindley

- †**C. speciosa** (Sweet) Nakai (occasionally naturalised: E.P.) Japanese Quince. H [no surviving account]

....

#### Malus Miller

....

- †**M. purpurea** (Barbier) Rehder (Natd. in W. Kent: garden origin c.1900). Purple Crab. H [no surviving account]

[Genera and species continue through the rest of ROSACEAE, then:]

## CAESALPINIACEAE

## Cassia L.

†**C. occidentalis** L. Oil-seed casual. [no surviving account]

## Cercis L.

†**C. siliquastrum** L. Judas Tree. Waste ground, Hythe. H [no surviving account]

## FABACEAE

## Robinia L.

†**R. pseudoacacia** L. False- acacia. Widely naturalised in woodland, quarries, roadsides etc [no surviving account]

## Phaseolus L.

†**P. vulgaris** L. French Bean. C asual on rubbish tips. [no surviving account]

†**P. coccineus** L. Runner Bean. Casual. [no surviving account]

†**P. lanatus** L. Casual. [no surviving account]

## Vigna Savi

†**V. radiata** (L.) Wilczek Mung-bean. [no surviving account]

## Glycine Willd.

†**G. max** (L.) Merr. Soya-bean Casual [no surviving account]

## Galega L.

†**G. officinalis** L. Goat's-rue. Naturalised on waste ground. [no surviving account]

## Coluta L.

†**C. arborescens** L. Bladder-senna. Naturalised on waste ground. [no surviving account]

†**C. x media** Willd. Orange Bladder-senna. Naturalised on waste ground. [no surviving account]

## Astragalus L.

**A. glycyphyllos** L. Wild Liquorice. N [no surviving account]

## Onobrychis Miller

**O. viciifolia** Scop. Sainfoin. N, also colonist & planted. [no surviving account]

....

## Lotus L.

**L. glaber** Miller (**L. tenuis** Waldst. & Kit. ex Willd.) Narrow-leaved Bird's-foot-trefoil N

Localised records for district 15: alluvial pastures at Brenzett in 1945 (tetrad **TR02D?**) [BM and F.R. in MNE]; and Sandhurst Levels in 1954 (**TQ82**)

**L. corniculatus** L. Common Bird's-foot-trefoil N [no surviving account]

**L. pedunculatus** Cav. (**L. uliginosus** Schk.) Greater Bird's-foot-trefoil N

Localised records for district 15: Shirley Moor south from **TQ940320** in 1954; and Dungeness Marsh in 1956 (**TR01**).

**L. angustissimus** L. Slender Bird's-foot-trefoil N

[The MS included reference to: Stone Marshes [W.Watson]....Isle of Grain [B. Draydon Jackson 1875]..not refound in spite of much search....Trenley Park Wood [Miss E. Day].....]<sup>54</sup>

## Tetragonolobus Scop.

<sup>54</sup> Taken from Rosemary FitzGerald's notes of the species account. Additional square brackets are introduced where the text may not be an exact transcript.

**T. maritimus** (L.) Roth Dragon's-teeth. ?N  
 [The MS included reference to: ....Scrapsgate, Minster [J.E. Nichols, 1965]....Roadside, on waste ground, Minster-Sheerness [Mrs Begg]....Shell ness [A.G. Side]....Abundant on London Clay cliffs W. of Warden Point [F.R. 1947]....]<sup>55</sup>

**Dorycnium** Mller

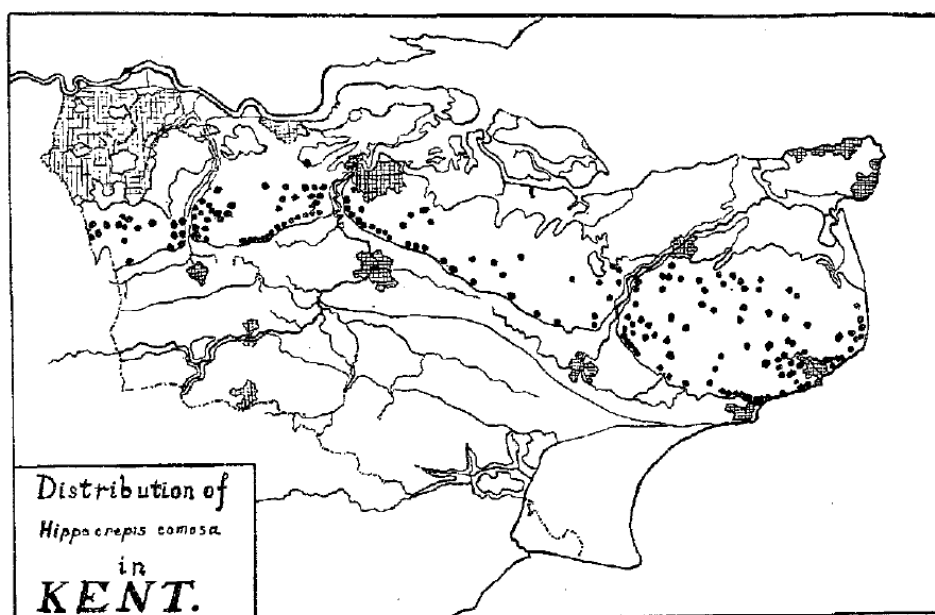
†**D. pentaphyllum** Scop. Naturalised: Warden Point (? now fallen into sea): "road verge, Canterbury": E P.  
 [no further surviving account]

**Ornithopus** L.

†**O. compressus** L. Naturalised on road bank nr. Swanley. (Not in E P. area, but in VC 16). [no further surviving account]

**O. perpusillus** L. Bird's-foot N [no surviving account]

**Hippocrepis comosa** L. Horseshoe Vetch H&M-EP →N [no surviving account, other than map]<sup>56</sup>



**Securigera** DC. (= **Coronilla** L.)

†**S. varia** (L.) Lassen (**C. varia** L.) Crown Vetch. Well naturalised in a few places. H [no further surviving account]

**Scorpiurus** L.

†**S. muricatus** L. Casual: tip and wool alien. [no further surviving account]

**Vicia** L.

....

**V. tenuifolia** Roth Fine-leaved Vetch. Naturalised: VR: [Aylesford], Dover cliffs [no further surviving account]

[the checklist does not include the next species, in Stace edition 2 treated as **Vicia parviflora**:]

**V. tenuissima** (M. Bieb) Schinz & Thell. (*V. gracilis* Lois.) 15, 16 Slender Tare.

Possibly native, more likely alien. Hedgebanks, tracksides, scrub; very rare indeed, and only seen recently in one spot.

1<sup>st</sup> record, 1849; Kent, Mr. Quekett, Eng. Bot. Supp. p.2904.

<sup>55</sup> As above.

<sup>56</sup> Rose, F., Distribution maps of Kent Plants (Exhibit), in Lousley, J., ed. (1951) *The Study of the Distribution of British Plants* (1950 conference report), B.S.B.I, Arbroath.

- 3) Herne Bay, Trimen. Between Whitstable and Canterbury, G.C. Druce (J. Bot. 1888).
- 6) Between Cobham Park and Ifield in a lane (now A.2) Quekett in Hb. Borrer K.
- 13) Formerly abundant at Southborough, W. Fawcett (J. Bot. 1869).
- 16) Folkestone, Miss V.F.P. Day.

[Various *Vicia* species follow, no surviving accounts until:]

†**V. pannonica** Crantz Hungarian Vetch. Naturalised in Dartford: formerly at St.Margaret's at Cliffe.  
[In manuscript given as follows (N.B. this species and *V. lutea* are set out with the latter first, but placing *V. pannonica* first would accord with Stace, 2<sup>nd</sup> edition sequence):]

**Vicia pannonica** Crantz

The following records, made originally for *V. lutea*, probably refer in the main to this species. It is a very hairy, more or less erect, plant, with primrose-yellow flowers. Sepals entire. Flowers 2-4 together (pod + adpressed hairs).

- 1) Alien, Lower Sydenham, 1912, H. & J.G. BM.
- \*2) Horrid Hill, Rainham, W.C.R.W.; 1951-61! MNE. Roch. Nat. 1948 ("*lutea* var. *hirta* det. Kew")
- 4) "Alien", Richborough, L.W.W. Sandwich Bay, 1946, W.J.L.S. ("*V. lutea*")
- 6) Chalk turf, Gravesend, 1962, H.A.S. ("alien form") ("*V. lutea*")
- \*7) Rochester Rd., N. of Maidstone, Mrs H. Brice, 1960 MNE.
- \*8) Abbot's Cliff top, 1953 MNE. Chalk grassland N.E. of St Margarets Bay, J. Caddy [?] etc. det. E. Melderis.
- 9) Cliff top, Pegwell Bay, 1961, Mrs Dodds. ("*V. lutea*")
- 12) "Alien" near Ashford Warren, 1894, E.S.M.
- 13) Old allotments, T. Wells, 1962, Miss M.P. Page. ("*V. lutea*")

|                          |  |              |                  |                        |
|--------------------------|--|--------------|------------------|------------------------|
| <b>V. sativa</b> L.      | ssp. <b>nigra</b> (L.) Ehrh.           | Common Vetch | N                | [no surviving account] |
|                          | ssp. <b>segetalis</b> (Thuill.) Gaudin |              | Well naturalised | [no surviving account] |
|                          | ssp. † <b>sativa</b>                   |              | Casual           | [no surviving account] |
| <b>V. lathyroides</b> L. | Spring Vetch                           | N            |                  | [no surviving account] |
| <b>V. lutea</b> L.       | Yellow-vetch                           | N            |                  |                        |

[In manuscript given as:]

**Vicia lutea** L. 15, 16 Yellow Vetch

Native, on shingle and shell-sand beaches, very rare, though locally common about Dungeness. The native species is an almost glabrous, more or less prostrate plant with linear leaflets and cream-coloured flowers which become pale rose-tinted as they fade.<sup>57</sup>

1<sup>st</sup> record, 1873: Kent east (Dungeness) W.R. Jeffrey, in *Top. Bot.* VC16 – BEC, 1915, p.262.

2) Grain, S. Beach, 1955 (native form) MNE.

15) Dungeness Beach, 1905, E.A. B: 1879, F.J.H. B: J.W. Long [?], 1911 MNE: H. Elgar, 1920 MNE: abundant near Hoppen Pits, Dungeness: J.E.L., 1926: 1946-60! MNE. Abundant, S. Brooks, 1946. Abundant, Midrips, 1946 MNE.

Var. **coerulea** Archang.

15) Lydd, W.H. Kew, *B.E.C. Rep.*, 1924, p.567.

**V. bithynica** (L.) L. Bithynian Vetch N

[In manuscript given as:]

**Vicia bithynica** L. 15 [16] Bithynian Vetch

Native. In grassland or scrub on clay soils, especially near the sea and tidal waters; very rare.

First record, 1835: Frindsbury, Henslow in Hooker & Arnott's British Flora, edn.1, p.324.

1) Woolwich Common, c. 1960, G.M.B.

2) Scrub on London Clay Cliffs near "Royal Oak", East End, Minster in Sheppey, 1946-63 MNE. Shellness Point, Rochester N.H.S. c.1930 (var. *angustifolia*). Grassy scrub, Horrid Hill, Rainham, W. Watson: 1950-52! MNE. Upnor and Frindsbury, Henslow; 1835 Borrer; L. Stevens c.1890 B; Miss Young. Clay Bank by Medway below Cookham Wood, Upnor. Mrs M. Dolling, 1959, 1960! MNE.

[3) Deal, Duthie (var. *angustifolia* Syme)]

<sup>57</sup> The original manuscript account went on to mention a different, alien form; and subsequently records for the latter were transferred to *V. lutea*.



[6] Darent Wood, Berkeley in *Fl. Met. Supp.*] *Greenhithe* Fl. Lond. Area. *Springhead, Northfleet*. Fl. Lond. area.

[8] "Reported at Lydden Spout", Mrs Walton.

16) Lower Sandgate Rd, Folkestone, J.B. Syme, BM; 1864, F.J.H. Ditto, by steps from Lees (sic) to Lower Sandgate Road, 1877, F.J.H. Folkestone, 1885, Hb. E.F. Linton B. Folkestone, H.L., 1863 MNE; Formerly on the Gault Forelands ... *Eastwear Bay*, Folkestone, but not observed since, Miss V.F.P. Day.

†**V. faba** L. BroadBean. Escape from cultivation. [no further surviving account]

†**V. cassubica** L. Formerly naturalised at Greenhithe; now extinct. [no further surviving account]

#### Lens Miller

†**L. culinaris** Medikus Lentil. Casual alien on tips, etc. [no further surviving account]

#### Lathyrus L.

†**L. niger** (L.) Bernh. Black Pea Naturalised on railway banks Tun. Wells (K.E. Bull). [no further surviving account]

....

†**L. tuberosus** L. Tuberous Pea. Naturalised at Sandgate. [no further surviving account]

†**L. grandiflorus** Smith Two-flowered Everlasting-pea Naturalised Trenley Park Wood [no further surviving account]

....

†**L. hirsutus** L. Hairy Vetchling Naturalised, now rare – formerly locally abundant (Kingston)

[In manuscript given as:]

**Lathyrus hirsutus** L. 15, [16]. Hairy Pea

Naturalised alien, but sometimes only casual: hedgebanks, waste ground: very rare, possibly native in Essex.

1<sup>st</sup> record, 1878: Southborough, Fawcett, BM, J. Bot. 1878.

1) Rough field, Bromley, 408675, 1955, D.P.Y.

2) Milner Court Sturry, J.O., 1956.

[6] Cobham; Strood. Miss Stevens; *B.E.C. Rep.* 1925, p.871.]

4) S. of Ebbsfleet, towards Richborough port, on waste ground, 1937, D.McC.; 1939, F. Druce; 1949! FR, L.W.W. plentiful. 1958! MNE. 1962, abundant, R. Gorer & BJB.

Walmer, L.W.W.

8) Roadside, Bonnybush Hill, Kingston, 1939, BJB: abundant 1954 D.A.C.L. Three plants 1956 D.A.C.L. 1957, B.J.B.: 1958, Mrs. Rowlands MNE: 1962! MNE.

N.E. of St Margarets at Cliffe, 1959, R.B. Codd MNE.

13) [Markbeech, 1914, G.F. Talbot, B.

Southborough, in wood by road, 1875, W. Fawcett.]

....

**L. nissolia** L. Grass Vetchling N

Localised records for district 15 [it is generally a plant of North Kent]: dyke near Boulderwall in 1956 (tetrad **TR01U**); and Potman's' Heath in 1958 (tetrad **TQ82U**?).

**L. aphaca** L. 15,16 Yellow Vetchling

Alien<sup>58</sup>, occasionally naturalised on roadsides, banks, pits, and waste ground, mainly on chalk and sand: with a long history in the county, but not of long standing anywhere.

1<sup>st</sup> record. 1632; Faversham to Gravesend, Johnson, *Descriptio*, p.37.

[1] Old records at: S. of Bromley, 1892, Whitwell: near Dartford: Elmers End, H.J. Sutton, 1910 MNE: Beckenham, 1909, E. Marston: Hb. Davis, 1934 MNE. Ruxley pits, 1963.

2) Same: Ringwold: Dover: Chatham: Folkestone (1865, Lady Chandler): Westenhanger.]

3) 1 plant in grassland N.W. of Dunkirk, 1945.

4) Ebbsfleet, Richborough, L.W.W. 1949; 1958, Miss B. Nash, E. of level crossing.

Pegwell Bay, Richborough, L.W.W., R.B.W.

5) Greenhithe; chalkpit E. of Mounts Road, 1950, E.C.W. & R.A.B.

<sup>58</sup> In the checklist it is given as 'Doubtfully native, but established'.

Verge of Wrotham by-pass in chalk turf, 300 yds S.E. of roundabout, 1950-63.

[Copse by Nurstead Church, R. Pocock, BM.]

- 6E) Green Street Green in gravel pit,<sup>59</sup> 1947. H.M. Pratt, roadside, P.C.H. 1954.  
Lane End, on green, P.C.H.
- 8) St. Margarets at Cliffe, on rough chalk grassland by track, R.B. Codd 1958: abundant 1952! MNE.  
Selsted near Hawkinge, Miss E.M. Ratcliffe.
- 12) 1 plant, grounds of Grove House, Sellindge, 1956, Martyn Rix, comm. Miss D.A.C.L.  
 Weed in Canterbury, E. Robinson, 1949.
- 14) Appledore waste ground, D.A.C.L.
- 15) Dungeness, *teste* D.A.C.L.

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#### Ononis L.

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†**O. alopecuroides** L. Casual, on tips, vr (E.P.). [no further surviving account]

#### Melilotus Miller

**M. altissimus** Thuill. Tall Melilot. ? N or C or D [no surviving account]

....

#### Trifolium L.

....

**T. fragiferum** L. Strawberry Clover N

Common in district 15, including heavy clay pastures and roadsides. Localised records for: Romney Marsh Warren (tetrad **TR02S?**); north of Dymchurch and Hythe in 1905 (**TR13**) [S.E.C. *i.e.* S.E. Chandler]; and at Potman's Heath in 1956 (tetrad **TQ82U?**). Non-localised records for hectads: **TQ82, TQ92, TQ93** and **TR01**.

†**T. resupinatum** L. Reversed Clover. Casual – no recent record. [no further surviving account]

†**T. tomentosum** L. Woolly Clover Casual. [no further surviving account]

†**T. aureum** L. Large Clover Casual in crop fields [no further surviving account]

....

**T. stellatum** L. Starry Clover Possible former N. Dartford saltmarsh before 1700 (Hb. Du Bois.)  
 Long extinct in Kent. [no further surviving account]

....

