UPDATE FEBRUARY 2020

WHAT HAPPENED TO FRANCIS ROSE’S FLORA OF KENT?
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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 the manuscript only came to light some years after his death, in 2006. Even then, the surviving manuscript is incomplete.

In consequence, we have had no published full 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is maintained through his herbarium specimens (some 10,000), since absorbed into the Maidstone Museum herbarium, the unpublished status of the Flora means that we have been deprived of the benefit of the views of an ecologist of considerable national standing.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 Flora is given below.

The writing of the Flora and its disappearance

Francis Rose would have been the person to provide Kent’s Flora: ‘I know Kent intimately – I have done much work there from my youth (first field trip 1936!) and I lived there for 28 years, more or less, from 1941-1969. So I have a vast background of knowledge on Kent’¹. However, the project was begun before all this knowledge had accumulated, when he was only 20. 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 to mention 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

¹ In litt. to Rosemay FitzGerald, 15 May 1985.
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 there had been contact with printers, some of the distribution maps had been prepared\(^2\), 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 and describing some of the interesting features of plant distribution and preferences which had been revealed in the course of Flora preparation\(^3\). Nevertheless, by 1960\(^4\), he could only say that the manuscript was, after many delays, about half completed. In 1963, subscription forms were being issued. Subscribers were essential, due to the absence of any capital for immediate payment for printing (other than £200 from Kent Field Club, who were to act as joint publishers and the prospect of a grant from the Royal Society). Advanced discussions with T. Buncle & Co. as printers seem to have fallen by the wayside in July 1963; he was also corresponding with Kent Arms Printing Works who provided sample proofs; and later that year an approach to the Ray Society to publish came to nothing. Work on the Flora, however, continued and in the mid-1960s, he was sending out ‘wants lists’ for 10km ordnance survey squares, generating much correspondence over incoming records.

The mapping aspects were clearly on his mind, with progress shown at the 1965 BSBI annual exhibition meeting which he illustrated with Cardamine bulbifera, Caltha palustris, Cardamine pratensis, Cardamine amara, Agropyron caninum, Paris quadrifolia, Allium ursinum and Anemone nemorosa\(^5\). By 1966, he is quoted\(^6\) as being in the process of reducing the book – then running to nearly 1,000 pages – to 600 pages, although surviving papers do not show evidence of this. It was always going to be a problem reducing the amount of material which had been assembled. Ted Lousley wrote (in litt., 1963), when approached for suggestions as regards covering aliens: ‘The difficulty, as I see it, is that your Flora will run to an immense book with the material you have already. If you take maps and diagrams in the text into account, I would be very surprised if you can get it into 550 pages, while if you cut down the Flora proper by much it will cease to serve its purpose’. 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

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\(^6\) Unsourced newspaper cutting.
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. In 1986, he wrote to Rosemary FitzGerald that ‘I have a manuscript flora of Kent (which I intend to use for a book – much abridged – when other more urgent jobs are completed)...It occupies four looseleaf foolscap files!’.

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. Supposedly, the Introduction was put into type (although this has not been found) and a start was made on revising the main part of the Flora, the species accounts. These in their original 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: 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 nothing has been found which demonstrates that the updating continued after 2000.

It was then believed that the Flora was missing, perhaps lost. After an initial attempt to reconstruct the Flora was undertaken from copies of some of the species accounts which had been made during Francis Rose’s lifetime, it was found that much of the original manuscript still survived. It had not followed his main written archive, which had been deposited with the National Museum of Wales, but had remained in his study where two of the four folders of species accounts were found in 2017 by David Streeter and Andrew Rose; a third folder was located by Anna Rose in 2019. All in all, nearly 90% of the species accounts are extant. The earlier sections of the Flora, essays on the characteristics of the vegetation of the county, have not been traced other than a few skeletal draft elements; although they are largely covered by papers published by Francis Rose 1946-72. The surviving manuscript and its related revisions and copies are described below (‘the remaining species accounts’).

The planned contents of the Flora

“Kent is still one of the loveliest of the English counties, with a variety of scenery and wild life unique in the British Isles. Its flora is remarkably rich, both in number of species and in interesting plants. On a conservative estimate, Kent has still 1,200 species of native or established vascular plants; only Hampshire and Sussex have more. This total includes 30 species of orchids (only Hants. and Oxford have as many) and eight of our ten British broomrapes.”

The Flora was planned to be some 550 pages long, with an emphasis on ecological and historical aspects, 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

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8 Retyped by Owen Davis c.2000 with changes made then by Francis Rose, which are reflected in the following description.
geomorphology 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 Flora has ten districts based on geology.

**Botanical Districts**

The identity of the 16 botanical districts is likely to have been as indicated in the reconstruction above\(^9\), namely (1) the Eocene soils of north-west Kent, west of the River Darent; (2) the alluvial marshes and coastline of the R.Darent, including Sheppey and Watling St to Swale lowlands; (3) The Blean, including woods from Canterbury to Littlebourne; (4) The Thames Medway Estuary; (5) The Metropolitan District; (6) Darent-Medway Chalk and other Hills; (7) Medway-Stour Chalk; (8) Stour-Channel Chalk; (9) Thanet; (10) Darent Basin; (11) Medway Wealden Basin; (12) Stour Wealden Basin; (13) High Weald of Medway; (14) Rother High Weald; (15) Romney Marsh; (16) Channel Terrace.

These districts had to be decided upon before the MS Flora was begun to be assembled, as this is laid out with records under each species set in their relevant district. While the district names are reasonably descriptive, detailed boundaries are given for some in the Flora notebook. The Metropolitan District is defined as follows: N.—the Thames from Deptford to Crossness. E.—Lessness Manor Way [L.C.C. bound] to Abbey Woods Station. —N. Kent Line to Crayford Mills: up to Met-Vickers to leave out Barnes Cray Marshes. Down to join A.206 on E. side of Marsh: by A.206 to Bull Hotel, Dartford: by A225 to “the Folly”, Farningham: by track to W for ¼ m. And S.E. edge of Farningham Wood and Orchard to Farningham Hill Farm: by A.20 to Swanley...: by B. 258 to Crookhill: by road to Skeet Hill and Well Hill: by E. edge of Hollows Wood to join Timberden Lane at $55027$: due S. 200 yds, then S.:—W. for ½ m. along S. wood edge to A.224 at Badger’s Mount: by A224 to Chelsfield Ch[urch]: to Gillmans Brimstone— to Worldsend and Green St[reet] Green: to Farnboro’ by A21.

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\(^9\) A note by FR with the Flora papers shows some gathering of statistics: Kent ninth largest county, nearly 1,000,000 acres, 1,555 sq miles...N. Foreland — London 64 miles, N. Foreland-Dungeness -38 miles...[1947] 144,300 acres Woodland, 8,300 F[orestry] C[ommission], 136,000 private: 29,000 hardwood high forest: 7000 conifer high forest, 8000 mixed, 69,000 coppice or c[oppice] w[ith] standards.'

\(^10\) These are the same districts as given in Rose, F. (1949). A Bryophyte Flora of Kent I, *Transactions of the British Bryological Society*, **1(3)**: 202-210. They are also given in a notebook (c. 1946-8) associated with the MS Flora papers together with lists of special vascular plant species for each district, under the following names: (1)The Metropolitan District, (2) The Thames-Medway Estuary, (3) The Blean, (4) Stour Marsh, (5) Chalk W. of Darent, (6) Darent-Medway Chalk and other Hills, (7) Medway-Stour Chalk, (8) Stour-Channel Chalk, (9) Thanet, (10) Darent Basin, (11) Medway Wealden Basin, (12) Stour Wealden Basin, (13) High Weald of Medway, (14) Rother High Weald, (15) Romney Marsh, (16) Channel Terrace. These districts had to be decided upon before the MS Flora was begun to be assembled, as this is laid out with records under each species set in their relevant district. While the district names are reasonably descriptive, detailed boundaries are given for some in the Flora notebook.
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 (in some cases a separation of the eastern element was recognised: (6E)); (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 reconstruction is set on a map with current local authority boundaries. No map has yet been found with Francis Rose’s district boundaries superimposed, but the accompanying sketch of the eastern district boundaries is taken from one of his notebooks.

From that notebook, comments on the botanical districts would have included (although needing to be updated in nomenclature and plant occurrences):

1. 2nd for heath plants — the light soils near London. Soil: Eocene sands, clays, gravels, alluvium. Best localities: Keston Common; Hayes[commons]; Chislehurst C[ommons]; Dartford Heath; Farningham Wood; N. of Bickley; SE of Bickley; Pets Wood — St Pauls Cray C[ommon]; Holwood Park. [Special plants listed, species confined to (1) were Myrica gale; Scirpus caespitosus; Filago apiculata].

2. Finest for brackish and saltmarsh flora — one of the best in Britain. Good localities: Strood (Rochester) (with obvious exceptions); round district (6) to Gravesend and Dartford. [Special plants listed, species confined to (2) were Rumex palustris, Salvia verticillata].


The Thames-Medway Estuary district is defined as follows: N. Thames from Cross Ness to Grain Jetty: NE coast of Sheppey: to where road meets coast ½ m W of Sealsalter Ch[urch] [by P[ost] O[ffice]]. E: Inland to A.299: by A299 to Brenley Corner. S. by A.2 to Rainham Ch[urch]: down to Station: thence by R[ail] to Gillingham St[ation]: by A.231 to Chatham Town Hall: by A.2 to Rochester Cathedral Gate: by B. L. Road to Wooltham Village: by River Road to Burham Ch[urch] and Rose Cott[age]: to N[ew] H[ythe] ferry Path — Aylesford Friars: High St[reet]: Forstal. Up river banks to Allington lock and back to Lit[tle] Preston: by R[ail] to N[ew] H[ythe]: up N[east] H[ythe] and by path to Lunsford L[a]n[es]: W — by A.228 to Ham Hill: by Marsh Edge to Snodland: by A2286 to Holborough: by R[ail] to Strood (Rochester) [with obvious exceptions]; round district (6) to Gravesend and Dartford. The Blean district is defined as follows: N. — Sea from Sealsalter Post Office to Reculver Towers: W. — Kent Coast Road from Brenley corner to Sealsalter, then NW by road to sea: S. — by road thro’ Boughton Church to Upper Esen — from there by a track N. of Chalk to A28 ½ m W of Chatham (where cliffs meet the road). By A.28 from ½ m W of Chatham to Milton Bridge — by S[outhern] R[ailway] to E. of Chisle. E — Edge of the Upland from Reculver Towers by Chisle to the S[outhern] Railway: thence to Canterbury.

Stour Marsh district is defined as follows: N. Boundary, sea from Reculver Towers to Minnis Bay cliffs: S. border of Thanet upland to the Sportsman. E. — The sea, from the Sportsman at Ebbsfleet to Oldstairs Bay: S. The cliff foot from there to Walmer C[astle]: The edge of the chalk from Walmer C[astle] to Canterbury. W. Edge of Upland to C[janter]bury and Wingham.

The Chalk W. of Darent district is defined as follows: S. Boundary — Pilgrims way, from Sturry boundary to W. of Otford. W. Boundary — S[urrey] Boundary to Wickham-Croydon Road. E. Boundary — Road on W. side of River Darent, to Farningham and ½ m N.

The remaining districts are not defined in the notebook, but there is a sketch map of the eastern districts.

11 An account of this botanical district was worked up in a notebook, but there is nothing comparable for other districts, so that it is unclear whether this was a pattern to be followed elsewhere. The text is as follows:

Does not look promising to an outside botanist. Purposely left out wider chalk, to show richness of area, history very long.


3) Upper Thames. Aster and Puccinellia, Festuca rubra, smaller red Salicornias, Triglochin, no Limonium.
(3) [Special plants listed, species confined to (3) comprised Prunus padus.]

(4) Richest in county. Mainly in 3 first rate areas — The Dunes; Ham & Hacklinge Fen; Wingham Fen. Richest in species confined to it – finest for marsh and coast plants in c[oun]ty and in SE Eng[land]. [Special plants listed, species confined to (4) were Potamogeton coloratus, Utricularia vulgaris, Carex extensa, Utricularia vulgaris, Tillaea muscosa, Juncus acutus, Parentucellia viscosa, Himantoglossum, Clematis flammula, Juncus compressus.]

(5) Fair only. [Special plants listed.]

(6) Very rich in var[ieties] of chalk plants and others on overlying soils. [Special plants listed, species confined to (6) were Althea hisrutsa, Silene italica, Ranunculus parviflorus.]

(7) Fair chalk flora - not distinctive. [Special plants listed, species confined to (7) comprised Senecio caprestris.]

(8) Div[ision] of most interest, other than local – for splendid chalk and cliff flora. [Special plants listed, species confined to (8) were Cirium eriophorum, Euphorbia cypria, Thesium humifusum, Rubia peregrina, Brassica oleracea, Silene nutans subsp. smithiana, Ophrys arachnites, Epipactis leptochila, Rosa agrestis, Matthiola incana.]

(9) Poor. [Special plants listed, species confined to (9) comprised Falcara vulgaris.]

(10) Fair. [Special plants listed, species confined to (10) were Potamogeton lintoni.]

(11) 1st inland waterways and dry heaths – finest for grasses. [Special plants listed, species confined to (11) were Arabis perfoliata, Oenanthe silaifolia.]

(12) Richest in variety of species and of greatest veg[eta]l[tional] types – clay/sand, limestone, local interest. [Special plants listed, species confined to (12) were Carex canescens, Orobanche major.]

c) Banks: H[ordeum] marit[mum], 14 clovers in Grain, Marrubium, Mariana [lactea], G[ra]vesend and Sho[rne], C(entaurea) calitrapa, Lactuca saligna, Onopordon.


V[ery] rich flora: Tutsan; Lily of the Valley; Solomon Seal; Hard Fern; Mountain Fern (V[ery] rare); G[reen] Wood; D[aphne] laureola; Iris foetidissima; Primula, Scilla, Mercurialis, Pteris, Lonicera. Very rich flora: Tutsan; Lily of the Valley; Solomon Seal; Hard Fern; Mountain Fern (very rare); Daphne commoner. Orchids. Lactuca virosa in old pits, formerly rare. Helianthemum fringes Woods; Calamintha acinos, Clinopodium, and ascendens; Atropa; Cerastium. Hedge and border of park: Salvia pratensis, Astragalus (also M[ount]s Rd., Northfleet), Althaea hirsuta (only native loc[ation]).

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 (including the use of old maps to show decline in heathlands and downland); and changes at the (then) present time. The most recent changes would presumably be those outlined by him in 1962: the pressures of development and modern methods of farming and forestry. Farming changes had almost wholly eliminated the old permanent pastures of heavier soils, replacing them with leys; and had entailed the ploughing up of chalk downland slopes, the drainage of bogs and heathland, the loss of hedges with enlargement of fields or needless replacement by fences. Forestry had been affected by the old coppice-with-standards system becoming uneconomic, and at that time the old woods, except on chalk, were being replaced by pure chestnut coppice or dense conifer plantations. Francis Rose made some outline notes for this section, kept with his Flora papers, as follows:

The history of the vegetation of Kent since the Ice Age.

There is little purely local evidence. Information on this subject has been largely obtained from pollen analysis data, and to a less extent from macroscopic remains in alluvial deposits (peat, river gravels, lake muds, marine deposits). In Kent, we have few sites where damp peat beds of great age occur; Ham-Hacklinge fen — loved by Godwin, never published. Hothfield Common — very shallow liquid peat — very recent. Medway — not studied. Some data from Thames side (Roman, Potteries) and Thanet (Bronze age coastal sites). Picture derived from general English studies, mostly in E. Anglia, also in New Forest, Southampton, etc.

Give diagram of pollen zones (Episcope).


Flora much as now; Cromer Forest Bed, Deciduous forest.

Full glacial: arctic flora, e.g. Lea Valley Middx, and Cambridge. Arctostaphylos uva-ursi, Betula nana, etc. (see list in Rose, Lond. Nat. 36, p30, 1957. but also some maritime (Silene maritima)

some marsh species: Carex pulicaria, Potentilla palustris, Damasonium (alisma), Vicia sylvatica, Eriophorum angustifolium, Salix repens, Menyanthes trifoliata, Potamogeton obtusifolius)

Ice not nearer than 100 miles then.

Thus … Max. of Ice Age.

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This paper suggest that the chalk cliffs of East Kent may have provided a treeless open habitat for calcicole grassland species during the forest maximum, until Bronze Age clearances north of Dover enabled re-spread to occur. Gaulium pumilum, Falcaria vulgaris, Euphorbia cyparissias, Silene nutans, Thesium humifusum and Cirsium eriophorum as given as possible examples; also a pale form of Polygala calcarea in the Dover area. On the other hand, orchids and broomrapes may well have colonised by wind-blown seeds from the Continent, after the British Isles had become separated.


14 Rose, F. (1957). Vegetation History and Environmental Factors in the London Area. London Naturalist for 1956, 36: 29-40. This paper, at least as far as the Iron Age, follows closely the notes given here, albeit adjusted as applicable to the London area.
Hence flora like arctic tundra of Lapland or Iceland, or mountain tops in Scotland today — no woodland — open scrub-heath — some present day bog plants still with us. We can assume therefore that the woodland flora of Kent of lowland species had almost completely disappeared during the Ice Age — had to re-emigrate except for a few heath and marsh species and aquatics.

Birch woods of Allerød.

Recession:
- Birch pine pre-boreal IV.
  - VI, Pine – Hazel.
  - VII Atlantic mixed oak forest, warmest period.
  - VIIb Sub boreal drier, cooler, dry. Neolithic – Bronze Age – lime pollen at Addington.
  - VIII Sub atlantic – much cooler and wetter, bogs grow faster.

Holes (Holocene?)

Post glacial period — very open — (see Piggott & Walters 1954). Many common weeds of today very common, also chalk grassland, open habitat species, e.g. Helianthemum.

Neolithic period — much forest cleared in E Anglia (Hockham Mere etc.) no doubt in Kent too: where?

late Neolithic 1800 BC. Kits Coty, Coldrum; probably same period: Giants Grave, Juliberry’s Grave. Clearances in Medway Valley and at Wye. Many chalk spaces may have spread then.

Bronze: heaths on Greensand; and on E. Kent chalk plateau. Prob(ably) heaths formed later on land cleared then.

Iron age — more forest cleared. Hornbeam common and Beech commoner.

Romans — Caesar prob(ably) wrong about Fagus absent in Kent. He prob(ably) didn’t explore the forested areas.

Mediaeval period. More clearance in River Valleys in Weald.

Elizabethan Maps — Woods essentially as today; but more ... e.g. Blean, Mereworth (Wild Boar), Kings Wood, Ham Street, Chalk plateau.

Historical period: Botanical study.


Turner – 1548 Names of Herbes

John Gerard 1597, Herbal

Thomas Johnson 1633 Gerard emaculatum

1629 Iter ) 1st accounts of botanical rambles in Kent.

1632 Descriptio )

give details from MS.

Parkinson Theatrum 1640

C. Merrett Pinax 1666

Ray, several records taken up

E. Jacob —1st local flora in Kent, 1777.

Dillwyn & Turner, Botanical Guide.

G.E. Smith.

H. Cowell – 1840.


My own work

Nearly half of the flora, excluding the species accounts, was to be devoted to an account of the remains of the natural vegetation and habitats of Kent up to the end of the mid-20th 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 Sussex15 and Hampshire16, 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-mashes; the tidal marshes of the Upper Medway; brackish marshes and the effect of inning; sea-level changes; shell-sand beaches; and the clay 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\(^{17}\) (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 heaths of the lower Eocene (Keston, Hayes, Chislehurst) and the old woodlands (Joydens Wood, Farningham 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\(^{18}\) 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 what was the original pre-Neolithic climax forest on chalk soil; 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. Francis Rose made some notes, kept with his Flora papers, which may indicate how part of this section was to be approached:

**The Chalk Woodlands of Kent**


\(^{17}\) It is likely that this section would have drawn on Rose, F. (1950). The East Kent Fens. *Journal of Ecology* **38**(2): 292-302.

\(^{18}\) 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.
1) Scrub of Cornus, Viburnum lantana, Sorbus aria, Taxus, Rhamnus cathartica, Euonymus, Betula pubescens (local), Crataegus monogyna on deeper soils esp., Rosa spp., Corylus, Fraxinus, Acer campestre.

2) Sorbus aria — Betula pubescens Taxus on S.aspects; Fraxinus — Corylus wood on north aspects.

3) Fagus woodland + Taxus, Sorbus aria — Daphne laureola, Helleborus foetidus, Cephalaria damasonium, Sanicula europaea, Mercurialis perennis.

Variations:
1) Many dry valleys — modified to coppice and stands or pure coppice. In mid Kent (Wichling, Bredhurst etc.) Corylus Viburnum Fraxinus coppice: + Fraxinus, Acer, Quercus robur stands, Fagus local.
2) in Kent E of Canterbury Folkestone Road; Fraxinus - Acer - Quercus robur Woods; Taxus rare; Fagus rare; Corylus – Fraxinus – Acer – Cornus coppice. Wetter climate (35 ins p.a.); deeper loamy soil: Allium ursinum, Paris, Mnium stellare, Angelica, Deschampsia caespitosa, Helleborus viridis, Pimpinella major, Orchis purpurea.


Note features of beechwood flora and regeneration.

Plateau Woods — what is natural vegetation?

loams — Allium, Paris, Adoxa, Cardamine pratensis, Ranunculus auricomus, Saxifraga granulata very local.

Pliocenes — acid soils: Luzula sylvatica, Blechnum, Sartothamnus, Convallaria, Quercus petraea, Rubi.

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, and comparison made with the Boulder-clay woods of East Anglia.

The next aspect of the vegetational account would relate to the Folkestone Sand belt of Kent, its heathlands now lost or destroyed; 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 and with West Sussex. Then consideration would be given to the Folkestone Sand woodlands of the Wrotham-Sevenoaks area; and to the Sandgate and Bargate 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 in relation to Willesborough Lees, Braboenne Lees and Charing Heath, against the background of what is still known to occur on the Folkestone Sands belt in west Sussex, remaining very rich.

The Hythe Beds escarpment provides Kentish ragstone scarp s and acid drift soils; and the effect of lithological changes westward would be noted; the sessile oak woods on head deposits over the Hythe Beds. 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. It would have dealt with the remarkable atlantic flora of the High 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, Normandy, Brittany), with a discussion of geographic elements in the flora, considering both ‘native’ and ‘alien’ species.

There would be a numerical comparison 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. It may be that this would be an expansion of the following notes, held with the Flora papers:

The types of distribution occurring in Kent plants

Main features botanically are: The chalk downs; Woodland areas; Alluvial flats; coastline, The Forest ridge; The Folkestone Sands.

A. Widespread spp where physical character of ... is ... feature, wayside spp “weeds”


2) Universal; in all wooded areas, irrespective of soil. —: Stellaria, abs[ent] from alluvial areas and Thanet – nearly treeless. Arum maculatum, Scilla, [r[chis]] mascula, P. vulgaris, Galeobdolon, Euphorbia amygdaloides, Nepeta glech[oma], Ajuga reptans. Shelter more than shade the factor.

3) Universal in woods on heavy soil. Carex pendula (non-calc[areous]).


22 Cf. the section in the Flora of Hampshire (1996) entitled ‘A Comparison of Hampshire’s Flora with those of some other southern counties’. Some preliminary work was done, however, towards a comparison between Kent, Surrey and Sussex. Francis Rose prepared a MS note listing species in Kent; in Surrey only; in Sussex only; and in Surrey and Sussex, but not Kent.

23 These notes would appear to be drafted early on, not least from the older versions of plant names used (Bentham & Hooker, rather than CTW, 1952 edition); and some of the insights which emerged from the Flora work are not reflected, e.g. such as are mentioned in Rose, F. (1955). The New Flora of Kent. Presidential address to the Botanical Section. The South-eastern Naturalist and Antiquary 60: 9-19.
4) On all areas of heavy soils (gleys and brown earths) wooded or not. Pulicaria dysenterica.

**B. Chemo-Edaphically determined distributions, confined largely to local soil types.**


6) On chalk, ragstone and calcareous sand dunes — Anacamptis, Anthropophora, Platanthera chlorantha.

7) Strict calcicoles on chalk, etc. — widespread — Potentilla sanguisorba, Helianthemum, Scabiosa columbaria, Opuntia apifera.

8) Strict calcicoles — localised to ± aboriginal turf in drier places; Aspectera, Hippocrepis, Gentianella amarella.

9) Strict calcicoles — woodland — Helleborus foetidus, Orchis purpurea, Orchis muscifera.

9) [sic] Strict calcicoles very local and puzzling — Polygala calcarea → Aceras → Polygala austriaca → Senecio campesris, O. fuciflora, Campanula gomerrata, Filipendula hexapetala.

10) Very rich deep woodland soils — Helleborus viridis, Paris. Little less base rich — Allium ursinum, Adoxa more wide off downs.


12) Weald clay only — Carex vulpina.

13) Rivers only — Cardamine impatiens, Nasturtium amphibium, Cirpus lacustris, Althaea officinalis, Ranunculus pseudofluitans.

14) Coastal: (Allium — Helictotrichon pratense, Carex divisa

   (shingle — Lathyrus maritimus, Crampbe, Rumex crispus) trigranulatus

   (sand — Eryngium maritimum, Carex soldanella)

   (wide. C. tenuiflorus) + chalk. all beachy, Glaucium

   (salt m’arsh) — Limonium, Triglochin, Polygala maritima, Salicornia ramosissima

   (cliff — Limonium biennum, Brassica oleracea, Crithmum)

**C. Climatically determined distributions, v(ery) local**

15) P.polygala oxyptera, Op[hrys] sphegodes, Rubia, Orobanche, Iris foetidissima — bias E.


18) Heaths —

19) bogs

20) fen.

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

The main part of the Flora, originally estimated to comprise some 200,000 words and then amended to 100,000, 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), 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.

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The Flora would have ended with a bibliography, a list of contributors and (according to earlier versions of the Synopsis) a list of subscribers, plus an index. Of these, only a set of bibliographical references (in no discernible order) appears to survive. The present Flora reconstruction incorporates at the end a list of contributors with other abbreviations which has been put together by the editor: there is no manuscript version by Francis Rose, although some contributor initials are taken from Rose (1960).25

The remaining species accounts
The surviving original manuscript starts (in what would have been the second folder) with Hydrocotyle vulgaris through to Hieracium lanatum; then (third folder) from Viola hirta to Hedera helix; and then (the fourth folder, after a missing page or pages) from mid-way through Alisma plantago-aquatica to the end of the species accounts (i.e. virtually all of the Monocotyledones). The accounts were written on foolscap paper, which had been assembled into ring binders. The standard format gave a heading with the Latin name and authority for the taxon, followed (in most cases) by a note of which Kent vice counties (15 and/or 16) it had been recorded in, the English name and the total numbers of 10km Ordnance Survey squares in which it had been known. Most taxa were then given a short commentary and then records were listed under the relevant botanical districts 1-16. The records were evidently added on an ongoing basis, and the result was sometimes messy, even near-indecipherable. At a later stage, it appears that, instead of just relying on citation of a botanical district, six figure gridreferences were added to many records and a further grouping into the relevant 10km square was begun, often with annotated clusters of 10km square numbers to show how mapped distribution might appear (as well as smaller clusters as working notes to remind how the records in one or more botanical districts would contribute to the fuller mapped distribution).

While the initial part of the species account original manuscript has not yet come to light, it is nevertheless (for ferns and fern allies especially) the most up-to-date section, 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 photocopies 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. The later species accounts apparently did not advance beyond manuscript, and many of these bear extensive crossings-out and interpolations. At least some accounts seem not to have advanced since c. 1960.26

A number of accounts 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. These extracts, as well as copies from other sources, have helped fill in some of the content of the missing first folder.

In this transcription, the accounts are laid out below in the systemic order of Stace (second edition) and Kent, as mentioned above, as though the revisions started in 1999 had been carried through then; 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 so far as it goes (unless otherwise indicated). The check-list was being compiled in 2000, starting from Eric Philp’s Atlas of the Kent Flora (1982), with additions from the Kent Field Club Bulletins. 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; the original manuscript also exists for this. Nomenclature of plants

26 For example, that for Euphorbia platyphylla 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.
which would presumably have been in the rest of the checklist is in this transcript 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!’.

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 together (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 – these, often in red ink, appear to have been added to the manuscript as the author began to consider species distribution in terms of hectads and began to include tables of hectad numbers, probably for working convenience rather than inclusion in the final version of the Flora. These hectad numbers are presented here in small, bold type at the end of records for a botanical district. While Francis Rose often grouped them as a mini-map, no attempt has been made here to present them in map format unless he put them together for a species as though there were an intention to provide a full map. In such cases, they are here mapped onto a background outline map of Kent supplied for the purposes of this transcript.
- 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 by ‘/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.
- Square brackets (other than for species or records) have been added so as to fill out abbreviated words, or to add English names where presumed to have been intended. The context should show where this has been done, as distinct from Francis Rose’s square brackets to show an extinct species or location. The added English names are taken either from Stace (second edition) or from Francis Rose’s Colour Identification Guide to the Grasses, Sedges, Rushes and Ferns of the British Isles and north-western Europe (1989).
- References to Maidstone Herbarium as M have been converted to the standard MNE; references to the Herbarium 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; and so far as they have yet been identified, they are given in a key at the end.
- The species descriptions (as distinct from records) are given here in blue font for presentational purposes; they are not separately distinguished in the manuscript.

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27 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).
Thus, a typical entry should be interpreted as follows:

6) 77 Cliffe chalk pit 728766, 1945-62, abund. **MNE** (100 pl., 62, DL).

In botanical district 6 (chalk, from Darent to Medway) and in 10km square TQ77, it was present at Cliffe chalk pit, at ordnance survey grid reference TQ728766, recorded as abundant between 1945 and 1962. There is a specimen at Maidstone Museum herbarium. In 1962, David Lang recorded 100 plants there.

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. It is perhaps best ignored, as is done here, unless clearly intended to denote italics. Full stops are sometimes employed to excess, and these have been converted to commas or semicolons here when it would make it easier to tell where an entry begins and ends, and additional punctuation has been introduced for the same purpose.

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. This had long been the intention; Francis Rose wrote in 1985 of his intention to publish ‘in much shortened form’ from the manuscript. In effect, he must have been regarding the manuscript (with his field note-books) as the equivalent of a card-index, from which the more representative records might be taken, without an intention to carry through all. Footnotes are given here to highlight some of the pruning changes between manuscript and revised version, but these are only a small proportion of the changes made in the revision. By far the greater part of the species accounts, however, never reached a typed or revised status, and so the full records are given in this transcription.

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 Francis Rose’s 1999 revisions show that he was more than likely to have reduced the number of records rather than adding to them. Indeed, the following transcription of the manuscript must be regarded as largely being the listing out of what amounts to a database of records, upon which Francis Rose would have drawn in order to produce a more succinct account. For the purposes of present-day botanists, however, it is all the more valuable for giving the complete records, rather than a summary.

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Sample extract from manuscript
FLORA OF KENT
FRANCIS ROSE

[for the most part transcribed from the original manuscript; otherwise taken from copy manuscript extracts or copied from typescripts]

THE VASCULAR FLORA

Lycopodiopsida

LYCOPODIACEAE

Lycopodiella inundata (L.) Holub

Marsh Clubmoss. [15, 16].

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


12) Hothfield Common G.E. Smith, FGEK, 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.


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 19th 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:

29 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 CS. Surely elsewhere in and near gardens on acid soils.

**EQUISETACEAE**


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 30. 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). 31 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


30 Listed or summarised according to district in the earlier manuscript.
31 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 B. 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.*
32 The attribution in the manuscript of this find to J.R.W. in alder carr has been omitted in the typescript.
33 1897 in manuscript.
14) Sandpits Wood, Biddenden, 855305 1963 MNE. In the Boullonais 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[34] 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.

**E. 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 scarp, 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[35] 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[36] (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.

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[34] Manuscript states 97 localities known, but does not list them; var. polystachion is said to be not infrequent.

[35] 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.

[36] 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 20th 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) relic natives, 2) old 19th 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 relic here in part; Ravensbourne estate, Keston, 1956 MNE; abundant by stream, Danson Park37, 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.).


12) 9835 Longrope Wood, Orlestone: (loc. plentiful), E. Smith38.

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 Bedegebury Pinetum, 1947-50, MNE.


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.


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.

37 Assessed in manuscript as probably planted.

38 E. Smith is given in the typed revision, but ES in the manuscript, which usually refers to E. Scott. Also in the manuscript, Osmunda here is stated to be reputedly planted, rather than locally common.
[P. globulifera L. Pillwort. 15 - very doubtful.

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


*1688 — found by Mr. Dare, ‘circa Tunbrigiam’, Kent. 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 Wildl. (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.)

POLYPODIACEAE

Polypodium L. 41

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

As the aggregate, this is widespread in Kent. The segregate P vulgaris 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. australis 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

39 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 in given is English; in Latin it is instead in Ray’s Historia Plantarum).

40 A prescient observation, as it was recorded in two Kentish areas in 2016.

41 The Polypodium account has undergone major change from the earlier manuscript. This acknowledged that the Polypodium vulgaris 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. vulgaris, both s. l. and s. str., and for P. interjectum, albeit that the P. cambricum (as P. australis) account is blank.
Pteridium Gled. ex Scop.  
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): 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 Anglely Wood, Cranbrook, and 15) by the Open Pits on Denge Beach. Formerly in 7) North Cray, and in 4) at Wingham and Sturry. 

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

Damp heathy woodland ridges 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]. 
11) Ryars 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.  
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  

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. 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 Boullonnais and Pas de Calais. It is as plentiful in the suitable part of Kent as in S.W. England. 

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42 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'. 
43 In manuscript described as 'Fen on site of Tuckers Pond...1945-61, abundant!'. 
44 The manuscript entry is 'Fen N.W. of Wingham in 1947 MNE; D.A.C.L. 1963'. 
45 Sixteen given in the manuscript, viz. Redleaf Wood, Penshurst; Ferndale, Tun. Wells; Hayes Wood, Pembury; Furnace Pond, Horsmonden; N. of Lamberhurst Quarter; Furnace Wood; St Sandherst Wood; E. side Bayham Woods; N.E. of Kippings Cross; Kilndown Wood; Combwell Wood, abundant; Bedegbury Pinetum; Bedegbury Forest; Angley Wood; Old Park Wood; Sissinghurst Park Wood. 
46 The manuscript lists, or gives districts for, many of these records.
Asplenium L.
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).


[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.

**Athryum 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.


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?
  It is well established now (1980)17 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 hortial origin, on damp mortared walls: rare.

11) Ragstone walls, E Malling; Loose.

**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 raqstone 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).
3) S. of Fordwich;
6) Lane above Otford;

47 This suggests that Francis Rose had taken the status from Eric Philp’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.

48 The only record given in the manuscript is for 10) Darent Steps, Westerham, RAC.
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.

**Cyrtomium** C. Presl

*C. falcatum* (L.fil.) C. Presl


**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.


**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. *boreri* (Newman) Fraser-Jenkins. 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.

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49 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 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.]
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 & M, p. 426.

This very interesting extreme oceanic (or Lusitianian) 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 sandbanks 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 Diplolophyllum 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. 50

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. 51

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 Folkstone Sand: present but rare elsewhere in 4), 5), 8), 10), 11), and 15). 92 sites known.


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) 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.


11) Dike E. of Tonbridge; SE of 'Woolpack', Yalding, by pond; Starvencrow Hill Woods; Sandway Bog, Lenham.

12) 6 localities, Hothfield to Gibbons Brook.

13) 44 localities.

14) 12 localities.

15) Fen on Denge Beach.

50 The account as revised by Francis Rose omitted details of sites. In view of the interest of such details, these are reproduced below from the unrevised manuscript.


51 The manuscript adds that 'It was rediscovered by me in a fen in the Somme 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.'

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.
D. dilatata (Hoffm.) A.Gray. Broad Buckler-fern. 15, 16. N. (map)53

Woodlands, hedgebanks and ditchesides. 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 Hythe 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 Bean. 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.

*1725: Shooters Hill, Herb. Dil.

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)54

AZOLLACEAE

†Azolla Lam.

†A. filiculoides Lam. 15. 4/52 H.


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


Pinopsida55

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).]

53 No map has been found.
54 No map has been found.
55 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.
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  56

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

CJU PRESSACEAE

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 seaciffs, though stunted, possibly by exposure, appear to be still healthy and free from any obvious disease. *1562: “growth most plenently 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.


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) Wateringbury; 14) Sandhurst. It is still found at Shoreham, Westwell and Crundale, so I understand.]

**TAXACEAE**

_Taxus_ L.

_T. baccata_ L.\(^{57}\) 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 Folkstone Sand. Common in the High Weald of 13), in gills and on steep rocky banks on 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 Folkstone 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.


2) Self-sown on ruins, S. of Oare Mill Pond. Love Lane, Minster, OD; probably planted.

3) 16 Church Wood: 04\(^{58}\) Holly Hill, Dunkirk: 05 W. of Radar Stn., Dunkirk: 26 Shelvingford Wood.

5), 6), 7) Very common, forming pure woods in places.


10) 45 N.W. Slope of Toys Hill. 55 Scarp, Hubbards Hill. Rooks Hill; Wilmott Hill. Bitchet Common.


12) Park Wood, Bilsington.

13) Frequent: 22 localities.

14) 73 Robins Wood, Cranbrook; Parsonage Wood, Netterhall Gill, Benenden and Babbs Gill, Benenden. 83, 93.

**Magnoliopsida**

**MAGNOLIIDAE (Dicotyledons)**

**LAURACEAE**

\(^{57}\) Not in checklist.

\(^{58}\) In error for [TR]06.

\(^{59}\) Queried in text.
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.60 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.
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 (tetras TQ93Q and/or 93V) [E.S.]
TR01: Long Lake, Dungeness in 1950 (TR0181) [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, Palmmarsh (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)
TQ93: Dyke by lane 1 mile south-east of Kenardington Bridge in 1959 (tetrad TQ93V)
TR01: Dungeness, Hoppen Pits and gravel pits in 1946 (tetrad TR01U etc)
TR02: Ditch west of New Romney in 1945 and 1950 (tetrad TR02M7); ditch north of Ivychurch (TR031281); and moat north of Old Romney (TR033254)
TR03: Dykes south of Aldington Knowle in 1958 (tetrad TR03S) [ ]; and 2) Orgarswick (tetrad TR03V).

60 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.
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. nana* 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 TQ822); and west of Hythe (TR03 or TR13).


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

R. hederaceus L. Ivy-leaved Crowfoot.

Localised records for district 15: Royal Military Canal at Appledore (tetrad TQ92?) [R.G.W. – recent]; Ham Street (off Romney Marsh?) [E.S. Marshall]


R. tripartitus DC. Three-lobed Crowfoot.

R. baudotii Godron

Brackish Water-crowfoot.

Locally common in district 15:

TQ92: Appledore in 1947 (!) [E.S. Marshall]
TR01: Dungeness in 1947 (!) [det. R.W. Butcher – MNE]
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.

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

TQ82: Small Hythe (TQ894298) [David McClintock]
TQ92: west of Appledore in 1949 (tetrad 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 Lympne (tetrad TR02I)
TR13: Dyke south of Lympne (tetrad 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.

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)]; north-east of Brenzett in 1958 (tetrad TR02D and/or TR2X); 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 (tetrad TQ92U and/or 92Z).

R. peltatus Shrank

Pond Water-crowfoot.

R. peltatus (Dumort.) Bab. ssp. pseudofluitans (Syme) S. Webster

Stream Water-crowfoot.

R. fluitans Lam. River Water-crowfoot.

– to re-find in Medway.

R. circinatus Sibth.

Fan-leaved Water-crowfoot.

Localised records for district 15: locally frequent:

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 (tetrad 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) 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.

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, Herbol, 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.

9) W. of Cleve Court, Minster, 1963. Northdown, L.W.W. [old records at Ramsgate and Margate].


P. argemone L. Prickly Poppy.

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


1) Eltham: Orpington, W.C.R.W.
2) Faversham.
4) Sandwich Bay: N. of Deal.
6) 11 localities.
8) 8 localities, all in E. half of district.
9) Westgate: Birchington, L.W.W.
14) Tenterden Station: Dungeness, near Lighthouse, Mrs. B.D.

Meconopsis Viguer

†M. cambrica (L.) Viguer Welsh Poppy. H. [no surviving account]

Glaucium Miller

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

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

Ulmus L.

U. glabra Huds. Wych Elm N, H 62

[Then from 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

61 This account is taken from a typed copy, probably made in the 1980s and extending to no more than this.
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 (TQ90330).

[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:
CQ92: on border of Royal Military Canal, ½ mile south of Appleford 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.
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]63

[The checklist continues through CHENOPODIACEAE, to:]
Salicornia L.

63 Taken from Rosemary FitzGerald’s notes of the species account.
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 Forsskål 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 TR01J)
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 TR13X).

[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]....] 64

Silene nutans L. 65

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.

64 As above.
65 Given in the checklist as:

S. nutans L. ssp. smithiana (Moss) Jeann. & Bocq  Nottingham Catchfly.  N.
S. nutans L. ssp. salmoniana Hepper  N.
The two varieties, with their main distinguishing characters, the 1st 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.

**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. italic**a 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 Hardelot, 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, and in Derbyshire, Denbigh, Caernarvon (Great Orme’s Head), Dorset, Knaresborough in Yorks., and on the cliffs on the E. Scottish coast.

*S. vulgaris* Garcke ssp. vulgaris Bladder Campion. N [no surviving account]
*S. uniflora* Roth (= S. maritima With) Sea Campion. N [no surviving account]
*S. noctiflora* L. Night-flowering Catchfly. C [no surviving account]
*S. dioica* (L) Clairv. Red Campion. N [no surviving account]
†*S. coel-rosa* Godron Rose-of-Heaven. H [no surviving account]
*S. conica* L. Sand Catchfly. N [no surviving account]

*Saponaria* L.
†*S. officinalis* L. Soapwort. D [no surviving account]
†*S. ocyoides* L. Roack Soapwort. H [no surviving account]

**Vaccaria** Wolf
†V. hispanica (Miller) Rauschert Cowherb

[no surviving account]

Petrorhagia (Ser. ex DC.) Link
P. nanteuillii (Burnat) P. Ball & Heyw. Childling Pink. (? extinct) N
[no surviving account]
†P. saxifraga (L.) Link Tunic-flower
[no surviving account]

Dianthus L.
†D. caryophyllus L. Clove Pink. D
[no surviving account]
†D. plumarius L. Pink.
[no surviving account]
D. deltoides L. Maiden Pink N (? Now extinct as N)
[no surviving account]
†D. barbatus 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.

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 Culyery Down Broke, near Fawkham Ch., D.V.S. Woods.

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.) Schrank 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

66 Status not given for this, nor for P. saxifraga and D. plumarius below.
Wet open ground, ditches, ponds, etc.: extremely rare in Kent. 1st record.


2) Near Minster-in-Sheppey F.J.H.

11) (Hadlow, Miss Peers "spring field". Is this a reliable record?)


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. 1st record.


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 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. 1st 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.


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


[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

67 Nothing given, but presumably it is the Tunbridge Wells record (1855).

68 Nothing given: it is presumably the 1802 note cited. The 1899 Flora of Kent gives Cooper's record (1836) – incorrectly, as the text of English Botany (1802) refers to Blackheath, irrespective of the origin of the plant figured.
Limonium Miller
L. vulgare Miller    Common 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 & Erdtmann (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, Combell 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. × 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 (TQ82X); and south of Wittersham (TQ82W).

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

TQ93: S. of Kenardington in 1959 (tetrad TQ93Q and/or TQ93V) [MNE]; and marsh at New Romney in 1909 (TQ9330) [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); Newchurch (tetrad TR03F?); west of Burmarsh (tetrad TR03V?); south of Bilsington (tetrads TR03G and/or TR03L); and south of Aldington (tetrad TR03R?).

TR13: dykes near Redoubt, Dymchurch Road, Hythe (tetrad TR13G) [L.J. Margetts]; north of Dymchurch (tetrad TR13A); south of Lympne (tetrads TR13B and/or TR13G); and seafront at Seabrook in 1944 (tetrads TR13S and/or TR13X) [D.H. Kent].

[Genera and species continue through the rest of MALVACEAE, then DROSERAEECE, CISTACEAE, to VIOLACEAE]

Viola L.  

V hirta L. 69  

15, 16  33/52  

Hairy Violet

Native. Grassland and scrub on chalk, abundant and very constant: open woods and banks on ragstone, common: local on Thanet Sand: one locality each on Folkestone Sand and on London Clay in Sheppey. Unknown on other soils. Rare in 1), 2), 4); abundant in 5)–8); rare in 9) and 10); locally common in 11); and 16) on ragstone.

1666*; Charlton Wood etc., C. Merrett, Pinax, p.125.

Common on chalk in Surrey and Sussex; rare in Essex; common in Pas de Calais.


4) Wood on Thanet Sand, Wenderton Manor, Wingham, 1959, B.N.


69 At this point, the second volume of the manuscript begins.
10) Rooks Hill scarp woods, 565531, CAS: FR.
12) Smeeh Ch[urch] y[ar]d RAC.
V. hirta L. subsp. calcarea (Bab.) E.F. Warburg
15, 16
Native. Chalk downs, frequent. The taxonomic status of this plant is doubtful.
16) Folkestone, Mrs. R's HERB.
V. riviniana Rchb. ssp. riviniana
15, 16 48/52
Native. Woodlands, hedges, sheltered grassland. Very common in all parts of Kent except the alluvial marshlands of 2, 4 and 15.
1st records either 1597: Blackheath, Gerard; or 1632: Faversham, Johnson, Descriptio. See W.A. Clarke in J. Bot. 1892, p151.


6e) Cockham Woods Upnor.


V. reichenbachiana Bor.  Synonyms:- Viola sylvestris auct.  15, 16

Native.  Woodlands on more base-rich soils; common on the chalk and ragstone, less so on the Tertiaries and in the Weald, but frequent, very widespread in all wooded areas,


[Then the rest of VIOLACEAE TAMARICACEAE, FRANKENIACEAE, CURCURBITACEAE to SALICACEAE, which includes:]

Populus L.
†P. alba L.  White Poplar.
prob. † P. canescens (Aiton) Smith (P. alba x P. tremula)  Grey Poplar [account not yet transcribed]
P. tremula L.  Aspen.  [account not yet transcribed]
P. nigra L. ssp. betulifolia (Pursh) W. Wettst. (by Hothfield Lake, J.Pitt.). N [account not yet transcribed]
†P. nigra L. var. italica Münchh. (much planted).  [account not yet transcribed]

†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 (tetrads 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. 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 (tetrads TQ92U); Boulderwall (tetrad TR01U); and moat north of Old Romney in 1959 (TQ033254)

R. x sterilis Airy Shaw (R. nasturtium-aquaticum x microphylla)  [account not yet transcribed]
**R. microphylla** (Boenn.) N. Hylander ex A. & D. Love Narrow-fruited Water-cress

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]

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

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

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

Localised records for district 15:
- 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

[account not yet transcribed, map exists]

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**C. amara** L. Large Bitter-cress

[account not yet transcribed]

**C. pratensis** L. Cuckooflower

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 (TQ932)
- 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:]

**Calluna** Salisb.

**C. vulgaris** (L.) Huds. Heather

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Part of a series of maps from Francis Rose’s folder marked Kent Flora Maps; the distribution dots appear incomplete.
Erica L.  
**E. tetralix** L.  Cross-leaved Heath  N

Vaccinium L.  
**V. oxycoccus** L.  Extinct, if indeed really found. Cranberry [account not yet transcribed]

**V. myrtillus** L.  Bilberry

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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 Etham 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 [account not yet transcribed]

Lysimachia L.
L. nemorum L. Yellow Pimpernel N [account not yet transcribed]

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. Comdn."); and Small Hythe in 1956 (TQ888296).

Anagallis L.
A. tenella (L.) L. Bog Pimpernell N [account not yet transcribed]

A. arvensis L. ssp. arvensis Scarlet Pimpernell N [account not yet transcribed]

A. arvensis ssp. coerulea Hartman Blue Pimpenell 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.


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


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 (tetrads TR02Z etc); the Wicks west of Dungeness in 1946 (tetrads TR01D and/or 01E) [MNE]; and 3) brackish meadows by church, Fairfield (tetrads 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 (tetrads TQ92U); and Snargate in 1954 (tetrads TQ92Z)
TQ93: dykes on Shirley Moor near Farm in 1945 (TQ932)
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 (tetrads TR03G) [MNE]
TR13: canal southeast of Burmarsh in 1958 (tetrads 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) [account not yet transcribed]

Sedum L.

†S. album L. (possibly native on shingle & chalk cliffs). White Stonecrop. ?N, C, H [account not yet transcribed]

†S. rosea (L.) Scop. (Garden relic or escape). Roseroot. H account not yet transcribed]

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

Chrysosplenium L.
C. oppositifolium L. [account not yet transcribed, but it is likely to have included comment along 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.\textsuperscript{73}

\textbf{C. alternifolium} L. \textit{Alternate-leaved Golden-saxifrage}\textsuperscript{74}

[\textit{account not yet transcribed, but it is likely to have included comment along these lines:}]

Although it appears to require exactly similar physical conditions, and usually grows with or near \textit{C. oppositifolium}, has evidently narrower chemical requirements. It is confined to springs and streamside flushes on the Kentish Ragstone and on the Thanet Sands. It is noteworthy that these two strata yield water of alkaline reaction, moderately calcareous, but containing many other soluble minerals as well, particularly iron, unlike the Chalk.

\[\text{[Genera and species continue through the rest of SAXIFRAGACEAE, then:]}\]

\textbf{ROSACEAE}

\textbf{Sorbaria} (Ser. ex DC.) A. Braun

\textit{\textsuperscript{†}S. tomentosa} (Lindley) Rehder (natd. in N.W. Kent). Himalayan Sorbaria H \textit{[account not yet transcribed]}

\textit{\textsuperscript{†}S. grandiflora} (Sweet) Maxim (natd. in W. Kent.). H \textit{[account not yet transcribed]}

\textbf{Spiraea} L.

\textit{\textsuperscript{†}S. billardii} Herincq (\textit{S. alba} x \textit{S. douglasii}). (natd. in W. Kent). Billard’s Bridewort. H \textit{[account not yet transcribed]}

\textit{\textsuperscript{†}S. douglasii} Hook. (natd. in W Kent.). Steeplebush. H \textit{[account not yet transcribed]}

\textit{\textsuperscript{†}S. canescens} D.Don (natd. Longfield). Himalayan Spiraea. H \textit{[account not yet transcribed]}

\textit{\textsuperscript{†}S. x arguta} Zabel (natd. Darenth Wood). \textit{Himalayan Spiraea}. H \textit{[account not yet transcribed]}

\textbf{Holodiscus} (K. Koch) Maxim.


\textsuperscript{73} Rose, F., Distribution maps of Kent Plants (Exhibit), in Lousley, J., ed. (1951) \textit{The Study of the Distribution of British Plants} (1950 conference report), B.S.B.I, Arbroath.

\textsuperscript{74} Two maps are given here. The larger one was present with Francis Rose’s papers made available to other botanists; the smaller one is taken from Rose, F. (1955) The new Flora of Kent. \textit{The South-Eastern Naturalist and Antiquary} 60: 9-19.

Filipendula Miller
F. vulgaris Moench Dropwort N [account not yet transcribed]

F. ulmaria (L.) Maxim Meadowsweet N

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.) [account not yet transcribed]
S. minor Scop. ssp. minor H&M> Salad Burnet. N [account not yet transcribed]
†ssp. muricata (Gremli) Briq. (=Poterium polygonum Waldst. & Kit.). H&M Fodder Burnet [account not yet transcribed]

Acaena Mutis ex L.
†A. novae-zelandiae Kirk (introd. (?with shoddy) natd.). Pirri-pirri-burr.

Alchemilla L. Lady's Mantles.
[A. glabra Ney. (SW of Snodland, 1947.)] [account not yet transcribed]
A. xanthochlora Rothm. Lyminge Forest, R Gorer. N [account not yet transcribed]
A. filicaulis Buser ssp. vestita (Buser) Bradshaw (Cobham Gt. Wd., Oaken Wd. Barming). N [account not yet transcribed]
†A. mollis (Buser) Rothm. (Garden escape). [account not yet transcribed]

Rosa L.
†R. multiflora Thunb. ex Murray Rare escape (E.P.) Many-flowered Rose. H [account not yet transcribed]

(R. mollis Smith – reported by EP (northern species- not likely to occur). (Culverston - Green - garden escape?) Soft Downy-rose. [account not yet transcribed]


Prunus L.
†P. persica (L.) Batsch (planted - rare escape). Peach. H [account not yet transcribed]
P. dulcis (Miller) D.Webb (ditto) Almond. H [account not yet transcribed]
†P. cerasifera Ehrh. (planted and now well naturalised). Cherry Plum. H [account not yet transcribed]
P. x fruticans Weihe – (P. spinosa x P. domestica). Common now.
†P. domestica L. (old introduction - now common). Wild Plum H [account not yet transcribed]
P. avium (L.) L. Wild Cherry. N [account not yet transcribed]
†P. cerasus L. Introduced Dwarf Cherry. [account not yet transcribed]
†P. mahaleb L. (Introduced and well-naturalised esp. by railways; N. France native) St. Lucie Cherry. H [account not yet transcribed]

Cydonia Miller
†C. oblonga Miller (rare escape, hedges and waste ground E. P.) Quince. H [account not yet transcribed]

Chaenomeles Lindley
†C. speciosa (Sweet) Nakai (occasionally naturalised: E.P.) Japanese Quince. H [account not yet transcribed]

Malus Miller

†M. purpurea (Barbier) Rehder (Natl. in W. Kent: garden origin c.1900). Purple Crab. H [account not yet transcribed]

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

CAESALPINIACEAE

Cassia L.
†C. occidentalis L. Oil-seed casual. [account not yet transcribed]

Cercis L.
†C. siliquastrum L. Judas Tree. Waste ground, Hythe. H [account not yet transcribed]

FABACEAE

Robinia L.
†R. pseudoacacia L. False- acacia. Widely naturalised in woodland, quarries, roadsides etc [account not yet transcribed]

Phaseolus L.
†P. vulgaris L. French Bean. Casual on rubbish tips. [account not yet transcribed]
†P. coccineus L. Runner Bean. Casual. [account not yet transcribed]
†P. lanatus L. Casual. [account not yet transcribed]

Vigna Savi
†V. radiata (L.) Wilczek Mung-bean. [account not yet transcribed]

Glycine Willd.
†G. max (L.) Merr. Soya-bean Casual


Galega L.
†G. officinalis L. Goat’s-rue. Naturalised on waste ground. [account not yet transcribed]

Colutea L.
†C. arborescens L. Bladder-senna. Naturalised on waste ground. [account not yet transcribed]
†C. × media Willd. Orange Bladder-senna. Naturalised on waste ground. [account not yet transcribed]

Astragalus L.
A. glycyphyllos L. Wild Liquorice. N [account not yet transcribed]

Onobrychis Miller
O. vicifolia Scop. Sainfoin. N, also colonist & planted. [account not yet transcribed]

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  [account not yet transcribed]

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].....]76

Tetragonolobus Scop.
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]....]77

Dorycnium Miller
†D. pentaphyllum Scop. Naturalised: Warden Point (? now fallen into sea): "road verge, Canterbury": E P.  [account not yet transcribed]

Ornithopus L.
†O. compressus L. Naturalised on road bank nr. Swanley. (Not in E P. area, but in VC 16).  [account not yet transcribed]
O. perpusillus L. Bird's-foot  N  [account not yet transcribed]

Hippocrepis comosa L. Horseshoe Vetch H&M-EP →N  [account not yet transcribed, but there ismap]78

Securigera DC. (= Coronilla L.)
†S. varia (L.) Lassen (C. varia L.) Crown Vetch. Well naturalised in a few places. H  [account not yet transcribed]

76 Taken from Rosemary FitzGerald's notes of the species account. Additional square brackets are introduced where the text may not be an exact transcript.
77 As above.
Scorpiurus L.
†S. muricatus L. Casual: tip and wool alien. [account not yet transcribed]

Vicia L.

V. tenuifolia Roth Fine-leaved Vetch. Naturalised: VR: [Aylesford], Dover cliffs [account not yet transcribed]

[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.
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, accounts not yet transcribed 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, 2nd 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.
*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”)

V. sativa L. ssp. nigra (L.) Ehrh. Common Vetch N [account not yet transcribed]
ssp. segetalis (Thuill.) Gaudin Well naturalised [account not yet transcribed]
ssp. † sativa Casual [account not yet transcribed]

V. lathyroides L. Spring Vetch N [account not yet transcribed]

V. lutea 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.79
2) Grain, S. Beach, 1955 (native form) MNE.

79 The original manuscript account went on to mention a different, alien form; and subsequently records for the latter were transferred to V. lutea.
Var. coarerulea Archang.


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.


1) Woolwich Common, c. 1960, G.M.B.
3) Deal, Duthie (var. angustifolia Syme)
5) Greenhithe Fl. Lond. Area.
6) 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 ...
17) Eastwear Bay, Folkestone, but not observed since, Miss V.F.P. Day.

†V. faba L. Broad Bean. Escape from cultivation. [account not yet transcribed]
†V. cassubica L. Formerly naturalised at Greenhithe; now extinct. [account not yet transcribed]

Lens Miller
†L. culinaris Medikus Lentil. Casual alien on tips, etc. [account not yet transcribed]

Lathyrus L.
....
†L. tuberosus L. Tuberous Pea. Naturalised at Sandgate. [account not yet transcribed]
†L. grandiflorus Smith Two-flowered Everlasting-pea Naturalised Trenley Park Wood [account not yet transcribed]
....
†L. hirsutus L. Hairy Vetchling Naturalised, now rare – formerly locally abundant (Kingston)

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

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

1st record, 1878: Southborough, Fawcett, BM, J. Bot. 1878.
1) Rough field, Bromley, 408675, 1955, D.P.Y.
Walmer, L.W.W.
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 80, 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.

1st record. 1632; Faversham to Gravesend, Johnson, Descriptio, p.37.

3) 1 plant in grassland N.W. of Dunkirk, 1945.
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.
14) Appledore waste ground, D.A.C.L.
15) Dungeness, teste D.A.C.L.

....

Ononis L.

....

†O. alopecuroides L. Casual, on tips, vr (E.P.). [account not yet transcribed]

Melilotus Miller

M. altissimus Thuill. Tall Melilot. ? N or C or D [account not yet transcribed]

....

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 TR025?); 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. [account not yet transcribed]

†T. tomentosum L. Woolly Clover Casual. [account not yet transcribed]

†T. aureum L. Large Clover Casual in crop fields [account not yet transcribed]

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. arboresus Sims Tree Lupin. Widely naturalised esp. sandy areas incl. the coast [account not yet transcribed]

†L. x regalis Bergmans (arboresus x polyphylus) Russell Lupin. Often planted and escapes on waste ground. [account not yet transcribed]

†L. polyphylus Lindley Garden Lupin Naturalised on waste ground. [account not yet transcribed]

Laburnum Fabr.

80 In the checklist it is given as ‘Doubtfully native, but established’.
81 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.
†L. anagyrroides Medikus Laburnum. Naturalised widely now. [account not yet transcribed]

Cytisus Desf.
C. nigricans L. Black Broom. Natd. in old gravel pit, Aylesford, 1970 → [account not yet transcribed]
C. scoparius L. Broom. N [account not yet transcribed]

Ceratonia L.
†C. siliqua L. Casual on dumps. [account not yet transcribed]

Spartium L.
†S. juncceum L. Spanish Broom. Naturalised from plantings. [account not yet transcribed]

Genista L.
G. monspessulana (L.) L. Johnson Montpellier Broom. Naturalised at Dartford. [account not yet transcribed]

Hippophae L.
H. rhamnoides L. Sea-buckthorn. N [account not yet transcribed]

Eleagnus L.
†E. umbellata Thunb. Eleagnus. Bird-sown alien, and on waste ground. [account not yet transcribed]

HALORAGACEAE

Myriophyllum L.
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].