#### Lupinus L.

†**L. arboreus** Sims Tree Lupin. Widely naturalised esp. sandy areas incl. the coast [no surviving account]

†**L. x regalis** Bergmans (**arboreus x polyphyllus**). Russell Lupin. Often planted and escapes on waste ground. [no further surviving account]

†**L. polyphyllus** Lindley Garden Lupin Naturalised on waste ground. [no further surviving account]

#### Laburnum Fabr.

†**L. anagryroides** Medikus Laburnum. Naturalised widely now. [no further surviving account]

#### Cytisus Desf.

**C. nigricans** L. Black Broom. Natd. in old gravel pit, Aylesford, 1970 → [no further surviving account]

**C. scoparius** L. Broom. N [no surviving account]

#### Ceratonia L.

†**C. siliqua** L. Casual on dumps. [no further surviving account]

#### Spartium L.

†**S. junceum** L. Spanish Broom. Naturalised from plantings. [no further surviving account]

#### Genista L.

<sup>59</sup> There is, under 5), a further entry which may be related to this: Lane End (Gravel pit) to Green Street Green 578708, 1956, H.M.P. P.C.H.

**G. monspessulana** (L.) L. Johnson Montpellier Broom. Naturalised at Dartford. [no further surviving account]

....

**G. hispanica** L. Spanish Gorse. Naturalised Darent Wood, E.P. [no further surviving account]

....

#### ELAEAGNACEAE

##### Hippophae L.

**H. rhamnoides** L. Sea-buckthorn. N [no surviving account]

##### Eleagnus L.

†**E. umbellata** Thunb. Eleagnus. Bird-sown alien, and on waste ground. [no further surviving account]

#### HALORAGACEAE

##### Myriophyllum L.

**M. verticillatum** L. Whorled Water-milfoil. N. V. rare now (IH&M - E.P.).

Localised records for district 15: Shirley Moor in 1954 (**TQ93**); Ham Street (**TR03**) [W.R. Jeffrey]; Hythe (**TR13**) [F.J. Hanbury]; and Sandhurst Levels south of Ethnam in 1954 (tetrad **TQ82D**) [MNE].

†**M. aquaticum** (Vell. Conc.) Verdc. Parrot's-feather. Introduced by aquarists to ponds. Not in E.P. 1982. H. [no surviving account beyond these comments in checklist]

**M. spicatum** L. Spiked Water Milfoil. N, freq.

In relation to district 15: Common in the Romney Marsh. Localised records:

**TQ92**: Fairfield in 1952 (tetrad **TQ92T**) [MNE]; roadside dyke east of Appledore (tetrad **TQ92U**) [MNE]; and southwest of Brookland to Sussex boundary in 1954 (tetrads **TQ92R**, **92S** and **92X**)

**TQ93**: The Dowels, south of Kenardington in 1959 (tetrad **TQ93V**) [MNE]; and Shirley Moor

**TR01**: south of Lydd; and dykes south of Boulderwall Farm, Dungeness (tetrad **TR01U**)

**TR02**: Romney Warren (tetrad **TR02S**); and Brenzett (tetrad **TR02D**?)

**TR03**: south of Aldington (tetrad **TQ03R**?); and Ruckinge (tetrad **TR03G**)

**TR13**: dykes south of Lympe in 1958 (tetrads **TR13B** and/or **13G**) [MNE]; Royal Military Canal, Hythe in 1955 (tetrad **TR13M** and/or **13S**) [MNE]; dyke below the Roughs, West Hythe (**TR1333**?) [L.J. Margetts]; Palmarsh gravel pits in 1956 (tetrad **TR13G**) [L.J. Margetts]; and canal at St Mary's Bay (**TR1232**?) [L.J. Margetts].

**M. alterniflorum** DC. Alternate Water-milfoil. N: now v. rare; Ashurst, Braboume. H&M - E.P. [no surviving account]

#### LYTHRACEAE

##### Lythrum L.

**L. salicaria** L. Purple-loosestrife N

In relation to district 15: absent from much of the Romney and Walland Marshes with localised records at marsh ditches, Boulderwall (tetrad **TR01U**?); dykes south of Kenardington 1959 (tetrads **TQ93Q** or **93V**) [MNE]; and on Dungeness, abundant in dykes southeast of Hamilton Farm (tetrad **TR01U**?); and in Oppen Pits (!) (**TR0718**). Off the marsh within this district: marsh dykes southwest of Small Hythe (tetrad **TQ82Z**); Shirley Moor (**TQ940320**) [E.S.]; and ditch by meadow, Hexden Channel, in 1954 (TQ82).

†**L. junceum** Banks & Sol. False Grass-poly. Wool -alien casual, and in gardens. [no further surviving account]

[**L. hyssopifolia** L. Grass-poly. ? N; extinct.] [no surviving account]

[Genera and species continue through the rest of LYTHRACEAE, THYMELACEAE to:]

#### ONOGRACEAE

**Epilobium L.**

Hybrids occur between most of the species in Kent, they are recorded between 1x2; 3 x8, 2x3.

**E. hirsutum L.** Great Willowherb. N

Localised records for district 15: Boulderwall in 1956 (tetrad **TR01U**); Romney Warren by R.H. & D.R. in 1956 (tetrad **TR02S**); Bonnington to Newchurch road in 1958 (tetrad **TR03L?**); road in Hythe hectad (probably near Selby Farm in 1958) (tetrad **TR13B?**); old green lane south of Kenardington (probably ca 1 mile southeast of bridge) in 1959 (tetrad **TQ93V**); dyke northeast of Old Romney church in 1959 (tetrad **TR02H**); and Royal Military Canal south of Appledore in 1959 (tetrad **TQ92P**).

**E. parviflorum** Schreber Hoary Willowherb. N

Localised records for district 15: dyke south of canal bridge, Ruckinge in 1956 (tetrad **TR03G**); New Romney in 1956 (tetrad **TR02S**); Potman's Heath in 1958 (tetrad **TQ82U**); dykes south of Kenardington in 1959 (tetrads **TQ93Q** or **93V**); Windmill Channel (**TQ83**); and dykes to north of moat and also northeast of church, Old Romney (tetrad **TR02H**).

**E. obscurum** Schreber Short-fruited Willowherb. N

Localised records for district 15: by Bonnington to Newchurch road in 1958 (tetrad **TR03L?**).

[Genera and species continue through the rest of *ONOGRACEAE*, then *CORNACEAE* to:]

## SANTALACEAE

**Thesium L.**

**T. humifusum** DC. Bastard-toadflax. N, but apparently recently extinct. [no surviving account]

[Genera and species continue through *VISCAEAE*, *CELASTRACEAE*, *AQUIFOLIACEAE* to:]

## BUXACEAE

**Buxus L.**

**B. sempervirens** L. Box N (and planted, or self-sown) [no surviving account]

## EUPHORBACEAE

....

**Euphorbia L.**

[**E. peplis** L. Purple Spurge. Former native, now extinct] [no surviving account]

**E. platyphyllos** L. Broad-leaved Spurge N or C

[in manuscript, given as:]

**Euphorbia platyphyllos** L. 15, 16 Warty spurge

Native or colonist. Arable land and waste ground, particularly on heavy clay soils; rare but widespread, at least formerly: most modern records are from the eastern Weald. 1<sup>st</sup> record, 1777: Faversham, Jacob, Pl. Fav.

1) [Chislehurst, Woods, B.G. p.347.] [Southborough to Town Court, 1863, J.S.M.]

2) Stone, St. J. Marriott, B.E.C. Rep., 1921, p.397.

Thorn, Faversham, in cornfields, E. Jacob.

6) Northfleet Huds. Fl. Ang., Ed. 2 1778, p.210. S.E. of Dartford R. de C.

7) arable by Hawkins Rough, on clay soil, Chilham, D.H. Kent, 1945.

8) Stowting, G.E. Sm. In F.G.E.K.

11) [N. of Chiddingstone, J.S. Mill MNE.] [Hop garden, Edenbridge, E.S.S.] [Maidstone, Clover fields, W.W.R.] [Staplehurst, E.S.M.] [Frittenden to Headcorn, J.S.M. 1863.]

12) Cornfield on Weald Clay, "Scotts Pond", Stubbs Cross, Kingsnorth, 1955, E. Scott. (1956!) MNE.

Cornfield S.W. of Mersham, near Bliby, 1954, E. Scott.

[Aldington, F.G.E.K.. Brabourne, F.G.E.K.]

13) [Tunbridge Wells, Henslow in Hooker & Arnott, Ed. 7, p.381: W.W.R. TLS. Near High rocks, E. Forster Fl. Tonb.; E. of Rusthall Common, E.J. Fl. T.W.]

14) [Between Cranbrook and Hawkhurst, E.J., Fl. T.W.]

Between High Halden and Woodchurch, B.D.J. (near Susans Hill, Woodchurch, 918342 cornfield, C. Skinner, E. Scott, 1955).

15) Cornfield on alluvium, between B.2082 and Reading Sewer, 1956, Wittersham Parish, G.B., P.C.H. and F.R. MNE.

16) [Cheriton, C.P.S.K.]  
Pas de Calais, very rare.

**E. serrutata** Thuill. Upright Spurge. Established at Pembury 1988, R. Moyse & K. Friend [no further surviving account]

**E. helioscopia** L. Sun Spurge. N or C [no further surviving account]

**E. lathyris** L. Caper Spurge N or H

Almost certainly native in Kent, and in Surrey too. 1<sup>st</sup> record, 1836: abundant near Cobham, Pamplin, *N.B.G.*, p.78. Dry Woods on base-rich soils; very rare but locally abundant; also as a casual escape.

[1) Wood near Bromley, Scargill.] † Green Street Green near Farnborough, 1961, J.R. Palmer.

6) Randall Wood, Shorne, 1836, *N.B.G.*, p.78: Lady E, Bligh; 1947-53, abundant in 2-3 year coppice! MNE. Wood E. of A.227, Nursted, 1956, D. Stephen. [Hedgebank of wood E. of Dartford, C.E. Britton.] (Wall, Vigo Farm, Fairseat, C.A.S.)

7) Boxley Warren, E.M.A., *Phytol. NS. VI* p.188, 1860: in glade of yew wood, abundant 1942-54! MNE.

8) Larkey Valley Wood, Thanington, in coppiced areas on loam over chalk, abundant 1948-9; - Miss M.E.M., 1951: abundant 1953 1954, R.E. Wood; 1956, E. Scott, F.R. MNE.

Casual records at:

2) Faversham, F.G.E.K.

4) Pegwell Bay, D. McC. 1947;

7) Cottage garden, Old Wives Lees, 1945, D.H.K. never cultivated there since 1871.

8) Railway cutting, Godmersham, Mrs. J. R..., 1951.

St Margarets at Cliffe, R.J.H.;

11) Ightham Place, Bailey: roadside S.E. of Cobtree, Sandling, 1943, F.R. Potato field on cleared woodland site, Hurst Wood, Comp Woods, G.H. Norton 1959. Maidstone, 1882, H. Lamb MNE. Pizian Well, Mrs. ...ston, 1951.

[12)] Wood E. of Mental Hospital, Chartham, a few plants. 1955 Mrs B.

13) Monson Road, Tunbridge Wells, K.E.B. 1952.

16) Sandgate, 1854, J.I. Brent, Hb. F.J.H.

....

**E. cyparissias** L. Cypress Spurge N (probably)

[in manuscript given as:]

**Euphorbia cyparissias** L. 15 Cypress spurge

Native, almost certainly, in E. Kent, though possibly not so elsewhere in the British Isles. Rough chalk grassland and scrub, very rare, but known from at least five localities, in four of which it still exists.

1<sup>st</sup> record, as a native, 1876: W. of Dover, E. de Crespigny, in *B.E.C. Rep.*, 1879, p.19.

8) Whinless Down, Elms Vale, Dover (E. de C's locality, below "Biggles Tower") c. 1898, Rev. J.G. Groman: 1925, J.E. Lousley: 1958, Mrs. Rowlands; 1959, abundant in *Brachypodium pinnati* on a S. slope among native plants! MNE.

Down S. of Langdon Barracks, Dover, on the cliff top, 1948-54 MNE. 1960 Mrs B. Dodds.

Barham, 1912, J. Jacob in litt. to F.J.H. in Hb. F.J.H. ?= Chalk scrub near Gravel Castle, Barham, 1942, B.J.B. & F.R. MNE (destroyed since).

Juliberry Downs, Chilham, 1932 E.S.: 1943, D.H.K. 084531 (1945-59!) MNE.

Down N.W. of Down Wood, Chilham, 082527, 1955, E.S. & R.G. Williams (1959!) MNE.

Scrub near Acrise, 1960, R. Gorer.

On Epsom Downs, Surrey, looking native, and less "natural-looking", in Berkshire, Bucks, and Sussex. Not recorded for the Pas de Calais, but widespread in France generally.

[Recorded as an alien at:

1) Crayford Gun Cub, 1955 G.M.B. 47 Elmstead Woods, 1950, Miss A. Mills: 1957! (*L. Nat.* 1956, 12). Laurie Park, Sydenham, 1859, Beisly in *Phyt. N.S. III*, p.336; extinct in 1884, W.W.R. and at

11) Leybourne, H. Lamb, 1898 MNE. Escape, Orchard Trottscliffe, 1946, D. McC. Derelict field, Larkfield, 1962, R.D. English.

T. Pritchard (personal communication) reports that our wild Kent plant is [*manuscript blank*]

[*Genera and species continue through the rest of EUPHORBACEAE to:*]

#### VITACEAE

##### Vitis L.

†**V. vinifera** L. Grape-vine. Naturalised esp. on river banks, etc. H [*no surviving account*]

##### Parthenocissus Planchon

†**P. quinquefolia** (L.) Planchon Virginia-creeper Naturalised on old walls, hedges and tips. H  
[*no further surviving account*]

†**P. inserta** (A Kerner) Fritsch False Virginia-creeper. (As the last). H [*no further surviving account*]

#### LINACEAE

....

##### Radiola Hill

**R. linoides** Roth Allseed N

[*In manuscript given as:*]

**Radiola linoides** Roth 15, 16 Allseed 5/51

Native. Damp open loamy soil in woodland rides, often with *Centunculus*. Almost confined now to the central High Weald of 13) and 14) where it is still locally common: formerly possibly in 16) outside the High Weald, it should occur in the Tonbridge–Penshurst–Cowden and the Hawkhurst–Rolvenden–Tenterden areas. Not infrequent in 12) on the Folkestone Sand and on the Eocene Sand, but only recently seen.

1<sup>st</sup> record: Johnson, *Descriptio*, 1632, p.31, "*Millegrana minima*".

1) [Chislehurst, Gerard em; Ray Syn. To 1930s, W. Watson. Keston, 1836: Cooper Fl. Met. St Pauls Cray Common W.W.R.]

[2] Ore/Luddenham, E. Jacob, 1777: Extinct, if correctly named.]

3) [E. of Canterbury, Johnson, *Descriptio*, 132.]

12) [Hothfield Common, H. Lamb, 1902 MNE: not seen for many years.] [Willesborough Lees: Brabourne Lees C.P.S.K.]

13) W) Pembury Wood, 1952. Combwell Wood, 1943, 1946, 1954 MNE, 1979! Kilndown Wood. Chingley Wood 1949. Bedgebury Wood, abundant in many rides 1944 MNE, 1945 MNE, 1952 MNE. Oaks Wood, Cranbrook, 1944 MNE. Angley Wood, 1946 MNE, 1954 MNE. Brewers Wood 1949. Bayham, Lamberhurst 1945; Sandhurst Wood, 1956 MNE. Dandle Wood, 1946.

E) Sissinghurst Park Wood, 1948 MNE. Roundshill Park Wood 1947. Chittenden Wood 1946 MNE. Copden Wood, E. of Sissinghurst, 1954, MNE.

14) E) Brogues Wood, Biddenden. Wood E. of Clapper Hill, S. of Biddenden.

16) Copse in Sandling Park, E.S.M. Kiln Wood in a ride, 1958! MNE.

[*Genera and species continue with POLYGALACEAE, as far as:*]

##### Polygala L.

**P. austriaca** Crantz Dwarf Milkwort N

[*The MS included reference to:* ....Down E. of Rumsted Court, Hucking....[Magpie Bottom, Shoreham, F.R.] in valley, and by old pit [1946], about 50 plants [1956]....Little Gains..61/127461 {Ray Clarke 1954}....Downs N. of Podlinge Farm, 1948 and later....Whiteacre Farm Waltham, L.W.W....Down by road, N. of Longport Farm [E. Glendenning 1964, F.R. 1981]....Pett Street Down..a few plants [F.R. 1946]....abundant (over 150 plants seen in several years) on strip of E. facing downland W. of Crundale (at Longport)..with a few white flowered plants [F.R. 1950-64]....chalk turf at The Nower, Brasted [Ray Clarke 1954, F.R. 1958 over 100 plants].....]<sup>60</sup>

#### STAPHYLEACEAE

<sup>60</sup> Taken from Rosemary FitzGerald's notes of the species account. Additional square brackets are introduced where the text may not be an exact transcript.