H. [no surviving account beyond these comments in checklist]

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 Brookwood to Sussex boundary in 1954 (tetrad 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 Boulder Wall 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 Lympne in 1958 (tetrad TR138 and/or 13G) [MNE]; Royal Military Canal,
Hythe in 1955 (tetrad TR13M and/or 13S) [MNE]; dyke below the Roughs, West Hythe
(TR133?) [L.J. Margetts]; Palm marsh gravel pits in 1956 (tetrad TR13G) [L.J. Margetts];
and canal at St Mary's Bay [TR1232?] [L.J. Margetts].

[account not yet transcribed]

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 (tetrad TQ93Q or 93V) [MNE]; and on Dungeness, abundant in dykes southeast of Hamilton Farm (tetrad TR01U?); and in Oppen Pits (!) (TR71B). 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. [account not yet transcribed]

[L hyssopifolia
L. Grass-poly. ? N; extinct.] [account not yet transcribed]

[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 hectar (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. [account not yet transcribed]

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

BUXACEAE

Buxus L.
B. sempervirens L. Box N (and planted, or self-sown) [account not yet transcribed]

EUPHORBACEAE

....

Euphorbia L.
[ E. peplis L. Purple Spurge. Former native, now extinct] [account not yet transcribed]

E. platyphyllos L. Broad-leaved Spurge N or C [in manuscript, given as:]

Euphorbia platyphyllos L. 15, 16 Warted 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. 1st record, 1777: Faversham, Jacob, Pl. Fav.
[account not yet transcribed]

E. helioscopia L.  Sun Spurge.  N or C  [account not yet transcribed]

E. lathyris L.  Caper Spurge  N or H
Almost certainly native in Kent, and in Surrey too.  1st 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.
7) Boxley Warren, E.M.A., Phytol. NS. VI p.188, 1860: in glade of yew wood, abundant 1942-54! MNE.
Casual records at:
2) Faversham, F.G.E.K.
4) Pegwell Bay, D. McC. 1947;
8) Railway cutting, Godmersham, Mrs. J. R..., 1951.  St Margarets at Cliffe, R.J.H.;
[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.
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:


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 [account not yet transcribed]

Parthenocissus Planchon
†P. quinquefolia (L.) Planchon Virginia-creeper Naturalised on old walls, hedges and tips. H [account not yet transcribed]
†P. inserta (A Kerne) Fritsch False Virginia-creeper. (As the last). H [account not yet transcribed]

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.

1st 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.]


16) Copse in Sandling Park, E.S.M. Klin 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, Huckling....[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]....

STAPHYLEACEAE

Staphylea L.
†S. pinnata L. Bladdernut. Naturalised nr. Otford H [account not yet transcribed]

HIPPOCASTANACEAE

Aesculus L.
†A. hippocastanum L. Horse-chestnut. Well-naturalised and self-sown. [account not yet transcribed]

ACERACEAE

Acer L.
†A. platanoides L. Norway Maple Naturalised from seed in woods, eyc. H [account not yet transcribed]
A. campestre L. Field Maple. N [account not yet transcribed]
†A. pseudoplatanus L. Sycamore. D [account not yet transcribed]
†A. saccharinum L. Silver Maple. Planted, but self-sown seedling recorded. H [account not yet transcribed]
†A. negundo L. Ashleaf Maple Naturalised in one place. H [account not yet transcribed]

[This is as far as the checklist goes. The remaining species accounts are in given in the order in which they appear in Stace, 2nd 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 campstref L. Field Eryngo

....very common on sand dunes....west of Calais, and on the chalk inland frpm Cap Nez Blanc, so probably native in Kent, it is only surprising that it is so rare with us....

Scandix pecten-veneris L. Shepherd’s Needle

Colonist. Arable land and waste open ground, especially on sand and chalk: not very common, but well distributed.

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, A.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.
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.
10) Cornfield, Dunton Green station, P.C.H.

82 Taken from Rosemary FitzGerald’s notes of the species account. Additional square brackets are introduced where the text may not be an exact transcript.
83 Taken from Rosemary FitzGerald’s notes of the species account.

13) Sandy arable land S.W. of Pembury, 1944, J.R.W. & F.R.

†Myrrhis odorata (L.) Scop.  16 Alien, very rarely naturalised.

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 TQ92U); and Snargate (tetrad TQ92Z)
TQ93: abundant on Shirley Moor (MNE); Reading Street (TQ9230); Prebble; south of Kenardington (tetrads TQ93Q and/or TQ93V);
TR02: Hook House, Brenzett (ca TR000282) [MNE]; south of Ivychurch (tetrad TQ92I); Old Romney (tetrad TR02H); and near Romney
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 TQ922); and dykes by road north of Oxney in 1954
TQ93: Shirley Moor (TQ938320) [E.S.]; south of Kenardington (tetrads TQ93Q and/or TQ93V); Royal Military Canal; The Dowels, Appledore in 1959 (tetrad TQ93V) [MNE]
TR01: Dungeness, dyke south of Boulderwall Farm (tetrad TR01U); and Galloways Road TR01987?
TR02: Brenzett in 1945 (tetrad TR02D) [MNE]; 2) Ivychurch (tetrad TR02I); Old Romney (tetrad TR02H); and near Romney
TR03: south of Ham Street (tetrad TR03B etc); and Ruckinge (tetrad TR03G)
TR13: Near Selby Farm, south of Lymnpe in 1958 (TR1333) [MNE].

Oenanthe pimpinelloides L. Corky-fruit Water-dropwort

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 (tetrad TR011 and/or 01J)
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:
- TQ92: dyke south of Small Hythe in 1952 (TQ894298) [D. McClintock]; and Hedden Channel
- TQ93: Shirley Moor (TQ33322) [E.S. – MNE]; The Dowels northeast of Appledore in 1959 (tetrads TQ93Q and/or 93V) [MNE]; Royal Military Canal, Kenardington (TQ90315); 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 (TR057285)
- TR03: south of Ham Street (tetrad TR03B etc); dyke 1 mile south of Bilsington in 1958 (TR0332) [MNE]; and Orgars Wick in 1947 (tetrad TR03V)
- TR13: dyke south of Burmarsh in 1947 (tetrad TR13A); ditch near Selby Farm, south of Lympne 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
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 TR022) [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 TR01L and/or 01J) [J.H. Lorinder]; and Littlestone promenade in 1950 (tetrad TR02X) [MNE]. No records inland.

Bupleurum rotundifolium L.  Thorow-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—18th 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 TR022)

84 This account extract is taken from a typed transcript made by Rosemary Fitzgerald c. 1985.
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. Brennan – BM]; and railway, Lydd Station in 1952 (TR049215) [K.E. Bull].

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 (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.
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).
1st record, 1777: Faversham, E. Jacob, Fl. Fav., p.23.
2) Sheppey, Hb. Davis, 1918 MNE.
4) Fields N. of Wingham, R.G. Williams.
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 Lynpe (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 (tetrad 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 TR138); 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 TQ827) [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....]\(^85\)

Glechoma hederacea L. Ground Ivy\(^86\)

Clinopodium ascendens\(^87\)

Clinopodium calamintha (L.) Stace

\(^85\) 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.


\(^87\) Part of a series of maps from Francis Rose’s folder marked Kent Flora Maps which are generally incomplete as regards the distribution dots; but this is one of the better ones.
C. nepeta  L.  

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.


7) Roadside of A249, between Key Street and Chestnut Street: S.W. of Chestnut Street, 1945-62, MNE, abundant.


Lycopus europaeus  L.  

Gypsywort  

Localised records for district 15: at inland edge of Marsh east of Oxney, probably rare (tetrads TQ92N?), Shirley Moor in 1955 at TQ940320 and to south (tetrads TQ93F and/or 93K), and southwest of Dymchurch (tetrads 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  

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 (tetrads 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.

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 (tetrads TR03R) [MNE].

Callitriche obtusangula  Le Gall  

Blunt-fruit Water-starwort  

Localised records for district 15: dyke on Romney Marsh, near Selby Farm, Burmarsh in 1958 (tetrads TR13B) [MNE]; and ditches at Lydd in 1891 [TR01 and/or TR02] [E.S. Marshall – SLBI and Oxford herbarium].

88 Taken from Rosemary FitzGerald’s notes of the species account.
Callitriche hamulata Kütz. ex W.D.J. Koch  Intermediate Water-starwort

Localised records for district 15: Brenzett (tetrad TR02D7); ditch by Burmarsh road, Hythe (TR13?) [L.J. Margetts]; ditch near Hexden Channel (TQ82); ca 1 mile east of Appleford in 1954 (tetrad TQ92U); south of Ox pond in 1955 (TR035308); pond southwest of hychurch (tetrad TR02H); 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.


8) Hougham, O.B.G.

O. purpurea Jacq. 15 Blue Broomrape 1/51

Native. Parasitic on Achillea millefolium; extremely rare.

8) Bishopbourne, Anon., Ann. Mag. Nat. Hist., III (1830) p.435. Plentiful on Achillea, on neglected allotments, Bishopbourne 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 scarp 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, now very rare in a few bushy places and woodland rides.

1st record, 1597: (On broom) Shooters Hill, Gerard, Herbal, 1597


O. caryophyllacea Sm. 15 Clove-scented Broomrape 3/51
Native. Parasitic on *Galium mollugo* on fixed calcareous sand-dunes, in chalky south-facing hedgebanks, and on chalk cliffs near the sea in East Kent; rare and extremely local, in seven localities from Folkestone to Sandwich Bay; at the last locality it is, however, abundant.

Confined in the British Isles to East Kent; frequent on the fixed coastal dunes of the Pas de Calais (Sandgatte! Ambieteuse!).


4) St George’s Golf Links, Sandwich Bay, FJH; 1946-56 MNE; abundant over a wide range of fixed dunes from 362578 to 358588. [Sandhills, Deal, Duthe.]


O. elatior Sutton 89 15,16 Tall Broomrape 7/51
Native. Parasitic on *Centarea 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.

1st record, uncertain: none of those in Fl. Kent are very satisfactory, and may all refer to *O. rapum-genistae* or some other species.


(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. hederae Duby 90 15, 16 Ivy Broomrape 4/51

89 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.
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.

1st 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. Mill. By Mounts Road, Greenhithe, 1948, one spike.


O. artemisiae-campestris Vaucher ex Gaudin

[In manuscript given as O. picridis, to which the name has reverted since Stace, edition 2.]

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


8) Undercliff between St. Margaret’s Bay and Kingsdown, abundant, Syme, loc. cit.; rare ¾ mile NE of St. Margaret’s Bay, 1946, 1947! Not seen, 1953; abundant at St. Margaret’s Bay, 1957!


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) [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.


7) 76 Bluebell Hill, A.G. Davis, 1918 MNE.


10) 55 One plant, Oldbury Lane, Ightham, 1945, apparently on Anthriscus sylvestris. MNE. 1 plant, Toys Hill, near Pyrolo site, C. Stace.


13) 54 Bidborough, 1958, on zonal Pelargonium, F.R.B. [Tunbridge Wells, Hb. Lamb, 1870 MNE.]

Here, this account is placed in Stace (edition 2) order, before the next species; but in the manuscript it is placed afterwards.

**O. maritima** Pugs. 91 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.


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.*

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**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*

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**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).

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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91 Plants in Kent thus named are currently treated as a variety of *O. minor.*
**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.


13) Abundant on Ragstone scarp, W. of Hythe, 1949: W. of Lympne Castle, abundant on ragstone, 1946-55 MNE.

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**Centaurea cyanus** L. 15, 16 Cornflower

1) [Ruxley pits, 1958 T.H. Angel; escape?


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.


10) Sevenoaks dump, 1951, DMcC.


12) [St Pauls Church Street, Canterbury, Miss M.E.M., 1958.]

Centarea 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. 92

Sonnchus palustris L. 15, 16 Marsh Sow-thistle

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.


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]...]

93

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.


11) A.20. Garage, Harrietsham, 1962: Mrs B. Dodds (spl! MNE. ?Cornfield on Atherfield Clay, New Street Farm, Great Chart, 972407, 1952, I. We...


Aster tripolium L.

[no surviving account, other than map] 94

92 Taken from Rosemary FitzGerald's notes of the species account.

93 Taken from Rosemary FitzGerald's notes of the species account.

**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).

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**Petasites hybridus**

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**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).

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**Bidens tripartita** L.  
Trifid Bur-marigold  
In relation to district 15: Dungeness only (TR01).

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**Eupatorium cannabinum** L.  
Hemp-agrimony  
In relation to district 15: no records on Marsh, though noted by the Hexden Channel, Newenden in 1956 (tetrads TQ82I or 82P).

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*95 Part of a series of maps from Francis Rose’s folder marked Kent Flora Maps; the distribution dots may be incomplete.*
Liliidae (Monocotyledons)

ACORACEAE
ARACEAE
LEMNACEAE

ALISMATACEAE

Sagittaria L. 96

Sagittaria sagittifolia L. 15,16 Arrowhead
Native. Slow flowing rivers and marsh ditches: rare generally and decreasing, but still locally common in the Beult and Teise systems in 11) (apparently almost extinct in and by the Medway itself) and in 15). Very rare in 4), 2), 10) and 13). Rather rare in Surrey, local in Sussex and Essex and Pas de Calais.


10) 45 Westerham, Darenth pond, Squerries Park, D.P.Y.


13) 63 Ditch S. of Lamberhurst Church, 1936, JRW: 1956! MNE. 63 Bayham Abbey Lake, 1957, CAS. 61/63 Lamberhurst


Baldellia Parl.
[Apparently placed before Alisma in the manuscript and missing, together with the beginning of Alisma.]

B. ranunculoides (L.) Parl. Lesser Water-plantain

in relation to district 15, recorded at Hoppen Pits (TR0718).

Alisma plantago-aquatica L. Water-plantain
[The beginning of this account up to records for botanical district 4 is missing. There are no records for districts 5, 6 and 7.]

96 Placed after Alisma in the manuscript.
8) Pond on clay- and chalky clay above Gutteridge Fm, Denton, 1956, DACL


12) Brabourne Lees RAC. Ashford JG. Gravel pit Lake E of Chilham, 084539, ES


14) Beals Fm, Woodchurch, H.W. Adams

15) Dymchurch, JG. Shirley Moor, Dike SW side, '65.

16) Folkestone Warren, KDR.

Alisma lanceolatum With. 15, 16 14/52 Narrow-leaved Water-plantain
Native. Ponds and ditches; widespread but uncommon in districts 1), 2), 4), 11), 12), 14) and 15). It occurs in the alluvial areas and on the clay lands of the weald. Rare in Surrey, Sussex and Essex, unrecorded for Pas de Calais. 17 locations.

1) 46 Bickley, old Golf Course, 1956, C.A. Swain.
2) 77 Dikes, St Mary Hoo Marshes, 1958 MNE. 06 —.

4) Fordwich Marshes, '49, E. Robinson. 26 Grove Ferry, C.T.

11) 74 N. Bank of R. Beult, E. of Stile Bridge, Linton, 1945 MNE. 74 Teise, W. of Marden, 1956 MNE. 64 Pond E. of Rly, Hale St, 683493, E. Peckham, 1954-56 MNE.

14) 82 Pond, Palstre Court, Wittersham, 1958 MNE. 92 —.

[Damasonium Mill.

D. alisma Mill] [15] Star-fruit
Former native, now extinct: recorded long ago in two ponds, one in Sheppey, one at Folkestone. Still exists, very rarely, in Surrey (three localities); in Sussex (one locality); extinct in Essex. Formerly recorded for Nord. Still in Herts. This species is dying out in Britain like Pulicaria vulgaris apparently because the ponds in which both formerly grew are disappearing or becoming overgrown. Formerly ponds on commons and village greens were kept open by the grazing of cattle, horses and geese.

2) Field pond at East church, Sheppey; Pl. Fav., 1777.

[4] The records for Thanet (see Fl. K.) are almost certainly erroneous.

13) Tuckers Pond, Angley Wood, Dr Ranger, teste A.W. Hudson, c.1890.

16) Pool below cliffs between Folkestone and Sandgate, FGEK: now lost, CPSK.

BUTOMACEAE

Butomus L.
B. umbellatus L.

Flowering-rush

24/51

Native. Rivers, marsh dikes and ponds; uncommon, but still locally frequent in the marsh districts 2), 4) and 15), and in the Medway and its tributaries in 11); rare in 12). Now uncommon and very local in Surrey, local in Sussex and Pas de Calais.


51/76 Medway, 51/57 Dartford, 51/77 Higham.


10) [Darent, Dunton Green, 1933, A. Beadell.] [Darent, Hawley: Darenth, AC Tagg.] [Pit by Central Park, Dartford, before 1949, H.M.P.]


61/05 Dungeness, 51/92 Appledore, 61/02 Romney, 51/83 Tenterden, 51/93 Woodchurch, 61/03 Bilsingham.

HYDROCHARITACEAE

Hydrocharis L.
H. morsus-ranae L.

Frogbit

23/51

Native. Marsh ditches and ponds: locally frequent to locally abundant in 4), 11), and 15); rare in, and absent from most of 2); very rare elsewhere. A plant of alkaline fresh waters. Now rare and very local in Surrey, local in Sussex and Essex and Pas de Calais.


57, [NOT 67], [NOT 77], [NOT 76], 06


12) 04, 05, 15


Stratiotes L.
S. aloides L. Water-soldier

1) Keston, up[pe]r pond, introduced, 1924, ASK.

4) [Old records for Minster, Sarre and St Nicholas area, probably errors for Hydrocharis; see Fl.K.]

15) [Pond west of road between New Romney and Dymchurch, 1875, FJH: not recorded since.]

Egeria Planch.

E. densa Planch. 97

Elodea Michx.

E. canadensis Michx.

Alien, fully naturalised. Ponds, streams and ditches: very common in 2), 4) 10), 11), 12) and 15), rare in 1), 3), 13), 14) and 16), where suitable habitats are scarce, absent in 5) – 9).

1) Pond, 375661, W of W. Wickham, PCH. Pond, Blackheath, GMB. Cray, Old Bexley, nr A2, GMB. Ruxley pits, SAS. 37, 46

2) 47 Ditches, Erith Marshes, PCH. Pit N of Shorne, 693734, PCH. 57 Ditches, Dartford Marshes, 1962. 76 Ditches, Snodland Marshes, 1943. Gravel pits, Oare Creek, 1959 MNE. Seasalter Marshes, PRB. 66, 76, 47

3) 56, 57

[Not 64] 54

[Not 67] 75

Egeria densa has a heading in the manuscript, but the only entry (for Hatch Park) has been deleted. There is no evidence that this is, or has been, a Kent plant.

8) Swimming pool, St. Margaret’s Bay, B. Dodds.

10) N of Otford, D. Lang. Darent, Shoreham; Lullingstone; Eynsford, PCH. Hawley, AC Tagg. Westerham, AGS. 45, 55, 56


12) 74 Pond SW Southborough Common, Crampton. Dunorlan, T[unbridge] W[ells], CAS. Bayham Lakes, CAS. 94, 04, 05, 15. 53, 63, 73


16) Brockhill Lake, Saltwood, LJM.

† Lagarosiphon Harv.
† L. major (Ridl.) Moss

5) Pond, Downe village, FHB.

11) In flower, gravel pits S. of Yalding Sta[jon], 1961, CAS. Gravel pits, Aylesford, EGP. 01, 82, 92, 02, 83, 93, 03, 13

Vallisneria spiralis

APONOGETONACEAE

Aponogeton L.f.  
A. distachyos L.f.
1) Keston Upper Pond. Mrs M. Bostock, BEC Rep. 1924, p.200; 1952! 1954, PCH.
13) Pond nr Bayham Abbey, 648365, CAS. And in Teise.

JUNCAGINACEAE

Triglochin L.  
T. palustris L.  
15, 16  Marsh Arrow-grass 21/52
Native. Calcareous spring-fens and fen-meadows; brackish meadows and ditches; widespread but uncommon: 30 localities. Locally frequent in 4), occasional in 2), 12) and 16); rare elsewhere, in 1), 10), 11) and 15). Usually in short vegetation of Parvocaricetum type. Now very rare in Surrey, Sussex, and Essex; local and sub-maritime in Pas de Calais.
1) 47 Meadows S. of N. Cray, 1955 MNE. Bexley /47.
10) 56 Meadow S. of Castle, Lullingstone, 1956 MNE. [Hawley, Darrenth, A.C. Tagg.] Farningham /56
11) 85 Fen-meadow, the Brooks, Fairbourne Mill, Harrietsham, Mrs B. Dodds. 44 Hever, in alcareous flush in meadow SW of church, 1953 MNE. Harrietsham 85, Edenbridge /44
15) 01 In small fen SE of Hamilton Fm, Denge Beach, JHL, 1946. 01 Dungeness

T. maritima L.  
15, 16  Sea Arrow-grass 18/51
Native. Tidal salt-marshes, mainly in the general salt-marsh association: more rarely by brackish dikes: vey common and locally abundant in 2) and 4) in these habitats, rare in b3) and 15), absent elsewhere.
AG Davis MNE, 1956. 97 Minster S Marshes. Windmill Creek. 87 Greenborough Marsh, GHM & EGP. 86 W of Milfordhope, GHM & EGP. 96 Conyers Creek. 06 Faversham Creek. Oare Creek. Saline...Oare Meadow. Nagden Marshes. Castle Coot. Sealsalter nr Red Sluice, HMW.

16 Swalecliffe, 1945.


26 Chislet, /35 Sandwich, /36 Stour Est[uary]

POTAMOGETONACEAE

Potamogeton L.

P. natans L. [15, 16 38/51]

Native. Rivers, ponds, and ditches, in fresh weakly acid to alkaline waters: widespread and locally common, particularly in 2), 4), 11), 12) and 15); unrecorded for 3)\textsuperscript{101}, 5), 7), 8) and 16). Frequent in the adjacent counties and in N. France.

1) 46 Holwood Park Lakes. 46 Keston Common Ponds. 47 Chislehurst Common Pond, PCH. 46, 47

2) 57 Ditch, Dartford Marshes, 543772, 1962. 86. 77 Cooling Marshes, 1944. 07 Pond, Warden point. Luddenham Marshes, H.M.W. 57, 67, 77, 86, 96, 06, 07

3) Pond, Kites Fn, Swalecliffe, REW. Pond, Denstroude, HMW.


6) 67 Chalkpit S. of Northfleet, 1945, J.E.L.

7) Chalk pit, Rainham, OD.

10) 45 Westerham. 55 pond, Knole Park, PCH. 55 Dunton Green, AG Davis, 1919 MNE\textsuperscript{1}.


12) 94 R. Stour, SW of Hothfield, 1943: E.G.P. MNE\textsuperscript{3}. R. Stour, Godmersham Br[idge], E of Ch[urch], 1955, FR & E.S. 04 Dikes E of Rly, S. of Willesborough, 1950. 94, 04, 05, 15

13) 63 Ditch S. of Lamberhurst Ch[urch], 684365, 1960, CAS. 63 Bayham, Pond E. of Lamberhurst Gate,1944; Abbey Lakes CAS. 73 Bedegbury Pinetum, Marshall Lake, 1945 MNE\textsuperscript{4}. 54 Penshurst Park, Pond 1 mile N. of Village, by B.2176, 1944 MNE\textsuperscript{5}. 53 Pond by Broadwater Lane, T[unbridge] Wells, 1960, CAS. Dunorlan, T[unbridge] W[ells], CAS.

14) 83 Breeches Pond, 1947.

15) 01 Hoppen Pits, Dungeness, 1946 MNE\textsuperscript{6}. 02 New Romney. Brenzett RGW. 93 Dikes, Shirley Moor, 1947 MNE\textsuperscript{7}, 1965. Kenardington.

99 Follows Zostera in manuscript.

100 These details supplied; not in original.

101 However, records are given for district 3).

102 This symbol marks several entries, but the intention is not clear.
13) 53 Hawkenbury Bog, JRW 1945-. 73 Boggy streamlet, Pinetum, Bedgebury, 1962. 73 Louisa Lake, Bedgebury Forest, JRW: 1944-51 MNE
. 73 Peaty stream, Angley Wood, 1945-61 MNE
.

P. coloratus Hornem. 15

4) 25 Fen dikes N. of Wingham, 1945→ MNE
. 35 Hacklinge, fen ditches, 1946→ MNE
. 35 Dike, Ham Fen, 1838, 1949-60 MNE

P. lucens L. 15, 16
Native. Dikes, canals, lakes, and rivers, in still or slow moving neutral or calcareous water: frequent in the alluvial marsh dikes of 4) and 15), and i the Stour in 12): formerly in 1), 2), 11) and 14), but apparently now extinct there.

1) Ravensbourne, Lewisham, Milne & Gordon.
2) Greenwich Marshes; Deptford Creek, Mile & Gordon.

. 35 Dikes, Worth Minnis, 1956 MNE
. 26 Sarre, Miss M.E.Milward, 1962 MNE
. 25.

11) [Old records only for Tonbridge and Maidstone.] SW of Brenchden, 1955, ES.

12) Stour by WyeStation, 1939, J.P.M.B. HB. J.P.M.B.); Vaixhall Lakes, Canterbury, 1954, ES.

15) 93 Ditch, Shirley Moor, 1945-52, by B.2080 MNE
. 01 Hoppen pits, Dungeness, 1946 MNE
. 02 82 Dikes, W. of Wittersham, 1956 MNE
. 92 Dikes NW of Appledore Sta[tion], nr. B.2080, 1959 MNE
.

P. lucens x perfoliatus (= P. x salicifolius Wolfg.) (P. decipiens Nolte ex Koch)


P. alpinus Balb. 15
Native. Slow flowing rivers, ditches and ponds; extremely rare and only recently observed in 11) in the Beult and its tributary the Sherway.

[4] Ditches, Sholden, FGEK.
. R. Beult, 918397, S.E. of Buckhall, Bethersden, 1962 MNE
. R. Sherway, above and below Sherway Bridge, 867447, NE of Headcorn, 1962 MNE

P. perfoliatus L. 15, 16 formerly 13/51: now 4/51
Native. Rivers and canals: very rare, and much decreased since Fl.K. 24 localities given there: only 9 modern ones.

2) Marshes ditches nr the Thames, E. de C.]


[8] 34 In the Dour FGEK.


P. friesii Rupr. 15, 16 10/51

Native. Calcareous fen-dikes; very rare but locally abundant.

1) Cray tributary nr. Bexley M&G: 1963, G.M.B.


P. pusillus L. 15, 16 10/51

Native. Still or slow moving fresh water in streams, ditches, etc.: rare, and recorded only from the marsh districts 2), 4) and 15), and from the Medway valley 11) and Stour valley 12).


P. pusillus x P. trichoides = [P. x grovesii]104

11) Marden (as P. berchtoldii) E.S.M., BEC Rep., 1920, p.50.

P. obtusifolius Mert. & Koch 15, 16 4/51

Native. Ponds and ditches: now very rare, in a few ponds in the Weald.


4) [Ham, H.C. Watson. Stourmouth, Dowker.]


12) [Stour nr Wye, F.J.H.]

13) Pond N. of Scarletts, Cowden, 1949, ECW.

The wide blunt leaves, close branching habit, and very fine lateral nerves distinguish this species when sterile.

P. berchtoldii Fieb. 15, 16 13/51

Native. Freshwater dikes, streams and lakes, in base-rich water: rare in 2) and 13); widespread and locally frequent in 4), 11) and 12).

First record, 1881: see Dandy & Taylor’s paper in J. Bot., 72 (1940) p.56.

103 This account has been amended more than usual, with a number of records from district 4 queried and then deleted (so not included here).

104 Name supplied here, not in manuscript. In the BEC Report cited, it was P. x franconicus, a re-determination by C.G. Druce.
1) Danson Park, GMB. Ruxley pits, S&S.
2) 57 Dartford Marshes, 541761, 1962 MNE (det. JED 1963).
4) 57 Dartford Marshes, 541761, 1962 MNE (det. JED 1963).
5) 26 Preston Marshes, 1962, Mrs. B. Dodds; KFC. 26 Shuart, St Nicholas at Wade, 1939, JPMB Hb.
6) 26 Preston Marshes, 1962, Mrs. B. Dodds; KFC. 26 Shuart, St Nicholas at Wade, 1939, JPMB Hb.
8) 85 Pond by R. Len, Pollhill Ho., Harrietsham, 1962, Mrs. B. Dodds (specimen!). 75 Langley Park Lake, EGP, 1960 MNE. 84 R. Sherway, Sterway Bridge, Smarden, 867447, 1962 MNE.
11) 85 Pond by R. Len, Pollhill Ho., Harrietsham, 1962, Mrs. B. Dodds (specimen!). 75 Langley Park Lake, EGP, 1960 MNE. 84 R. Sherway, Sterway Bridge, Smarden, 867447, 1962 MNE.
In this species there is a strong lateral nerve on each side of midrib at some distance from it.

P. trichoides Cham. & Schlcht. 15
Native. Freshwater ditches and lakes: very rare and confined to 4) and 15).

P. acutifolius Link 15, [16] [4/51]: 2/51
Native. Alluvial dikes in calcareous water; very rare, and only seen recently in 4) and 15).

P. crispus L. 15, 16 38/52
Native. Freshwater streams, ditches and ponds: widespread and locally frequent in 2), 4), 10), 11), 12), and 15); unrecorded for 3), 5)-9). Frequent in the adjacent counties and in N. France.

In this species there is a strong lateral nerve on each side of midrib at some distance from it.
12) 94 Stour SW of Hothfield, 1943. 05 R. Stour, Godmersham, 1955 MNE. 05 R. Stour, Shalmsford Bridge, Chartham, 1960 MNE. 04 R. Stour, Olantigh Park, 1m S. of Godmersham, FR & R. Melville, MNE.
14) Breeches Pond, RAC. 83 Pond E of St Michaels RAC.
15) 02 Near Romney. 02 Brenzett. 13 Dike, Palmmarsh / R[oyal] M[ilitary] C[anal], Hythe, 1958, L.J.M. 01 Dungeness. 02 Lydd, Lady D., c.1902. 01, 82, 92, 02, 93, 03, 13, 23
16) 23 Gault pond, Folkes tone Warren, 1965, BN.

P. crispus x freisi = P. x lintonii Fryer

10) Stream in village, Riverhead BM. R. Darent, by rly. between Dunton Green and Riverhead, 1946, JPMB, in Hb. JPMB BM.

P. pectinatus L. 15, 16 24/51
Native. Streams, ponds, canals and ditches, in fresh and brackish waters: very common in the districts 2), 4) and 15), less so in the Stour in 12), rare in 1), 3), and 11).

1) 46 Keston Ponds, C. West.
3) 16 Swalecliffe, 1944.
6) Chalkpit, Northfleet, HAS.
11) 75 Maidstone, in R, Len, E.G. Philp, 1958 MNE.

Groenlandia Gay

G. densa (L.) Fourn. (Potamogeton densus L.) 15, 16 16/51 Native. Freshwater dikes, streams and ponds; rare and unrecorded from most of S. Kent but locally frequent in the dikes of 2), 4), in the Darent in 10) and in the Stour in 12); rare in 8), 11), 13), and 15).

1) Cray, Old Bexley, GB (nr A2).
8) 24 R. Dour, Kearsney, KDR. 24
10) Chipstead 45, 56
11) Tonbridge. 65 Clare Park, E. Malling. 65
12) R. Stour, Chilham, 1945, DHK. 04, 95, 05, 15
13) Tunbridge Wells, W.W.R. TLS.
15) Lydd, Lady D. c.1902. No recent records.
RUPPIACEAE

Ruppia L.
R. spiralis L. ex Dumort.

3/51
*Sheerness, Hb. Dillenius, teste G.C. Druce.
3) E. of Whitstable (=Swalecliffe) FJH, Fl. K.
4) /35 – to 1954 – Richborough?

R. maritima L.

15) Dikes and pools nr sea, Dymchurch, CPSK; FJH, Fl. K. (1947, sterile plants seen of a Ruppia)

ZANNICHELLIIACEAE

Zannichellia L.
Z. palustris L. 15, 16 Horned pondweed 32/51
Native. Ditches, streams, and ponds, in still and running fresh or brackish water, not in acid water: frequent to locally common in 2), 4), and 15), in the Darent and Stour in 10) and 12) and in the northern part of 11); rare elsewhere, and absent from 5)–9) and 13) and 14). Rare in Surrey, local in Sussex, Essex, and Pas de Calais, but commoner in the coastal marshes.

3) 16 Swalecliffe, 1944.
6) Flooded chalkpit, Northfleet, HAS.


13) Hythe, J.E.L.  02 Lydd.  92 Appledore.  13 Dike nr Selby Fm S. of Lympne, 1958 MNE.  92 Dike, Fairfield, 1952, MNE.

ZOSTERACEAE

Zostera L.
Z. marina L.  15
Native. In estuaries on mud near low-water mark: very rare, and not confirmed by specimens.
Zosteretum submerged:emerged ratio 0.628 – 282/732 hrs per month.
2) Mudflats near LWMO [Low Water Mark of Ordinary Tides], NW of Seasalter; reported, local fishermen, to REW and Pfof. GE Kewell, 1950. From the description and the habitat this was probably Z. marina L. Older records for this species cannot be accepted in the absence of specimens (see Fl. K.).

Z. angustifolia (Hornem.) Reichb.  15, 16 2/51
Native. Mud flats below the general salt-marsh level, but far above low-water mark of ordinary tides (often over low water reefs!); very rare, but locally abundant in at least three places. Rare in Essex, very rare in W. Sussex. Not reported from Pas de Calais; nor are the other two species.
4) “Salt-water ponds at Reculver”, Hb. J.S. Mill, probably refer to this species: I have not seen the specimen.
“A Mallard shot off Milford hope Island in Sept. 1958 had 170 seeds of this species in its food tract, in perfect preservation: it had probably fed just prior to being shot”: P. Olney in litt., 1962.

Z. noltii Hornem.  15 1/51
Native. Mud-flats, with Z. angustifolia: very rare but plentiful in at least two places.

ARACEAE

Acorus L.
A. calamus L.  15, t16 Sweet Sedge  1/51 (3/51)
Alien, probably introduced into Britain, but appearing quite native in dikes about Plucks Gutter.
13) Spa Golf Course, T[unbridge] Wells, KEB.

Calla L.

105 Follows Aponogeton in manuscript.
106 Follows Orchidaceae in manuscript.
C. palustris L.

Alien. Naturalised in a swamp at:

13) Kenward Green, 633409, Pembury, 1956: flowering 1962, CAS, det. BM.

Arum L.

A. maculatum L. 15, 16 /51 Wild arum, Lords and Ladies, Cuckoo-pint 2n=56

Native. Woodland on all except highly acid soils; hedgebanks; abundant throughout Kent except in the marsh districts 2), 4) and 15) where it is, locally, very rare or absent; it is also rare in the acid sandy plateau woods of 13), but even here occurs on hedgebanks where the soil is somewhat base-enriched. Common throughout the adjoining counties and N. France.


3) 06 Hernhill village 55. 16 Canterbury golf course 55. 16 Old Park, Canterbury 55. 26 Shelving Wood (Woolwich Beds) ‘62.

4) Wenderton Wood, Wingham, BN.

5) Darwins Bank, Downe. Halstead PCH. Rushmore Hill PCH. Hedge 396611 PCH. Pilots Wood PCH.


9) Copse, Durlough, Minster, 1959, A.B.S.


A. italicum Mill. subsp. neglectum Towns.  

Native: deep, well-drained banks on calcareous rocks: very rare and as a native only known in one locality in Kent so far. There are a number of old records from S.E. Kent quoted in Fl. K.: C.T. Prime and I have visited most of these, and C.T.P. has looked at the available herbarium material: he has concluded that all records prior to the one quoted below are errors (see Melvill's account of his reputed discovery of this at Folkestone in J. Bot. 1888, p.348, and N.R.A. Brigg's comment in Ibid. p.378). It is locally common in sheltered localities on the chalk in W. Sussex, and westward from these; not recorded in any other adjacent county nor in France NE of Normandy.


L= of leaves 3½” long, m= 4¾”, 17.9.60. L= 4”, m= 6”, 15.10.60. L= 6½”, m= 8”, 13.11.60.

subsp. italicum

The type of this species (with white veins) occurs as escape at several places:

11) Cobtree Hill, Aylesford, 1926, MNE.

†A. dracunculus


A. dracunculus

16) Old r[ai]l[wa]y bank, Shorncliffe, for 3 years to 1950, teste V.F.P.Day.

LEMNACEAE

Spirodela Schleid.

S. polyrhiza (L.) Schleid. 107

Greater Duckweed

Native. Ponds, and slow-moving rivers and ditches: very widespread and locally common in fresh base-rich waters. Surprisingly rare in 2; common in 4 and 15), and in the Medway-Beult system in 11) and in the Stour. [old records for Plumstead, Northfleet and Harty Ferry, Fl.K.]

2) 06 Dikes NW of Waystreet Fm, Hernhill, 055616, 1955 MNE 06
10) 45 Westerham, R[iver] Darent AGS.
12) 94 Stour below Ashford, ‘49, E.S. 04 R[iver] Stour, Olantigh Br[idge], Wye, L.W.W. 94, 04
13) 53 Tunbridge Wells, ‘55. 53
15) 01 Dungeness. 02 Brenzett. 93 R[oyal] M[ilitary] Canal, Kenardington, 1959 MNE. 83 Dike, Windmill Channel, E of Freezingham, Rovenden, 1959 MNE. 82 Dikes SW of Small Hythe, 1956. 92 Appledore. 83, 82, 93, 92, 02, 01

L. gibba L. 15, 16 25/51 Fat Duckweed

Native. Streams, ponds, and ditches in fresh and weakly brackish waters: common in the marsh districts 2), 4) and 15), in 12), 13) and in the Medway-Beult system in 11); rare elsewhere.

107 In the manuscript, given as Lemna polyrhiza L.
2) 77 Higham Marshes, 1944-1956; flowering here, D.P.Y. 1947. 67 Northfleet Marshes, stream 615746 PCH. 76 N. of Burham Fl. K. 87 Dike, All Hallows, AGS. 06 By Waystreet Fm, Hernhill. 96 Dikes, Blacketts Tonge. 67, 77, 87, 96, 06


12) Ditches S. of Willesborough, E.S. N. of Willesborough. Near Ashford Sewage Works, 1949, E.S. Stour, Milton Bridge, MEM. 94, 04

13) 64 pond, Kippings Cross, 644401, 1957, CAS.

L. minuta

Now common.

L. minor

Native. Fresh and weakly brackish waters, in streams, ponds and ditches; abundant in such habitats wherever they occur; hence very common in the chalk districts.


3) Pond by Ch[urch], Blean.


7) Pond, Eastling, C.T., 963566.

8) 24 Bushy Rough Lake. Pond, Coldred. 34 R. Dour, Kearsney. Gate Fm Pond, Rhodes Minnis, ES. Pond, St Margarets at Cliffe DYP. 24, 34

10) Seal Chart, 1946. River below Shoreham PCH. St. Johns Jerusalem PCH. 45, 55, 56

11) 75. 85. 66. 44. 54. 65 Leybourne Castle Lakes. 65 Platt, DMcC. 64 Pond E of Hale St[ree]t CAS. 74 Beult, N of Cross in Hand, Staplehurst, 1955 MNE. E of Marden. Pond Haysden 568449. 84 Beult S. of Ch[urch], Headcorn, 831440, 62. 84 Pond W of Leightonbridge, 813454, Headcorn, 1962. 84 Pond by River E of Golden Square, Smarden, 1962. 44, 54, 64, 74, 84, 65, 75, 85, 66

12) 14 Stowting stream. 94, 04, 14, 95, 05, 15


14) 72


L. trisulca

Native. Ponds and ditches, in fresh base-rich and in brackish waters; very abundant in the coastal marsh districts and estuaries of 2), 4) and 15), far less common than L. polyrhiza inland in 11) and 12); very rare in 13).

1) 37. 46 Pond, Bickley 37, 46


3) Kites Fm, Swalecliffe; Swalecliffe Sewage Works, HMW.

10) 45, 55
11) 75.  85.  74 Yalding.  84 Pond by River, SE of Golden Square, Smarden.  74 Marden, E of, 1946.  64 Below Tonbridge.  Haysden, 568449, McFarlane.
12) 04 S. of Willesborough.  Ditch n[ear] R[iver], Chilham / Chilham Castle Lake, ES.
14) 83, 93, 92, 03, 02, 01, 13
16) 13 Pond by Folks Wood, Pedlinge, LJM.

*Wolffia* Horkel ex Schleid

**W. arrhiza** (L.) Horkel ex Wimm.

Native.  Ponds and ditches: rare, but locally abundant in a few places in 4), 11) and 15): unknown elsewhere.

* 1935: BEC, 1935, p.44.

11) JPMB, BEC '35 Rep, p.44.  Pond 1m E. of Marden, 1946, 1952.

JUNCACEAE

**Juncus L.**

*J. squarrosus* L.  15, 16  Heath Rush  5/52

Native: dry- and wet-heaths: very rare, but still plentiful at Hotfiel d Common.  Still very common on the heaths of Surrey and Sussex, very rare in Essex: very rare in Pas de Calais (3 localities only now).

1) 46 Keston Common, 1944-62, MNE.  46
12) 94 Hothfield Common, 1943-62, abundant in wet-heath and damp heath communities, MNE.
13) [Southborough Common, Miss Crampton: gone by 1960, C.A.S.]

*J. tenuis* Willd.

15, 16  11/52

Naturalised alien, becoming widespread in damp paths in woods on acid soils, but still rare.

† In the manuscript, this section follows Liliaceae.
14) 73 nr Mopesden, Hawkhurst, 1946.

J. compressus Jacq. 15 6/51
Native. Moist calcareous meadows, associated with chalk springs: rare, but locally plentiful in 4) and 12) and in one place in 11). Local in meadows by the Thames in Surrey; very rare in Sussex; unrecorded for Essex; frequent in the Pas de Calais. This is an inland freshwater species, in contrast to the next, and its globular fruits much exceed the perianth in length.


11) 85 By entrance to the Brooks, below Fairbourne Mill, Harrietsham, 1961, 1962, B. Dodds; E. Philp. 85


J. gerardii Loisel. 15, 16 24/51
Native. Brackish ditches and meadows: upper parts of tidal saltings: fresh meadows in former estuarine areas: common and general on these habitats in 2), 4) and 15). Inland at Swalecliffe in 3), in 12) at Sevington, E.S. In 15) it occurs well inland at Fairfield, Sandhurst Levels, Brenzett and Shirley Moors, probably as a relic of anciet brackish conditions. Probably now extinct by the tidal Thames in Surrey, but plentiful locally in its typical habitats in Sussex, Essex, and Pas de Calais.


3) 16 Swalecliffe, REW.


12) Road verge, Sevington 036404, 1957, ES. 04


J. bufonius L. 15, 16 51/51
Native. Bare, damp ground, such as pond banks, paths, track ruts, often in woods and on heaths on acid soils, but also in fens and marshy meadows: very common, except in the chalk districts, 5) – 9), where it is rare: common in the adjoining counties and in N France


2) Higham Marshes. Holborough Marshes. Grain, 886774, AGS. Oare Meadow, H.M.W. Gravel pits E of Bysing Wood, HMW.


5) Pond, Downe village, 1960, FHB.


8) Pond, Gate Fm, Rhodes Minnis, 1955, DACL. Napchester Wood, in clearing, 1957, BN.
10) Darenth Meadows PCH, FR. Bradbourne pits, FSEF. Roadverge 1½ m N of Westerham RAC. Ightham Common. Seal Chart, SW part 1954 MNE.


16) Folkestone golf course, VFDP.

J. inflexus L. 15,16 51/52 Hard Rush

Native. Meadows, alluvial grasslands, pastures and marshes on moist or heavy base-rich soils or on alluvial peat: very common and often abundant, except in the chalk districts 5) – 9). Particularly abundant in the marsh districts 2), 4), and 15), and on the Weald and Gault Clays in 10), 110, and 12); its local abundance in grasslands indicates poor drainage. Abundant throughout S.E. England and N. France.


2) 857669, L[owe]r Halstow by str[eam], ‘62. Grain, PCH.

3) Luddenham Marshes, 61, HM Wilks.


8) 24 Woolwich Wood, KDR. 34 Pond, E. Langdon, 1959, BN.

10) Knole Park, PCH. Above S. Darenth, PCH. St Johns Jerusalem, PCH. Darenth Meadows, PCH. Lullingstone PCH. Bradbourne pits FSEF.


12) Cuckoldscoomb, Brook. Stowting.

13) By str[eam], High Rocks L[anc[et]], Tun[bridge] Wells, 1960, CAS. Ditch S. of Lamberhurst Church, 684365, 1960, CAS. Southborough, .... field & Vauxhall Lane, HWC.


J. effusus L. 15, 16 50/51 Soft Rush

Native. Very Common and abundant in damp grasslands, marshes, and open places in woods on a wide range of soils from weakly acid to calcareous and brackish types: rare only on the chalk in 5) – 9). Abundant throughout S.E. England and N. France.


3) Rs[ide] Pond SE of Blean, CAS.

4) Wenderton, meadows BN. Westbere Marshes, MEM. N. of Sandwich Bay.

5) Andrews Wood, PCH. 396611, PCH.


10) Westerham Wood PCH. Meadow nr. Darent W of Brasted GMB. Knole Park PCH. Bradbourne pits FSEF.


J. effusus x inflexus = J. diffusus Hoppe  
11) Leybourne, 1962, Mrs. R. Begg.  

J. conglomeratus L.  
Native. Damp grassland, marshes, rides and clearings in woods: not quite as abundant as J. effusus; though very well distributed; it is rare in 2) and the NE part of 4), rather more common on acid soils. Most easily distinguished from compact-headed forms of effusus by the stem, which has fewer and stronger ridges and feels fluted when rolled between finger and thumb (effusus feels smooth). Common throughout S.E. England and N. France.  
1) Crofton Heath, PCH. Joydens Wood, PCH. Gattons Plantatio[n], PCH. Farningham Wood, PCH. Chislehurst Common 1945 MNE. Shooters Hill GMB.  
2) (not recorde[d] for 87, 97, 07, 96)  
3) Marsh, Old Park, E of Canterbury 1947 MNE.  
5) Andrews Wood S. of Badgers Mount PCH.  
8) Eastling Woods, BN. Reindon Wood, 1959, BN.  
12) Hothfield Heath, 1947 MNE. Field SW of Sellindge Ch[urch] RAC.  
15) Bird observ[atory] area, Denge Beach J. Hubbard.  
16) Copt Point, V.F.P.D. (not recorde[d] for 13)  

J. maritimus Lam.  
Native. Upper parts of tidal salt marshes: common in 2) from below Gravesend to Seasalter and up the Medway to Cuxton; in 4) in the Stour estuary below Sandwuch; and in 15) rare, and only at Littlestone and SW of Lydd.  
67, 77, 97, 76, 86, 96, 06  
4) N. of Sandwich by Stour, from Downs Farm to river mouth. Saline dune slacks S of Shellness, Sandwich Bay MNE.  

J. acutus L.  
Native. Dune slacks, both saline and fresh, and sandy salt-marshes: very rare, but locally abundant from Deal to the estuary of the R. Stour. Not known elsewhere in S.E. England, or in N. France E. of the Cotentin. It occurs very rarely in Norfolk., and is abundant in the dune slacks of N. Devon and Wales. It is an essential ly Mediterranean species in Europe.  
**J. subnodulosus** Schrank

Native. Calcarous fens and fen meadows, usually on peat: rare generally, but locally common in 4) and 16); scattered elsewhere in 2), 11), 12), and 15). Very rare in Surrey, Sussex and Essex; locally common in fens in Pas de Calais.

2) Footscray Meadows, R. Burton. 57 Ditch, Barnes Cray, below Crayford, 1944 [MNE]. 76 Holborow Marshes, Snodland, abundant, 1944, [MNE]. 76 Snodland S. Marshes, one clump, 1943-44 [MNE]. 06 Gravel pits NE of Oare, 1959, [MNE]. [67 Northfleet Brooks, 1862, Maidstone NHS, MNE.]


15) 01 Old shingle workings NE of Bird observatory, Dungeness, 1953-62 [MNE].


**J. acutiflorus** Ehr. ex Hoffm.

Native. Valley bogs and swamps on heaths or in woodland, on moderately acid peat: rare on the Eocene gravels and sands in 1) and 3), local on the Folkestone Sand heaths of 10), 11), 12), and 16); only common on the Hastings Sands of 13); very rare in 14); and Dungeness in 15). Usually associated with some degree of flushing with base-deficient water. Very common in the acid sandy areas of Surrey and Sussex on Bagshot Sands, Greensand and Wealden Sands; very rare in Essex and Pas de Calais where suitable habitats are few.


2) Marsh on landslip on cliffs, E of Minster, 1954, on Bagshot Sands and London Clay.


10) 55 Ightham Common. 55 Oldbury Hill. 45 Marsh 1m. E. of Westerham 1955 [MNE]. Westerham Wood 82. 45, 55, unknown in 65

11) 85 Sandway bog, Lenham. [S Mate Park.]

12) 94 Hothfield Common, 1900,H.L. [MNE]: 1943-62! 04 Ashford Warren. 04 Willesborough Lees. 13 Gibbons Brook. 03 Stonehill bog, Sellindge. 93 Ponds S. of Willowbed Fm, Gr[ea]t Chart, 991397, ES.


14) 93 ——. 83 Knock Heath, Tenterden.

15) 01 Hoppen pits, Denge Beach.

16) 13 Whitenbrooks Wood, Seabrook, 1947 [MNE].
**J. acutiflorus x articulatus** = **J. x surreyanus** Druce

**J. articulatus** L. 15/16 43/51 [Jointed Rush]

Native. Marshy meadows, swamps and fens on neutral to calcareous peat or alluvial soil: rather frequent in most parts of Kent except the dry chalk districts.


2) 57 Barnes Cray, below Crayford, 1944, MNE. 77 Meadow ¾ m. S. of Cliffe Station, 1944. 76 Holborough Marshes, 1944 MNE. 76 Snodland S. Marshes. 96 Luddenham Marshes, 1961, H.M.W. Sheppey, A.G. Davis 1918 MNE. 06 Meadow N. of Oare Mill Pond, 1959 MNE. 07 Warden cliffs, in ravine. 76, 96, 06, 77, 87, 07

3) Gipsy Corner, Clowes Wood, 1953, REW. Church Wood NW of Rough Common REW.


5) 45. 55 Bradbourne Pits FSEF. 45, 55

6) Addington Place, DMcc. 65 Leybourne Lakes. 65 Mereworth. 85 1m. S. of Harrietsham 1958 EGP MNE.

7) 84 Pond 811454 W of Leighton Heathdow ’62. 84 Pond E of Hale St. CAS 683493. 66 Ryarsh Wood. 75 Boxley, 1958, EGP, MNE. Pluckley Brickworks ES. 65, 75, 85, 66

8) 04 Cuckoldsoomb Fen, Brook, 1946-54 MNE. 14 Stowting fen-meadows, 1954 MNE. 94. 95. 94, 04, 05, 95, 05, 15

9) 63 Cocksbrook Wood, Lamberhurst, 1942, JRW. 73 Combwell Wood, 1959, MNE. Southborough HNC.

10) 13 The Lince, Etchinghill 1958 MNE. 23 Gault, Folkestone Warren, in flushes, BN. 44, 54, 64, 74, 84, 53, 63, 73, 83, 92, 83, 03, 13, 23

**J. bulbosus** L. 15, 16 21/52 Bulbous Rush


3) Pond, Downe Village, 1960, F.H.B. 55

4) 55 Ightham Common, 1944. Westerham Wood 82. 55


6) 94 Hothfield Common, 1943-62 MNE. 04 Willesborough Lees. 13 Gibbons Brook, 1945-54 MNE. 03 Stonehill Bog, Sellidge.


8) 72 Sandhurst.

9) 01 Ballast pit, Dungeness. 01

**J. kochii**

10) Formerly treated as a separate species, but presumably would not have been maintained as such if Francis Rose had continued his revision of taxa covered by the Flora.
**Luzula DC.**

**L. pilosa** (L.) Willd. 15, 16 44/51 Hairy Woodrush

Native. Dry woods and shaded hedgebanks, more abundant on lighter soils: very common in all wooded areas of Kent, but absent from the marshland areas and from Sheppey in 2), and wholly from 4) and 15): rare on the Weald Clay in 11) from Tonbridge to Smarden. Common in the adjacent counties and in N. France.


**L. forsteri** (Sm.) DC 15, 16 34/52 Narrow-leaved Woodrush

Native. Dry woodlands, particularly of beech and oak, especially on banks, mainly on chalk, sand or gravel; rather common to locally very common over most well-wooded parts of the county, but rare in 12), unrecorded in the marsh districts of 2), 4), and 15), and absent from the heavy clay soils: common over much of Surrey and Sussex: the Weald and the North Downs seem to be the headquarters of this species in Britain. Very rare in Essex, unknown in Pas de Calais, or NE of Normandy in France. 1) Holwood Park. Elmstead Lane, N of Bickley, 1944. Petts Wood. Hayes Common. Joydens Wood PCH: 1946.
Luzula forsteri x pilosa = L. x borreri Bromf. ex Bab.

Native. This hybrid can usually be detected where the parents occur together — and nearly always where L. forsteri occurs, L. pilosa is nearby or intermixed.


2) Darenth Wood, ESM.


7) Rare. 03? 741 54 abs[ent] in 1944, 03 Aldington


10) Bargrove Wood / Asholt Wood VFPD.

13 Hythe
frequent generally on the Eocene of 1), 3) and 6E), occasional and local on drifts over the chalk in 5), 6), 7) and 8). Common to abundant on the Lower Greensand of 10) and 11), scattered on the Hastings Sands of 13) and 14). Frequent in the High Weald and Greensand areas of Surrey and Sussex, rare and very local in Essex, very local in Pas de Calais and confined to the Wealden of the Boulonnais.

1) 57 Joydens Wood, 1946 MNE. 56 Farningham Wood! PCH.


10) 45 Crockham Hill. 45. Ide Hill. 45 Goathurst Common S&S, RAC. 55 Everlands, 508518, RAC. 55 Bayleys Hill.

11) 65 Comp Woods. 65 Mereworth Woods. 75 Oaken Wood, Barming 1900 HL; 1945 MNE. 75 Oaken Wood, Ditton, 1946 MNE. 85 Kings Wood, Langley. 86

12) unrecorded.

13) Stonewall Park, Chiddingstone. 54 South Park, Penshurst. 53 Hungershall Rocks 1947: ‘60 MNE. 63 Winbridge Lamberhurst 1944 MNE. Fishers Castle Rocks. 73 Old Park Wood. 63 Kilndown Wood. By drive, Tunbridge Wells 595400 CAS. 53, 54, 63, 73, 83, 93

14) 93 Finchbourne Wood. 93 Gill S. of Pigeon Hoo, Tenterden, 1962. 82 Gill N. of Wittestham. 92 Gill Wood, Owley, Wittersham 1954 MNE.

[16] Aldington Common, FGEK.†

L. luzuloides (Lam.) Dandy & Wilmott [White Wood-rush]

Alien; status uncertain.

11) Maidstone, 1890 H. Lamb MNE.

L. campestris (L.) DC. 15, 16 50/51 [Field Wood-rush]

Native. Dry grassland, dunes and open places on heaths and in woods: very common throughout most of Kent but unrecorded recently for Thanet 9). Common in all adjacent counties and N. France.


2) Dartford Heath 516728, 1961, HMR.

3) 123660 track Chelsfield HMW.

4) Sandwich Bay.

5) Leaves Green. Rushmore Hill, PCH. Pilots Wood, PCH.


10) Knole Park.
L. multiflora (Retz.) Lejeune  

Native. Dry open woods and heaths, usually on acid sandy or peaty soils: also in fens: widespread and locally common in such habitats. Common in Surrey and Sussex, more local in Essex and Pas de Calais. The two varieties of this species, var. congesta (DC.) Lej. and var. multiflora, have been recognised as species (see J. Buchanan, 1960, *Proc. Linn. Soc.* 171, pp126-128), but I have followed Dandy in regarding them as varieties. Their distribution, as far as it is known, is given below that of the aggregate.


10) Ightham, 1899, H.L. *MNE*.


15) Hoppen Pits, Denge Beach, 1954 *MNE*.

var. congesta (DC.) Lejeune (*L. congesta* (Thuill.) Lej.)
Plants of this taxon cultivated from Glen Lyon, Perthshire were found to have consistently 2n=48 by Buchanan (see above), and she considers that on cytological grounds, as well as from biometrical morphological studies, this variety should be regarded as a good species. She measured morphological characteristics from over 1000 plants of the *campestris – multiflora* complex.

1) Keston Common, 1945, 1946 MNE. Holwood Park, 1954 MNE.
3) Thornden Wood, 1945 MNE.
11) Maidstone, 1890, H.L. MNE. By Sandway Bog, Lenham, 1955, MNE.

**CYPARACEAE**

**Eriophorum L.**

**E. angustifolium** Honck. 15, 16 9/52 Common Cotton Grass

Native. Fens, valley bogs and wet heaths in acid (pH3-5) to calcareous (pH7.5) waters: also in artificial ponds and ditches: rare and scattered (only eleven localities), but plentiful at Hothfield, Gibbons Brook, Dungeness and Keston. Probably once common on the L{ow}e Greensand bogs. Still locally common and abundant in W. Surrey and in Sussex (High weald, and Greensand heaths in the west): rare in Essex and Pas de Calais where suitable habitats are few.

1) 46 Keston Bog 1916, AGD MNE; 1944-62! MNE.
11) 85 Sandway bog, Lenham, 1965, B. Dodds.
15) 01 Hoppen Pits, Denge Beach, 1945-62 MNE. 01 Shingle pit, Marsh E. of school, Dungeness, 1962.

**[E. latifolium** Hoppe [15]

Calcareous marshes and open fens: now extinct.


**[E. vaginatum** L. (15 error), [16]


Tunbridge Wells (W.W.R., TLS), probably from Fishers Castle, the bog is now merely a marshy field. The Thanet records are undoubtedly errors (see Fl.K.). still locally frequent on wet heaths in w. Sussex and W. Surrey. Not recorded from Essex or Pas de Calais.

**Trichophorum Pers.**

**T. cespitosum** (L.) Hartm. ssp. *germanicum* (Palla) Hegi [15], 16 1/51

Native. On wet-heath: extremely rare and probably extinct: confined now to the edge of the bog, Keston Common and last seen in 1962!, where only two plants still remained, not seen 1969: still common on the wet heaths of Ashdown Forest, rare elsewhere in E. Sussex: locally common on the wet heaths on Greensand and

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10 In the manuscript this follows Typha.
Bagshot Sand in West Surrey and in W. Sussex. Extinct in Essex and Middlesex: still at one locality (wet-heath at St Josse, 1962!) in Pas de Calais.


[12] Willesborough Lees, CPSK; extinct

13) about Tunbridge Wells, Forster Fl. Tonbr.: extinct now on the Kent side; but it probably occurred formerly. (The records at 2) Frindsbury, FGEK; 3) Hernhill, Stowell; 4) Thanet, Dr. Hunter; and Sandwich E.S.M. are certainly errors for another species. The Sandwich record of Marshall probably relates to Eleocharis. quinqueflora: these two have been confused in the past by excellent botanists.)

Eleocharis R. Br. 111

E. palustris (L.) Roem. & Schult. 15, 16 /51 [Common Spike-rush]

subsp. palustris

Native. Ponds, ditches and swamps, usually on inorganic mud or silt, in weakly acid to calcareous water. Very common in all suitable habitats throughout the county, but unrecorded from the chalk districts 5) – 9). Common in Surrey, Sussex, Essex, and Pas de Calais.

1) 37 Beckenham Place, pond, PCH. V 47 SW pond, Chislehurst Common, 1945 MNE. Ravensbourne, Bromley, AG Davis, 1919 MNE. Ruxley pits! S&S.

2) 47 Erith Marshes, PCH. 87 Dike, All Hallows, AGS. 96 Conyer, KDR. 95 Luddenham Marshes. 67 Northfleet. 57 Swanscombe. 67 Chalk. 77 Higham. 77 Cliffe. 76 Upnor. 76 Cuxton. 76 Halling. 76 Holborough Marshes. 76 S. of Snodland. 75 Aylesford. 06 Faversham Creek, Miss V. Day, 1957 MNE and ES.