**Staphylea L.**

†**S. pinnata** L. Bladdernut. Naturalised nr. Otford H [no further surviving account]

## HIPPOCASTANACEAE

**Aesculus L.**

†**A. hippocastanum** L. Horse-chestnut. Well-naturalised and self-sown. [no further surviving account]

## ACERACEAE

**Acer L.**

†**A. platanoides** L. Norway Maple Naturalised from seed in woods, etc. H [no further surviving account]

**A. campestre** L. Field Maple. N [no surviving account]

†**A. pseudoplatanus** L. Sycamore. D [no surviving account]

†**A. saccharinum** L. Silver Maple. Planted, but self-sown seedling recorded. H [no further surviving account]

†**A. negundo** L. Ashleaf Maple Naturalised in one place. H [no further surviving account]

[This is as far as the checklist goes. The remaining species accounts are in given in the order in which they appear in *Stace, 2<sup>nd</sup> edition, which was current at the time of the checklist preparation.*]

....

**Hydrocotyle vulgaris** L. Marsh Pennywort

In relation to district 15: Almost always in shingle depressions (**TR01**): Dungeness Marsh (*probably Open Pits*) in 1956 (**TR0718**); and Boulderwall in 1956 (tetrad **TR01U**)

....

**Eryngium campstre** L. Field Eryngo

....very common on sand dunes....west of Calais, and on the chalk inland from Cap Nez Blanc, so probably native in Kent, it is only surprising that it is so rare with us....<sup>61</sup>

....

**Scandix pecten-veneris** L. 15, 16. Shepherd's Needle

Colonist. Arable land and waste open ground, especially on sand and chalk: not very common, but well distributed.

1<sup>st</sup> record, 1629: Gravesend to Rochester, Johnson, *Iter*, p.2.

1) 56 Old Swanley, in fields, 1948.

2) 76 Railway Bank, Cuxton, 1944, 1946. 96 Sandy banks by A.2, S. of Green Street, Teynham. 77 Minster, Sheppey, N.G. Davis, 1917, MNE.

3) 06 094647, etc., cornfields on L.C., E. of Seasalter Church, 1958, H.M.P. Graveney, farm weed, R. Theobald, 1956.

4) Field at Hacklinge, 1946. Field S. of Sandwich, 1948, MNE.

5) 56 Cornfields W. of Shoreham, F.R., 1945. 55 Dunton Green, 1916, Hb. Davis, MNE. 45 Cornfield E. of Westerham Hill, 1958, R.A. Clarke. 46 arable, Leaves Green, 1956, Miss A. Hills.

6) 57 Greenhithe, 1946. 66 605666, Hartley, Mrs Woods. 67 Shingle Well, 1912, C.E.B. BM. 76 Cuxton, 1939, J.B.M. BM.

7) Cornfield, Westwell, E. Scott. Magpie Farm, Bredhurst, 1960 MNE.

8) Coombe Vale, Dover, 1945. Bishopsbourne, 1946 MNE. Bossingham, Miss Milward, 1959. E. of Dover, 1948 MNE. Cornfield, Stelling Minnis, Mrs M.J. Comyn. Sibertswold, Cornfield, D.P.Y.

10) Cornfield, Dunton Green station, P.C.H.

11) 85 Stubble field, Fairbourne Lanr, 1960, Mrs B.Dodds. Field by R. Eden, W. of Penshurst, 1944 MNE. By Medway, Tonbridge, E. of Cannon Bridge, C.A.S. Platt, D. McClintock, 1959 MNE. [Edenbridge 1906 D. Smith MNE] Arable near Marsh Green, Edenbridge 439448, 1958, PCH.

13) Sandy arable land S.W. of Pembury, 1944, J.R.W. & F.R.

†**Myrrhis odorata** (L.) Scop. 16 Alien, very rarely naturalised.

<sup>61</sup> Taken from Rosemary FitzGerald's notes of the species account.

11) By road in Honnors' Nurseries, Allington. Mote Park, L.R.A.G., 1957 MNE.

....

**Sium latifolium** L.

In Kent nearly confined to Romney Marsh and its adjacent alluvial levels where still widespread, frequent and locally very plentiful. Localised records for district 15:

**TQ82:** South of Small Hythe (**TQ894298**); levels south of Wittersham Road Station (**TQ8628**); and on Hexden levels

**TQ83:** Tenterden "Bottoms"

**TQ92:** southwest of Appledore (tetrad **TQ92P**); south of the Stocks, Wittersham (tetrads **TQ92C** and/or **92D**); east of Appledore (tetrad **TQ92U**); and Snargate (tetrad **TQ92Z**)

**TQ93:** abundant on Shirley Moor [MNE]; Reading Street (**TQ9230**); Prebble; south of Kenardington (tetrads **TQ93Q** and/or **93V**); and south of Warehorne (tetrad **TQ93V**)

**TR02:** Hook House, Brenzett (*ca* **TR000282**) [MNE]; south of Ivychurch (tetrad **TR02I**); north of Old Romney (tetrad **TR02H**); 1 mile west of Dymchurch on St Mary's road (**TR0829**); and 1 mile south of Orgarswick (**TR0929**)

**TR03:** plentiful south of Ham Street (tetrad **TR03B** *etc*); south of Ruckinge (tetrad **TR03G**); east of Sherlock's Bridge (tetrad **TR03R**); south of Bonnington (tetrad **TR03M** *etc*); and Bilsington in 1958 [MNE] and southward in 1956 (tetrad **TR03L** *etc*).

**TR13:** Dyke southeast of Burmarsh in 1958 (tetrad **TR13A**) [L.J. Margetts]

**Berula erecta** (Huds.) Coville Lesser Water-parsnip

Localised record for district 15: dyke below The Roughs, west of Hythe in 1958 (**TR1333?**) [L.J. Margetts]

....

**Oenanthe fistulosa** L. Tubular Water-dropwort

In relation to district 15: Brackish, calcareous and weakly acid waters, usually stagnant. Localised records:

**TQ82:** Sandhurst Levels in 1954 [MNE]

**TQ92:** Snargate (tetrad **TQ92Z**); and dykes by road north of Oxney in 1954

**TQ93:** Shirley Moor (**TQ938320**) [E.S.]; south of Kenardington (tetrads **TQ93Q** and/or **93V**); Royal Military Canal; The Dowels, Appledore in 1959 (tetrad **TQ93V**) [MNE]

**TR01:** Dungeness, dyke south of Boulderwall Farm (tetrad **TR01U**); and Galloways Road (**TR040198?**)

**TR02:** Brenzett in 1945 (tetrad **TR02D**) [MNE]; 2) Ivychurch (tetrad **TR02I**); Old Romney (tetrad **TR02H**); and near Romney

**TR03:** south of Ham Street (**TR03B** *etc*); and Ruckinge (tetrad **TR03G**)

**TR13:** Near Selby Farm, south of Lympne in 1958 (**TR1033**) [MNE].

....

**Oenanthe pimpinelloides** L. Corky-fruited Water-dropwort

In relation to district 15: Only on disused damp claypits at Potman's Heath (west end of Isle of Oxney), where abundant in 1955 [P. & J. Hall, G. Brown and F.R. – MNE]; thought destroyed 1961 but still present in 1980.

**Oenanthe lachenalii** C.C. Gmel. Parsley Water-dropwort

In relation to district 15: Locally common in Marsh. Localised records:

**TQ92:** southwest of Appledore in 1955 (tetrad **TQ92P**); and west of Brenzett (**TQ9927**, possibly **TR0027**)

**TQ93:** Shirley Moor in 1954 (**TQ940320**) and in 1955 to south (tetrad **TQ93G** *etc*) [MNE]

**TR01:** Widespread: dykes southwest of Boulderwall Farm, Dungeness (**TR0619**); and South Brooks, south of Lydd (tetrads **TR01I** and/or **01J**)

**TR02:** Ivychurch (tetrad **TR02I**) and much of Romney Marsh area; Snave (**TR0129**); hollows of Romney Warren (tetrad **TR02S**); south of Littlestone in old estuary in 1950 (tetrads **TR02S** and/or **02X**); and hollows of Greatstone dunes in 1947 (tetrad **TR02W?**)

**TR03:** south of Ham Street (tetrad **TR03B** *etc*)

**TR13:** near *Prince of Wales* in hollows of shingle beach west of Hythe in 1947 (**TR142337**) [MNE]; and sandy area behind sea wall 1½ miles northeast of Dymchurch in 1947 (tetrad **TR13A**) [MNE]



**Oenanthe crocata** L. Hemlock Water-dropwort

In relation to district 15: Probably absent from the Levels, though found at Dungeness (TR01) and east of Reading Street in 1956 (tetrad **TQ93F**). Abundant in the Weald.

....

**Oenanthe aquatica** (L.) Poir Fine-leaved Water-dropwort

Common in district 15, notably in Brenzett and Snargate area. Localised records:

**TQ82:** dyke south of Small Hythe in 1952 (**TQ894298**) [D. McClintock]; and Hexden Channel

**TQ92:** Snargate (tetrad **TQ92Z**); Appledore (tetrads **TQ92P** and/or **92U**); and near Snargate (**TQ987295**)

**TQ93:** Shirley Moor (**TQ933322**) [E.S. – MNE]; The Dowels northeast of Appledore in 1959 (tetrads **TQ93Q** and/or **93V**) [MNE]; Royal Military Canal, Kenardington (**TQ980315**); and Appledore Heath (tetrad **TQ93K**)

**TR02:** Brenzett (tetrad **TR02D**); Ivychurch (tetrad **TR02I**); dyke northeast of Old Romney in 1959 (tetrad **TR02H**) [MNE]; and northeast of Ivychurch in 1955 (**TR037285**)

**TR03:** south of Ham Street (tetrad **TR03B** etc); dyke 1 mile south of Bilsington in 1958 (**TR0432**) [MNE]; and Orgars Wick in 1947 (tetrad **TR03V**)

**TR13 :** dyke south of Burmarsh in 1947 (tetrad **TR13A**); ditch near Selby Farm, south of Lympe in 1958 (**TR1033**) [MNE]; and dyke east of Burmarsh in 1948 (tetrads **TR13A** and/or **13B**) [R.M. Payne].

....

**Silaum silaus** (L.) Schinz. & Thell. Pepper-saxifrage

In relation to district 15: Almost absent but with localities: south of Royal Military Canal by lane south of Bilsington in 1956 (tetrads **TR03G** and/or **03L**); and Potman's Heath in 1956 (**TQ82U**).

....

**Bupleurum fruticosum** L. Naturalised alien: very rare †16

6) Railway bank, 570693, N. of Horton Kirby, A. Badell: C.E. Britton, J. Bot. LXXIV (1936), p.355; abundant, 1946 MNE; 1957m P.C.H.: →1962! Many observers.

9) Ramsgate, A.A. BM.

....

**Bupleurum tenuissimum** L. Slender Hare's-ear

In relation to district 15:

Old records: south of Dymchurch in 1863 (tetrad **TR02Z**) [J.S.M. in Cat. Pl. Soc. Kent]; northeast of Romney (**TR02**) and west of Hythe (**TR03/13**) [F.J. Hanbury]

Localised (more recent) records: South Brooks by Saltings in 1947 (tetrads **TR01I** and/or **01J**) [J.H. Lorinder]; and Littlestone promenade in 1950 (tetrad **TR02X**) [MNE]. No records inland.

....

**Bupleurum rotundifolium** L.<sup>62</sup> Thorough-wax

Extinct. Formerly as an abundant colonist in the chalky cornfields in the district between Crayford... and Swanley on the west and Higham, Shorne, Cobham on the east... also in Thanet, about Chatham, Ospringe, and near Tunbridge Wells. 16th—18<sup>th</sup> Centuries. Not recorded since F.J. Hanbury's record at Swanley in Fl. Kent (1899).

First record, 1629: Gravesend to Rochester, Johnson, Iter plantarum... p.1.

....

**Apium graveolens** L. Wild Celery

In relation to district 15: Locally common. Localised records:

**TR02:** Lydd (tetrad **TR02K** etc); Ivychurch (tetrad **TR02I**); Old Romney (tetrad **TR02H**); and Dymchurch (tetrad **TR02Z**)

**TR13:** Brackish sewer 2 miles west of Hythe in 1957 (L.J. Margetts).

....

**Petroselinum segetum** (L.) W.D.J. Koch

Localised records for district 15:

**TQ92:** roadside between Appledore Station and Snargate in 1959 (tetrad **92Z**) [MNE]

**TR01:** Dungeness, near lighthouse in 1945 (**TR088168** etc) [N.Y. Sandwith & J.P.M. Brenan – BM]; and railway, Lydd Station in 1952 (**TR049215**) [K.E. Bull]

**TR13:** beach west of Hythe in 1954.

.....

<sup>62</sup> This account extract is taken from a typed transcript made by Rosemary Fitzgerald c. 1985.

**Sison amomum** L. Stone Parsley

Localised records for district 15: by Royal Military Canal, Burmarsh road, west of Hythe in 1958 (TR138340) [L.J. Margetts]; and southwest of Brookland, as far as the Sussex border, in 1954 1954 (tetrads TQ92R, 92S and 92X).

...

†**Falcaria vulgaris** Bernh. 15 Longleaf

Alien, but completely naturalised; in chalk grassland; very rare and local, confined to Thanet and neighbouring parts of East Kent.

1) [Hayes Place, DMcC; extinct by 1937.]

4) N. of Wingham\*, 1858; G. Dowker; 1890, J. Bot. 1889, p.272; 1890, *Fl. Kent*.

8) On Chalk, Otty Bottom, S.W. of Kingsdown, Mrs G. Foggitt, 1926 B.

9) Birchington, 1886. A. Moore: 1946, Walter Johnson (*Roch. Nat.* p.12 1946). Westgate, Druce, 1887, *J. Bot.* p.182. Chalk gravel N. outskirts of Broadstairs, J.E.L.; L.W.W.; 1947!-1950 MNE. Abundant in chalk grassland, North Foreland Golf Course. MNE, 1934, J.E.L. BM: L.W. Wilson, 1947; 1954. In *Brometum erecti* with a typical chalk grassland associated flora. 1956, Miss B. Nash, 396703, N.W. side Road under

—.

[11] Field near Maidstone, 1912, M.L. Wedgewood in Hb. F.J.H.]

This plant is locally abundant on calcareous pastures in S.W. France, S. of the Loire. Its absence further north (i.e. in Normandy, etc.) is evidence against it being native in Kent, though from its habitats and distribution in the county one might have supposed that it was indigenous.

....

**Angelica sylvestris** L. Wild Angelica

In relation to district 15: Rare on the Marsh proper, with only localised records elsewhere in district: Shirley Moor in 1955 (TQ940320); and Windmill Channel Levels in 1959 (tetrad TQ83Q etc).

**Torilis arvensis** (Huds.) Link

Colonist. Cornfields: once rather frequent in Kent, to judge from old records, which cover all our districts except 10). Now very rare, though still plentiful S. of Nash in 5).

1<sup>st</sup> record, 1777: Faversham, E. Jacob, *Fl. Fav.*, p.23.

2) Sheppey, Hb. Davis, 1918 MNE.

4) Fields N. of Wingham, R.G. Williams.

5) 46 Cornfield on chalky loam, S. of James Wood near Nash, S.W. of Keston, 1954, F.R.& G. Brown, MNE. 36 Cornfields on chalk, near Greyhound Training Kennels, c. 1 m W. of Leaves Green, 3961, 1958, plentiful, P.C. & J.F. Hall.

6) Near Wrotham,, 1774, Hb. Banks B.

8) 1 plant, Turnip field, Wingham, 1951, R.G.W.

11) Near Maidstone, Rev. Fielding, 1893 MNE.

16) Cornfield, above North Road West, Hythe, Miss J. Gibbons.

...

**Menyanthes trifoliata** L. Bogbean

Localised records for district 15: Hoppen Pits (TR0718) and also reported (doubtfully) from a pond near Lympne (TR13)

**Nymphoides peltata** Kuntze Fringed Water-lily

Royal Military Canal at Appledore (tetrad TQ92P) and to northeast (tetrad TQ93Q) – abundant up to 1970.

....

**Myosotis scorpioides** L. Water Forget-me-not

In relation to district 15: Mainly off the marsh, with localised records: south from TQ940320 on Shirley Moor (tetrads TQ93F and/or 93K); and Small Hythe in 1956 (TQ888296).

**Myosotis secunda** Al. Murray

Localised records for district 15: by a dyke, Brenzett (TQ92 or TR02); Selby Farm south of Lympne (tetrad TR13B); and Old Romney (tetrad TR02H).

....

**Stachys palustris** L. Marsh Woundwort

Localised records for district 15: dykes northwest of Wittersham (TQ82); west of Small Hythe in 1956 (tetrad TQ82Z?) [MNE]; Royal Military Canal south of Appledore (tetrad TQ92P); Shirley Moor (at TQ940320 etc); south of canal, Ham Street (tetrads TR03A and/or 03B); south of canal, Bilsington (tetrad TR03L etc); Boulderwall in 1956 (tetrad TR01U); and Potman's Heath in 1956 (tetrad TQ82U).

....  
**Scutellaria galericulata** L. Skullcap

In relation to district 15: Unrecorded on Marsh but noted at: Shirley Moor in 1955 (TQ940320); and Small Hythe in 1956 (TQ888296).

....  
**Teucrium botrys** L. Cut-leaved Germander

[The MS included reference to: ...[Godmersham] shown to Mrs M.E. Millward [1939]....[E. Robinson 1949]....Rough ex-arable field on chalk downs above Eggerton Manor 61/0185 503 [F.R.]..rare....]<sup>63</sup>

....  
**Clinopodium calamintha** (L.) Stace

[in manuscript given as:]

**C. nepeta** L. 15, 16. Lesser Calamint.

Native. Dry hedgebanks, roadside verges and pastures on base-rich gravelly soils, frequently associated with *Rumex pulcher*: rare, but scattered along the valley- and river terrace-gravels of the N. Kent coastal plain, from Abbey Wood, Plumstead to Faversham, where it is locally abundant, formerly more widespread, from Charlton to Thanet; an outlying locality exists at Leybourne on the Medway gravels. This interesting and pleasantly-scented plant is a drought-resistant "Southern-Continental" species: it remained fresh right through the great drought of 1959. In Kent it appears to be on the edge of its range, being very common in parts of Essex, Suffolk and Cambridge. In the past it occurred very rarely in Surrey and Sussex, but there are no recent records. It occurs in similar gravelly places at the mouth of the Somme, but not in Pas de Calais.