10) Pond, Wilderness Park, Seal.

11) Leybourne. R. Len, Bearsted, EGP, 1958 MNE. Yalding, H. Lamb 1897 MNE. 54 Tonbridge. 64 Pond S of Hale Street CAS. 84 Pond ¼ m SE of Marden, 62, 879417.

12) 94 Hothfield, H. Lamb, 1903 MNE. 14 Stowting Marsh, 1954 MNE. 94 WestWell pond by W[ater] W[orks], ES. 93 Scotts Pond 986395 ES. 03 S. of Water Fm, Sellindge (W. of) 082387, RAC.


14) 73 Pond S. of Cranbrook (Hartley).


16) 23 Darnley Vale, Cheriton, 1955 MNE.

subsp. microcarpa Walters 112

Native. Brackish to calcareous meadows, often with E. uniglumis: apparently rare, but readily overlooked among E. uniglumis which it resembles superficially; it can be distinguished by the two sterile basal glumes to the spikelet: uniglumis has only one.


4) Stodmarsh, 1955 MNE det. SMW.

10) Meadow N. of Shoreham, 1955 MNE, det. SMW.

11) Birling Marshes, 1944, MNE, det. SMW.

E. multicaulis (Sm.) Sm. 15, 16 3[4]/51

Native. Pools of valley bogs and swamps, always in fairly acid waters (pH 4.5-5.5); very rare. In only three localities for certain now. Locally common in bogs in west Surrey, and in the High Weald and Greensand heath areas of Sussex: extinct on Essex: very rare (2 localities now) in Pas de Calais.

111 In the manuscript, Eleocharis follows Eleogiton. Also the species are ordered differently from Stace edn.2 as adopted here.

112 This is currently treated as a synonym of subsp. palustris.
1) 46 Keston Common, Fl.K., 1963!
12) (vc15) 94 Hothfield Common, Fl.K., in three valley bogs, 1944-63! abundant MNE.
13) (vc14) 53 Hawkenbury Bog, JRW 1941; 1944-46! MNE. (vc16) 73 Bog around Louise Lake, Bedegbury Forest, 1943, JRW; 1945-51, abundant! MNE.

(Other records for coastal or estuarine habitats in Fl. K. (Greenhithe JSM, Hb JSM; Oare Creek; Faversham Brooks, Fl. Fav.; Ham Marshes, Stowell, Phyt. N.S. II, p.181) probably refer to *E. uniglumis*.)

**[E. quinqueflora](F.X. Hartmann) Schwarz**

Open base-rich fens and mires among short vegetation; formerly very rare, and apparently now extinct: no record since Fl. K.

4) Ham Ponds, Dillwyn, Fl. Brit; FGEK. Marsh 1 mile N. of Sandwich E.S.M. (as [S.] *caespitosus*, but almost certainly this.)

15) Dungeness, 1875, F.J.H.; Fl.K. 
(Reported at Keston by W. Griffin, 1903, *Woolwich Surveys* – probably *S. caespitosus* or *E. multicaulis* was intended.)

Still existed in Surrey (Bisley!) at least to 1951; extinct in Sussex; still plentiful in a fen (Cucq!) in Pas de Calais.

**E. acicularis** (L.) Roem. & Schult.

Native. On the gravelly bed and shores of a fresh water pond: extremely rare. Rare but widespread in Surrey, and Sussex; very rare in Essex: rare and sublittoral in Pas de Calais.

(1) reported by pond on Chislehurst Common by HMP, unconfirmed.)

11) 64 Abundant in and around pond on gravel, 1m E. of Hale Street, E. Peckham, 1954-1962 MNE.

**E. uniglumis** (Link.) Schult.

Native. Somewhat brackish alluvial meadows in estuaries, and calcareous fen-meadows inland in short vegetation: rare but locally abundant in the Thames-Medway estuary in 2), more frequent in the Stour fen areas in 4): very rare elsewhere inland in 1), 6), 10), and 12); and formerly at least in 15). Very rare in Sussex, not recorded in Essex; rare in East Anglia and Pas de Calais in similar locations.

1) Marsh in Meadow N. of Foots Cray, 1955, GMB and FR, MNE. 51/47 Bexley
06 Ditches near “Sportsmen”, Sealsalter, PRB and SMW, 1946 MNE, BM.


10) 56 Water-Meadow N. of Shoreham, 1954 MNE. 51/56
12) 94 Meadow S. of Brabourne Church, 1954 MNE. 94

**Bolboschoenus** (Asch.) Palla

**B. maritimus**

Native. Brackish or saline marshes and flets, dikes (usually brackish or saline) of alluvial flats, upper tidal river banks; abundant and fully distributed in these habitats in 2), 4) and 15); rare on the coast of 3) and 8); very rare in inland ponds, as in 11) (Harrietsham). Very rare in inland ponds in Surrey: common in the Sussex and Essex coastal marshes and in the estuaries of Pas de Calais.

2) 47 Plumstead Marshes, 1944. 57 Dartford Marshes 1930 PHC; 1962. 57 Stone Marshes 1938 PHC: 1945. 57 Swanscombe Marshes 1933 PHC; 1946. 67 Northfleet. 67 Denton. 67 Chalk. 67 Shore. 77 Higham '44. 77 Cliffe HL 1898 MNE. 1950. 77 Cooling. 76 Wouldham. 76 above Burham Ch[urch]. 76 Halling. 76 Holborough Marshes. 76 S. of Snodland 1894 HL MNE; 1943. 76 Aylesford. 77 High Halstow. 87 St Mary Hoo. 87 All Hallows. 87 Grain. 87 [lower] Stoke 1959 MNE. 77 S. of Hoo. 77 Upnor, meadow SW of. 06 Harty Marshes. 96 Elmley. 96 Kings Ferry. 07 Leysdown. 06 Shellness, ditches. 97 Minster Marshes. 86 Brackish flets, Chetney Marshes, 1962. 96 Conyer Creek. 06 Oare Creek and Meadow. 06 Ditches by Faversham Creek. 06

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113 Given as *Scirpus* L. in the manuscript., which genus accordingly begins with *B. maritimus* named as *Scirpus maritimus* L.
Graveney. 06 S. of East Church, 1918 AGD MNE. 06 Near Harty Church. Luddenham Marshes, HMW. 47, 57, 67, 75, 76, 86, 96, 06, 77, 87, 97, 07
8) 23 Lagoon behind beach below Abbots Cliff. 23
11) 85 Pond, Harrietsham, 1958, EG Philp MNE. 85
12) 04
15) 93 Shirley Moor, 1942, JHL MNE. S of Wittersham. New Romney, Ch[urch] Lane, RAC. Dymchurch. South Brooks. Wicks. 82, 92, 93, 03, 13, 01, 02

Scirpus L.

S. sylvaticus L. 15, 16 31/51 [Wood Club-rush]
Native. Springs, swamps and flushes in woods, usually of alder: common in the High Weald in 13) and the western part of 14), and frequent in alder carrs on the greensand spring lines in q19), 11), 12) and 16; a few localities on the tertiaries in 1) and 3), and rare near the tidal Medway in 2); in one place in 4). Common in Surrey and Sussex, principally on the Weald; uncommon in Essex, very local in Pas de Calais.

2) 66 Birling Marshes. 76 S. of Snodland. 76 W. of Burham.
3) 06 Copse W of Waystreet Fm, Hernhill, 1955 MNE. 05 S. part of Fishponds Wood, Charlton, Miss B. Nash, 1958 MNE at 097581 near R[oa]d. 16 Convicts and Longtye Woods by str[eam] S. of South Street REW, 1960 HMW. 15 Stream at Tyler Hill, RGW. Calcott Bridge, Sturry, 1955, RGW. 06, 16, 05, 15
4) 26, 35
10) 45 Near Source of Darent, W. of Westerham, GMB, 1954. 45 1 mile E. of Westerham, 1955 MNE. 56, 45, 55
12) 94 Hothfield Mill! alder carr BN. 04 Cadmans Wood 1946. Smeeth. 04 Hinxhill, Oastley, 053423 ES. 94 N. of Yonsea mill 991455. 14 Chalk springs, Stowting, 1944. 93 N. of Ham Street 997343 by B.2070. 05 Cudham, 1945. 04 Bybrook, 015441, ES. 94, 04, 14, 93, 03
14) Hawkhurst.
16) 13 Stream by Westenhanger Castle.

Schoenoplectus (Rchb.) Palla114

[S. triqueter (L.) Palla 15, 16 [Triangular Club-rush]
Former native, now extinct, on the Medway above and below Aylesford on the tidal mud-banks. Probably now extinct too on the tidal Thames in Surrey and Middlesex: there are no recent reports of it either from the Arun in W. Sussex.

2) Medway, Aylesford , 1924, Ex Herb T.J. Foggitt BM; [right] bank of Medway, above Bridge, Aylesford 1934, JPMB; 1939, J.E.L.; not refound, 1942-62! Apparently destroyed by dredging of the river channel, or possibly by pollution: its hybrid with tabernaemontani, however, still survives (see below).

114 Treated as Scirpus in the manuscript; hence S. triqueter given as S. triquestrus L.]
4) Mouth of R. Stour, Sandwich Bay, 1932 – ‘very few plants – no leaves, stem triangular; ex Herb. Col. R. Meinertzhagen BM teste PCH.

*S. lacustris* (L.) Palla

Native. Margins of rivers and lakes in base-rich water; very local; almost confined to the freshwater Medway and Stour and their main tributaries but frequent along these rivers in 11) and 12); rare elsewhere in a few isolated localities in lakes, ponds and ditches in 1), 4) 10), 13) and 14)\(^{115}\); in tidal waters and in alluvial coastal flats it is replaced by *S. tabernaemontani*.

*Bronze Age: Crossness, fruit, Spurrell 1889, Reid 1899.*

1) Pond, Hawkwood Lane Chislehurst, G.M.B. 1958.

4) Hacklinge marshes, 1961, Miss B. Nash.


*S. tabernaemontani* (C.C. Gmel.) Palla

Native. Tidal river banks, dikes and fleets, usually brackish, of alluvial coastal or estuarine flats: widespread, but only locally common in 2), 4) and 15); also in freshwater lakes on Denge Beach in 15), and very rarely, in inland ponds. Frequent locally in inland freshwater ponds in Surrey.


2) 57 Crayford Ness, 1951, JEL, etc. 67 Northfleet. 57 Dartford Marshes, behind River Wall ’62. 76 Snodland Marshes 1944. MNE. 75 By Medway, R[ight] B[ank] Ayleford. 75 Right bank, New Hythe, 1950 MNE. 76. 77 Cliffe. 87 Grain, 805790 All Hallows, AGS. Conyer, KDR. Dike near Oare Creek, 1957 MNE. Pits E of Oare Creek. Luddenden Marshes HMW. Ham Marshes REW. Ditches by Faversham Creek ES. 96 Elmley. 06 Harty. Below Rainham OD.


10) Chingford Ness, 1951, JEL, etc. 67 Northfleet. E. of Aylesford, 1942-45 MNE. By the Friars, Aylesford, 1946 MNE. Tidal creek of Medway, opposite New Hythe, 1948-53 MNE. Only seen by me on the right bank – i.e. in V.C.15.

11) 44 Ditch in field, Hever, 1933, J.E.L. (Hb. JEL).


*S. tabernaemontani x triqueter = S. x kuekenthalianus* (Junge) D.H. Kent

Native. This hybrid still persists on the tidal Medway although one of its parents, *S. triqueter*, seems to have gone. It also occurs still on the Arun in W. Sussex and on the Tamar on the Devon-Cornwall border, but appears to be extinct in Surrey and Middlesex on the Thames.

2) R[ight] bank of Medway, ¼ m above Aylesford, 1942-45 MNE. By the Friars, Aylesford, 1946 MNE. Tidal creek of Medway, opposite New Hythe, 1948-53 MNE. Only seen by me on the right bank – i.e. in V.C.15.

*Isolepis* R. Br.

*I. setacea* (L.) R.Br. 15, 16 21/51 [Bristle Club-rush]

Native. In bare, most places, such as pond borders, track runs, ditch-sides, and meadows, often on peaty or sandy soils, both acid and calcareous: widespread, but only locally common in 1), 12), 13); rare in 2), 3), 4)

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115 Treated as *Scirpus* in the manuscript; hence *S. lacustris* given as *S. lacustris* L.

116 There is a marginal note in the manuscript: ‘single localities occur in the Darent near Sevenoaks, in 10), 13) – Cranbrook?, 14) – Breeches Pond, and in 4), in 1).

117 Treated as *Scirpus* in the manuscript; hence *S. tabernaemontani* given as *S. I tabernaemontani* C.C. Gmel.

118 Treated as *Scirpus* in the manuscript; hence hybrid given as *S. tabernaemontani x triqueter = S. x kuekenthalianus* (Junge).
10), 11) and 15), unrecorded from 5) – 9), 14), 16). Rather common in Sussex in the Weald, locally so in Surrey, rare in Essex; and in Pas de Calais.


2) 76 Snodland S. Marshes, 1946.

3) 15 Church Wood, Blean, LW & RGW, 1950, [very abundant] 1965, on field to E, RGW.


5) 67 Wet chalk pit, SW of Cliffe, 1963.

6) 55 Bradbourne Gravel Pits, FSEF, 1957.


11) 15) 02 Romney Warren, abund[ant].


(I. cernua (Vahl.) Roem. & Schult.\(^{120}\) Formerly occurred in Surrey (Wimbledon Common), and may yet exist in littoral marshes in Pas de Calais.)

Eleogiton [Link]

E. fluitans (L.) Link 15, 16 7/51 [Floating Club-rush]

Native. Ponds, lakes, streamlets and flushes, in peaty acid water; rare. In 1), 11), 12) and 13 sparsely: 8 localities. Commoner but still local in similar places in Surrey and Sussex, rare in Essex (Epping), very rare in Pas de Calais (Helfaut! St Josse!).


2) 11) 55 Ponds, Rose Wood, Ightham, 1944. 54 Pond Dry Hill Rd Tonbr[idge], 589474, CAS, ’55. 64 Pembury Woods, 1953. [Tunbridge Wells, WWR TLS.]


5) 15) Marsh Dike, Appledore, 93Q.\(^{121}\)

Blysmus Panz. [ex Schult.]

B. compressus (L.) Panz. ex Link 4 or 5/51 [Flat-sedge]

Native. Calcareous fens and wet meadows, in short vegetation; very rare, but abundant in its habitats. A species of Parvocaricetum associations in flushed calcareous mires and marshes. It was probably once more widespread in the E. Kent fen areas and in flushed turf communities by chalk and ragstone springs. Probabky extinct in Surrey; very rare in Essex. Very rare in Sussex, but in at least two localities by chalk springs (Aldworth and Kingstone-next-Lewes). Rare in Pas de Calais in similar places.

1) Bexley, E.M.H. – probably = 47 Meadows N. of Foots Cray, in wet hollows of former stream bed, 1955, MNE, abundant, G.M.B. and F.R.

4) Fen-meadows, Hacklinge, OBG: abundant, JPMB: 1946, FR and DMcC, MNE.

\(^{119}\) Presumably Derrick, although the handwriting is clear.

\(^{120}\) Given in manuscript as S. cernus Vahl., even though Isolepsis has otherwise been used instead of Scirpus. Francis Rose missed the presence of this species in the Hacklinge area (found in 2003), despite his study of the East Kent fens and subsequent visits.

\(^{121}\) A marginal note lists as follows: Keston 51/46; Tonbr[idge] 1955, 51/54; Woodch[urch] sq[uare] 1956, 51/93; [even]oak 51/55; Cranbrook 51/73; Lamberhurst 51/63; Pembury 51/64.
12) 04 Calcareous flush meadows by chalk stream, Cuckoldscoomb, Brook, FGRK: 1946-54 MNE, not found 1986. 14 Fen-meadows, Stowting, FGEK; F.J.H. (Fl. K.): not refound here, though habitat was still quite suitable in 1954
16) Darnley Vale, Coolinge Folkestone, in flush fen meadow fed from calcareous L[owe]r Greensand, 1955, MNE.

“Salt Marshes, Kent” ex Herb. (G.) Francis, BM. “Bogs, Kent”, Herb. Roem. (er) BM.
(Several records quoted for this in Fl. K. are probably errors for Carex divisa or C. disticha: Thames below Woolwich; Brents, Faversham; Luddenham; Seasalter.)

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. 1958! 1962 C.A. Lister. Probably a survival of a very different former habitat here. 35
16) 13 Whitenbrooks Wood, Seabrook, near Hythe 197352 (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:
14) Pond by Hawkhurst Old Ch[urch], 1956, P.C.H.

(C. fuscus L. occurs by a muddy pond at Shalford, Surrey, and at Staines, Middlesex, and has old records for pas de Calais, Nord, and Somme.)

†C. declinatus Moench

(Schoenus L.
S. nigricans L. (15) [Black Bog-rush]
Reported at
4) “Boggy Places”, Fl. Thanet 1847, p.60; and
16) “Near Folkestone [...] plenty”, W. Pamplin in Irvine’s London Flora, 1838, P88: but there is no other evidence: some other sedge may have been found, though Pamplin is unlikely to have been mistaken. It may have occurred on the Warren at Folkestone and have been destroyed by coast erosion. It occurs in flushed valley bogs S of Bagshot, Surrey, but not in Sussex or Essex: it is, however, abundant in dune slacks and sublittoral fens in Pas de Calais.)

Rhynchospora Vahl
[R. alba (L.) Vahl 16 [White Beak-sedge]
Former native, now extinct; in sphagnetum of a valley bog. Still plentiful in Ashdown Forest, E. Sussex, and on the bogs of W. Surrey; and in one locality still (St. Josse!) in Pas de Calais.
13) (near Tonbridge, Ray, Synopsis, ed. 3, p.427: in Sussex?) Bog near Mr. Slopers, towards Tonbridge, Forster, Fl. Tonbrigensis, p.6. This record appears certainly to have referred to a site in Kent.

(R. fusca (L.) Ait. f. occurs plentifully in bogs at Thursley, Surrey, but not in any other adjoining county in Kent. It also occurred in wet-heath at one place (St. Josse!) in Pas de Calais until c.1980.)

Cladium Browne
C. mariscus (L.) Pohl 15 Saw Sedge 2/52
Native. In two base-rich fens: very rare, but locally dominant. Unrecorded as a native from Surrey, Sussex, or Essex; but plentiful in the fens behind the coastline of Pas de Calais and Somme.

122 Likely to be in error for TR17935.
4) 35 Ham Ponds, OBG, 1802; CPSK; 1946-62! MNE, 1991! Locally dominant in patches, over about three acres of rough fen. Its remains occur at a considerable depth. In the peat of this ancient fen. This colony is the last relic of a species formerly widespread in the fens between Deal and Sandwich.

15) 01 Fen in natural shingle pit, S.E. of Hamilton Fm., Dungeness, F. Swain, 1951; 1952-62! One patch about 20 metres across, MNE, c.50m across 1997!

Carex L. 123

C. paniculata L. 15, 16 27/51

[Greater Tussock Sedge]

Native. Fens and Fen carr, Valley Alder carrs, Pond borders, in alkaline to weakly acid waters; widespread; locally common in the High Weald in 13), the Greensand of 10)-12) and 16), and the fen areas of 4); rare on the Tertiaries of 3).

1) Ruxley pits, S&S. E side R[iver], N. Cray, GMB. 51/47 Bexley


6E) Randall Wood, Shorne, by Pond, 1954 MNE. 51/45 W[esterham]; 51/55 S[evenoaks]

10) The Moors, Bat and Ball, 530575 CAS. 45 Westerham, by R. Darent.

11) 65 Marshy Wood SW of Mereworth. By Medway, S. of Station, Leigh, 1942, JRW. 85 Goddington, Harriets yard, BD. 51/65 W[est] M[alting]; 51/75 M[aidstone]; 51/85 H[ristians]


14) not 51/83; not 51/93

15) NOT 61/01 Dungeness


C. paniculata x remota = C. x boenninghausiana Weihe 15, 16 2/51


( C. appropinquata Schumach. formerly occurred in Middlesex, and still occurs in Pas de Calais (Camblain-Chateline [sic], 1956!).

C. diandra Schrank (C. teretiuscula Good.) 15, [16] 1/51

[Lesser Tussock Sedge]

Native. In short vegetation in rich fen: very rare, and only seen recently at Dungeness. Extinct in Surrey and Sussex, doubtfully recorded for Essex, but locally plentiful in fens in Pas de Calais (Cucq, 1962!). A decreasing species of rich fens.

123 The species of Carex are listed here in the sequence of Stace edn. 2, rather than that of the manuscript.
[4] Ham Ponds, FJH in Fl. K.; 1906, H.W. Pugsley BM; but appears extinct through lowering of the water table. [Boggy places, Brook, G.E. Smith in FGEK; probably correct but there is no later record.]

15) Hoppen Pits, Denge Beach, FJH on Fl. K.: A.M.G. Natal and ECW, 1934 BM; 1946-62! MNE → 1973! abundant in parvocariceta of the fen zones of all four pits. Marsh E. of Old School, Dungeness, 1962. Marsh E of Boulderwall, Dungeness, 1961. Not seen since 1963 – water levels have fallen. (recorded at 2) meadows at Upnor, FGEK; by Oare Creek, Cowell, Fl. Fav.; Dykes near the sea wall, Ham Marshes, Stowell, Fl.K.: these are almost certainly errors for C. divisa or C. otrubae: C. diandra is most unlikely to occur on the inorganic alluvial silts at these places.)

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**C. vulpina L.**

15, 16 8/52 [True Fox Sedge]

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 substrata. 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.\(^\text{124}\)


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**C. otrubae Podp.**

15, 16 45/51 [False Fox Sedge]

Native. Pond borders, swamps, ditch and stream-sides, on neutral to brackish, usually inorganic substrata: very common in 1)-4), 10)-16) (Blean, the river valleys and the coastal plains); absent from the chalk country

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\(^{124}\) In addition to a copy of the manuscript Flora account which bears cumulative revisions to 1985, there exist two vey similar manuscript notes by Francis Rose headed CAREX VULPINA L. Kent records held by FR. These do not appear to be specifically intended for the Flora, but give information for records more or less corresponding to the Flora account, albeit sometimes with additional details. Those additions have been included above in the Flora account, but are given in green font, so as to distinguish. The notes are prefaced by introductory comments, of which one reads: ‘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’.

\(^{125}\) Thus as written, but 630473 may have been intended.

\(^{126}\) Gravel pits do not appear to have existed at this grid reference 1940-60.

\(^{127}\) TQ89459 in separate manuscript note.

\(^{128}\) Thus as written, but 867349 is more likely.
5)-9), except from springs on the cliffs in 8); very rare in Sheppey. Common throughout SE England and N. France.

**C. otrubae x remota = C. pseudoaxillaris** K. Richt. (C. axillaris Gooden. Non L.; C. kneucheriana Zahn)

* To *Bot. Suppl.* 1.

1) Field by Burnt Oak Lane, Sidcup, 1894, AHWD BM. Darrack [sic] Wood, Orpington, E.B. Bishop (Hb. Br.)

**C. vulpinoidea** Michx.

**Alien**

1) Green St[reet] Green (Farnborough) 1937, J.E.L. in Hb.

**C. spicata** Huds.

Native. Hedgebanks, pond- and ditch banks, wood borders, scrub, old sandpits: very common on a wide range of soils in all districts except [sic.]. Common in Surrey and Sussex, rarer in Essex: common in Pas de Calais.

1) Keston, PCH. Hawkwood, Chislehurst, Swain. Sparrow fields, FM Swain.

2) N. of New Hythe, 1943 MNE. Below Aylesford, 1958 EGP MNE. ¾ m S. of Cliffe Station.

4) Fen SE of Wingham 1949 MNE. Worth Minnis 1950 MNE.


7) Putt Wood, Ospringe, 1957 MNE. Belmont Park, 1958, DMcc MNE.

8) Reindens Wood, B.N.

10) Sandpit E. of Riverhead by R[ail]way CAS. Lullingstone, Swain.


14) Robhurst Fm., High Halden, RAC.


16) R[ail]way banks, Folkestone Cent[ral] Sta[tion], VFPD.

**C. muricata** L. (C. pairaei F.W. Schultz) 15, 16 /51 [Common Prickly Sedge]

Native. Dry grassland, hedgebanks and roadsides on sandy soils: frequent and widely distributed in these habitats. On the Eocene in 1), 3) and 6E), and on the Folkestone Sand in 10)-12) and 16): very rare in 13) and 15). Common in similar habitats in Surrey, rare or under recorded in Sussex; not distinguished from spicata in Pas de Calais.

1) Elmstead Lane, Bickley, 1945 MNE. Eden P[ark], AG Davis, MNE. Ruxley pits, S&S. Farningham Wood 82!

3) Trenley Park Wood. Canterbury Golf Course. Alcroft Grange Rd, Tyler Hill 1949 MNE. Hernhill, bank near Waystreet Fm. on Thanet Sand 1955 MNE.

6E) Lane End to Green Street Green, 1946 MNE. Greenhithe GMB.

10) Bessels Green, 1949. Oldbury Lane, Ightham 1945 MNE. Eynsford, GMB. ¾ m S. of Brasted 1955 MNE.


13) Postern Lane, Tonbridge, JPMB; 1944!

14) Lydd Common, 1954 MNE.

16) Folkestone Leas. Sandling Junction, 1961, MNE.

**C. divulsa** Stokes 15, 16 38/51 Grey Sedge

Native. Hedgebanks, woodborders and pastureland on dry soils, mostly on sand, but also on chalk-derived loams; widespread, and locally frequent in the chalk districts 5)-8), and on the L[owe]r Green Sand in 10), 11), 12) and 16); more scattered in 3), 4), 13) and 14) and on the Weald Clay of 11) and 12). Frequent throughout SE England and N. France.

1) Hayes Common, 1931: W. Abbey Wood Sta[tion], 1936, PHC. North Cray, G.M.B. v(d) bank W. Wickham, 387654, D.P.Y. 47 Bexley

2) Dartford Marshes 1931, PHC. Faversham KDR.

3) 96 Byng Wood. 05 N. of Dunkirk. Whitstable Castle REW.

4) 16 Westbere Marshes 1956 MNE. 26 E of Stodmarsh 1955 MNE. 16 Whitstable; 26 Stodmarsh


7) 86 Heath (Thanet S[and]), Dannaaway, Newington, 1957 MNE. 95 Belmont Park, DMCt, 1958 MNE. 86 Hedge by Magpie Farm, Bredhurst, 1960 MNE. 95; 76 Chatham; 85 Snarhurst

8) 04 ½ m E of Wye on Roadside, 1953 MNE. 24 Lane E. of Denton, 1955 MNE. 25 Lane, Elvington, 1956 MNE. 14 Dane Fm, NW of Elham, 1958 MNE. 24 Alkham; 25 Wingham; 14 Elham

10) 45 N. of Ide Hill. 55 Ightham. R[ail]way side near Ch[urch], Kemsing, '62, HMP. Darenth. 45 W[east]ham; 55 S[even]oaks

12) 94 Potters Corner. Woolpack Chilham, 1957 ES. 93 Woodch[urch]; 03 Aldington; 94 P[otters] Corner; 04 Kennington

13) Southborough Vauxhall Lane HNC. 54 Penshurst Place Wood. 53 Halls Hole Rd., Tunbridge Wells, 1943, HWP. 54 Tonbridge Wood, W. of Bidborough, CAS. 53 Lane, Ashurst Park, Tunbridge Wells, 1943, HWP. N of Pembury waterworks, 1962 CAS. Lamberhurst JRW. 65 Lanebank, Upper Halling, 1953 MNE. 54 Tonbridge; 51/53 Tunbridge Wells; 63 Lamberhurst; 73 Cranbrook; 83 Tudeley

14) Benenden, DKR.

15) [subsp. leersii (Kneuck.) W. Koch] 129

16) 23 Sandy bank E of Sandgate. 13 Bank by Newington Moor 1954 MNE. 51/92 Appledore; 13; 23

Native. Hedgebanks and wood-borders on base-rich soils, mainly on chalk: widespread but uncommon: 5)-8), 10), 11). I am not fully convinced that this species can always be distinguished from C. divulsa. Frequent in Surrey, very rare or unreported in Sussex and Essex: not yet detected in Pas de Calais.

5) 46 Hedge, Biggin Hill, 1949 MNE.

7) 96 Tunstall, 1958, DMCC MNE.

10) 55 One Tree Hill, 1952 MNE. 45 SE of Sundridge, 1955 MNE. 45 1m E of Westerham 1955 MNE.

11) 75 Allington, 1882, E. Bartlett MNE.

C. arenaria L. 15, 16 11/51 [Sand Sedge]

Native: open sandy habitats: local; abundant on fixed coastal dunes, locally abundant on roadside verges and banks inland on the Folkestone Sand from Wrotham Heath to Leeds in 11). Very local on the coasts of Sussex and Essex, very [sic] inland on open sandy heaths in W. Sussex and W. Surrey; abundant along the coast of Pas de Calais.

1) Ruxley pits, 1962, A.G. Spooner. 06 Shellingness, Sheppey, 1946. 07 Beach N. of Leysdown. 07, 06
2) 06 Beach W. of Seasalter, DHK, 1945. 87 Grain. 87
3) Shipyard, Whitstable town, on beach shingle, HMW.
4) 35 Abundant on the fixed dunes, from Deal Links; by Sandwich Bay; to 36 Shellingness at the mouth of the Stour. Old dunes E of Downs Fm 62. 36 Pegwell Bay beach.

11) 65 Wrotham Heath (on sandy verges of A.20 and in adjacent grass heath) 1944-60. 75 Roadbank near Bearsted Station. 85 Verges of A.20, 1 m. W. of Hollingbourne, abundant[ant], 1944+. 85 By A.20, on banks, Warren Wood, Leeds, 1944-62. 65, 75, 85


16) 23 Folkestone Lees.

129 In the manuscript treated as C. polyphylla Kar. & Kir. (C. leersii).
**C. disticha** Huds.  

Native. Base-rich or calcareous fens and fen-meadows, nearly always on peat; locally common in 2), 4) 10) 11), 12), 15) and 16); probably now absent elsewhere. Very local in Sussex, rare in Surrey and Essex; locally common in Pas de Calais.  