- 1) Dry grassland on roadside and banks, Lessness Abbey, 1948, R.A.B. 1949: AHWD: [Charlton: Plumstead: Belvedere]
- 2) Roadside of A249, between Key Street and Bobbing, abundant, 1945-62 (MNE).  
Dry pasture opposite Davington Priory, 1839, Cowell: L.W.W., 1955-1959! (MNE). Davington Churchyard, H.M. Wilks, 1960.  
Roadside bank between Teynham and Conyer, 1955.  
By A2, London Crossroads: by A2, Syndale Bottom turning, R.E.Wood, 1950.
- 6) By Darenth Rd, s of Dartford, H.M.P., 1961. Stone Church Yard, 1948, H.M.P. Abundant in dry gravelly pastures and road verges about 584741 Stone Castle, 1945 (MNE), 1948, 1964, H.M.P. [Darenth, Syme.] [Cobham, Ridley.]  
Green Street Green, in dry turf near the ....., Cooper, Fl. Met.: 1947 (MNE): - 1961, H.W.P.
- 7) Roadside of A249, between Key Street and Chestnut Street: S.W. of Chestnut Street, 1945-62, MNE, abundant.
- [9] Dry banks at Westwood: Upton: & Nash, Fl. Thanet.]
- [10] Roadside W. of Eynsford, 1863, J.S.M.]
- 11) Dry pastures around Leybourne Church and Castle: and in the Churchyard, W.M.R; 19..-1961,MNE.



1<sup>st</sup> record, 1629: Gravesend to Rochester and Gillingham to Sheppey. Johnson. *Iter*, p.5.

....  
**Lycopus europaeus** L. Gypsywort

Localised records for district 15: at inland edge of Marsh east of Oxney, probably rare (tetrad TQ92N?); Shirley Moor in 1955 at TQ940320 and to south (tetrads TQ93F and/or 93K); and southwest of Dymchurch (tetrad TR02Z).

....  
**Mentha x verticillata** L. Whorled Mint

Localised records for district 15; Ditch southwest of Small Hythe in 1956 (TQ888296).

....  
**Mentha aquatica** L. Water Mint

<sup>63</sup> Taken from Rosemary FitzGerald's notes of the species account. Additional square brackets are introduced where the text may not be an exact transcript. The surviving text does not refer to the Halling site, but it would have been mentioned; Francis Rose collected from there.

In relation to district 15: On the Marsh at Dungeness only (**TR01**). Off the Marsh at: dykes at **TQ940320** and to south on Shirley Moor (tetrads **TQ93F** and/or **93K**); and dyke south of canal bridge in 1956 (tetrad **TR03G**).

....

**Mentha pulegium** L. Pennyroyal

...its phase of abundance appears to have coincided with a type of rural economy now past, namely the regular use of commons and village greens as pasture by the local commoners.<sup>64</sup>

....

**Callitriche platycarpa** Kütz. Various-leaved water-starwort

In relation to district 15: Dyke south of Aldington Knowle, near Sherlock's Bridge, Romney Marsh in 1958 (tetrad **TR03R**) [MNE].

**Callitriche obtusangula** Le Gall Blunt-fruited Water-starwort

Localised records for district 15: dyke on Romney Marsh, near Selby Farm, Burmarsh in 1958 (tetrad **TR13B**) [MNE]; and ditches at Lydd in 1891 (**TR01** and/or **TR02**) [E.S. Marshall – SLBI and Oxford herbarium].

....

**Callitriche hamulata** Kütz. ex W.D.J. Koch Intermediate Water-starwort

Localised records for district 15: Brenzett (tetrad **TR02D?**); ditch by Burmarsh road, Hythe (**TR13?**) [L.J. Margetts]; ditch near Hexden Channel (**TQ82**); ca 1 mile east of Appledore in 1954 (tetrad **TQ92U**); south of Ox pond in 1955 (**TR035308**); pond southwest of Ivychurch (tetrad **TR02I**); and dyke north of moat, Old Romney in 1958 (tetrad **TR02H**).

....

**Scrophularia auriculata** L. Water Figwort

In relation to district 15: no records on the Marsh except: by roads west of Newchurch in 1955 (**TR038304**); and Royal Military Canal, Kenardington in 1959 (tetrad **TQ93Q**).

....

**Veronica scutellata** L. Marsh Speedwell

In relation to district 15, on peat - all records in **TR01**: Dungeness Fen by Hoppen Pits (**TR0718**) [G. Dowker]; fen V southeast of Hamilton Farm, 1945-1958 (!) [MNE]; ditch south of Boulderwall Farm in 1961 (tetrad **TR01P**) [MNE]; and Long Ballast pit north end in 1952 (**TR079187**) [D. McClintock].

**Veronica beccabunga** L. Brooklime

In relation to district 15, probably rare, partly due to brackish nature (of the Marsh) and continual cleaning. Only localised record in district: ditch on Sandhurst Levels in 1954 (**TQ82**) [MNE].

....

**Veronica catenata** Pennell Pink Water-speedwell

In Kent, generally rarer than *V. anagallis-aquatica*, but the commoner species on the Marsh. Localised records for district 15: ditch northeast of Old Romney in 1959 (tetrad **TR02H**) [MNE]; ditch south of Small Hythe in 1952 (**TQ894298**) [D. McClintock]; and probably this also at Aldington and Hythe in 1956 (**TR03/TR13**).

....

†**Lathraea clandestina** L.

13) Earls Road, Tunbridge Wells, 1947, A. Graseman.

## Orobanche L.

[**O. ramosa** L.

Alien, parasitic on hemp (*Cannabis sativa*), formerly occurring in hemp fields; hemp is no longer cultivated and the species has not been reported in Kent for over 150 years.

2) Sheppey; near Faversham, Hudson, *Fl. Angl.*, Ed. 2, (1978) p.266.

6) Near Rochester, Hudson, *Ibid.*; Field S. of Rochester by Maidstone Road, O.B.G., 1805.

8) Hougham, O.B.G.

**O. purpurea** Jacq. 15 Blue Broomrape 1/51

Native. Parasitic on *Achillea millefolium*; extremely rare.

<sup>64</sup> Taken from Rosemary FitzGerald's notes of the species account.

8) Bishopsbourne, Anon., *Ann. Mag. Nat. Hist.*, III (1830) p.435. Plentiful on *Achillea*, on neglected allotments, Bishopsbourne village, 1955, B.J.B.; 1955! 1958! MNE. Part of the rough field was ploughed in 1958; afterwards in 1958 and in 1959 the plant was much more abundant in the part that had been ploughed than in the part that was kept! 1960, not seen (field grassed). 1961, one only by hedge. 1962, not visible.

Not certainly recorded for Sussex, not at all for Surrey: one ancient record (near Bethune) for Pas de Calais. It still occurs on the cliffs of the coast of N.E. Norfolk and has records for Hampshire, chalk river scarps S. of Rouen, Seine-Maritime, 1961!

**O. rapum-genistae** Thuill. 15, [16] Great Broomrape. 5/51

Native. Parasitic on *Sarothamnus scoparius*, more recently on *Ulex europaeus*: formerly not uncommon, nor very rare in a few bushy places and woodland rides.

1<sup>st</sup> record, 1587: (On broom) Shooters Hill, Gerard, *Herbal*, 1597

- [1] Old records for Shooters Hill: Charlton Wood, Curtis: Eltham, Fl. Met. Supp. W. Wickham, 1888, A. Steward.]
- [2] Gillingham to Sheppey, Johnson, Iter, 1629, p.5.] Broom above Boughton street 1958 Mrs B., 3 spikes in flower.
- 3) Near Ellbridge, plentiful, F.J.H.; on broom, Gravel pit, Swanton Farm, Littlebourne, 1956, E. Scott, Mrs B. Nash et al.: probably the same locality. Old Park, Canterbury, F.G.E.K. [Bigberry Wood, Mitchinson (as *O. elatior*)]
- [4] Preston, F.J.H. Near Sandown Castle, F.G.E.K. Upper Deal, Miss L. Day.]
- [6] S. end of Darenth Wood, 1861, J.S.M. (Hb. Mill). Cuxton, Bossey.]
- [7] Newnham Road, in gravel pit: Coxett Wood, Fl. Fav.] [Path, Lordswood Lane Walderslade to Gibraltar from 1917, S. [Ashman].]
- 8) [Covert Wood, on Broom, F.G.E.K. Between Dover and Folkestone, E. de C.] [By Crete Road, Folkestone, on *Ulex*, Miss Day] West Wood, Stowting, 137424, on broom in ride on Pliocene sand, 1958 Mrs. D. Rowlands, 1960 Miss D.A.C.L.
- [10] Field by Sevenoaks Gas works, F.J.H.]
- 11) Offham, C.A. Stevens B. Barming Heath, E.M.H. On Broom and Gorse on heathy ridge on Folkestone Sand N. of A.20, 1m W. of Hollingbourne 1951, E. Scott, c.100 spikes, 1951; c.70 spikes, 1952; 1953! 1962! MNE.
- 12) Edge of Bourne Wood, Orlestone, 1946 C.N.P. & E.S. Ashford Warren, W.R. Jeffrey, 1901, Lady Davy; c.1930, Miss West. Ride at S. end Horns Wood, E. of Ruckinge, 1957, E. Scott; 1958!
- 13) On way to High Rocks, Forster, *Fl. Tonb.* (as *O. elatior*).

Rare and not recently reported in Surrey, now very rare in Sussex, no recent record for Essex: very rare in Pas de Calais.

**O. elatior** Sutton<sup>65</sup> 15,16. Tall Broomrape 7/51

Native. Parasitic on *Centaurea scabiosa* on grassy banks, scrub, and old pits on chalk: very rare.

In Surrey and in Sussex, rare on the chalk: rare in Essex but locally common on chalk in the N.W. of the county: very rare in the Pas de Calais.

1<sup>st</sup> record, uncertain: none of those in Fl. Kent are very satisfactory, and may all refer to *O. rapum-genistae* or some other species.

- 6) 66 Pilgrim's Way, N. of Trottscliffe Church 644610 to 646612: 1915, A. Elgar MNE; 1945! 1 spike; 29 spikes, 1955; many spikes, 1957. O. Davis: 1958-61! MNE.
- 57 S. of Stone, Field N. of A2, opposite Darenth Woods, 578734, H.M.P.: dozens of plants 1955-56. Bean, Rev. B. Glennie: Hb. Glennie (BRIST).
- 77 Chalk pits, W. of Cliffe, 1958 MNE.
- Halling Downs; roadside, Cuxton, M. Atkins.
- Pilgrim's Way, between Detling and Boxley, 1913, H. Elgar MNE.
- 94 Pilgrim's Way, Westwell, Miss M. Cobbe, B.E.C. Rep. 1923, p.204; E. Scott, 1947.
- 76 Rectory Chalk pit Wouldham, 1938, J.B. Marshall.
- 15 Bank, Bonnybush Hill, Kingston, 199518 – 200517, 1939, B.J.B.; 1946-62! MNE.

<sup>65</sup> Although the records in this account begin with botanical district 6 (the Chalk between Darent and Medway), their subsequent layout is somewhat confused by the abandonment of references to districts 7 and 8, leaving one to follow the 10km square grid references, where given.

25 Roadside Chalk banks, E. of Bekesbourne, 212547, 1948, B.J.B.

21 Roadside S. of Adisham, 210551, 1962, B.J.B. & R.G.

(Reported "nr. Woolwich" in Fl. Met.; at Bigberry Wood by Mitchinson; and near High Rocks, by Forster in Fl. Tonb. —probably all really *O. rapum-genistae*.)

**O. hederæ** Duby<sup>66</sup> 15, 16 Ivy Broomrape 4/51

Native. Parasitic on ivy, only recorded on chalk in Kent; extremely rare.

Extremely rare in Surrey (Kew Gardens, Betchworth and Witley), unrecorded in Sussex, Essex and the Pas de Calais.

1<sup>st</sup> record, 1873: Kent east, Borrer, in *Top. Bot.*: the locality is not known.

This species has very short rootlets which form no secondary attachments, unlike *O. minor* (teste A.D. Greenwood in litt.).

6) Wood on the side of the chalk hills, near Shoreham, 1868, J.S. Mill in Hb.vMill. By Mounts Road, Greenhithe, 1948, one spike.

8) Among Ivy in woods E. of A.2, Kearsney, 1928, Miss J. Gibbons. Chalk hedgebank, one spike on Ivy, Knowlton, 1949, P.R. Bell & F.R.: 1950, F.R. MNE. One spike among Ivy, 313506, Willow Wood, N. of Sutton, 1955, B.J.B. & F.R.

**O. artemisiae-campestris** Vaucher ex Gaudin

[In manuscript given as:]

**O. picridis** f.W. Schultz ex Koch 15 Picris Broomrape. 2/51

Native. Parasitic on compositae, chiefly *Picris hieracioides*, near the sea, mostly on chalk cliffs; very rare.

Very rare in Surrey (3 records only): unrecorded for Sussex, Essex, or the Pas-de-Calais'

1<sup>st</sup> record, 1866: N. of St Margaret's Bay, Syme, *Eng. Bot.*, ed. 3, VI, p.198.

4) On waste ground, E. of A.256, S, of Ebbsfleet Hs, Richborough Port, 1949, L.W.W.; 1962, B.J.B. & R. Gorer.

8) Undercliff between St. Margaret's Bay and Kingsdown, abundant, Syme, *loc. cit.*; rare ¼ mile NE of St. Margaret's Bay, 1946, 1947! Not seen, 1953; abundant at St. Margaret's Bay, 1957! MNE.

Dover E. Cliff, near sloping path, B.J.B. 1947, L.W.W. 1948, a few plants, 1954-55!; 1959; 1960; 1961; 1962.

In Kent, I have only seen this plant myself on the ledges of steep chalk cliffs.

**O. minor** Sm. 15, 16 Lesser Broomrape 29/51

Native. Parasitic upon Papilionaceae, more rarely on other families: scattered through the county and not uncommon on chalky or sandy soils; sometimes abundant in sown clover fields.

Frequent in the adjoining counties and locally so in the Pas de Calais.

1<sup>st</sup> record, 1724: Cuxton, Rand, in Ray, *Synopsis*, ed. 3, p.288.

1) [56 Formerly about Charlton, D.G.B.] 56 Rough sandy field W. of Farningham Wood, P.C.H.

2) 06 Old Brickworks near W—house, Faversham, 1954, R.E.W. 06 Murtons Farm, Graveney, 1956, R. Theobald.

3) 06 By Thanet Way on clover (and ? wild carrot?) 200 yds N. of Brenley Corner, 1959, H.M.W.

4) 35 Princes Golf Links, Sandwich Bay MNE. 35 Hacklinge, 1946 MNE. Stone Cross, Sandwich, C.C. Townsend. 36 Ash, 1948. 26 Stodmarsh, in clover field 1949 MNE. 35 Track to Downs Farm E. of Sandwich, 1954 RGW. 25 Staple, a clover field, 1949.

5) Jewells Wood, Salt box, A.G. Davis, 1910 MNE. Roadside S. of W. Wickham, 3864, 1956, R.A.C.

6) 57 E. of Dartford, 1946, J.E.L., R.L. & D.H.K.

67 Northfleet 1946.

665636, Dode Church, Mrs Woods.

Eynsford Railway bank, F.J.H.

57 on clover, S. of Greenhithe, 1946 MNE.

67 S. of Wombwell, Gravesend, 1946.

Swanscombe Wood by A2, K.E.B., 1955.

Hatch Hill, Luddesdown, 1951, DMcC.

76 Cuxton, Lower Bush, roadside, 1953, RGW.

7) 76 Bluebell Hill, A.G. Davis, 1918 MNE.

<sup>66</sup> Here, this account is placed in Stace (edition 2) order, before the next species; but in the manuscript it is placed afterwards.

- 8) 05 E. of Chilham, R.G.W.  
 15 Bourne Park, Bridge, R. Gorer.  
 15 Bonny Bush Hill, Kingston, 1955 MNE, 1958 D. Stainer MNE.  
 25 Barham Downs, 1939; 1946; 203520, 1958.  
 25 Fredville, DMcC.  
 25 Adisham, 1948.  
 25 Road near Denne Court S.W. of Woodnesborough, 1962.  
 a[bundant?], Cloverfields, Tilmanstone, 1957, R. Gorer, yellow variety.  
 34 Kingsdown golf course, 1954 MNE  
Denton, 1956, Miss D.A.C.L.  
 34 N.W. of St Margarets, 1946, in cloverfield 1954 D.P. Murray.  
 24 River, Mrs. E, Carlton, 1960 MNE.
- 10) 55 One plant, Oldbury Lane, Ightham, 1945, apparently on *Anthriscus sylvestris*. MNE.  
 1 plant, Toys Hill, near *Pyrola* site, C. Stace.
- 11) 75 E. Malling, J.S.M.; F.R.!  
 75 W. of Sandling, 1943, on roadside.  
 75 Aylesford Gravel pits 736588, 1957m C.A.S.: E.G. Philp, 1959 MNE, 1960.  
 85 Leeds village, 1959 MNE.  
 85 Langley, 1951. DMcC.
- 12) 05 Roadside verge, E. Stour Farm, Chilham, R.G. Williams. [Charing Heath. H. Lamb, 1901 MNE.]  
 04 Quarry at Sevington, 1946.
- 13) 54 Bidborough, 1958, on zonal Pelargonium, F.R.B. [Tunbridge Wells, Hb. Lamb, 1870 MNE.]
- 15) 01 Near School, Dungeness, 1955: 1958, E. Scott.

**O. maritima** Pugsley.<sup>67</sup> 15 Seaside Broomrape 3/51 (?4/51)

Native. Parasitic on *Eryngium maritimum* on sand dunes and on *Daucus carota* on sea cliffs: very rare, but locally abundant on the coast from Folkestone to Pegwell Bay, also reported at Dungeness.

Only detected in Sussex of the neighbouring counties (West Wittering, on *Eryngium maritimum*, 1938!): mainly southwestern in Britain. Foreign distribution not known: not in Pas de Calais.

1<sup>st</sup> record, 1866 (as *O. amethystea* Thuill.): St. Margarets, Syme in *Eng. Bot.*, Ed.3, Vol. II, p.200.

- 4) On *Eryngium maritimum* on foreshore of dunes, Princes links, Sandwich Bay, L.W.W.: very abundant 1950-52! det. E.B. Bangerter. Very abundant, re-appeared after flood 1953: Behind Guildford Hotel, 1953, R.E.W. Thousands of plants, 1954-1962, increasing enormously, 100,000s, 1962, for 2 miles. MNE.

On *Eryngium*, Pegwell Bay, 1947.

- 8) Base of cliffs S. of Oldstairs Bay, Kingsdown, 1956 MNE. Undercliff, E. of St. Margarets Bay, Syme: 1946-47 MNE. St Margarets Bay, 1957-62 MNE. Dover East Cliff, 1954. Langdon Bay C.C.T. Undercliff and lower slopes of cliff, by Lydden Spout, F.J.H.; (From the Shrimpers Steps, W. of Dover, westward to Abbots Cliff 1945!-1962 MNE abundant, 1871-1878, A. Bennett, and in *J. Bot.*, 1928, p.168.). Folkestone Warren on *Daucus*, c.7 spikes, 1959, P.W.W. Pett Bottom, fallow field, 1916, G.L. Davidson, det. Keir as *O. amethystea* Thuill.

[15] On *Chrysanthemum leucanthemum*, Dungeness, L.W. Wilson (unconfirmed).]

The British plant was formerly regarded as identical with *O. amethystea* Thuill. Pugsley (*J. Bot.* 1926 p.18) cast doubt on this, but C.E. Salmon reported that Beck had confirmed plants from E. Kent as *O. amethystea* Thuill., though the corolla was less bent and the bases of the filaments more hairy than in the type (*J. Bot.* 1927, p.117). Pugsley has since erected the British plant into a separate species, as *O. maritima*.

....

**Utricularia minor** L. Leser Bladderwort

In relation to district 15: in dykes west of Hythe ca 1972 (**TR03** or **TR13**) [Miss B. Nash - Kent Field Club]. Near old record from *Bull. KFC*

....

**Galium palustre** L. agg. Common Marsh-bedstraw

In relation to district 15: The aggregate recorded at: Brenzett (tetrad **TR02D**); Snargate (tetrad **TQ92Z**); and Shirley Moor (**TQ93**).

<sup>67</sup> Plants in Kent thus named are currently treated as a variety of *O. minor*.

Subsp. *palustre* at: Dungeness, near Old School (**TR01**); Hoppen Pits (**TR0718**); and marsh by Boulderwall, on shingle in 1956 (tetrad **TR01U**) [MNE]. Overall, not infrequent.

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**Cirsium palustre** (L.) Scop. Marsh Thistle

Present in district 15. Only localised record: near Camber in 1956 (tetrad **TR01E?**).

....

**Silybum** Adans

**S. marianum** (L.) Gaertn.

Fully naturalised alien, or possible native: rough ground on ragstone and chalk, banks and waste ground near the sea and estuaries; local and uncommon, but abundant in several localities where it has the appearance of a native species, particularly west of Hythe to Lympne on the ragstone escarpment, at Upnor and at Higham Marshes.

[Orpington, 1852, A.A., BM.]

[Bexley, E. Bartell, 1882 MNE.]

67 Thames River Wall, *E. of Denton*, 1945. 67 *Chalk*, 1945; 67 *Shornemead*, 1945 MNE. 77 *Higham*, 1938, J.B.M.: 1944! abundant.

06 N. side *Harty Ferry* MNE P.R. Bell, 1947. 06 *Graveney Marshes*, 1950, R.E.W. By road, *Isle of Grain*, 1946. 06 *Ham Marsh Farm, Faversham*, 1950, R.E.W.

57 *Gore Hill, Dartford*, 1946.

57 *Ridge of Green Street Green, towards Lane End*, 1945 MNE.

618724 By A.2. E. of Springhead, Northfleet, 1945: 67 1957, H.M.P.

6E) 77 *Cockham Wood, Upnor, 773715, on sandy banks by the Medway: 1945: 1951 D.McC. 1960! MNE.*

16 *Cliff top E. of Tankerton*, R.E. Wood. *Cliff, Swalecliffe*, 1953, R.E.W.

26 *One plant Stodmarsh*, by track, 1950, R.E.W. Sea wall, *Reculver*, Miss D.A.C.L.

[65 S. of W. Malling, Gray.] 65 1 plant, Bracken Hill, *Platt*, 1949, D.McC. *Sutton Valence*, D.McC.

[casual, W.... Well, E.S., 1947, 94] [Casual, Canterbury, R.G.W.]

[93 Appledore Heath, asparagus estates, 1955, E.S.]

13 Abundant on Ragstone scarp, W. of Hythe, 1949: W. of Lympne Castle, abundant on ragstone, 1946-55 MNE.

....

**Centaurea cyanus** L. 15, 16 Cornflower

1) [*Ruxley pits*, 1958 T.H. Angel; escape?

2) Mangoldsfeld, *Graveney* —1 plant, 1952, R. Theobald.

3) *Cornfield by A28, Hersden*, 1954, R.G.W.

5) [W. of Farningham, 1948, C.W. MNE.]

6) [N.W. of *Wrotham*, 1 plant, Mrs Tatton Brown.] near *Dartford*, 1931, P.H.C. Pitside, Cotton Lane, Stone —escape, 562748, 1955, H.M.P.

7) Boxley, 1882, E. Bartlett MNE. Cornfield, *Belmont Park*, 1958, DMcC. *Near Doddington*, before 1958, B. Keane.

8) Cornfield, *Great Watersend Farm, below Lords Wood, Lydden*, 1961. Cornfields Little Mongeham, 1960, Miss J. Moore (vidi sp.): abundant 323517, 1961.

10) Sevenoaks dump, 1951, DMcC.

11) [Farleigh Station, Railway siding, one plant, 1946.] [Newly sown grass by A.20 garage, Harrietsham, 1961, B. Dodds.] [Malling 1896, H. Elgar, MNE.] [Yalding, 1960, E.G. Philp.] [Riverbank, Edenbridge, 1930, J.E.L. BM.]

12) [St Pauls Church Street, Canterbury, Miss M.E.M., 1958.]

13) Old cornfield, Dodhurst Farm, S.W. of Pembury, 1940, J.R.W.

**Centaurea calcitrapa** L. Red Star-thistle

Probably native. Dry grasslands and banks on chalk....in similar habitats near the Sussex coast and in the Somme estuary, and in those areas is probably native.<sup>68</sup>

....

**Sonchus palustris** L. 15, 16 Marsh Sow-Thistle

<sup>68</sup> Taken from Rosemary FitzGerald's notes of the species account.



Native. Tidal reed swamps along the upper part of the tidal R. Medway, rare and extremely local but locally abundant: also in freshwater reed swamps in a disused gravel pit. Now confined in the British Isles to the tidal Medway and the Norfolk-Suffolk Broadlands (from Minsmere, Blythburgh, and the Waveney Valley) to the Yare, Bure, Ant and Thorne Broadland rivers).

- 2) From ¼ mile below Allington lock, to Aylesford Bridge, frequent, 1942-1945 MNE.  
 Aylesford Bridge to Mill Hall, 1945, left bank MNE.  
 The Friars. Ditch bank, 1m NW of Aylesford below Maidstone Sewage Works, 1962.  
 Left bank, below New Hythe, locally abundant towards Snodland, 1945, **200** spikes MNE. (1895, H.L. MNE)  
 Right bank, below New Hythe, very abundant (>**500** spikes, 1945-1953, MNE.  
 Right bank, **50** plants above New hythe, 1945. Wet copse, S. of Snodland, 1955 MNE.  
 West of Eccles, **20** spikes, 1945.  
 Island W. of Burham Cement Works, **2-300** spikes, 1945.  
 Burham Marshes by river, frequent, 1909, H.L.M.-1953!  
 1 plant by roadside, Wouldham, 1946 MNE.  
 By river below Dartford, P.C. Hall.
- 11) Leybourne Castle Lakes, 1958.

....

**Lactuca saligna** L. Least Lettuce  
 [The MS included reference to: ...E. of 'Sportsman', behind bungalows 1952...Greatstone [J.P.M. Brennan, 1954]...on disturbed shingle at N. end of Long Pit, Dungeness [F.R. & D.McC., 1947]....]<sup>69</sup>

**Taraxacum palustre** (Lyons) DC.

In relation to district 15, recorded at Dymchurch.

....

**Pulicaria dysenterica** (L.) Bernh. Common Fleabane

Localised records for district 15: Dymchurch; road west of Newchurch in 1955 (**TR038304**); and south of Ox pound (**TR035308**).

.....

**Achillea ptarmica** L. Sneezewort

In relation to district 15: Dungeness only (**TR01**).

....

**Anthemis arvensis** s.l. 15, [16]

Cornfields, usually on chalk; formerly fairly frequent, now rare.

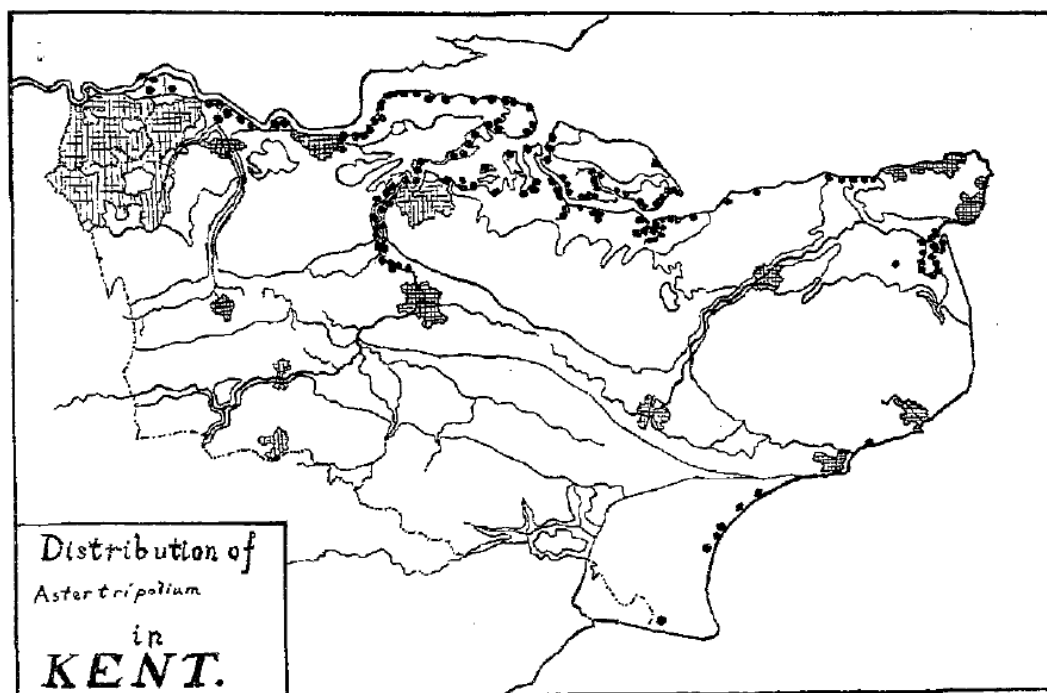
- 3) Cornfield border, Blean, W. of Church, R.G. Williams, 1958.  
 6) Rough chalky field N. of A2, Darenth Wood, 578732, 1955, H.M.P.; field S. of Darenth Wood, 572717, 1948, H.M.P. Cornfield, The Warren, S.E. of Cobham, 693677, Mrs Woods. N.W. of Cobham, 1810, NBW, BM.  
 8) Between Bishopsbourne and Kingston L.W.W. Cornfield near station, Adisham, 1949, L.W.W. Cornfield, Little Mongeham, 323317, Miss Ida Moore, 1960 (vidi sp.) MNE  
 11) A.20. Garage, Harrietsham, 1962: Mrs B. Dodds (sp!) MNE. ?Cornfield on Atherfield Clay, New Street Farm, Great Chart, 972407, 1952, I. We...  
 12) Railway sidings, Ashford, 1955, Mrs. N. Baker, det. Mrs. Farquarson.

....

**Aster tripolium** L. [no surviving account, other than map]<sup>70</sup>

<sup>69</sup> Taken from Rosemary FitzGerald's notes of the species account.

<sup>70</sup> Reproduced here from Rose, F., Distribution maps of Kent Plants (Exhibit), in Lousley, J., ed. (1951) *The Study of the Distribution of British Plants* (1950 conference report), B.S.B.I, Arbroath.



....

**Senecio aquaticus** Hill                      Marsh Ragwort

Localised records for district 15: Sandhurst Levels in 1954 (**TQ82**); and S. of Ham Street, 1954 (tetrads **TR03A** and/or **03B**).

....

**Bidens cernua** L.                              Nodding But-marigold

In relation to district 15: only localised record off Marsh: dyke east of Friezingham, near Windmill Channel, Rolvenden, 1950 onward (tetrad **TQ83Q**).

**Bidens tripartita** L.                          Trifid Bur-marigold

In relation to district 15: Dungeness only (**TR01**).

....

**Eupatorium cannabinum** L.                  Hemp-agrimony

In relation to district 15, no records on Marsh, though noted by the Hexden Channel, Newenden in 1956 (tetrads **TQ82J** or **82P?**);

....

**Butomus umbellatus** L.                      Flowering-rush

Still locally frequent in district 15. Localised records:

**TQ83**: ditches east of Friezingham, east of Rolvenden Layne in 1959 (tetrad **TQ83Q**) [Maidstone herbarium]

**TQ92**: Snargate by B2080 (tetrad **TQ92Z**)

**TQ93**: near B2080, Shirley Moor in 1945 and 1965 (tetrads **TQ93F** and/or **93K**) [1945 record in Maidstone herbarium]; east of Reading Street (tetrad **TQ93F**); and dyke south of **TQ940320** on Shirley Moor in 1955 (tetrads **TQ93F** and/or **93K**)

**TR01**: dykes southwest of Boulderwall Farm, Dungeness in 1962 (tetrad **TR01U**)

**TR02**: Brenzett (tetrad **TR02D**)

**TR03**: Ruckinge and Royal Military Canal north of Newchurch (tetrads **TR03G** and **03L**) [D.A.C.L.]

**Sagittaria sagittifolia** L.                      Arrowhead

In relation to district 15, locally common on the Romney Marsh, though no records for **TR03**. Localised sites:

**TQ82:** marsh dykes on Sandhurst Levels south of Ethnam in 1954 (tetrad **TQ82D**); dykes southwest of Small Hythe in 1956 (**TQ894298**) [MNE]; southwest of Oxney [R.G.W.]; and east of Newenden [C. Skinner]

**TQ83:** ditches east of Friezingham, east of Rolvenden Layne in 1959 (tetrad **TQ83Q**) [MNE] – probably also at Tenterden

**TQ92:** east of Appledore (tetrad **TQ92U**)

**TQ93:** Royal Military Canal south of Kenardington in 1959 (tetrad **TQ93Q**) [MNE]; on Shirley Moor in 1945 [MNE]; and dyke near B2080 on Shirley Moor in 1965 (tetrad **TQ93F**)

**TR01:** dyke east of Hamilton Farm, Dungeness [J. Hubbard]

**TR02:** west of Brenzett near Hook House in 1945 (**TR0028**); and probably also Romney

**TR13:** probably west of Hythe.

....

**Baldellia ranunculoides** (L.) Parl. Lesser Water-plantain

In relation to district 15, recorded at Hoppen Pits (**TR0718**).

....

**Alisma plantago-aquatica** L. Water-plantain

In relation to district 15, known in **TQ92**, **TQ93**, **TR01**, **TR02**, **TR03**, **TR13**. Localised records: Dymchurch; Shirley Moor dyke, SW side in 1965 (**TQ93**); frequent also near Woodchurch (**TQ93** – *probably off the levels*); by Rother Marshes in dykes by road, Oxney in 1954 (**TQ92**); and Hexden Channel (**TQ82**).

**Alisma lanceolatum** With. Narrow-leaved Water-plantain

Localised records for district 15: dyke southwest of Small Hythe in 1956 (**TQ888296**) [MNE] and also in west Oxney (**TQ82**); dyke, Windmill Channel, east of Friezingham, Rolvenden in 1959 (tetrad **TQ83Q**) [MNE] and also at Tenterden; east Oxney – *probably off the Marsh proper* (**TQ92**); Shirley Moor, dyke on southwest side by B2080 in 1965 (tetrad **TQ93F**); Dungeness (**TR01**) [F. & G. Swain]; Royal Military Canal, Ham Street (tetrad **TR03B**) [C.A. Stace]; and probably also at Bilsington (tetrad **TR03L**).