1) Abbey Wood Sta[ti]on, GBB, ’58.  

51/76 Medway; 51/67 Gravesend; 51/77 Higham  


61/26 Preston; 61/25 Wingham; 61.35 Sandwich  


51/56 Shoreham; 51/45 Westerham; 51/55 S[evenoaks  


51/95 E. Lenham; 51/94 Hothfield; 51/93 S[evenoaks  

21/52 [Divided Sedge]  

**C. divisa** Huds.  

Native. Pastures and dike banks on the alluvial coastal and estuarial flats on soils derived from former saltings: abundant in such habitats, very rare elsewhere. Locally common in the coastal marshes of Sussex, Essex and Pas de Calais: very rare on dry grasslands near the Thames in N. Surrey.  

1) West Greenwich, J.T. Syme, 1852 BM.]  


51/67 Gravesend; 51/47 Woolwich; 51/57 Dartford; 51/76 Medway; 51/86 L[j]owe[r] Halstow; 51/96 Teynham; 61/06 Faversh[am]; 51/77 Higham; 51/87 Grain; 51/97 Sheerness; 61/07 Warden S.  

3) Edges of brook, Swalecliffe, 1946, P.R.B. Track, Sealsalter, HMW. 61/16  


61/35 Sandwich; 61/26 Chislet; 61/36 Minster etc.  

8) Chilton, Mrs K.D. Rowlands, on roadside bank near source of the Dour.  

61/24 T[empl] Ewell; 61/13 Hythe; 61/03 Ruckinge area  


16) verge of A20 W. of Newington (Frogholt) B.N.  

**C. remot**a L.  

Native. Damp woodland, Alder carrs, ditch and steam banks, most often in shade: very common in the Weald in [sic]  


4) Ditch E of Ellbridge [sic] LWW. Elbridge JG.
10) Westerham Wood, 1947 (821). Darenth copse, 1944-.


14) Breeches Pond.
15) Coombe Wood Etchinghill BW.

16) C. ovalis Gooden. 15, 16 /52 Oval Sedge

4) Stodmarsh, 1950, LWW. Hacklinge.
10) Meadow 1m. E of Westerham, 1955 MNE. Knole Park, PCH. Meadow W. of Otford Road, N of Sevenoaks, 1950-MNE.
16) Damp slope SW of Newington BN.

1.C. crawfordii Fernald
1) Pit, Green Street Green (Farnborough) 1937, J.E. Little in Hb.

1. C. echinata Marr. 15, 16 /51 Star Sedge
Native: moderately acid valley bogs, swamps, and carrs; among short-sedge vegetation; rare generally, but locally frequent in 13), and on the Greensand of 12). Locally frequent in Surrey and Sussex, very rare in Essex and Calais.

1) 46 Keston Bog, 414648, AGD, 1915 MNE: 1945 MNE! 1962, HMP. 46 St Pauls Cray Common, WCRW. 46
3) 15 Bigbery Wood, in Alder Carr, 1954 MNE. 05 Bog, Hunstead Wood, Charnham Hatch, 1956 MNE. 05, 15
4) 35 Ham Fen, 1956 MNE. Ditch W. of Sandwich DHK.
11) 85 Boggy meadow W. of Sandway, Lenham, 1954 MNE; 1965, B. Dodds.


14) 83 near Penhill, 1947.

15) 01 Fen SE of Hamilton Fm, Dungeness, 1946, JHL; 1953! MNE.

C. elongata L. 15, 16 3/51 [Elongated Sedge]

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!).


12) "Scotts Pond", Stubbs Cross, Kingsnorth, E.S.; 1952 MNE.

C. curta Gooden. 15 2/51 White Sedge

Native. Moderately acid swamps: extremely rare. In Surrey rare and nearly confined to the west: in Sussex in a few localities in the Weald and on the western Greensand; unrecorded for Essex and Pas de Calais.


C. hirta L. 15, 16 43/51 [Hairy Sedge]

Native. Fens, meadows, pastures, sand dunes, rodsidye banks; on soils of a wide range of texture and water content, but commonest on peat, sand and alluvial soils: absent on typical chalk downland, and in very acid or saline habitats, or in heavy soils, but otherwise fairly common and widespread through the county. Common in Surrey, Sussex and N. France.


2) 47 Woolwich Arsenal, PCH. 47 Northfleet. 57 Below Crayford. 97 Sheppey. 97 Upnor Marshes. 87 Gain. Newington, F.F. 76 Holborough Marshes. (NOT 07), 97, 77, 87, 76, 86, (NOT 96), 06 '55

3) 16 Thorndean Wood. 05 Dunkirk. Church Wood, REW. 05, 15, 16


6) 57 Greenhithe. 57, 67

7) 8 Winterage Wood, Acrease, 1963, DACL.

9) Pegwell Bay.


11) Addington Place DMcC. 66 Birling Marshes 1943 MNE. 65 Leybourne. 75 New Road, E. Malling. 65 Roydon Hall. 65 Ryarsh Wood. 85 A20, W. of Hollingbourne. 85 Kiln Wood, Lenham, on Sandgate loam, ‘62. The Brooks, Harrietsham, B.D.


13) Meadows NW of Chiddingstone 1944, 1947 MNE. Southborough cemetery, HNC. Finchcocks, 1896, JS TLS. 44, 54, 64, 73, 83, (NOT 53), (NOT 63)

14) 83 Near Breeches pond, 1947. 73 Hawkhurst, DS. Knock Wood Tenterden RAC. (NOT 72), 82, 92

15) Dungeness, 1953, MNE.

16) Folkestone Warren KDR. 02, 01

13, 23
(C. lasiocarpa Ehrl. occurs in valley bogs in the New Forest, Hants, in Suffolk, and in rich fen at Cucq, Pas de Calais, but is unrecorded for Kent, Surrey, Sussex and Essex.)

C. acutiformis Ehrl.  15, 16  37/51  [Lesser Pond Sedge]

Native. River and stream banks, ponds, fens and ditches in neutral or calcareous waters; widespread, and generally common and abundant in the basins of the Darent, Medway, Stour, and Thames, in 1), 2), 3), 4), 10), 11) 12) but very rare in the Thames-Medway estuary below Northfleet and Tocherster, and unrecorded in the Stoke-Grain-Sheppey-Teynham areas: very rare in the High Weald (Lamberhurst only) in 13), rare in 16): absent from Romney Marsh 15), and the chalk districts 5)-9). Frequent in Surrey, Sussex, Essex, and Pas de Calais in suitable habitats.


2) Plumstead Marshes. Northfleet Brooks. Holborough Marshes. S. of Snodland. New Hythe. Medway banks, above Aylesford. Waystreet Fm, Hernhill, HMW. (Crayford, H. Groves BM.) Barnes Cray, 1944. Fen, 857669, L[ow]er Halstow '62. 51/76 Medway; 51/86 rare; (NOT 51/96); 61/06; 51/67; 51/77, '55: (NOT 87); (NOT 97)

3) Alnetum, Hunsstead Wood, Chatham Hatch, 1956 MNE.


12) 14 Stowing Meadows, 1954 MNE. 04 Cuckoldscoomb, Brook. 95 SE of Lenham. 94 Charing Heath, Alder Carr, ES. 05 Chiland, by Stour, 1938 F.R.B.: 1959! MNE. Lenham E 51/95

15) (not at Dungeness 61/01 nor Romney Marsh 61/02) in Woodch[urch] 51/93; in Ham St[reet] 61/03; in 61/13 Hythe.

16) 23 Sandling Park RAC. Fen, Darnley Vale, Cheriton, 1955 MNE. 23

C. riparia Curt.  15, 16  32/51  [Greater Pond Sedge]

Native. Fens, swamps, riverbanks, ditches, in neutral, calcareous or brackish waters, and mainly on inorganic substrata; locally common, and widespread in (2), 4), 11), 12) and 15): unrecorded from 5)-9), from the High Weald 13) and 14), from 16) and the coastal parts of Romney Marsh. Commonest by the large rivers. A dominant of the "Magnocaricetum" association of base rich marshes with consistently high water-tables. Frequent in the river villages of Surrey, Sussex and Essex and N. France.

1) [Chariton Marshes, 1821, C. Johnson.]


51/47-55; 51/57 Dartford; 51/76 Rochester, 51/86 Llowe[h] Halstow; 51/96 Teynham '56; 61/96 F[aw]yersham; 51/67; 51/77-56; 51/87 Grain '58?


9) 36 Copse, Durlock Minster, AGS.

10) The Moors, Bat & Ball, 530575, CAS. Chalk stream, Brasted Brook, RAC.

51/56 Farningham '56; West[erham] in 51/45; 5(even)oa[s] 51/55.


(not 51/44); Tonbr[idge] 51/54; Pemb[ury] 51/64; (not 51/74); Headcorn 51/85; 51/65 W[est] m[all]; 51/75 Maidstone; 51/85; (not 51/95 Lenham)
C. pseudocyperus L. 15, 16 /51 [Cyperus Sedge]  
Native.

6E) Pond, Randall Wood, Shorne, 1954 MNE.  
15) Largest 2 lakes, Hoppen Pits, Dungeness 1947-1953 MNE; H. Lamb, 1901 MNE. Dike, Windmill Channel, E of Freezingham, Rolvenden, 1959 MNE.  

C. rostrata Stokes 15, 16 11/51 [Bottle Sedge]  
Swamps, ditches, and lake borders, usually on peaty organic substrata, in calcareous to flushed weakly acid waters; it forms a pioneer stage in the hydrosere leading to the formation of fens. Now rare and local in Kent, though still frequent in 4). Local and scattered in Surrey and in Sussex, extinct in Essex, very local in Pas de Calais.  

3) 05 Sphagnum bog in Alder carr, Hunstead Wood, Chartham Hatch, 1956 MNE.  
11) 54 Marshes above Tonbridge, c.1944, H.W. Pugsley: not seen by me. 54  
14) [Reported from Breeches Pond, Tenterden, in Fl. Kent.]  
15) 01 Hoppen Pits, Denge Beach (II, II, III and VI) 1946-62 MNE. 01  

C. vesicaria L. 15, 16 13/51 [Bladder Sedge]  
Native. River- and stream-banks and pond margins, usually on clayey inorganic substrata of non-calcareous, neutral to weakly acid water. Very local: almost confined to the Weald, where it is frequent on the Weald Clay of 11) and 12), and in the High Weald occasionally in 13), rare in 14). It is rare lower down the Stour in 12) and unknown today elsewhere in the County. Distribution-pattern similar in Surrey and Sussex; very rare in Essex and Pas de Calais.  
1) Sparrow Fields, F. & C.A. Swain.  
10) Westerham Wood, 82!
11) 54 R. Eden NE of Chiddingstone.  44 W. of Chiddingstone, 1947.  44 Edenbridge, 1947.  54 By Eden, W. of Penshurst 1944 MNE.  54 Straight Mile, Leigh.  54 Marsh ditches W of Tonbridge 1944 MNE.  64 E of Tonbridge, 1944 MNE.  74 Pond S. of Yalding, by B2162.  64 N. of Beltring, 1944 MNE.  64 Pond ¾ m E. of Hale Street, E Peckham, 1952 MNE.  84 In Sallow carr round Pond 3m E of Headcorn, 849347, 1949 MNE, 1962.  84 Smarden.  84 Beult S. of Church, Headcorn, 831440, ‘62.  84 W Leighbridge Pond Headcorn, 813454, ‘62.  84 Beult W of Cross at Hand, 1963.  94, 34, 64, 74, 84, 94
12) 93 Pond, Stubbs Cross, E.S., 1952 MNE.  04 By Lake, Mersham Le Hatch, 1960, FR and ES MNE.  W of Kingsnorth.  04 N. Smeeth RAC.  93, 04, 15
14) 83 Breeches Pond, Tenterden, 1947, RAC.  Robhurst Fm, High Halden, RAC.

C. pendula Huds.

Native. Deciduous woodland, mainly of oak, alder or hornbeam, on heavy, mostly non-calcareous, clay soils, usually gleys; abundant through the High Weald of (13) and 14), the Weald Clay areas, and the spring lines of the (low) Greensand, and on the Gault in (10), (11), (12) and (16): locally common on Eocene clays and loams in 3): now rare in 1): a solitary locality on Woolwich Beds in 2) (Newington, Hawes Wood): absent elsewhere, in the chalk districts 8) and the marsh districts 2), 4) and 15). It has a similar distribution pattern in Surrey and Sussex. In Essex it is widespread on the clays throughout the inland parts. In Pas de Calais it is largely confined to the Boulonnais and the NE.

2) 86 Hawes Wood, Newington, 1959, on Woolwich Beds MNE.  86 R[are]
5) Betsoms Hill on clay, RAC.
8) Reinden Wood, 1959, B.N. and DACL, on clay with flints.
12) 04 Below Cuckoldscoomb, Brook.  04 Cadmans Wood.  04 Brabourne Coomb.  13 Hayton Wood Monks Horton (gault) ’55.  14 Stowing Meads, 1954 MNE.  03 Rd ¾ m N. of Ham St[reet]. Wood SW of R[ail]w[ay] W of Sellindge RAC.  94, 04, 14, 03, 95 (rare)
C. silvatica Huds.  15, 16  47/51  [Wood Sedge]
Native.  Deciduous woodland on a very wide range of soils, from Beechwoods on chalk and Ashwoods on ragstone to damp oak and alder woods; absent from unflushed waterlogged gleyes (where it is replaced by C. remota and C. pendula) and from very acid soils (pH below about 5.5), and its abundance in a site generally indicates good aeration, fair water supply, and reasonable base-content.  Common throughout Kent wherever there are old woodlands, thus absent from the marsh districts 2), 3) and 15).  (apart from woods on Tertiary outliers in 2) and 4).  Absent from Sheppey.  In the Heathy Oakwoods of Quercetum petraeae type on Greensand and Hasting Sands, it is confined to gills, puddle tracks, hollows, and flushes where the base-status of the soil rises.  Common in all adjacent counties and in N. France.


2) 87 Copse N of Fenn Street, St Mary Hoo, 1955 MNE.  Hawes Wood, Newington.  87


Millbay Wood, Nettlestead.  N. of Bough Beech '55.  863438 N of Marley Fm Smarden DMcC.

12) Cotypes S. of E. Lenham.  Willesborough Lees.  Near Pond, SW of Sellindge Ch[urch], RAC.  Cuckoldscombe '97.  94, 04, 03, 95


C. strigosa Huds.  15, 16  26/52  [Thin-spiked Wood Sedge]
Native.  Damp deciduous woodland on base-rich soils, mainly in calcareous or basic flushes in Alneta, but also in rides: widely distributed in the Weald, mainly in gills on the Wadhurst Clay of 13) and 14) (becoming rather common eastwards about Tenterden to Oxney); on the ragstone of 10) and 11), and on the gault of 11) and
117

12); also occurring on the Eocene, particularly on the glauconite Thanet Sand and the Woolwich Beds, in six localities in 1) and 3); far rarer on the Weald Clay of 11) and 12) where it is always associated with flushed sites. It extends westward into Surrey along the gault, but is rare there: in Sussex it is frequent in gills, and occurs on the Weald Clay and Greensand as well. Rare and local in Essex. Rare in Pas de Calais on Wealden and Jurassic strata in base-rich Alneta. It is far commoner in the Wealden region than elsewhere in Britain.


12) 95 Copse on Gault SE of Lenham 1944-45 MNE. 03 Bourne Wood, Orlestone (Wadhurst Clay) 1957 MNE. 03 Wood W. of Bilsington (Wadhurst Clay) 1959 MNE. 14 S. of Stowting, copse by stream on Gault, 1947 MNE.


C. flacca Schreb. 15, 16 47/51 [Glaucous Sedge]

Native. Grassland and scrub on chalk, abundant and very constant; fens and fen-meadow, common; basic grasslands on sand and clay soils, less common and usually in open associations and near the sea. Well distributed and generally frequent throughout Kent, except on alluvial flats in the Sheppey-Grain Thames-Medway estuary below Rochester and Greenhithe, and the inland parts of Romney Marsh. Not about Appledore, Minster, Grain, (Gravesend).


2) 76 Holborough Marshes.

3) 05 Grassland N. of Dunkirk. 05 Grassland NE of Rhode Common. Ellenden Wood, Penn Hill REW. 16 Thornden Wood. 15 Marsh on hills W. of Fordwich. 16/110650 ...on clay, Duncan Down, Whitstable, 1961, HMW.

4) 35 Ham Fen. 35 Hacklinge Fen 1946 MNE. 45 Worth Minnis. 25 N. of Wingham. 26 Preston Marshes. 35 Dune Slack S. of Hotel, Sandwich Bay.


10) Westerham Wood 1977, 82!


13) Ditch, Chittering Wood, 1944 MNE.  Modest Corner / Vauxhall Lane, Southborough, HNC.  [Old pit, Spelmonden, 1903 JS TSL.]

14) Penhill, 1947.  Marsh in Gill 1m E. of Rolvenden, 1954.  72, 82 (NOT 92)

15) 01 Marsh E. of School, Dungeness, 1962.  Romney Warren.  NE of Dymchurch.  By canal, St Marys Bay, LJM.


C. panicea L.  15, 16 23/51 [Carnation Sedge]

Native.  Fens, fen-meadows, basic flushes, and the more flushed parts of valley bogs: abundant and fairly constant in such habitats: usually in short vegetation and tolerant of grazing.  In the alluvial marsh areas 2) and 15) it is rare, normally confined to areas of calcareous flushing.  Widespread but only locally common: absent from the dry chalk of 5)-9).  Commonest in the fen areas of 4).

1) 46 Keston Bog, J.E.L., G.M. Brown.  47 Chislehurst Common, GMB.  47,46


10) 55 Meadow W. of Otford Rd (½ m N. of Bat & Ball) Sevenoaks 1950 MNE.  56 Meadow N. of Shoreham 1954 MNE.  55, 56

11) 65 Leybourne, 1944.  66 Birling Marshes.  65 Lunsford 1944.  35 Sandway Bog, Lenham 1954 MNE.  65, 85, 66


15) 01 Hoppen Pits, Denge Beach, 1945-1956 MNE 1962.  01 Marsh E. of old school, Dungeness.

16) 23 Valley fen, Darnley Vale, Cheriton, 1955 MNE.

[C. depauperata] Curt. ex With.  [16] [Starved Wood Sedge]

Formerly native of Charlton, but long extinct, where it occurred in dry woodland on Eocene strata (probably calcareous Thanet Sand).  Still found but very rare, on Bargate limestone at Godalming in Surrey: elsewhere in Britain only in Somerset (Axbridge) and Anglesey.

1) Charlton Wood, Curtis: 1787, Withering; ex Hb. Ed. Forster BM; ex Hb. Carrington BM.  

C. laevigata Sm.  15, 16 15/51 [Smooth-stalked Sedge]

Native.  Weakly acid, base-deficient flushes in woodland, usually Alneta; abundant in the greater part of the High Weald of 13) and 14), though rarer westward and absent from the Oxney-Newenden area; scattered on the Folkestone Sand in 12), where it is found in open bogs as well as in carrs; locally common in the SW part of the Blean woods in 3); unreported elsewhere.  A characteristic High Wealden species, abundant throughout
the Sussex High Weald except in the extreme east; rare in Surrey (Alneta on Hythe Beds), very rare in Essex (Woodham Walter); once recorded, possibly in error, from Pas de Calais, but in the Ardennes.


C. binervis Sm. 15, 16 14/51 [Green-ribbed Sedge]

Native. Sheltered ground on heaths, heathy oak-birch or pine woods, often in the rides: very local, and largely confined to the High Weald of 13) and the NW part of 14), where however it is frequent and locally abundant: outlying areas of distribution exist in the rather similar habitats of the Blean Woods in 3) and at one locality each on heaths in 1) and 12). Common in the High Weald of Sussex, local in Surrey, very rare in Essex and very local in Pas de Calais. This is a highly oceanic species, requiring a humid atmosphere: it quickly fades out as one passes into the Continent.


(4) Ham Ponds, ESM: error for distans.)

10)

12) Hothfield Common, 1946; 1954 MNE. (Recorded from Barrack Wood, Mersham by G.E. Smith in FGKE; we could only find laevigata there, which he does not record; FR & ES, 1960.)


14) 83 The Brogues, Biddenden. Brook Wood, NW of Woodchurch.

C. distans L. 15, 16 18/51 [Distant Sedge]

Native. Fens, meadows, marshes and their dikes, in brackish habitats near the sea and estuaries, and in calcareous habitats inland; uncommon, occasional near the coast and estuaries in 2), 4), and 15), inland frequent in 4), local in 12) and 16). It resembles Oenanthe lachenalii and Schoenus nigricans in its tolerance of both sodium- and calcium-rich environments. Local near the coast in Sussex, Essex and in Pas de Calais in similar habitats: extremely rare in Surrey.
2) 67 Northfleet Brooks, 1944, MNE. 77 Meadows S. of Cliffe Station, 1943. 76 Holborough Marshes, 1944 MNE. 76 Snodland Marshes, 1944. 06 Meadow N. of Oare Mill Pond, 1959 MNE. Shellness. 06 Harty, 1946. 87 Grain, 1946. 66, 76, 57, 67, 77, 87


5) 57 Chalk pit, Swanscombe, 1947 MNE.

7) Chalk pit (flooded), Eccles, 1953, RGW.

11) [Birling Marshes, 1943 MNE, ploughed up, 1944.]

12) 14 Stowting in fen meadows, 1946-54 MNE. 04 Brabourne coomb, in fen-meadows 1946. 04 S. of Brabourne Church, 1954 MNE. 04 Cuckolds coomb, Brook, in fen-meadow, 1945-58 MNE. 94, 04, 14


C. distans x extensa = C. x tornabennii Chiov.

15) Littlestone, 1902, in Hb. G.C. Druce (as C. extensa) det. J.P.M.B.

(C. punctata Gaudin\textsuperscript{130})

\begin{itemize}
  \item \textbf{C. extensa} Gooden. 15 1/51 [Long-bracted Sedge]
    \begin{itemize}
      \item Native. Sandy salt marshes and saline dune-slacks: very rare; abundant at the mouth of the Stour, but occurring nowhere else at present. Absent in Surrey; very rare in Sussex (confined to the Selsey and Littlehampton areas): extinct in Essex: very rare in Pas de Calais (Ambleteuse!)
    \end{itemize}
  \item 4) Abundant in sandy saline slacks of the dunes, 200 yards S. of Bloody Point, Mouth of the Stour, Sandwich, 1946-62 MNE.
    \begin{itemize}
      \item [Former estuary, E. of Reculver, Hb. JSM: Phyt. N.S. VI p56. Not seen there recently: the coast is much altered since JSM's time.]
    \end{itemize}
  \item 9) Small salting behind beach, below cliff, Cliffsend, Pegwell Bay, 1947, MNE.
\end{itemize}

(C. hostiana DC.)\textsuperscript{131}

(C. flava L.

This “Continental” species is confined in England to Yorks and Lanc; but it occurs in the fens of the Somme in N. France.

C. viridula Michx. subsp. brachyrhyncha (Celak) B. Schmid\textsuperscript{132} 15, 16 5/51 [Long-stalked Yellow Sedge]

\begin{itemize}
  \item Native. Calcareous spring-fens and fen meadows in short vegetation; veey rare and local, and confined to areas fed by springs from the chal{r}g (or ragstone). Drainage tends to restrict it to dike-borders. Extremely rare in Sussex (in two localities by chalk springs), absent or extinct in Surrey and Essex: still locally abundant in fens in Pas de Calais.
    \begin{itemize}
      \item (1) This was reported by me on an LNHS excursion from the uppermost lake in Holwood Park in 1948: furter material collected from the same spot in 1962 by F. Swain makes in clear that what was seen was C. demissa Hornem.
    \end{itemize}
  \item 11) 75 Marsh between Church and railway, Barming (v.c.16) H. Lamb, 1900 MNE. The marsh exists still but I have not refound this plant.
  \item 12) 04 Calcareous fen meadow by chalk stream, Cuckoldscoomb, Brook, MNE, 1944-54, with A. tenella, etc., abundant. Both gone, 1978.
\end{itemize}

\textsuperscript{130} No records given.

\textsuperscript{131} No records given.

\textsuperscript{132} Given in the manuscript as \textit{C. lepidocarpa} Tausch subsp. \textit{lepidocarpa} to which it has reverted after the name given here, from Stace edn. 2.

*C. viridula* Michx. subsp. *oedocarpa* (Andersson) B. Schmid\(^{133}\) 15, 16 20/52 [Common Yellow Sedge]

Native. Damp- and wet-heaths, valley bogs, damp acid woodland rides, sandy or peaty borders of acid ponds: frequent in the High Weald in 13) and 14) and on the Folkestone Sand in 12): rare on the Weald Clay and Gault in 11) and 12) and on the Eocene Sands in 1) and 3): absent elsewhere 5)-9), 2), 4, 10), 15) and 16) though it would have been expected in 10) and 16). Locally frequent in suitable habitats in Surrey and Sussex, very rare in Essex and Pas de Calais.


10) Westerham Wood 82!


15) 83 Very rare, on shingly shore of small lake, Hoppen Pits, Denge Beach, 1947, P.R.B. and F.R. MNE: not found since.


*C. viridula* Michx. subsp. *viridula*\(^{134}\) 15, 16 1/51 [Small-fruited Yellow Sedge]

Native. Shingly lake shores: extremely rare, and only seen at intervals, Very rare in W. Sussex and SW Surrey: extinct, if it occurred, in Essex: unrecorded in Pas de Calais.


15) Very rare, on shingly shore of smallest lake, Hoppen Pits, Denge Beach, 1947, P.R.B. and F.R. MNE: not found since.

*C. pallescens* L. 15, 16 16/52 [Pale Sedge]

Native. Woodland on moderately damp, usually somewhat acid, loams and sands: local and rather uncommon, but widely distributed: occasional on the Eocene in 1) and 3), on Pliocene sands and loams in 8), Gault and greensand in 10), Weald clay in 12): most frequent in 13) on the Hastings Sands, where it is rather common.

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\(^{133}\) Given in the manuscript as *C. demissa* Hornem., to which it has reverted after the name given here, from Stace edn. 2

\(^{134}\) Given in the manuscript as *C. serotina* Mérat
(C. humilis Leyss. occurs on chalk downs in West Hants., but no nearer to Kent.)

C. caryophylla Latourr.  15, 16  28/51  [Spring Sedge]
Native. Old dry pastures, grass-heath, ancient short turf on chalk, banks on wood-borders; widespread and frequent locally in the High Weald, on the Greensand, the chalk downs, and the Eocene districts, but not really common. Frequent in Surrey and Sussex, rarer in Essex, fairly frequent in Pas de Calais.

(C. ericetorum Poll. Is not known nearer than Cambridge and Suffolk in England, but has old records from pas de Calais.)
(C. montana L. occurs at Eridge, Sussex in grass-heath, only ½ mile across the present Kent border. The old Kent records in Fl. K., Bysing and Thorneden Woods in 3) are unconfirmed and probably errors for C. pilulifera: I have searched these areas closely and only found the latter species. C. montana has never been found on the Kent side of the boundary near Tunbridge Wells, either in VC14 or 16: reports are due to misunderstanding of the boundary line.)

C. pilulifera L.

15, 16 31/51 [Pill sedge]

Native. Dry heathland, open heathy woodland, on more or less podsolised sands and gravels; calcifuge, common in such habitats. Common in 1) and 3), local in 6E), on the Eocene, local in 7) and 8) on the Pliocene formations over the chalk; plentiful on the Lowr Greensand (Folkestone Sand and Hythe Beds chert) in 10), 11) and 12); and on the Tunbridge Wells Sand and Ashdown Sand in 13) and 14). Absent from the marsh districts 2), 4) and 15), and from the London, Gault, Weald and Wadhurst clays. Common in similar habitats in Surrey and Sussex, rare in Essex and in Pas de Calais, where such habitats are few in number and extent.


5) 45 Appareantly on chalk, Beech hanger ½ m S of Cudham, 1958 MNE.


7) 86 Heath on Thanet Sand, Dannaway, S. of Newington, 1957 MNE. Syndale Wood; Coxett Wood, REW. 86


(C. limosa L.)

C. acuta L.

15, 16 10/51 [Slender Tufted Sedge]

Native. River banks, ponds, and swamps in rater base-rich waters: local and uncommon, and largely confined to the Medway and its tributaries and neighbouring ponds in 11), 13) and 2), and to the middle Stour in 12) and 14). Local in Sussex and Surrey, rare in Essex, rather frequent in Pas de Calais.

2) 75 Medway bank S. of New Hythe, C. West, 1943 MNE.

4) 16 Marsh Dike below Trenley Park Wood, fordwich, 1949 MNE.

10) 55 Pond, Wildernesse Park, Seal, 1944 MNE.

11) 44 By Eden, W. of Chiddingstone '53. 54 W. of Penshurst 1944, 1953 MNE. 75 Medway, Maidstone, 1960, E.G.P., MNE. 64 Medway, S. of Yalding, 1953 MNE. 54 Medway, 1 mile above Tonbridge. 64 Medway bank, E. of Tonbridge, 1939, F.R.B. 64 Pond E. of Hale Street, E. Peckham, 1952 MNE. 65 Medway, Wateringbury, 1949 MNE. 75 Above Teston Bridge, 1959 MNE. 73 By Teise, Goudhurst, 1896; 1907; J. Stirling (as C. elata), TLS.

135 No further entry given; indeed, it is difficult to see why it was mentioned at all.
var. *sphaerocarpa* (Attr.) KüK

**C. nigra** (L.) Reichard 15, 16 27/51 [Common Sedge]

Native. Marshes, fens, valley bogs and meadows, usually on peat, and where the water is weakly acid to calcareous (pH 5.0 – 7.5): in short sedge-grass associations (*parvocariceta*).

1) 46 Keston, JEL. 46 Hayes Common, DMcC. 47 Chislehurst Common. Ravensbourne, Bromley, AGD, 1919 MNE.

2) Holborough Marshes, 1944.

3) 05 Alder carr bog, Hunsstead Wood, Chartham Hatch, 1956 MNE. SE part Church Wood, REW, 1955. 05, 15


6) 65 Damp heath, Valley Wood, Wrotham Heath 1955 MNE. 75 Marsh W of Sandling 1944 MNE. 85 The Brooks, Harrietsham, 1962, Mrs B. Dodd. Sandway Bog, Lenham, Mrs B. Dodd. 65, 75, 85, 66

7) 94 Godmersham DACL.