....

**Hydrocharis morsus-ranae** L. Frogbit

In relation to district 15, locally abundant. Localised records:

**TQ82:** Sandhurst Levels south of Ethnam in 1954 (tetrad **TQ82D**); southwest of Small Hythe (**TQ888296** and **TQ894298**) [D. McClintock]; and Reading Sewer by Oxney Road in 1956 (**TQ884294**)

**TQ83:** ditches east of Friezingham, east of Rolvenden Layne in 1959 (tetrad **TQ83Q**) [MNE]

**TQ92:** Stone Ferry in 1946 (**TQ942288** etc); Snargate (tetrad **TQ92Z**); Appledore (tetrad **TQ92P**); and marsh dyke by road north of Oxney in 1954

**TR01:** dykes southwest of Boulderwall, Denge Beach (tetrad **TR01U**); and south of Southeast Lydd in 1948 (tetrad **TR01P**) [R.M. Payne]

**TR02:** Brenzett (tetrad **TR02D**); and Dymchurch in 1956 (tetrad **TR02Z?**)

**TR03:** Ruckinge and Royal Military Canal north of Newchurch (tetrads **TR03G** and **03L**) [D.A.C.L.]

**TR13:** west of Hythe.

**Stratiotes aloides** L. Water-soldier

In relation to district 15: Pond west of road between New Romney and Dymchurch in 1975 (**TR02**) [F.J. Hanbury] – not recorded since.

....

**Elodea canadensis** Michx. Canadian Waterweed

In relation to district 15: here and there *e.g.* Shirley Moor (**TQ93**), including 1 mile east of Reading Street in 1954 (tetrad **TQ93F**); and 1 mile east of Appledore in 1954 (tetrad **TQ92U**).

....

**Potamogeton natans** L. Broad-leaved Pondweed

In relation to district 15, locally common: Dykes on Shirley Moor in 1947 [MNE] and 1965; Hoppen Pits, Dungeness in 1946 (**TR0718**) [MNE]; New Romney (tetrad **TR02S**); Brenzett (tetrad **TR02D**) [R.G.W.]; Kenardington (**TQ93?**); and Hexden Channel in 1954 (**TQ82**). Other non-localised records in **TQ82**, **TQ92**, **TR03** and **TR13**.

....

**Potamogeton lucens** L. Shining Pondweed

In relation to district 15, one localised record: ditch by B2080 on Shirley Moor 1945-52 (tetrad **TQ93F**) [MNE]. Other non-localised records in **TQ82**, **TQ92**, **TQ93**, **TR01** and **TR02**.

....

**Potamogeton perfoliatus** L. Perfoliate Pondweed

In relation to district 15, very much decreased since the *Flora of Kent*. Localised contemporary record: Royal Military Canal west of bridge at Kenardington in 1959 (**TQ9731**) [Maidstone herbarium]. Older records: Lydd *ca* 1902 (**TR01** or **TR02**) [Lady D.]; and Hythe (**TR13**) [Duthie]

....

**Potamogeton pusillus** L. Lesser Pondweed

In relation to district 15, old record in ditch near coast at South Brooks, Denge Beach in 1935 (tetrad **TR01I?**) [Herbarium J.P.M. Brenan]. Contemporary localised records: Royal Military Canal west of bridge at Kenardington in 1959 (**TQ9731**) [MNE]; 2) dykes by Selby Farm, south of Lympe, *ca* 3 miles west of Hythe in 1958 (**TR1033**); 3) 1 mile east of Appledore in 1954 (tetrad **TQ92U**); and 4) probably this at Orgarswick in 1958 (tetrad **TR03V**).

....

**Potamogeton trichoides** Clam. & Schltldl. Hairlike Pondweed

Localised records for district 15: drain by Royal Military Canal near Knock Farm, Stone in 1959 (**TQ946264?**) [BM]; in long shingle pit, Dungeness, east of Old School (**TR0818?**) [BM] and 1946-1962 [MNE]; and ditch between Ham Street and New Romney in 1952 (**TR02** or **TR03**) [I.A. Williams and BM].

....

**Potamogeton acutifolius** Link Sharp-leaved Pondweed

In relation to district 15, recorded by Brenan (1935) and not known since Norman (1938).

**Potamogeton crispus** L. Curled Pondweed

Localised records for district 15: Dungeness (**TR01**); Brenzett (tetrad **TR02D** *etc*); New Romney (**TR02S?**); Lydd in 1902 (**TR01** or **TR02**) [Lady D.]; dyke at Palmarsh and Royal Military Canal, Hythe in 1958 (**TR13**) [L.J. Margetts]; and Hexden Channel in 1954 (**TQ82**). Other non-localised records in **TQ82**, **TQ92**, **TQ93** and **TR03**.

....

**Potamogeton pectinatus** L. Fennel Pondweed

Very common in district 15. Localised records:

**TQ92**: Appledore in 1949 (tetrad **TQ92P**); and 1 mile east of Appledore in 1954 (tetrad **TQ92U**)

**TQ93**: Royal Military Canal west of Kenardington Bridge in 1959 (**TQ9731**) [MNE]

**TR01**: Dungeness, ditches south of Boulderwall (tetrad **TR01U**); Long Pit, Dungeness in 1962 (**TR0818**); and Lydd to *Hope & Anchor* road in 1936 (**TR0616**) [Herbarium J.P.M. Brenan]

**TR02**: ponds northeast of New Romney in 1955 (tetrad **TR02S**) [MNE]; and behind shore south of Dymchurch in 1935 (tetrad **TR02Z**)

**TR03**: dykes south of Ham Street (tetrad **TR03B** *etc*); and ditch south of Aldington Knowle in 1958 (tetrad **TR03S**) [MNE]

**TR13**: Royal Military Canal, Hythe in 1955 (tetrads **TR13M** and/or **13S**) [MNE].

**Groenlandia densa** (L.) Fourn. Opposite-leaved Pondweed

Localised record for district 15: Lydd *ca* 1902 (TR01 or TR02) [Lady D.] – no recent records.

**Ruppia maritima** L. Beaked Tasselweed

In relation to district 15: Dykes and pools near the sea, Dymchurch [C.P.S.K., F.J. Hanbury – *Flora of Kent*] – sterile plants of a *Ruppia* seen in this area in 1947.

**Ruppia cirrhosa** (Petagna) Grande Spiral Tasselweed

Localised record for district 15: Dymchurch [F.J. Hanbury – *Flora of Kent*] – sterile plants of a *Ruppia* seen in this area in 1947.

....

**Zannichellia palustris** L. Horned Pondweed

In relation to district 15, frequent. Localised records: Appledore (tetrad **TQ92P**); dyke at Fairfield in 1952 (tetrad **TQ92T**) [MNE]; Lydd (**TR02**); Hythe (**TR13**) [J.E. Lousley]; and dyke near Selby Farm, south of Lympe in 1958 (**TR1033**) [MNE].

....

**Spirodela** Schleid.**S. polyrhiza** (L.) Schleid. Greater Duckweed

In district 15, common. Localised records: dykes southwest of Small Hythe in 1956 (**TQ888296**); dyke near Windmill Channel south of Rolvenden in 1959 (tetrad **TQ83Q**) [MNE]; Appledore (tetrads **TQ92P** and/or **92U**); Royal Military Canal, Kenardington in 1959 (tetrads **TQ93Q** and/or **93V**) [MNE]; Dungeness (**TR01**); and Brenzett (tetrad **TR02D** etc).

**Lemna** L.**L. gibba** L. Fat Duckweed

In district 15, common. Unlocalised records in **TQ82**, **TR01** and **TR03**. Localised sites: Windmill Channel east of Rolvenden Layne in 1959 (tetrad **TQ83Q**); Appledore (tetrad **TQ92P**); Shirley Moor (**TQ93**); Brenzett (tetrad **TR02D** etc); New Romney (tetrad **TR02S**); and marsh (old estuary) southwest of Littlestone in 1950 (tetrads **TR02R** and/or **02S**) [MNE].

**L. minor** L. Common Duckweed

In relation to district 15, unlocalised records in **TQ82**, **TQ83**, **TR92**, **TR01-03** and **TR13**. Localised sites: ditches near Windmill Channel south of Rolvenden in 1959 (tetrad **TQ83Q**) [MNE]; Royal Military Canal west of Kenardington in 1959 (tetrad **TQ93Q**) [MNE]; Shirley Moor (**TQ93**); Stone Ferry (tetrad **TQ92P**); marsh dyke north of Oxney in 1954 (**TQ92**); and 1 mile east of Appledore in 1954 (tetrad **TQ92U**).

**L. trisulca** L. Ivy-leaved Duckweed

In district 15 very common. Unlocalised record at **TR01**. Localised records:

- TQ82:** Sandhurst Levels in 1954 [MNE]
- TQ83:** dykes east of Friezingham by Windmill Channel in 1959 (tetrad **TQ83Q**) [MNE]
- TQ92:** west of Snargate in 1959 (tetrads **TQ92U** and/or **92Z**)
- TQ93:** Appledore in 1954 (tetrads **TQ92P** and/or **92U**) [MNE]; and Shirley Moor
- TR02:** [generally unlocalised other than older records] at Lydd in 1897 [Lamb – MNE]
- TR03:** Ruckinge in 1956 (tetrad **TR03G**) [MNE]
- TR13:** ditch on the Burmarsh Road, Hythe [L.J. Margetts].

....

**Wolffia** Horkel ex Schleid**W. arrhiza** (L.) Horkel ex Wimm. Rootless Duckweed

District 15: locally abundant in a few places. Localised records:

- TQ83:** Dyke by Windmill Channel, east of Rolvenden Layne in 1959 (**TQ867305**)
- TQ92:** east of Stone [E.C.W.]; Snargate (tetrad **TQ92Z**) [E.C.W. – BEC. Rep. 1939-40 p. 297] and 1959 (!); and north of Arrowhead Bridge, west of Snargate in 1955 and 1959 (**TQ987295**) [1955 record – MNE]
- TQ93:** south of Kenardington (tetrads **TQ93Q** and/or **93V**); and dyke north of B2080, Shirley Moor in 1965 [MNE]
- TR02:** unlocalised record
- TR03:** Newchurch in 1956 (tetrad **TR03L** etc) [E.S.]; and ditch south of Royal Military Canal, Ruckinge in 1956 (tetrad **TR03G**) [E.S.].

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**Juncus** L.

....

**J. gerardii** Loisel.

Common and general in district 15. It occurs well inland at Fairfield, Sandhurst Levels, Brenzett and Shirley Moor, probably as a relic of ancient brackish conditions. Recorded for **TQ82**, **TQ92**, **TQ93**, **TR01**, **TR02** and **TR03**. Localised records:

- TQ82:** Sandhurst Levels in 1954 [Maidstone herbarium]
- TQ92:** south of Appledore (tetrad **TQ92P**); and Fairfield in 1952 (tetrad **TQ92T**) [MNE]
- TQ93:** Shirley Moor in 1945 [MNE]
- TR01:** Galloways in 1953; South Brooks in 1945 (tetrads **TR01I** and/or **01J**); Midrips (**TR0018**); and Dungeness near school in 1953 [MNE]

**TR02:** west of church at Brenzett in 1945 (**TR0027**); northeast of New Romney; and marsh behind Greatstone in 1950 (**TR0722**)

**TR13:** south of Lympne by dyke in 1947 (tetrad **TR13G**) [MNE]; and northeast of Dymchurch in 1947 (tetrad **TR13A**) [MNE].

....

**J. subnodulosus** Schrank. Blunt-flowered Rush

In relation to district 15: old shingle workings northeast of Dungeness bird observatory (**TR0817**).

....

**J. articulatus** L. Jointed Rush

Localised records for district 15: Dungeness (**TR01**); Romney Warren (tetrad **TR02S**); west of Newchurch in 1955 (**TR038304**); and Small Hythe in 1956 (**TQ888296**).

....

**J. acutiflorus** Ehrh. ex Hoffm. Sharp-flowered Rush

Localised record for district 15: Hoppen Pits (**TR0718**).

....

**J. inflexus** L. Hard Rush

Very much commoner in district 15 than *J. effusus*. Localised records: southwest and northeast of Brookland in 1954 (tetrads **TQ92R**, **92S**, **92X** and **92Y**); and Hexden Channel in 1954 (**TQ82**).

**J. effusus** L. Soft Rush

Not very common in district 15, and especially found along the north and west fringe of the Marsh. Localised records: Hexden Channel (**TQ82**); and Shirley Moor 1 mile east of Reading Street in 1954 (tetrad **TQ93F**).

**J. conglomeratus** L. Compact Rush

Rare in district 15.

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**Eriophorum** L.

**E. angustifolium** Honck. Common Cottongrass

In relation to district 15, records at: Hoppen Pits on Denge Beach 1945-62 (**TR0718**) [MNE]; and shingle pit in Marsh east of school, Dungeness in 1962 (**TR01**).

....

**Eleocharis** R. Br.

**E. palustris** (L.) Roem. & Schult. Common Spike-rush

Localised records for district 15: Shirley Moor, dyke north of B2080 on 1965 (tetrad **TQ93F**); Shirley Moat Pond (**TQ93**); Kenardington Royal Military Canal, dykes and by bridge (tetrads **TQ93Q** and/or **93V**) [E.S.]; Hoppen Pits, Dungeness in 1959 (**TR0718**) [MNE]; Benzett [tetrad **TR02D** etc].

....

**E. uniglumis** (Link.) Schult. Slender Spike-rush

In relation to district 15, formerly at Denge Marsh in 1861 (**TR01**) [Herb. J.S. Mill.]

....

**Bolboschoenus** (Asch.) Palla

**B. maritimus** (L.) Palla Sea Club-rush

In relation to district 15, abundant and widespread. Unlocalised record in **TQ92**. Localised records: south of Wittersham (**TQ82**); 3 Shirley Moor in 1942 (**TQ93**) [J.H.L. – MNE]; The Wicks (tetrads **TR01A** and/or **01B**); South Brooks (tetrads **TR01I** and/or **01J**); Church Lane, New Romney (**TR066244** etc) [R.A.R.]; Dymchurch (**TR03** or **TR13**); 1 mile east of Reading Street in 1954 (tetrad **TQ93F**); and south of Ox pound (**TR035308**).

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**Schoenoplectus** (Rchb.) Palla

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**S. tabernaemontani** (C.C. Gmel.) Palla Grey Club-rush

In district 15, fairly common and widespread. Unlocalised site in **TQ82**. Localised records at: Snargate (tetrad **TQ92Z**); east of Appledore in 1954 (tetrad **TQ92U**) [MNE]; Shirley Moor (**TQ93**) [E.S.]; Hoppen Pits, Denge Beach in 1946 (**TR0718**) [MNE]; Brenzett (tetrad **TR02D** etc); and Palmarsh gravel pits (tetrad **TR13G**) [L.J. Margetts].

**S. triqueter** (L.) Palla                      Triangular Club-rush

....Not refound!....Apparently destroyed by dredging of the river channel, or possibly by pollution: its hybrid with *tabernaemontani* however still survives....now extinct on the Medway above and below Aylesford on the tidal mud banks.<sup>71</sup>

**Isolepis** R. Br.**I. setacea** (L.) R.Br.                      Bristle Club-rush

In relation to district 15, abundant on Romney Warren in 1945 (tetrad **TR02S**) [MNE].

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**Cyperus** L.**C. longus** L.                      15                      1 or 2 / 51                      Galingale

Native. Calcareous marshes near the S.E. coast, extremely rare, and possibly extinct in one of its two localities, though persisting in the other. A species of S.W. distribution in Britain and Europe, not otherwise known nearer than S. Hants and the Isle of Wight.

8) 35 Roadside Bank (by the course of a former stream from chalk springs), near station, Walmer, Miss B. Nash: 1958! MNE. 1959! 1962 C.A. Lister. Probably a survival of a very different former habitat here.

16) 13 Whitenbrooks Wood, Seabrook, near Hythe 197352<sup>72</sup> (peaty calcareous carr on Sandgate Beds) G.E. Smith, C.P.S.K.: BM. Ed. Forster BM, also Hb. J. Storey: the habitat is unchanged, except that it is overgrown, and a large cyperaceous species, which could be *C. longus*, still exists here, but never produces inflorescences.

As an alien, it occurs at:

10) "Westerham", 1952, L.P. [Samuel]

11) Wet field, Hever, E.C.W., B.E.C. (1933) p.547.

14) Pond by Hawkhurst Old Church, 1956, P.C.H.

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**Carex** L.

....

**C. diandra** Schrank                      Lesser Tussock-sedge

In relation to district 15, present at Dungeness Marsh in 1956.

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**C. vulpina** L.                      15, 16                      8/52

Native. Pond-borders, ditches and sallow-carrs on the Weald Clay tract from S.E. of Ashford to the Surrey border, where it is frequent; unknown elsewhere in Kent. It occurs always in unflushed, weakly acid to neutral habitats on essentially inorganic substrate. Very rare in Surrey on the Weald Clay of the S.E., where its localities near the Eden are a continuation of its Kentish distribution: very rare in Sussex (Arun Valley) (Amberley area). Unknown in Essex or Pas de Calais.<sup>73</sup>

11) 44 By Eden above Edenbridge, c. 435450, F.R. 1947.                      [Near Maidstone, E. Bartlett, 1882, MNE.]