8) Swamp, Angley Wood, Cranbrook, 1955 MNE.

9) Medway E. of Tonbridge, 1939, F.R.B.


11) Hothfield Common, frequent in flushed part of main valley bog, 1943-64 MNE. Gibbons Brook, G. Walton: 1954! MNE.


(C. dioica L. formerly occurred in Surrey and Sussex but appears to be now extinct in each.)
Leersia oryzoides (L.) Sw. Occurs in western Surrey and West Sussex.

Nardus L. 137
N. stricta L.

Milium L.
M. effusum L. 138
2) Holly Hill REW.
5) Jewells Wood, Biggin Hill, 1949 MNE. W of Westerham Hill 426577 RAC.
6) Whitehill, E of Shoreham 1945 MNE. Wood near Ch[urch], Fawkham, Swain; DVS Woods.
10) Westerham Wood. Brasted Chart, 1957 MNE.
12) Hinshill.
14) 50 acre Wood / Cole Wood, Woodchurch ES.

Festuca L.
F. pratensis Huds. 15, 16 31/51 [Meadow Fescue]
Native. Pastures and meadows, nearly always on base-rich riverine alluvial or peaty soils; common in suitable habitats; absent from the chalk country, and from the alluvial flats including Romney Marsh; and very rare in the High Weald. Its absence from alluvial coastal flats is probably due to the lack of suitable habitats with periodic flushing or flooding with base-rich non-saline water.
1) Shooters Hill, GMB. North Cray Meadows 1955 MNE. Ruxley pits, S&S. 51/46 Orp[ington]; 51/47 Bexley
2) 51/66 Meopham; 51/76 Medway; 61/06 Fav[ersham] SB.
5) Path in wood on c[lay] w[ith] f[lints], Chevening Park, 1961 MNE.
6) 51/77 Cliffe
F. arundinacea Schreb.  15, 16  35/51  [Tall Fescue]

Native.  Banks and rough grassland, nearly always on heavy soils inland, but on sand and chalk as well on the coastal line, where it is much more abundant than inland; locally common.


6) Swanscombe Wood, cutting of A2 on clay.  51/77 Cliff; 51/57 Dartford.


11) Darwins Bank Wood, Downe, JEL.  Chevening Park PCH.  51/65 W[est] M[alling]; 51/75 M[aidstone]; 51/84 Headcorn '55; 51/85 '58 Hollingbourne.

12) Meadow ESE of Lenham Church 1958 MNE.  Fen meadow, Cuckoldscombe, Brook 1945-54 MNE.  Stowting Fen Meadows 1946.  51/95 Lenham '58; 51/45 Westerham 139; 51/94, 58; 61/04; 61/14 Stowting; 61/05 Chilham; 61/15 Canterbury '55.


14) 51/82 W. Oxney 1956.

16) 61/13 Hythe '56; 61/23 Folkstone 58.

F. gigantea (L.) Vill.  [Giant Fescue]

Native.  Woodlands on relatively base-rich soils; common throughout Kent, except in the treeless Marsh districts and on very acid sands and heavy clays.  On the Weald Clay it is usually confined (as is Glechoma) to alluvial deposits or flushed areas on stream banks.


2) 06 S. of Oare Pond '59 MNE.  87 Copse, St Mary Hoo, PCH.  97 Rare in Brambledown Oakwood, 1955.  ...By Oare Meadow, 1962, HMW.

3) Shelving Wood, Hoath, 1962.  S. of Stodmarsh Court Farm REW.

5) Darwins Bank Wood, Downe, JEL.  Chevening Park PCH.


12) Copse on Gault SE of Lenham '44.  Copse (gault) S. of Brook 1952 MNE.  1 m NE of Chilham 1950 MNE.

16) Aldington Knowle 1950 MNE.

[F. altissima All.

Probably never found in Kent. Of the localities cited in Fl. K., “Harrison’s Rocks, Tunbridge Wells, Kent” (last report Townsend 1852) was a genuine locality for this species, but it is in Sussex: it is now extinct there. The Herne Bay and Cranbrook localities have never been confirmed. The former is highly unlikely; and intensive search of the Cranbrook area has not revealed the species, though the district has suitable localities for it: it still occurs in two rocky woods in the High Weald of Sussex, but not otherwise nearer than the Wye Valley, N. Warwick and the Derbyshire Pennines.]

F. arenaria Osbeck[140] [Rush-leaved Fescue]

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.


(not reported yet from New Romney area, but it probably occurs there.)

F. rubra L. subsp. rubra [Red Fescue]

Native. Hedgebanks, pastures on a wide variety of soils, saltmarshes: abundant throughout Kent. On the chalk downs it occurs on deeper soils, more gradual slopes, and damper sites generally than F. ovina, and is less common on the N. Downs than on the S. Downs. Common in all adjacent counties and in N. France.


2) Festucetum rubrae sub/emerg ratio 0.004: 3krs/732 p. month. S Minster Marshes ‘55. Eastchurch cliffs ‘55. E of Minster, ... of cliffs ‘54 MNE. Beach Seasalter HMW. Var. arenaria Shellness: N of Leysdown: Grain S. Beach.


5) Darwin’s Bank, Downt. Chevening Park. 396611 PCH.

6) G(reat) Chalk pit NW of Horns Cross ‘62. Mounts Rd, PCH. Down N. of Cuxton 45 MNE.


10) Westerham Wood 82.


15) V. arenaria Greatstone; Romney Warren MNE 1945; Lydd Common. Shirley Moor.

16) W of Hythe. subsp. commutata Gaudin

F. ovina L. [Sheep’s Fescue]

Native. Chalk Downs, in short open turf, on shallow, skeletal rendzina soils: characteristic and constant in such habitats, and very nearly faithful to them; occasionally in dry pastures on neutral non-calcareous sands and gravels. If sheep-grazing ceases, F. ovina tends to be replaced by B. erectus instead, or by Brachypodium pinnatum, especially nearer the sea; except on steep, hot slopes where solifluction tends to maintain a skeletal

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[140] Given as F. juncifolia St.-Amans, placed after F. rubra, in manuscript.

[141] A location near New Addington, just within the vc16 border.
soil and thus an open sward of short grasses. General on the chalk downs of Surrey and Sussex; naturally very local on the limited chalk areas of Essex; general on the chalk of N. France.

1) Ruxley pits, S&S.

3) Whitstable harbour REW.

4) Dunes, Deal links.


13) Timberley Orchard, JRW. By Hawkenbury Bog, CAS, 1958.


F. tenuifolia Sibth. (F. filiformis) {Fine-leaved Sheep’s Fescue}


15) Shingle Beach, Dungeness, 1945, MNE.

Festuca x Lolium = Festulolium Aschers. & Graebn.

Festuca pratensis x L. perenne = Festulolium loliaceum (Huds.) P. Fourn.

4) Fen-meadows N. of Wingham, 1946 MNE.

10) Darent Meadows, 1946 MNE. N.E. of Riverhead in Meadows, 1954 MNE.

13) Field by High Woods, Hawkenbury, 1960, CAS.

Festuca x Vulpia

F. rubra x V. fasciculata

4) Dunes, Sandwich Bay, Miss McCallum Webster, 1954, det. A. Melderis.

Lolium L.

L. perenne L. {Perennial Rye-grass}


3) Pasture on gravels S of Highstead Heath ‘62.

4) Sandwich Bay, etc.

5) Field W. of Shoreham PCH. Chevening Park PCH. 3964 Well Wood PCH.


10) Wrotham Heath ‘44 MNE. E. Farleigh, LRAG, 1958 MNE.

12) Hothfield Common 1943 MNE.

13) Southborough HNC.

15) Lyd Airport DMcC.


L. multiflorum Lam. [Italian Rye-grass]

1) Crofton Heath PCH. R. Cray, N. Cray PCH. 37 Beckenham Place, 1954, PCH. W. Wickham AE Davis 1916 MNE. Woolwich Common 1934 LRGAG MNE. Ruxley pits S&S.

3) Sharmal St[reet] Sta[tion] PCH. Blue Anchor, Seasalter, REW. Grain, 885765, AGS.

4) Plucks Gutter 1953 MNE.

5) Stumble, nr Well Wood, 396642, PCH.


7) [E of Bluebell Hill H.L. 1899 MNE]. Orchard E of Long Beech Wood ES.

8) Ringwould, B.N. Kale SE of Eastling Wood B.N.

10) Otford: Eynsford PCH. S. Darenth PCH. St Johns Jerusalem PCH. Bradbourne pits FSEF. 7oaks tip DMcC. [Boxley H. Lamb, 1898 MNE].

11) W Field, 917397, SE of Baskhall, Bethersden. Eenbridge tip DPY.

13) Cranbrook DS.

16) nr. Kiln Wood, Sandling, LJM.

L. rigidum Gaud. 143

4) Sandwich, 1960, DMcC.

9) Birchington, 1960, DMcC, MNE.

† L. temulentum L. Darnel


10) 7oaks Dump, DMcC.

Vulpia C.C. Gmel.

V. fasciculata (Forssk.) Fritsch 144 15 [Dune Fescue]

Native. On fixed dunes, especially in rathe open turf or disturbed areas: confined to the Sandwich dunes, where it is however very abundant. Surprisingly it appears to be absent at Romney. Absent at Camber, E. Sussex, but plentiful at Littlehampton. Unrecorded in Pas de Calais.

4) Fixed dunes, St. Georges Links, Sandwich Bay, 1945-62 MNE Fixed dunes about Guilford Hotel, Sandwich Bay.

V. bromoides (L.) Gray 15, 16 [Squirrel-tail Fescue]


2) gsd. On Bagshort Sand, Cliffs E of Minster, 1954 MNE.

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143 Placed after L. temulentum in the manuscript.
144 In the manuscript, given as V. membranacea (L.) Dumort..
3) Bysing Wood. Rough Common RGW. Grass heath NW of Dunkirk 1945 MNE. Swanton Fm pit, 1955 MNE. 06 topof Beach nr Medina av[enue], Seasalter, MNE, 1945-60.
4) about Guilford Hotel, Sandwich Bay MNE 1945-60. Deal Links. Richborough.
7) Newnham gravel pit. Stockbury, Three Squirrels Down, 1944 MNE.
8) Chilham Hill ES.
10) Sevenoaks 1903 H.L. MNE.
13) High Rocks Lane, on rubbish heap, ‘51. KEB.
14) 50 Acre Wood, Woodchurch ES.

V. myuros (L.) C.C. Gmel. [Rat’s-tail Fescue]
1) Farningham Wood, 1946.
3) Hernhill village, 1955 MNE.
4) Richborough waste g[round]. Kingsdown Beach, 1946 MNE. Plucks Gutter, 1955 MNE. Old r[ai]l[wa]y and Wall of Churchyard, Wingham BN.
8) Bridge, JG.
13) near Brighton Lake, Tunbridge Wells, CAS.
15) Dungeness, Shingle beach near Long ballast pit, 1946 MNE. Beach W. of Hythe, 1955, MNE.

† V. myuros f. megalura (Nutt.) Stace & R. Cotton145
12) Sellindge, 1951, D.H.K.

V. ciliata Dumort. [Bearded Fescue]
1) Sandy grass heath, W side of Farningham Wood, 1946 MNE.
6E) Chalk gravel pit 1946 MNE.

145 In the manuscript given as V. megalura (Nutt.) Rydb.
146 In the manuscript given as V. ambigua ssp ciliata (Le Gall) More; but this would better have been called ssp. ambigua.
V. ciliata subsp. ciliata Dumort.¹⁴⁷

V. unilateralis (L.) Stace¹⁴⁸
6) Broken chalky bank, between arable and downland, 628605, above Wrotham Water, PCH., 1959. 1959!
Rough open chalky field, Halling Warren, PCH., 698656, 1959. White Pit, Upper Halling + T. botrys, PCH.

Cynosurus L.¹⁴⁹
C. cristatus L.  
[Crested Dog’s-tail]
1) Blackheath GMB. Shooters Hill. Ruxley pits. Woolwich Common 1934 LRAG MNE. 36 W. Wickham Common PCH.
5) Field W. of Shoreham PCH. Darwins Bank Downe. Pilgrims Way Pohill PCH. Chevening Park PCH.
6) Swanscombe Wood PCH. Kemsing Downs PCH.
8) 137508 Petham SE Down MEM.
10) Knole Park PCH. Otford PCH. Darent water meadows PCH.
15) Lydd Airport DMcC. Denge Beach, J. Hubbard. Shirley Moor ’65.

C. echinatus L.  
[Rough Dog’s-tail]
1) 1 plant, Bexley, 1946. Hayes, casual, D.McC. [Beckenham, 1934, A.G. Davis MNE.]  
8) Dover E. Cliff, KDR. Bridge J.G.
9) Birchington, 1960 in shoddy, DMcC MNE.
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.

Puccinellia Parl.
P. maritima (Huds.) Parl.  
[Common Saltmarsh-grass]
15, 16
4) E. of Reculver 1946. Stour estuary Salt Marshes, Sandwich to Shellness.
8) Shakespeare Beach, Dover, KDR.
15) Salting behind Dymchurch Wall. Midrips, J. Hubbard.

¹⁴⁷ In the manuscript given as V. ciliata Link. which is the casual subspecies, better treated as ssp. ciliata, instead of this being attributed to the previous taxon.
¹⁴⁸ In the manuscript given as Nardurus maritimus (L.) Murb. and placed after Catapodium.
¹⁴⁹ In the manuscript, Cynosurus follows Dactylis.
**P. distans** (Jacq.) Parl.\(^{150}\) 15, 16  [Reflexed Saltmarsh-grass]


3) Swalecliffe sea wall, 1959, **HMW**.


**P. distans × rupestris** = **P. x pannonica** (Hack.) Holmberg


**P. pseudodistans** (Crép.) Jansen & Wachter\(^{151}\)


**P. fasciculata** (Torr.) Bicknell [Borrer’s Saltmarsh-grass]


3) Swalecliffe, **HMW** 1959 **MNE**.


15) 982264 Fairfield, 152: 1962, Mrs. K.D.R. NE of Littlestone 1947, 1950 **MNE**. St Mary's Bay 1947, **MNE**. By Canal, W. of Hythe, 1956, **LJMN**.

**P. rupestris** (With.) Fernald & Weatherby [Stiff Saltmarsh-grass]


3) Swalecliffe, 1959, **HMW** **MNE**.

16) Folkestone Harbour, Miss M. Cobbe, **BEC Rep.** 1923, p.223.

**Briza** L.\(^{152}\)

**B. media** L. [Common Quaking-grass]

1) Keston Common AGD 1916 **MNE**. Holwood Park near Lakes, 1954 **MNE**.

2) Meadow ¾ m S. of Cliffe, 1944.


4) Hacklinge Meadows. Sandwich Bay.

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\(^{150}\) In the manuscript, cited as **P. distans** (L.) Parl.

\(^{151}\) This taxon has since been treated as subsumed in **P. fasciculata**.

\(^{152}\) In the manuscript, **Briza** follows **Cynosurus**.
6) Down E. of Molehill Wood, Buckland '61.  White Hill, Downs E. of Shoreham, PCH; FR.  Preston Hill Down PCH; FR.  Kemsing Downs PCH.  Downs above Trottiscliffe PCH.
10) N. of Bat & Ball Sevenoaks 1950 MNE.  Darenth Water Meadows, PCH.
11) Wrotham Heath 1944, on r[oa]ds[e] MNE.  Clare Park, E. Malling.  Meadows ½ m W. of Penshurst 1944 MNE.
12) Cuckolds Coomb fen, Brook, 1945-54 MNE.  Stowting fen 1954 MNE.
14) 926347 ...by r[oa]ds[e] E of Robhurst ES.

B. minor L. 153

B. maxima L.  [Great Quaking-grass]

Poa L. 154
P. annua L.  [Annual Meadow-grass]
1) Blackheath GMB.  Bostall Heath PCH.  Ruxley Pits.  Shooters Hill. GMB.  Bexley Mill Pond PCH.  N. Cray Wood, PCH.  Joydens Wood PCH.
3) Swalecliffe Sea Wall, '59, HMW.  Church Wood: Blean Wood. RGW.
8) Down, NE of Elham Park 1958 MNE.
10) Bat & Ball tip CAS.  Otford PCH.  River Path N of Shoreham PCH.  Eynsford PCH.  Shoreham Ch[urch] y[ar]d PCH.  W. of S Darenth PCH.  St Johns Jerusalem PCH.
13) Stone Cross, Ashurst 1959 CAS.  S. Park Penshurst, by track 62.  Southborough HNC.  Bayham Abbey CAS.
15) Lydd Airport DMcC.

P. trivialis L.  15, 16  [Rough Meadow-grass]
Native.  Meadows, dry to damp woodland and carrs, roadsides, hedges, waste ground; abundant everywhere, except open grasslands on chalk and sands.
1) Blackheath GMB.  Ruxley pits, S&S.  Abbey Wood, RAB.  Farningham Wood, PCH; 82!
2) Stone Marshes, St J.M. (var. glabra Doell.) BEC Rep 1921 p403.  Oare mill pond meadow, 1959, MNE.  Marsh E. of Oare Creek 1959 MNE.
4) Sandwich Bay.
5) Darwins Bank, Downe, JEL.

153 Listed, but no records given.
154 In the manuscript, species are given in sequence; annua, bulbosa, nemoralis, compressa, pratensis, angustifolia, humilis, trivialis, palustris, chaixii.


P. humilis Erh. ex Hoff. 15, 16 [Spreading Meadow-grass]

Native. In dry habitats in Kent (walks, sandy ground, dunes, etc.) and probably not uncommon. In other counties it is reported in wetter places.

Sandwich Bay dunes 1949 MNE; 1963, KFC, det. A. Melderis.

Meadown N. of Bat & Ball, Sevenoaks, 1950 MNE. Westerham Wood 82! By R[iver] above S. Darenth, PCH.


Lydd Airport DMcC. Shirley Moor ’65.

P. pratensis L. [Smooth Meadow-grass]

Blackheath GMB. Abbey Wood, GAM. Shooters Hill, GMB. Ruxley pits, S&S.

Grain N. Beach 1955 MNE. Meadow SW of Upnor 1960 MNE.

Sandwich Bay 1946 MNE.

Cudham Ch[urch][ar]d (s.s.) D.P.Y. Morants Court Hill 1951 MNE. 3964, Well Wood, PCH.

The Warren, Down So. of G[rea]t Wood Cobham ’44 MNE.

Gravel pits, Chalk 1946 MNE.


St Johns Jerusalem PCH. R[a][l]w[ay], 1 m W. of Kemings Sta[tion], 1946 MNE.

Ragstone Walls, E. Malling MNE, Heath Rd; New Rd; Well St[reets]; Well St[ree]t Rocks. W. Malling. Aylesford Friary Wall 1952 MNE. R[a][l]w[ay] bank, Hildenborough 563482 CAS.

Hothfield Common 1946 MNE. Stubbs Cross, Kingsnorth 1952 MNE.

Stone Cross, Ashurst, 518381, 1959, CAS. Southborough HNC. Hawkenbury Bog, CAS. Bayham Abbey CAS.

Ancient walls S. of W Hythe ’62.

Folkestone Leas, 1946 MNE. Ragstone sc[ars] W. of Hyth, 1955, MNE.

P. angustifolia L. [Narrow-leaved Meadow-grass]

Native. Dry grasslands, on chalk or sand; probably common, but under-recorded, as I did not attempt to separate it from P. pratensis in earlier survey work.


Downs NE of St Margarets, 1955, DPY, det. CEH.

Walls, Minster Thanet 63.

Sandy vege of A.20, 1m W. of Hollingbourne, 1944 MNE.

P. chaixii Vill.156

P. compressa L. 1 [Flattened Meadow-grass]
Native. On old walls, widespread but uncommon: also in old shingle workings on Denge Beach. Most frequent on the Kentish ragstone belt. Rare in Surrey, Sussex and Essex and Pas de Calais.

1) Ruxley pits.
2) 06 Bank S. of Oare Creek HMW.
3) 15 Wall, St. Augustines Abbey, Canterbury.
4) 35 Old walls, Sandwich. Wingham Ch[urch] y[ar]d[ Wall, '59, BN.
7) 86, Wall, Kemsley Street Farm, Bredhurst, 1960 MNE.
9) 56 Lullingstone Castle 1956 MNE. 56 Farningham Village on wall 1958 MNE. 56 Farmhouse wall S. of Shoreham GMB & PCH.
12) 01 Old shingle workings, N.E. of Bird Observatory, Dungeness, 1953-1962.

P. palustris L. 157

P. nemoralis L. 15, 16 [Wood Meadow-grass]
5) Wood W. of Shoreham PCH. Woods Darwins Bank, Downe, JEL. 396611 hedge of copse PCH.
6a) Cockham Wood Upnor, 1960 MNE.
8) Temple Ewell: Bridge JG.

P. bulbosa L. 15 6/51 [Bulbous Meadow-grass]

156 Listed, but without any entries.
157 Listed, but without any entries.
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 16.
4) 35 Fixed dunes, Deal Links, 1961, 35. 35 Sandwich Bay; 1946: 35 E. of Downs Farm, '62. 35 St Georges Links 1946-61 MNE. 35 Walmer Beach, 1946.

16) Folkestone Leas, W. end, 1946, abundant MNE; 1954 E.S. MNE.

Dactylis L.

D. glomerata [L.] [Cock’s-foot]
4) Sandwich Bay. Track, 271690, N of St. Nicholas '62.
13) Stone Cross, Ashurst, 159 CAS. South Park Pasture, Penshurst, '62. Southborough HNC. Bayham Abbey CAS.
14) Knock Wood R[oad]side E of Tenterden '62.
15) Dungeness near Lighthouse.

Catabrosa [P.] Beauv.

C. aquatica (L.) [P.] Beauv.

[Whorl-grass]
1) Near Ravensbourne W.W., Bromley, 1908, S.E.C. Hb. Crop. 46 Orpington Park, PHC.
2) 76 Hildenborough Marshes, 1946.
4) 26 Deerson Marshes, Preston, 1956 MNE.


11) 65 Leybourne, '44. 66 By Stream, Lunsford Lane, E. Malling, 1962, R.W. English. 65 Plaxtol, '44. 83 Biddenden, '44.

12) 94 Pond SW of the Common, Hothfield, 1943, MNE. 10) 45, 16 [Fern-grass]

Catapodium

C. rigidum (L.) C.E. Hubbard 15, 16


2) Stone Marshes 575755, HMP. Shellness, Sheppey. [Sheppey AE Davis 1917 MNE.] Swanscombe Marshes. Grain 1945 MNE.


5) on chalk – steps N. of A.20, W. of Farningham Xroads, PCH. Chelsfield Ch[urch]. Down W. of Shireham 1945 MNE. Polhill Place LRG 1934 MNE. Polhill above Tunnel 1948 MNE. Pilgrims Way, Westerham, RAC. Lane bank NE of Brasted RAC.


7) Hollingbourne Hill 1959 MNE. Higstedt pits DMCc.


9) Dartford 1862 MNE.


C. marinum (L.) C.E. Hubbard [Sea Fern-grass]

2) Isle of Grain, E.S.M.; S. beach, 1947 MNE. Shellness beach, 1945- 1959--62 MNE. Oare Creek 1959 MNE. Beach W. of Seasalter 1959 MNE, 098657, HMW.

3) Whitstable, RGW. Reculver, wall near Ch[urch], MEM.


8) 250 yds SE of Pope St[reet] Fm, Godmersham, 1954, P. le Brocq, 077512. Shakespeare Beach, Dover, KDR.


16) Folkstone Leas cliff 1945 MNE. By Sandgate Castle, 1955 MNE.

(Sesleria coerulae (L.) Ard.) 158 [Blue Moor-grass]

Parapholis C.E. Hubbard 159

P. strigosa (Dumort.) C.E. Hubbard 159 [Hard-grass]


158 Listed in the manuscript after Melica, but no entries given (and not a Kentish plant, anyway).

159 Follows Phalaris in the manuscript.
MNE. Conyers Creek  MNE. Tonge N of Blacketts  DMcC  MNE. Oare Creek 1958, 1959  MNE  1962  HMW. Grain MNE.

P. incurva [L.] C.E. Hubbard [Curved Hard-grass]
2) Grain N. Beach, 1945 MNE. Grain S Beach, 1955 MNE. Beach below Upnor, 1960 MNE. SW of Upnor, 1951 MNE. Cuxton NE of Station, 1951 MNE. Shellness 1956 MNE. By Oare Creek, 1959 MNE, 1962 HMW.
4) Shellness, Sandwich, 1952 MNE. Oare Creek 1958, 1959

8) Shingly bank above sea wall, at cliff base, Lydden Spout 1953-5 MNE. Ditto, below Abbots cliff 1960 MNE.
15) Littlestone, Lady D, 1902. Dymchurch, CPSK.

Glyceria R. Br.
G. maxima (Hartm.) Holmberg[Reed Sweet-grass]
51/47 Woolwich; 51/76 Medway; 51/96 Teynam '36; 61/06 Fav[ersham]; 51/57 Dart[ford]; 51/67 Gravesend, c.'58. Not rec[orde]d for 51.77 Higham nor Sheppey or Grain, 51/89, 51/97, 61/07.
3) Pond, Kites Fm, Swalecliffe. Whitstable Harbour, REW.

P. incurva [L.] C.E. Hubbard [Curved Hard-grass]
2) Grain N. Beach, 1945 MNE. Grain S Beach, 1955 MNE. Beach below Upnor, 1960 MNE. SW of Upnor, 1951 MNE. Cuxton NE of Station, 1951 MNE. Shellness 1956 MNE. By Oare Creek, 1959 MNE, 1962 HMW.
4) Shellness, Sandwich, 1952 MNE. Oare Creek 1958, 1959

8) Shingly bank above sea wall, at cliff base, Lydden Spout 1953-5 MNE. Ditto, below Abbots cliff 1960 MNE.
15) Littlestone, Lady D, 1902. Dymchurch, CPSK.


G. fluitans (L.) R. Br. [Floating Sweet-grass]
1) W. side Avery Hill LRAG, '34 MNE. 36 Pickhurst Road, PCH. Shooters Hill, G.M.B. Ruxley pits, S&S. Pond in Farningham Wood, PCH.
2) Dikes Dartford Marshes 541761, 62. Highham Marshes PCH. High Halstow Marshes, 1958 MNE. All Hallows, Dike, AGS. Tonge Marshes, DMcC, 58, MNE. Graveney Brickworks, H.M.W. 06 Seasalter ditches, HMW.

14) Breeches Pond.
61/01 Dungeness; 51/82 W. of Oxney; 51/92 Appledore; 61/02 Romney; 61/13 Hythe; 61/03 Ham St[reet]; 51/93 Shirley M[oor].

G. fluitans (L.) R. Br. [Floating Sweet-grass]
1) W. side Avery Hill LRAG, '34 MNE. 36 Pickhurst Road, PCH. Shooters Hill, G.M.B. Ruxley pits, S&S. Pond in Farningham Wood, PCH.
2) Dikes Dartford Marshes 541761, 62. Highham Marshes PCH. High Halstow Marshes, 1958 MNE. All Hallows, Dike, AGS. Tonge Marshes, DMcC, 58, MNE. Graveney Brickworks, H.M.W. 06 Seasalter ditches, HMW.


14) Pond nr Palustre Court, Wittersham 58 MNE.


16) Holywell, Folkestone.

G. fluitans x plicata = G. [x] pedicellata Townsend

1) Bowman’s Hollow, Plumstead, 1934, LRAG MNE.

2) Snodland Marshes, JPMB. Tonge, DMcC.

4) Marsh NE of Wickhambeaux ‘56 MNE.

7) Marsh, Whitehill, Ospringe, 1959, MNE.


11) Ryarsh Wood ‘43 MNE. Maidstone, EGP, ’61, MNE. Bearsted EGP & GHM, ’59 MNE. Nr Boxley Abbey, EGP. Ayleford, EGP. Harrietsham, 1944, FR & LJM.

15) Ditch, Burmarsh Rd, Hythe, LJM.

G. declinata Bréb. [Small Sweet-grass]

1) Brook Hosp[ital] Woolwich, LRAG, 1934 MNE.


8) Gate Inn Pond, DACL.


G. notata Chevall.162 [Plicate Sweet-grass]

2) Plumstead Marshes, 1944. Gravel pits, Aylesford, EGP, ’58 MNE. Stream, L[owe]r Halstow, 857669, ’62. Oare Pond Meadow 59 MNE. Abbey Fm, Faversham, HJN.

3) Denstreoude, Pond, HMW.


12) Coldridge Wood S. of Lenham, 1958, Miss M.E. Milward MNE. SE of Lenham. Stowting Fen, ’54 MNE.

13) Ditch by Hawkenbury Bog, CAS. Pond N. of Kippings Cross, 6444901, 1957, CAS. Cranbrook, DS.

14) 50 Acre Wood, Woodchurch, ES.

16) The Lince, SE of Etchinghill, 54 MNE.

Melica L.163 [Wood Melick]

M. uniflora Retz. [Wood Melick]


162 Given as G. plicata Fr. In the manuscript, and placed before G. declinata.

163 Placed after Briza in the manuscript.


7) Warren Lane, Lower Bell, ’62 MNE, 1951... Squirrels Wood, Stockbury 1953 MNE. R[oa]dbank, Coxett Wood (Thanet S[and]) 1945 62 MNE.


10) Westerham Wood 82! Brasted Chart 82!


16) Blackhouse Shaw Saltwood Brockhill, LJM.

**Helictotrichon** Besser ex Schult. & Schult. f.\(^{164}\)

*H. pubescens* (Huds.) Pilg. [Downy Oat-grass]

Native. Chalk grassland, very common and general; also on fixed dunes at Sandwich Bay, locally abundant

4) Fixed dunes, St. Georges Links, Sandwich Bay, 1950-63 MNE.


6) Magpie Bottom, 1949, MNE. Upper Halling Downs 1943 MNE. N. of Cuxton 1951 MNE.


*H. pratense* (L.) Besser\(^{165}\) [Meadow Oat-grass]


6) Upper Halling Downs.