54 By R. Eden N E of Chiddingstone, E.S.M. 1894, BM det. E. Nelmes (B.E..C Rep. 1939-40, p.263). E.C. W., 1939: 1944! J.H.L. & F.R. c. 513457

54 Below Gilridge, W.of Penshurst. 1944 F.R. 515441

54 R. Eden, W. of Penshurst 1944-61, MNE. 521438, F.R. 1961 MNE

54 R. Medway, above Tonbridge, 1944-5. 557456, F.R. 1945. Below Tonbridge 604472 etc., by River, and in lateral ditches, 1944-52 [to c. 1950] also 599467.

64 Roadside ditch and hollow by Medway, J.P.M.B. 1939: Hartlake Bridge, J.R.W. 1943, det. E.N.; F.R. 1952 603473<sup>74</sup>.

64 Ditch by B2015, N.E. of Whetsted 658462, 1944 MNE – 1963!

<sup>71</sup> Taken from Rosemary FitzGerald's notes of the species account.

<sup>72</sup> Likely to be in error for TR17935.

<sup>73</sup> In addition to a copy of the manuscript Flora account which bears cumulative revisions to 1985, there exists a later manuscript note by Francis Rose headed **CAREX VULPINA L. Kent records held by FR**. This does not appear to be specifically intended for the Flora, but gives very similar information for records, albeit sometimes with additional details. Those additions have been included above in the Flora account, but are given in blue font, so as to distinguish. The note is prefaced by the comment that: 'The British headquarters of this species is clearly the Weald of Kent, on Weald Clay: habitats are river- and stream-sides, wet meadows, ditches and swampy woods'.

<sup>74</sup> Thus as written, but 630473 may have been intended.

- 64, Ditch, S. of Broadbridges [674482](#), 1944 MNE.  
 64 Medway E. of Broadbridges.  
 64 Gravel pits E. of Broadbridges [F.R. 1948: 677483](#)<sup>75</sup>.  
 ¾ m S. of Hartlake Bridge, 1962 C.A.S.  
 64 :Pond and wet copse ½ m E. of Hale Street, 1948 MNE, in wood 1985! [681495](#) etc.  
 74 Ponds by B20162, S. of Yalding, 1944 → [F.R. 709481](#) MNE.  
 74 Ponds 1m N. of Marden, [F.R. 1952 789459](#)<sup>76</sup>.  
 74 Ditch by A.229, S.E. of Stile Bridge, Marden, [F.R. 1946. 770471](#).  
 74 Ditch by A.229, Sweetlands Corner, N. of Staplehurst: 1946 → [F.R. 784455](#).  
 84 Ditch, Leighbridge, W. of Headcorn, [F.R. 1962. 814454. 893406 E. of Langley Smarden, R.A.Clarke, 1956](#).  
 84 R. Beult W. of Smarden, 877423, [F.R. 1956](#) MNE.  
Ditch, Frittenden Rd. Headcorn 824433, [R.A.Clarke](#).  
 863438 Roadside ditch N. of Marley Farm Smarden, 1949, [D.McClintock](#).  
 94 Roadside ditch E. of Vitter's Oak, Bethersden, [952407](#), 1985, [E. Scott](#).  
 12) S. of Betherseden [E.Philp \(Tetrad 9238 – probably by river SW of village\)](#)  
 93 By (former) B.2070, N. of Orlestone 992358. 1945-6. MNE; still there 1985.  
 03 Ditch, Steeds Lane, SE of Kingsnorth, 019377 etc. [E. Scott: 1956: MNE.](#)  
 (020377 – 016377)  
 020350 ditch N. of Ruckinge, [E.Scott](#).  
Marsh N. of Breaches Pond, N. of Tenterden [c.872353](#)<sup>77</sup>, [F.R. & J. Pitt 1987](#).

**C. otrubae** Podp. False Fox-sedge

District 15: unlocalised record in [TQ92](#). Localised records for: Shirley Moor ([TQ93](#)); Dungeness open pits ([TR0718](#)); Brenzett (tetrad [TR02D](#) etc); Romney Warren (tetrad [TR02S](#)); canal at St Mary's Bay (tetrad [TR02Y](#)) [[L.J. Margetts](#)]; below Copperhurst, Aldington (tetrad [TR03S?](#)); west of Hythe ([TR13](#)); dyke by road north of Olney in 1954 ([TQ92](#)); southwest of Brookland to Sussex border in 1954 (tetrads [TQ92R](#), [92S](#) and [92X](#)).

....

**C. spicata** Huds. Spiked Sedge

In district 15, records at: Dungeness ([TR01](#)); and Boulderwall in 1956 etc (tetrad [TR01U](#)).

....

**C. disticha** Huds. Brown Sedge

In district 15, records at Appledore ([TQ92](#)); Dungeness Marsh in 1956 ([TR01](#)); and Boulderwall in 1956 (tetrad [TR01U](#)).

....

**C. divisa** Huds. Divided Sedge

Localised records for district 15: Brenzett in 1945 ([TQ92](#) or [TR02](#)); east of Appledore (tetrad [TQ92U](#)); Shirley Moor by dyke north of B2080 in 1965 (tetrad [TQ93F](#)); Lydd ([TR02](#)); 5) canal at St Mary's Bay (tetrad [TR02Y](#)) [[L.J. Margetts](#)]; southeast of Ham Mill Green, Romney Marsh in 1952 ([TR0031](#)) [[D. McClintock](#)]; Hythe in 1979 ([TR13](#)) [[E.B. Clarke](#)]; and Dungeness Marsh, near lighthouse in 1956 (tetrad [TR01Y](#)).

....

**C. elongata** L. 15, 16

Native. Swamps, sallow-carrs, river and ditch banks, in Kent always on the Weald clay: very rare. Very rare, in a few places by rivers in Surrey and Sussex; extinct in Essex: unrecorded in Pas de Calais but fairly frequent in the east of Nord (forêt de Wassigny!).

- 11) Marsh below Gilridge, W. of Penshurst, 1944 MNE.  
 By Railway Bridge, by Medway, W. of Tonbridge, 1944, 1960, CAS.  
Ditch 1m E. of Tonbridge, abundant, 1944 MNE 1952 MNE.  
 Ditch E. of Beltring, J.E.L. Marshy wood E. of Hale Street, E. Peckham, 1952 MNE.
- 12) "Scotts Pond", Stubbs Cross, Kingsnorth, E.S.; 1952 MNE.

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**C. hirta** L. Hairy Sedge

<sup>75</sup> Gravel pits do not appear to have existed at this grid reference 1940-60.

<sup>76</sup> Thus as written, but 746549 may have been intended.

<sup>77</sup> Thus as written, but 867349 is more likely.



In relation to district 15, probably common. Localised records: Ivychurch in 1954 (apparently tetrad **TR03K**); Dungeness Marsh in 1956 (**TR01**); and Boulderwall in 1956 (tetrad **TR01U**).

....

**C. acutiformis** Ehrh. Lesser Pond-sedge

In district 15 along the Royal Military Canal and other localised records: roads west from Newchurch in 1955 (**TR038304**); and lane south of Kenardington Bridge in 1959 (tetrads **TQ93Q** and/or **93V**).

**C. riparia** Curt. Greater Pond-sedge

Generally absent from district 15, but with localised records at: Sandhurst Levels (**TQ82**); and big dyke parallel to B2080 in 1959 (tetrads **TQ92U** and/or **92Z**).

**C. pseudocyperus** L. Cyperus Sedge

In district 15, still in the sites listed in *Flora of Kent*. Localised records: Windmill Channel levels east of Friezingham in 1959 (tetrad **TQ83Q**); ditch by Hexden Channel in 1954 (**TQ82**); dykes south from **TQ940320** on Shirley Moor (tetrads **TQ93F** and/or **93V**); Boulderwall in 1956 (tetrad **TR01U**); Stone Cliff in 1958 (*ca* **TQ943263**); and Royal Military Canal south of Kenardington in 1959 (tetrad **TQ93Q**).

**C. rostrata** Stokes Bottle Sedge

In district 15, at Hoppen Pits (**TR0718**).

....

**C. flacca** Schreb. Glaucous Sedge

In district 15, mainly coastal. Localised records: Royal Military Canal; St Mary's Bay (tetrad **TR02Y**); northeast of Dymchurch (tetrad **TR13A**); and Potman's Heath in 1958 (tetrad **TQ82U**).

**C. panicea** L. Carnation Sedge

In district 15, at Dungeness (**TR01**).

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**C. distans** L. Distant Sedge

Occasional throughout district 15. Localised records: South Brooks, Denge Marsh (tetrads **TR01I** and/or **01J**); brackish marsh southwest of Littlestone in 1946 (tetrads **TR02R** and/or **02S**); behind dunes, Greatstone in 1947 (tetrads **TR02R** and/or **02W**); abundant in shingle lows southwest of Hythe in 1947 (tetrads **TR13G** and/or **13L**); on sea-wall northeast of Dymchurch in 1947 (tetrad **TR13A**); and Dungeness Marsh in 1956 (**TR01**).

**C. x tornabonii** Chiov. (**C. distans** x **C. extensa**)

In district 15, at Littlestone in 1902 (**TR02**) [Herb. G.C. Druce det. J.P.M. Brenan].

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**C. nigra** (L.) Reichard Common Sedge

In district 15, at Dungeness, by the pits in 1956 (**TR0718**).

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**Festuca** L.

**F. pratensis** Huds. Meadow Fescue

Possibly absent from district 15, though there are localised records: Hythe in 1956 (**TR13**); and Small Hythe in 1956 (**TQ888296**).

....

**F. arenaria** Osbeck

[*In manuscript given as:*]

**F. juncifolia** St.-Amans

Native: Fixed dunes, and white dunes becoming fixed: rare, but very locally abundant on the Sandwich dunes and at Shellness in Sheppey. Also at Camber, E. Sussex (1961!); Crabknowe spit, Essex (1956!); and on the dunes of Pas de Calais.

2) in Ammophiletum on shell-sand, Shellness, Sheppey, 1962 MNE.

4) Sandwich Bay, Dunes N. of Princes Club House, 1952 MNE. St Georges Links 1962 MNE. 1963, K.F.C. det. A. Melderis.

(not reported yet from New Romney area, but it probably occurs there.)

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**Lolium** L.

**L. perenne** L. Perennial Rye-grass

Ubiquitous *e.g.* in district 15: pastures south of Royal Military Canal, Ruckinge in 1956 (tetrad **TR03G**); Small Hythe (**TQ888296**); southwest of Ivychurch in 1958 (tetrad **TR02I**); dyke west of Appledore station in 1959 (tetrad **TQ92U**); and Windmill Channel levels (tetrad **TQ83Q**).

....

**Vulpia** C.C. Gmel.

....

**V. unilateralis** (L.) Stace

[*In manuscript given as:*]

**Nardurus** [**maritimus** (L.) Murb.]

- 6) Broken chalky bank, between arable and downland, 628605, above Wrotham Water, P.C.H., 1959. 1959! Rough open chalky field, Halling Warren, P.C.H., 698656, 1959. White Pit, Upper Halling + *T. botrys*, P.H.
- 7) Chalk pit, Hollingbourne Hill, 848558, 1959 P.H.: 1959! det. A. Melderis.
- 8) *Wye*.
- 15) Littlestone, Lady Davy, 1909.

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**Cynosurus** L.

....

**C. echinatus** L.

Vc16: X BEC, '35, p.47.

- 1) [1 plant, Bexley, 1946. Hayes, casual, D.McC.] [Beckenham, 1934, A.G. Dans MNE.]
- 4) gravel pit, Lower Stonar, Richborough, C.C.T., 1948. Beach by Guilford Hotel, Sandwich Bay, abundant 1946-1961, D. McClintock. Locally abundant, Walmer Beach, 1946 MNE.
- 6) Temple Farm Estate, Stroud, G.O.P. Roadside, Cliffe, 1951, D. Hambler.
- 8) Dover E. Cliff, K.D.R. Bridge J.G.
- 9) Birchington, 1960 in shoddy, D. McC.
- 11) [Maidstone, N.C. Cook. 1924 MNE.]
- 15) Old shingle workings N. of Lighthouse, Dungeness 1948, B.W. 1953-54 MNE. Shingle workings SE of Halfway Bush, Denge Beach 1946 MNE. Greatstone, 1946, rare MNE.

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**Puccinellia** Parl.

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**P. distans** (Jacq.) Parl. Reflexed Saltmarsh-grass

Localised records for district 15: north and south of Dymchurch (tetrads **TR02Z**, **TR12E** and/or **TR13A**); St Mary's Bay (tetrad **TR02Y**); southeast of New Romney (tetrads **TR02R** and/or **02S**); and Fairfield (tetrad **TQ92T**).

**P. fasciculata** (Torr.) E.P. Bicknell Borrer's Saltmarsh-grass

Localised records for district 15: Fairfield in 1952 and 1962 (**TQ982264**) [Mrs K.D.R.]; northeast of Littlestone in 1947 and 1950 (tetrad **TR02X**) [MNE]; St Mary's Bay in 1947 (tetrad **TR02Y**) [MNE]; and by canal west of Hythe in 1956 (**TR13**) [L.J. Margetts – MNE].

....

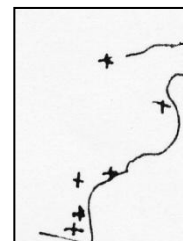
**Poa** L.

....

**P. bulbosa** L. 15 6/51

Native. Fixed dunes and old dune pasture, turfed shingle beach, sandy cliffs: locally abundant on the E. Kent coast in 4) and 15), at Swalecliffe in 3), unrecorded elsewhere. Very locally abundant on the Sussex coast and westward on that of Hants and Devon: unrecorded for Essex and only adventives in Surrey, but it occurs rarely on the Suffolk and Norfolk beaches and in the Pas de Calais. Commoner on the Kent coast than in any other part of England.

- 3) 16 Beach, Swalecliffe, P.R. Bell.
- 4) 35 Fixed dunes, Deal Links, 1961. 35 Sandwich Bay; 1946: 35 E. of Downs Farm, 1962. 35 St Georges Links 1946-61 MNE. 35 Walmer Beach, 1946.



- 5) Ancient dunes, S. of West Hythe, 1962 MNE.  
Beach W. of Hythe, rare, 1946-55 MNE. N. of Lighthouse, Dungeness, abundant 1948-68 MNE.  
 By A259, Romney Warren, 1947-62 MNE. Littlestone beach, 1958, MNE.  
S.W. of Lydd, J.H.L., 1946. N.E. of Littlestone, 1962, E.S.  
Folkestone Leas, W. end, 1946, abundant MNE; 1954 E.S. MNE.

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**Agrostis x Polypogon = X Agropogon** P. Fourn.

**A. stolonifera x P. monspeliensis = X Agropogon littoralis** (Sm.) C.E. Hubbard

[Plumstead Marshes, by Practice Butts, 1845, 1846, 1850, MNE. Extinct here now.]

All Hallows, J.E.L.

Brackish dikes E. of Stoke Junction Halt. 1949 MNE.

Brackish dikes S. of village, Grain. 1947, 1949, W. of Fort MNE.t

Near Grain Crossing Halt, Grain, 1946.

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**Glyceria** R. Br.

**G. maxima** (Hartm.) Holmb. Reed Sweet-grass

For district 15, recorded in **TQ82**, **TQ83**, **TQ92**, **TQ93**, **TR01-03** and **TR13**. Localised records: Shirley Moor in 1945 (**TQ93**) [MNE]; Dungeness (**TR01**); Brenzett (tetrad **TR02D?**); Ham Street (tetrads **TR03A** and/or **03B**); Royal Military Canal; Kenardington (tetrads **TQ93Q** and/or **93V**); Sandhurst Levels in 1954 (**TQ82**) [MNE]; common by the Canal at Warehorne in 1954 (tetrads **TQ93V** and/or **93W**); and dyke on Shirley Moor at 1955 (**TQ940320**).

**G. fluitans** (L.) R. Br. Floating Sweet-grass

Everywhere. Localised records for district 15: Hexden Channel in 1954 (**TQ82**); and Shirley Moor in 1955 (**TQ940320**).

**G. x pedicellata** F. Towns. Hybrid Sweet-grass

In district 15: Burmarsh road, Hythe (**TR13**).

....

**G. notata** Chevall. Plicate Sweet-grass

In district 15, quite common. Localised records: Hexden Channel in 1954 (**TQ82**); near Selby Farm in 1958 (tetrad **TR13B**); Stone Cliff in 1958 (**TQ943263**); and pond southwest of Ivychurch in 1958 (tetrad **TR02I**).

....

**Trisetum** Pers.

**T. flavescens** (L.) P. Beauv. Yellow Oat-grass

Localised records for district 15: South of Ham Street (tetrads **TR03A** and/or **03B**); and Potman's Heath in 1956 (tetrad **TQ82U**).

....

**Deschampsia** P. Beauv.

**D. cespitosa** (L.) P. Beauv. Tufted Hair-grass

In district 15: Hexden Channel in 1954 (**TQ82**); and Royal Military Canal south of Appledore in 1959 (tetrad **TQ92P**).

....

**Anthoxanthum** L.

**A. odoratum** L. Sweet Vernal-grass

In district 15, common. Localised record at Potman's Heath in 1956 (tetrad **TQ82U**).

....

**Phalaris** L.

**P. arundinacea** L. Reed Canary-grass

Localised records for district 15:

**TQ82**: dyke near Hexden Channel in 1954; west of Wittersham in 1956; and Potman's Heath in 1956 (tetrad **TQ82U**)

**TQ92**: dyke over ½ mile west of Appledore Station in 1959 (tetrad **TQ92U**)

**TQ93**: dykes south and west of road on Shirley Moor in 1955 (**TQ940320**, tetrads **TQ93F** and **93K**); and Royal Military Canal, Kenardington in 1959 and southward (tetrad **TQ93Q**)

**TR02:** Ivychurch in 1954 (tetrad **TR02I**); and sewer on main road north of Old Romney in 1959 (tetrad **TR02H**)

**TR03:** south of Ham Street in 1954 (tetrads **TR03A** and/or **03B.**)

....

#### Agrostis L.

**A. capillaris** L. Common Bent

Localised record for district 15: Hexden channel, Newenden in 1956 (tetrads **TQ82J** and/or **82P**).

....

**A. stolonifera** L. Creeping Bent

In district 15, common. Localised records: Small Hythe in 1956 (**TQ888296**); Potman's Heath in 1956 (tetrad **TQ82U**); and Hexden channel, Newenden in 1956 (tetrads **TQ82J** and/or **82P**).

....

#### Polypogon Desf.

**P. monspeliensis** (L.) Desf.

Native. Brackish marshes and alluvial dikes, usually on mud drying out in late summer; very rare, but locally plentiful. It also occurs as a shoddy casual. In Sussex, very rare in extreme west only: unknown in Surrey: very rare in Essex. Only as an adventives in Nord: not in Pas de Calais.

[Woolwich, F. Barham, 1846 MNE: Plumstead Maeshes, 1850 MNE.]

[57 Stone Marshes, 1930, G.C. Pownall.]

2) Open muddy parts of brackish *Phragmites* swamp, N. of Stoke Junction Halt, abundant, J.E.L. 1945-61! MNE. Brackish dikes S. of village, Grain. Dikes E. of Stoke Junction Halt MNE 1945-61. Dikes near Grain Crossing Halt, 1945 MNE. ± dry Salting behind S. beach, Grain MNE. Brackish marsh E. of Binney Farm, All Hallows, 1954, J.E.L.: 1954! MNE. Brackish marsh behind beach, N.W. of Leysdown, 1948-1958-1962, C.A. Lister -1963!

[77 Siding, Sharnel Street, with shoddy aliens, D.McC.]

4) [36 Dikes, alluvial flats, N.E. of Sandwich, Fl. K.]

[As a shoddy alien at:

4) Sandwich:

11) Comp and Wrotham, all 1960, D.McC. MNE]

....

#### Alopecurus L.

**A. pratensis** L. Meadow Foxtail

In district 15: meadow by Hexden Channel in 1954 (**TQ82**)

**A. geniculatus** L. Marsh Foxtail

Localised records for district 15: Sandhurst Levels in 1954 (**TQ82**) [MNE]; Windmill Channel southeast of Rolvenden in 1959 (tetrad **TQ83Q**); Shirley Moor (**TQ93**) [E.S.]; Dungeness (**TR01**) [K.D.R.]; canal at St Mary's Bay (tetrads **TR02Y** and/or **02Z**) [L.J. Margetts]; Willow Tree Farm, Burmarsh Road (**TR139339?** etc); and Reading Sewer in 1956 (**TQ884294**).

....

**A. bulbosus** Gouan Bulbous Foxtail

Native. Brackish meadows: extremely rare, and only seen in recent years<sup>78</sup> at Frindsbury. Very rare in Sussex and Essex.

Brackish alluvial meadows between Frindsbury and Upnor, abundant, J.H.L. & F.R., 1944 to 1960! MNE

Below Gravesend, C.P.Hurst, 1890 MNE probably equals: Higham Marshes near Kralite, J.B. Marshall 1938.

Seasalter Marshes, abundant, H.M.W., 1965.

....

**A. aequalis** Sobol.

1) Hayes Common. W.C.R.W.

2) Harty, R.D. English.

6) Thong, in Pond, 1956, P.C.H. det. A. Melderis.

11) Pond in NW part of Ryarsh Wood, 1944 MNE.

12) Dried up pond, Willesborough, C.N.P., 1946. The Moat, Secington, C.N.P., 1946. Mersham-le-Hatch, Miss E. Davies, 1960 MNE. Gibbons Brook, Sellindge, 116386, 1958, L.J. Margetts MNE.

<sup>78</sup> 'Recent years' will have been before 1985, possibly well before. It since transpires that, although rare, the grass is more widespread than this.

13) Finchcookes Road, J. Stirling TLS.

....

**Bromus L.**

**B. commutatus** Schrad. Meadow Brome

In district 15: Maytham Wharf in 1958 (ca **TQ867277**).

**B. racemosus** L. Smooth Brome

Localised records for district 15: Maytham Wharf, Wittersham in 1958 (tetrad **TQ82T**) [MNE]; and on Sandhurst Levels in 1954 (**TQ82**) [MNE].

....

**Elytrigia** Desv.

....

**E. atherica** (Link) Kerguélen ex Carreras Mart. Sea Couch

Localised records for district 15: Fairfield? (**TQ92T**); Camber in 1956 (**TR01**); and Reading Sewer in 1956 (**TQ884294**).

....

**Hordeum L.**

....

**H. secalinum** Schreb. Meadow Barley

In district 15, very common. Localised records: south of Ham Street in 1954 (tetrads **TR03A** and/or **03B**); Brenzett in 1955 (tetrad **TR02D** etc); and 1 mile northeast of Ivychurch in 1955 (**TR037285**).

....

**Molinia** Schrank

**M. caerulea** L.) Moench Putple Moor-grass

In district 15: Dungeness (**TR01**).

**Phragmites** Adans.

**P. australis** (Cav.) Trin. ex Steud. Common Reed

Everywhere. Localised records for district 15: dykes north of Oxney in 1954 (**TQ92**); Ivychurch in 1954 (tetrad **TR02I** etc); and Newchurch in 1954 (tetrad **TR03K** etc).

....

**Sparganium L.**

**S. erectum** L. Branched Bur-reed

Localised records for district 15: pond at Palstre Court, 1½ miles west of Wittersham, Oxney in 1958 (**TQ8828**, off the levels); Appledore, dyke near Station in 1959 (**TQ9729**) [MNE]; Shirley Moor near B2080 in 1945 (tetrad **TQ93F**) [MNE]; 4) Brenzett (tetrad **TR02D** etc); and New Romney (tetrad **TR02S**). Subsp. *neglectum* recorded at: north of B2080 on Shirley Moor in 1965 (tetrad **TQ93F**); and Newchurch in 1954 (tetrad **TR03K**).

**S. emersum** Rehmman Unbranched Bur-reed

In relation to district 15: ditch by Windmill Channel in 1959 (**TQ837305**); and Royal Military Canal, Kenardington in 1959 (tetrad **TQ93Q**)

....

**Typha L.**

**T. latifolia** L.

Not uncommon in district 15. Only localised records: Shirley Moor 1 mile east of Reading Street in 1954 (tetrad **TQ93F**); and west of Wittersham in 1956 (**TQ82**).

**T. angustifolia** L.

Locally common in district 15; commoner than *T. latifolia*. Unlocalised records in **TQ83**, **TR92**, **TQ93**, **TR01-03** and **TR13**. Localised sites: Shirley Moor (**TQ93**); Brenzett in 1955 (**TR005285**); Dymchurch [J.G.]; ditch by Royal Military Canal, Appledore in 1962 (**TQ958294**) [H.M.P.]; Palmarsh (tetrad **TR13G**); and Hoppen Pits, Dungeness (**TR0718**).

....

**Lilium L.**

**L. martagon** L. 15, [16] Martagon Lily, Turk's Cap Lily

Possibly native. In woods on clay over the chalk: very rare, but known today in four natural-looking localities, and similarly elsewhere in the past. On the continent it comes no nearer than E. France; this is against it being a native of Britain.

- 6) Ash, "plentifully in a very wild situation" N.B. Ward, *Phyt*, III, p.300. Copse at Meopham, Beeby. "Grove at Cobham, planted?" E. de C.
- 7) Hoath Wood, Ospringe, Mrs. W. Verschoyle, 1948: 1948-62! MNE. It is extremely abundant here in coppice among *Mercurialis* on a basic clay loam. 159501, S E corner of Hayfield, E. of Manor House, near Hardres, 1953 E.E. Day: D.A. & E.D., 8 plants 1955: 20 plants 1958, D.A.C.L.
- 8) S. of Penny Pot Chilham, in Wood on clay loam, 093511, H.M. Wilks: 1961! Lords' Wood, Temple Ewell, 12 in flower, H.M. Wilks, 1961: 1961! in coppice in a valley on chalk, about ¼ mile from any house or cultivation. Bourne Park, Bishopsbourne, naturalised, 1942.

....

**Iris pseudacorus** L. Yellow Iris

In relation to district 15, very common on Shirley Moor (TQ93) and quite frequent in other places: Brenzett (tetrad TR02D etc); Snargate (tetrad TQ92Z); Ivychurch (TR02) and Newchurch in 1954 (TR03)

....

### The Orchids of Kent<sup>79</sup>

The county of Kent has had more orchids recorded for it than any other British county, 43 species and sub-species in all.

**Cephalanthera damasonium** (Miller) Druce

**C. longifolia** (L.) Fritsch

(**C. rubra** (L.) Rich.)

**Epipactis palustris** (L.) Crantz

**E. purpurata** Smith

**E. purpurata** x **E. helleborine** = **E. x schulzei** P. Fourn.

**E. helleborine** (L.) Crantz

**E. leptochila** (Godfery) Godfery

**E. phyllanthes** G.E. Smith

**Neottia nidus-avis** (L.) Rich.

**Listera ovata** (L.) R.Br.

**Spiranthes spiralis** (L.) Chevall.

(**Liparis loeselii** (L.) Rich.)

(**Hammarbya paludosa** (L.) Kuntze)

**Herminium monorchis** (L.) R.Br.

**Platanthera chlorantha** (Custer) Reichb.

**P. bifolia** (L.) Rich.

**Anacamptis pyramidalis** (L.) Rich

(**Pseudorchis albida** A.Löve & D.Löve)

**Gymnadenia conopsea** (L.) R.Br.

**G. densiflora** (Wahlenb.) Camus, Bergon & A. Camus

<sup>79</sup> A list headed The Orchids of Kent was amongst documents typed out when Francis Rose was embarking on his revision of the Flora c.1999. It is unclear whether it was intended for the Flora and what was its relationship with the general checklist of species, whose typing up was incomplete, but it is given here.

**Coeloglossum viride** (L.) Hartman**Dactylorhiza fuchsii** (Druce) Soó**D. maculata** (L.) Soó**D. incarnata** (L.) Soó**D. praetermissa** (Druce) Soó**D. praetermissa** ssp. **iunialis****Orchis mascula** (L.) L.**O. morio** (L.)**O. ustulata** L.**O. purpurea** Hudson**O. purpurea** x **Aceras anthropophorum** = X **O. melsheimi** Rouy**(O. militaris** L.)**O. simia** Lam.**O. simia** x **Aceras anthropophorum** = X **O. bergonii** (Nanteuil)**Aceras anthropophorum** (L.) W.T. Aiton**Himantoglossum hircinum** (L.) Sprengel**Ophrys insectifera** L.**O. sphegodes** Miller**O. apifera** Hudson**O. fuciflora** (Crantz) Moench**O. scolopax** Cav.**Serapias cordigera** L.**Orchis ustulata** L. 15, [16]. Dwarf Orchid 6/52

Native. In short grassland on chalk: rare, and now only in 7) and 8), though in some local abundance in some localities in 8) in some seasons: only recorded in seven localities since 1947, and apparently long extinct in V.C. 16. This charming species appears to have diminished everywhere in England this century due to ploughing up, and lack of grazing, of chalk grasslands. It has not been seen in Surrey very recently though probably still exists there: it is still abundant in a few Sussex localities; extinct in Essex; and confined to one locality (Blanc Nez) in Pas de Calais. This species requires about 14 years for development of a flower spike from a seed, and each plant apparently flowers once only, so it should not be picked.

[5) reported at Darwins Bank, Downe, by E.J. Epps, 1939: Polhill, H.Knight / Chevening Park, H. Knight probable errors for *Herminium*.]

[6) Formerly at Gravesend and Dartford, F.C.K.]

7) 86 Queen Down Warren 829629/ 1880, Fawcett Osborne MNE: 1905, MNE. 1923 MNE.

|                       |          |               |
|-----------------------|----------|---------------|
| 1939, c.24 infl.      | 1949     | 1956          |
| 1942 nil              | 3 - 1950 | 1957          |
| 1943 – 1 infl.        | 1951     | 1958          |
| 1944 - nil            | 1952     | 1959          |
| 1945 – a few, Whelon. | 1953     | 13 - 1960     |
| 1946 – 24 infl.       | 1954     | 15 – 1961 MNE |
| 1947                  | 1955     | 1962          |
| 1948 – 5 infl.        |          | 1963          |

[Formerly near Bluebell Hill and Faversham, Fl. K.]

8) 04 Down S.E. of the Crown, Wye, F.G.E.K.: a few, 1954, K.E.B.: 33 spikes, 1952, M.E.M.; 1953, 4 infl.

D.A.C.L.; 1 infl., 1955, below Crown, Mrs. N.E. Baker; 1959! 3 infl.; 1964, 2 infl. Mrs B.

Broad Down, Brook, 1964, Mrs. B., 1 plant.

Down above Bulltown, H. Greenfield.

14 S. of Whiteacre, Waltham, 1945, D.H.K.

14 Cobbs Hill, E. of Stowting, 1947, D.H.K & F.R., 1 infl.

14 Down E. of Elham, Miss V. Day.

23 N.W. side Sugar Loaf, Folkestone, 1939, B.J.B: below tank trap, 1951, D.A.C.L. E. of Folkestone, 1957, A.C. Cawston.

[24 S.E. of Sladden Wood, Alkham, Miss V. Day: apparently now gone.]

24 Little London, Down S.W. of Lydden; 217454 for many years: 1959 MNE, 1963.

24 Down W. of Woodville, Temple Ewell, 1955-63 MNE, (>100, 1955! 7 in 1958, K.D.R.)

34 Langdon Bay, B.J.B., 1939: 1946, 80 infl. MNE 1948, 44 infl. 1949: 1950: 1951: 1952: 1953: 1954: 13 infl. 1955. 1963, B.J.B.

[34 Between lighthouses and sea, St Marg. Bay, A.D. Webster, before 1826.]

34 Free Down, Ringwould, 1954; 5 infl. 1955.

[formerly on St Margarets Bay, 1901, J. [Beunall] MNE: above Brook: above Beachborough: Wingham: Barham Downs: Undercliff S. of Kingsdown, Fl.K.]

....

#### **Ophrys sphegodes** Mill.

Early Spider-orchid

[*The MS included reference to: ...Cliffs E. of Dover Castle, abundant [F.R. 1948, 1954]....Langdon Bay, abundant [F.R. 1946-55]....On chalky rubble, rear of beach, South of Kingsdown [F.R. 1948, A.G. Side 1955]....Cliff top Oldstairs Bay to Hope Point, S. of Kingsdown [1948, 1955 – 44 spikes, 1956]....Sugar Loaf [F.R. 1939]....Castle Hill [F.R. 1939]....Above Danton Pinch, Newington, formerly abundant [D.G. Standford, before 1947]....Dover Hill, below A259 [F.R. 1948]....Downs E. of Etchinghill [L. Margetts 1958, F.R. 1960 – 40 plants]....Above Abbots Cliffon rifle range, hundreds [F.R. 1945-53]....on undercliff slopes, Lydden Spout [F.R. 1953-61]....undercliff slopes Abbots Cliff [F.R. 1962-65]....Downs W. of Coombe Farm, Dover [M. McFarlane 1955]....Down above A2, River [R.G. Williams]....Bushy rough E. of Alkham [local farmer 1949].... Downs W. of Woodville, Temple Ewell, abundant [F.R. 1948-60]....[tumulus near Brook 1942 (13 plants); 1943 (23); 1945 (6); 1946 (16); 1946 (4); 1948 (c.100); 1949 (>100); 1956 (35)]....].<sup>80</sup>*

....

#### **Ophrys fuciflora** (Crantz) Moench

Late Spider-orchid

[*The MS included reference to: ...N. of Holywell 1981....W of Parkgate on downs. W of Elham. Dry valley....[E. of Etchinghill, L. Margetts, 1958, 8 spikes. The hybrid with *O. sphegodes* was reported from here by L. Margetts at the same time. Both parents present]....S. side of Sugarloaf Hill [F.R. 1946, 1968, 1972; K.D. Rowlandes, 1961, 20 plants]....E. side of Sugarloaf Hill. 30 plants [K.D. Rowlandes, 1962]....Postling Down [1946-12 spikes]....West of Postling Down. 1 spike [1948]....Tolsford Hill, Postling. 1 spike in short turf above waterworks outlet [1958, L.G. Margetts]....Cheriton Downs [1945 – 27 spikes to 1960 – 1 spike]....[Hybrid *O. holoserica* x *O. sphegodes* reported from Cheriton Downs, Miss D.A.C. Long, 1945]....[Castle Hill] Up to 100 plants seen per annum [1953-62]....reported 30-60 years ago in Alkham Valley, comm. K.D. Rowlandes....The Warren.. not reported for about 25 years....Above Newington Quarry....The Bilting record in *S.E. Nat* [1953-54] is an error....[Trosley, Mrs. D.V.S. Woods]....Ravine S. of Hastingleigh [E. Scott, 1959-62]....Broad Down 1962-1, [*sic*] more frequent now (1975)....].<sup>81</sup>*

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Geoffrey Kitchener, October/December 2016

rev. Jan 2017: V7

<sup>80</sup> Taken from Rosemary FitzGerald's notes of the species account. Additional square brackets are introduced where the text may not be an exact transcript.

<sup>81</sup> As above.