7) Burham Downs, 1946 MNE. Down, Foxbury Wood, E. of Lenham, 1946 MNE. Downs ½ to 1m. NE of Lenham, 1956-58 MNE. “Simia” down, HWM. 94 Westwell Downs, ES.


9) Chalk grassland, Kingsgate, Thanet, 1959 MNE.

11) Meadows, Aylesford, 1943.

**Arrhenatherum** [P.] Beav.

* A. elatius* (L.) Pilg. [False Oat-grass]


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\(^{164}\) Cited as Bess. In the manuscript and with the order of species reversed.

\(^{165}\) Cited as (L.) Pilg. In the manuscript.
(var. tuberosum –common in Blea, copes and wood borders, RGW.)
4) Rear of fixed Dunes, Sandwich Bay. Shingle Beach, Walmer; Kingsdown.
7) Below Downs N. of Village Boxley 62.
10) St Johns Jerusalem PCH. Westerham Wood 82.

Avena L. 166

A. strigosa Schreb.167 [Bristle Oat]

A. fatua L. 15, 16 [Wild Oat]

Alien, usually only casual in waste ground and in crops: rare.
2) Bobbing, Mrs Henson. Tonge DMCC.
4) Wingham Well, 1958 MNE. Worth, oatfield, 355555, DACL & KDR.
6) N of Stansted 605625 DVS Woods. Trottscliff, Mrs Bigg.
7) Belmont Park DMCC. Westwell cornfield, G. Morgan.
8) Selstead in oats 211454 / W of Halfway Ho[use], Barham 228488 , 1955, DACL. Denton 1955 DACL. Bourne Park DACL.
9) Cornfield W of Minster, Thanet, 1958 MNE.
10) 7oaks tip CAS.
15) Arable N.W. of Wittersham, 1958, MNE.

var. pilosissima Gray

A. fatua x sativa (A. sativa) L.
2) Sandpit W of All Hallows, 1958, AGS.
7) Between Bluebell Hill and Boxley, 1899, H.L., MNE. Near Highsted, DMCC.
9) Joss Bay, Mrs B. Dodds.

A. sterilis L. 168 [Winter Wild Oat]

Alien, only casual in Kent in arable land, etc.: rare.
1) Woolwich Common, 1934, LRAG MNE.
3) Medina Av[enu], Seasalter, HMW.
4) SW of Grove, 28.7.1963, E.G. Philp MNE. Near Chislet, 1958, Miss M.E. Millward MNE. S of Plucks Gutter MEM
7) In crops, Godmersham, 1946, DHK, K.
9) N. of Minster in arable '63.
10) Rubbish Dump, Dunton Green, 1958, R.C. Palmer, det. C.E. Hubbard.
11) E. Farleigh, 1957, E.G.P., MNE.

166 Follows Koeleria in the manuscript.
167 In the manuscript, with A. byzantina, placed at the end of the Avena species.
168 In the manuscript given as A. ludoviciana Durieu.
A. byzantina
6) Longfield tip DMcC.

Trisetum Pers.\textsuperscript{169}

\textit{T. flavescens} (L.) P. Beauv. \[Yellow Oat-grass\]

1) Woolwich common 34 LRAG MNE. Blackheath GMB. Repository Grounds 34 LRAG MNE. Ruxley pits.
2) Isl of Grain 1945 MNE.
3) Sandwich Bay.
5) A.2 verge, Swanscombe Wood, PCH. Trottiscliffe Downs ‘45 MNE. Downs E of Shoreham PCH.
8) Meadow, Darenth, 1954 MNE. St Johns Jerusalem PCH.
9) Sandling Wood EGP 57 MNE. Tonbridge CAS. Pluckley 1943 MNE.
10) E)

Koeleria Pers.

\textit{K. macrantha} (Lebed.) Schult.\textsuperscript{170} \[Crested Hair-grasss]\n
1) [Chislehurst Common, 1885 MNE.] Blackheath G.M.B.
4) Deal Links. St Georges Links. Sandwich Bay, 1945-63 MNE.
5) Chevening Park? Darwin’s Bank, Downe, 1961 MNE.
6) E) Green Street Green Common, 1944 MNE. By Windmill, Shorne (grass-heath on Blackheath Beds) 1946 MNE.

D. cespitosa (L.) P. Beauv. \[Tufted Hair-Grass\]

\textit{D. cespitosa} (L.) P. Beauv. 15, 16

\textit{K. albescens} DC. was reported at Sandwich by W. Barton (\textit{BEC Rep.} 1914). Dr C.E. Hubbard considers the British plants reported under this name as indistinguishable from \textit{K. cristata}.\textsuperscript{171}

\textit{Deschampsia} [P.] Beauv.\textsuperscript{172}

2) Grain, PCH.
7) Kenneling Wood on chalk loam, o[ccasional], ‘62.

\textsuperscript{169} In the manuscript, placed after Koeleria.
\textsuperscript{170} In the manuscript, \textit{K. cristata} (L.) Pers.
\textsuperscript{171} i.e. \textit{K. macrantha}.
\textsuperscript{172} Follows Holcus in the manuscript.

10) Westerham Wood PCH, 82! Bradbourne Meads FSEF. ByRiver above S. Darenth PCH.


12) Hothfield Common 1957 EGP MNE.


15) Dungeness, 19445 MNE.

(D. setacea) Huds. Hack. 173

173 Follows D. flexuosa in the manuscript. No entry given, but this is not a Kent plant.

D. flexuosa (L) TRin. 15, 16 Wavy Hair-Grass

Native. Dry woodlands and dry heaths on acid sandy or gravelly soils; locally common in such places, but absent from the chalk districts (except where light drift soils occur), from the clay areasm from the marsh districts 2), 4), 5), and indeed from the whole coastline. Common in 1), 3), 6E), 10), 11), 12), 13) and 14). An “atlantic “ species, much at home in the humid climate of the western Greensands and the High Weald.


12) Ashford Warren. Hothfield Common 1943-63 MNE.


Holcus L. 174

H. lanatus L. [Yorkshire-fog]


2) Woolwich Arsenal PCH. Sewer Bank Plumstead PCH. Shellness.


4) Sandwich Bay.

5) 396611 PCH. Pilgrims Way, Polhill PCH. Chevening Park PCH. Darwin’s Bank Downe.


7) Base of Hangers W. of Westwell, ’62.

8) R[are], Down ENEof Giddy Horn, ’62. Wolverton crossroads ’62.


174 Follows Arrhenatherum in the manuscript.

H. mollis L.  [Creeping Soft-grass]
5) Andrews Wood, Badgers Mount PCH.
8) Covert Wood DACL. By Track and in coppice on Pliocene Sand, Reindien Wood ‘62.
10) Westerham Wood 82! Brasted Chart 82!
11) Fairbourne Lane, Harriesham, BD.
12) Hothfield Common, 1957, E.G.P., MNE.

(Corynephorus canescens (L.) [P.] Beauv. 175
This was reported in Kent by L’Obel in 1655, and by GES in C.P.S.K., but the evidence is slender and unconfirmed, though it could well have existed on the Sandwich dunes. It is not uncommon on the fixed dunes in Pas de Calais: in Britain it is probably only native on the Norfolk and Suffolk coast, and formerly occurred in Breckland.

Aira L. 176
A. caryophyllea L. 15, 16
Native. Dry open grassland or disturbed ground on sand or gravel, usually on leached soil: widespread, but not common generally.
2) On Bagshot Sand, E of Minster, 1954 MNE.
4) Deal Links. Richborough Port, ’55, PCH. St Georges Links, Sandwich (Sand) 1946, W.J.L.S.
12) Hothfield Common, 1950 MNE.
14) R[ail]way bank NE of Sta[tion], Tenterden, 1959 MNE.
15) Denge Beach, J. Hubbard.
16) Kiln Heath, Sandling, LJM.

A. praecox L. 15,16 Early Hair Grass
Native. Dry open grassland, usually on leached soils: common in suitable places.
3) 05 Grass heath S. of Dunkirk MNE. 15 Tenterden Park Wood, 1946. (Fordwich JG.)

175 Follows Aira in the manuscript.
176 Follows Deschampsia in the manuscript, and begins with A. praecox.
4) 35 Fixed Dunes E. of Downs Fm, Sandwich, 1962.  34 Fixed Shingle S. of Walmer Castle, BN, 1959.  35 Deal Links.


7) Heath, Danaway, Newington, 1957, MNE.

10) Sandpit E. of R[ailwa]y, Riverhead, CAS.


16) Folkestone Lees.  Shorncliffe, 1955 MNE.

Anthoxanthum L.

A. odoratum L.  [Sweet Vernal-grass]

1) Blackheath GMB.  Eltham Common 1934 LRAG MNE.  Ruxley pits, S.&S.  Farningham Wood, PCH.  82.


4) Sandwich Bay.

5) Chevening Park PCH.

6) Darenth Wood, PCH. Lords Wood, Darent PCH.  Green Street Green.  Preston Hill, PCH.

6E) Randall Wood, Shorne (Thanet S[and]) 1953 MNE.


10) Bradbourne Meads FSEF.  Knole Park PCH.


Phalaris L.

P. arundinacea L.  [Reed Canary-grass]


2) Sewer Bank, Plumstead, PCH.  Plumstead Marshes.  Northfleet, Ebbsfleet Channel.  66 Birling Marshes PCH.

3) Oare Meadow HMW.  Near Waystreet Fm Hernhill HMW,


6) Swanscombe Wood, in marshy cutting PCH.

8) Dour head Chilton KDR.  Bridge, Nail Bourne, JG.


13) Bayham Lakes, CAS.
16) L[owe]r Sandgate Rd, Folkestone VFPD.

var. picta
8) Coldred Pond.
11) Bourne Fm, Plaxtol, 1960, DMcC.
13) Toad Rock Tavern, Bishop'sdown, KEB.

P. canariensis L.
1) N. Cray tip, PCH. Pokeridden Wood, Swain. Hayes Gravel pit 1915 AED MNE. Eltham Common by Police Station 1934 LRAG MNE.
2) Conyer KDR.
3) Dargate, Denstroke Rd, HMW.
4) Worth, DACL.
6) Cotton Lane, Stone, tip side, 563746, 1961, HMP. Longfield tip DMcC MNE. A.2 verge E of Darent Wood 583730, H.M.P.
7) near Westwell, EGP 1958 MNE. Kennaways, Mrs W. Verschoyle.
9) North Foreland, L.W.W., 1949! MNE.
10) Sevenoaks tip DMcC.
11) E. Malling ’53 MNE, 57. Vintners Quarry 1956 LRAG MNE. Edenbridge Tip DPY. Runham sandpit Mrs B Dodds.
12) Canterbury Station MEM. Chilmington tip ES.
13) High Rocks Lane, Tunbridge Wells, CAS, 1959. Cranbrook DS. Garden, Southborough HNC.
14) Woodchurch Green RAC.
16) Folkestone Brickfields DMcC.

P. minor Retz.

Shoddy alien:
4) Ash: Sandwich, 1960, DMcC.

P. paradoxa L.

Shoddy alien:
1) Green Street, 1938 DMcC.
4) Sandwich.
9) Birchington; 1960, DMcC.

P. brachystachys Link.

Agrostis L.178
A. capillaris L.179 [Common Bent]
6) 668628, Holly Hill (B. Bels) 62. Darent Wood, H.M.P.

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177 Sic, =Withersdane?
178 Follows Calamagrostis in the manuscript and gives species in sequence: A. curtisii, canina, vinealis, capillaris, gigantea, stolonifera, avenacea
179 Given as A. tenuis Sibth.
10) Sandpit by [railway] E. of Riverhead CAS. Bat and Ball tip CAS.
12) Ashford Warren MNE. Hothfield Common, 1903, HL to 1961! MNE.
15) Blackwall Farm, Dungeness, 1956 MNE.

A. gigantea Roth.
2) Dartford 1898 H.L. MNE. Tonge, DMcC. Snodland, 1898 H.L. MNE.
5) Arable, Blackmans, 397684, PCH.
6) Greenhithe Waste Ground, H.M.P.
7) Field below Timbolds Hill, Wichling, 1959 MNE. 95 Eastling, C.T. 86 Field, Guildsted, Stockbury, 960 MNE.
10) Sandpit by [railway] E of Riverhead, CAS.

A. stolonifera L. [Creeping Bent]
1) Blackheath GMB. Shooters Hill GMB. Ruxley Pits, GM.
5) A.20 NW of Farningham PCH. Chevening Park PCH.
9) East Wear Bay 1947 MNE. Lydden Spout 1955 MNE. Abbots Cliff 1956 MNE.
10) Sandpit E of [railway] E, Riverhead, CAS. Bat and Ball tip CAS.
15) Lydd Airport DMcC.

A. avenacea J.F. Gmel.
Shoddy alien.
4) Sandwich 1959 MNE. 11) Comp, 1960 MNE: both D.McC.

(A. curtisi) Kerguelen

A. canina L.

180 Given as A. setacea Curt. without any entry; it is not a Kent plant.
181 Given as subsp. canina and distinguished from subsp. montana (now A. vinealis).
3) Church Wood, Blean, SE part, RGW.  
16) Ride, Kiln Wood, Sandling Park (F[olkestone] Sand) 1958 MNE.  

A. vinealis Schreb.¹⁸³  
1) Keston Common.  
12) Hothfield Common.  

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.]  

Calamagrostis Adans.  
Native.  Roadside ditches, woodborders, etc., on heavy moist soils; also in old quarries: rather rare, but widespread.  Rare in Surrey and Sussex, commoner in Essex; very common in Pas de Calais, even on the dunes.  10 localities 9/51.¹⁸⁴  
1) 46 Roadside Ditch, Hayes Common, D.McC; 1946-62! MNE.  
3) 16 Roadside on clay, A.291, E. of West Blean Wood, 1946 MNE.  
6) 57 Horns Cross Chalk pit, 1964, Mrs AG Side.  77 Damp floor of chalk pit, SW of Cliffe, 1963.  
6) E) 77 edge of Chattenden Wood, Lodge Hill, 1954 MNE.  
8) 14 Border of West Wood, Stowting, W. of Gate Fm, on Pliocene loam, 1956, Miss DAC Long 1958 MNE (1956!).  Near Winterage Wood Acrise DACL.  
15) 01 Damp ground, old shingle workings E. of Old School, Dungeness, 1956, Miss DACL: 1961! MNE.  

C. canescens (F.H. Wigg.) Roth¹⁸⁵  
15 1/51
Native. Swamps; extremely rare, and now apparently confined to one locality. Very rare in Sussex and Essex; rare in Pas de Calais. Commoner in Suffolk and Norfolk, unrecorded in Surrey.

Reported at 1) Charlton, FlK; and Walmer see FlK: (probably errors). 11) Pond W. of London Beach, N. of Tenterden, 1959, E. Scott: 1959!

[12] Swamp below Lit[tle] Hoddford, Sellindge, FGEK.

[16] Woods near Hythe, Ann Pratt. 186

(Ammophila arenaria x Calamagrostis epigejos = X Calamohyla baltica (Flüggê ex Schrad.) Brand) occurs on the dunes at Ambleteuse, Pas de Calais (C. Stace, 1959, det. C. Melderis 1962). In Britain it occurs in Norfolk, Suffolk and Northumberland; it may appear on the Kent coast.)

Ammophila Host

A. arenaria (L.) Link 15, 16 Marram Grass 7/51

Native. Sand dunes and sandy beaches: very local but locally abundant in all suitable habitats: the chief agent in sand-dune building in Britain. Unrecorded in Surrey. Very local in a few places in Sussex and in Essex, abundant on the extensive dunes of Pas de Calais and Somme.

2) 87 Grain S. Beach, 1946-59 MNE. N. Beach, 1945; gone, 1959, MNE. Beach opp[osite] “Rose in Bloom” Seasalter, 1959, HMW, 098657 and to W. 06 Shell sand beach, Shellness, Sheppey, [locally] d[ominant]. 07 Beach N. of Leysdown, 1918 AGD MNE 1945!

4) 35 Abundant, to dominant on white dunes, Deal Links to Shellness, 1946-62 MNE. 36 Beach, Pegwell Bay, 1946. Old Fixed Dunes E of Downs Fm ’62.

9) 36 Cliffsend, Pegwell, 1946. 15) 02 Lydd on Sea, a small patch, 1946. 02 Lydd Common, on ancient dunes 2 miles inland, 1946-62, MNE. 02 Greatstone Dunes, [locally] d[ominant], 1946-60 MNE. Romney Warren, abundant near sea wall, and rarer inland, 1946 MNE. 01 W of Dungeness, 1957, E.G.P. MNE.


G. ventricosum (Gouan) Schinz & Thell.


Lagurus L.

L. ovatus L.

Escape in waste places 51/58-36; 52-54; 56;68; 54-74. Normandy, Brittany, S[use], S. Hants, Channel Islands – native, Dawlish Warren. Could be an old native, or more likely is extending its range with walmer climate on this side of the Channel.


6) Longfield tip, DMcC.

11) Ditton, 1933, FF.

Apera Adans.

A. spica-venti (L.) [P.] Beauv.


1) Plum lane Brickfield, Elmstead, AHWD, 1893 MNE. Green Street Green (casual) J.P.M.B. Marlborough La[ne], Shooters Hill, G.M.B.

7) Upper Bell, F.F.

8) Arable field, at Lydden, 1964, Miss D. Moore.

Polypogon Desf.

P. monspeliensis (L.) Desf. 15, 16 2/51 Annual Beard-Grass

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.

186 Given as Ammocalamagrosis baltica (Schrad.) P. Fourn., and following Ammophila.

187 Placed between Aira and Calamagrostis in the manuscript.

188 Follows Polypogon in manuscript.


[22 Siding, Sharnel Street, with shoddy aliens, PCH]

4) 36 Dikes, alluvial flats, N.E. of Sandwich, Fl. K.

[As a shoddy casual alien at:]

4) Sandwich: 11) Comp and Wrotham, all 1960, D.McC. MNE.

Alopecurus L.

1. A. pratensis L. [Meadow Foxtail]

1) Blackheath GMB. Shooters Hill, GMB. Chislehurst Common. Ruxley pits, S&S.

2) Meadows W. of Upnor, 1945-1960 MNE. Sheerness Canal, OD.

4) Wenderton Meadows, BN. Mead[ow]s, ½ m N. of Wingham.

5) Meadow 396611 PCH.

7) Upper Bell '55.

10) Bradbourne Meadows FSEF.


13) Meadow by Teise S. of Lamberhurst Ch[urch], 684365, CAS. Southborough, HNC (common).

14) Meadow W. of Pigeon Hoo, E of Tenterden '62.

15) Dungeness near Bird Obs[ervatory], J. Harper.

A. geniculatus L. [Marsh Foxtail]


13) Meadow by Teise S. of Lamberhurst Ch[urch], 684365, CAS. Southborough, HNC (common).

14) Meadow W. of Pigeon Hoo, E of Tenterden '62.

15) Dungeness near Bird Obs[ervatory], J. Harper.

A. geniculatus x pratensis = A. x brachystylus Peterm. 190

A. bulbosus Gouan

Bulbous Foxtail

Native. Brackish meadows: extremely rare, and only seen in recent years 191 at Frindsbury. Very rare in Sussex and Essex.


189 Placed after *Phleum* in the manuscript, and with species in order *A. myosuroides, pratensis, geniculatus, x hybridus, aequalis, bulbosus*.

190 Cited as *A. x hybridus* Wimm. No records given.

191 ‘Recent years’ will have been before 1985, possibly well before. It since transpires that, although rare, the grass is more widespread than this.
A. aequalis Sobol.  
1) Hayes Common.  W.C.R.W.  
2) Harty, R.D. English.  
11) Pond in NW part of Ryarsh Wood, 1944 MNE.  
13) Finchcocks Road, J. Stirling TLS.  

A. myosuroides Huds.  
1) Ravensbourne, Bromley 1912 AED, MNE.  Near Chelsfield Station 1946 MNE.  
2) Arable, Scocles Fm, Minster in Sheppey, 1958.  
3) Corn Fields E of Sealsler Church, 0964 0965, H.M.W.  
4) Chislet Marshes MEM.  Beet field, Ebbsfleet, MEM.  
5) Chelsfield, 1945.  426577 W. of Ebbsfleet, MEM.  
6) Near Ash Ch[urch], DVS Woods 603645.  
8) St. Radigunds, K.D.R.  
10) Arable N of Westerham, 1958 RAC.  
13) Southborough Garden HNC.  
14) Arable, Wittersham 1956 MNE.  

Phleum L.  
P. pratense L.  
1) Beckenham (Elmers End) 1915 AED MNE.  36 Near Hayes St[a]tion PCH.  Eltham Common 1934 LRAG MNE.  Ruxley pits, S&S.  Past[ure] by R. Cray, N. Cray PCH.  
2) Woolwich Arsenal PCH.  Meadow near Fort grain, AGS.  
3) Hernhill 1955 MNE.  
6) Mounts Rd, PCH.  Romney St[reet] PCH.  Kemsing Downs PCH.  Field above Trosley.  
8) 24 R[oa]ld[side], Hawkige BN.  
10) By R[iver] above S Darenth, PCH.  St J[ohns] Jerusalem, PCH.  
11) Sandling Wood 1957 EGP MNE.  
12) Hinxhill, 1956, MNE.  
14) 50 acre Wood Woodch[urch] ES.  
15) Shirley Moor ES.  

P. bertolonii DC., P. nodosum auct.  
2) Woolwich arsenal, PCH.  Grain, PCH.  All Hallows 1945 MNE.  Aluvial pasture, Chetney Marshes ’62.  
3) Barley Feld W of Shelving Wood Hoath ’62  
5) Pilgrim’s Way, Polhill PCH.  
6) Darenth Wood HMP.  Downs E of Shoreham PCH.  Kemsing Downs PCH.  Trottscliffe Downs 1945 MNE.  
10) Horton Kirby PCH.  

192 Follows Lagurus, and gives species in order P. bertolonii, pratense, phleiodes, arenarium.

13) South Park pasture, Penshurst '62. Meadow by Teise S. of Ch[urch], Lamberhurst, CAS. Southborough HNC.

15) Dungeness, 1945 MNE.

(P. phleoides (L.) [H.] Karst.
It occurred formerly in Essex; plentiful in Suffolk Breckland! In Somme! but now extinct in Pas de Calais.)

P. arenarium L. 15 4/51 Sand Cat’s tail grass
Native. On sanddunes, particularly on loosensand; rare, but very locally abundant in 2), 4) and 15).

2) Shell sand beach, Shellingness, Sheppey, 1945-62 MNE. 06 Seasalter Beach, 1951 MNE.

4) Deal Links 1954 MNE. Sandwich Bay to Shellingness, abundant on loose sand, rarer on fixed dune sand, 1945-63 MNE, 1996.


Bromus L. 193
B. arvensis L.
A casual: many old records for 1) and 2), 3), 6), 7), 8), 9), 10) and 13: (see Fl.K.) none recent.

13) Meadow, Scotney Castle, JS (TLS).

B. commutatus Schrad., B. pratensis Erh. ex Hoffm. non Lam. [Meadow Brome]

2) Stone Marshes, 1945 MNE. AllHallows, 1946 MNE. Tonge, DMcC. Seasalter, 1959 MNE.

3) Herne Bay, 1868, N.T. BM.

4) W of Minnis Bay.

6E) N. of Chattenden Wood, Cliffe, 1954, MNE.

13) Ditch near Skiffs Cottages, Lamberhurst, 1940, JRW.

B. racemosus L. [Smooth Brome]

*Top Bot Suppl.1.

1) Bexley, EMH.

2) Meadow, New Hythe 1947 MNE.

4) Hacklinge Fen, 1946 MNE. Deal Links, 1954 MNE.


13) Lamberhurst on Roadside, 1943, J.R.W. Bedgebury, 1952, MNE.

14) Wittersham in hedges, Col. R. Meinertzhagen, BM.


B. hordeaceus L. subsp. hordeaceus194

1) Blackheath, GMB. Woolwich Common, 1934, LRAG. Ruxley pits. N. Cray tip PCH. Farningham Wood 82!


4) Meadows, Hacklinge 1946 MNE.

5) 3964 Well Wood PCH.

6) (var. glabrata) Eynsford, 1893, ESM BM. Above Trottscliffe in field, 1945 MNE.

193 The treatment of Bromus as a broad family under the one name, but covering what was separated as Anisantha in the first edition of Clapham, Tutin & Warburg’s Flora of the British Isles (1952) and Ceratochloa in the second edition (1962), appears to be a very conservative ‘lumping’ approach. The sequencing given was: Bromus erectus, ramosus, sterilis, madritensis, diandrus, scoparius, tectorum, schraderi, patulus, mollis, ferrorii, thominii, commutatus, molliformis, rubens, interruptus, arvensis, secalinus, unioideus, macrostachys, lepiidus, racemosus.

194 In the manuscript, given as Bromus mollis L.
7) Lower Bell 55 by A269. Upper Bell 55 by A229.
8) Langdon Bay, 1955 MNE.
10) Bradbourne Meads FSEF.
12) Rippers Cross 1954, MNE. Near Mill E of Hothfield, 1948, MNE.
16) Shorncliffe 1955 MNE.

B. hordeaceus subsp. divaricatus (Bonnier & Layens) Kerguélén.195

Shoddy alien.
4) Sandwich, 1960, DMcC, MNE.
9) Birchington, 1960, DMcC MNE.
11) Wrotham, 1960, DMcC MNE.

B. hordeaceus subsp. ferronii (Mabille) P.M. Sm.196
8) Shakespeare Cliff. Abbotscliff, 1953 MNE, 1960 MNE.

B. hordeaceus subsp. thominei (Hardouin) Braun-Blanq.197
2) Chalk gravel pits, 1946 MNE. Grain S. Beach, 1945 MNE; 1955 MNE. Horrid Hill, Rainham, 1952 MNE. 56 Ham Hill, Birling, PCH.
6E) Lane End to Green Street Green, 1945 MNE 1951 MNE.
8) Shakespeares Cliff, 1955 MNE. Barham Downs 1955 MNE.
11) Meadow W. of Penshurst 1953 MNE.
12) Hothfield Common 1945 MNE.
13) Tunbridge Wells Common, 1961, CAS (“common here”).
15) Dungeness, 1953-56 MNE. Old shingle Palmmarsh, LJM.

B. lepidus Holmberg
2) Shorne Marshes, 1956. P.C.H.
4) Sandwich Bay, KFC.
6) Roadside above Trottiscliffe 1945. Ranscombe Fm, Cuxton 1946. Fields near Lads Fm, Snodland, 1945, MNE. Green Street Green.
7) W. of Thurnham Castle, 1961, MNE.
8) Below Juliberry Downs, Chilham, in pasture, 1945, MNE. Cliffs E of Dover, 1955 MNE.
11) 64 Beltring, J.P.M.B. 54 W. of Penshurst, 1947 MNE.
12) R[oa]dside, Hothfield, Common, JMPB.
13) 64 North Fm. Sewage W[or]ks, Sherwood Park, T[unbridge] Wells, 1954, CAS.

B. interruptus (Hack.) Druce

195 In the manuscript, given as B. molliformis Lloyd.
196 In the manuscript, given as B. ferronii Mabille.
197 In the manuscript, given as B. thomini Hardouin. It may be that many of these records, especially the inland ones, should be placed in Bromus x pseudothominei, which was not named until 1968.
Colonist, of doubtful origin; cultivated fields; not seen recently. See Fl. K., p.413-4; J.Bot. 1895, p.344; J. Linn.Soc. 32, p426-430, 1896.

1) Eltham, 1894, A.H.W.D. Sainfoin field near Dartford Hospital (W of Darenth Wood), 1893, A.H.W.D. BM.
6) Cultivated field, Snodland, J.M. Roper, BEC Rep. 1923, p.413. Lads Fm., Snodland, J.E.L. Upper Halling, J.P.M.B. Sainfoin field, Singlewell→Cobham, CEB, 1912 BM.
It has been found also in Surrey, Cambridge.

*B. secalinus* L.
Colonist or casual in fields and waste ground: many old records for 1), 3), 4), 5), 6), 7), 8), 11), 12), 13) and 16) (see Fl. K.); recently only as follows:
11) 94 Elvey Farm, Pluckley, ES. 84 E of Headcorn. Egghill Fm., Smarden, in wheat, Mr. Miller, teste L. Hawkins (spl).

*B. lanceolatus* Roth.198

*B. scoparius* L.

*B. schraderi* Steudel199
1) & 2) Casual about Woolwich and Greenwich AHWD (see Fl.K.).

*B. patulus* L.200
Casual 2) Woolwich Arsenel, AHWD, 1892.

*Bromopsis* (Dumort.) Fourr. 201

*B. ramosa* (Huds.) Holub202
1) High Wood, Crofton PCH. Copse by N. Cray Ch[urch] PCH. Wet wood by R[iver] N. of N. Cray PCH. N. Cray Wood PCH.
2) Oare Meadow HMW.
5) Larches Wood W. of Farnborough PCH. Near Knockholt, LRAG 1934 MNE. Wood S. of Cudham 1949 MNE.
7) Chalk pit by A2, E of Preston HMW.
10) Bradbourne pits FSEF. R[iver] path below ShorehamPCH. Eynsford PCH. St Johns Jerusalem PCH. Wood S. of Darenth Ch[urch], 1944 MNE.
13) Holden Corner Southborough[ugh] Common HNC. Bayham CAS.
16) Seabrook, 1955, MNE.

*B. erecta* (Huds.) Fourr. 203
1) S. side Eltham Common 1934 LRAG MNE.

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198 In the manuscript, given as Bromus macrostachys (without citation; presumably Desf. Intended).
199 Nomenclature as given; may best relate to Ceratochloa.
200 May belong under *B. squarrosus* L.
201 In the manuscript, all *Bromopsis* species are subsumed into *Bromus*.
202 In the manuscript, given as *Bromus ramosus* Huds. and placed after *Bromus erectus*.
203 In the manuscript, given as *Bromus erectus* Huds.


9) N. Foreland Golf Course 1954 MNE.

11) Railway Bank by Straight Mile, W of Tonbridge, 1960, CAS.

12) Roadside, A.20, Mersham.


Anisantha K. Koch

*A. diandra* (Roth.) Tutin ex Tzvelev

**Alien, occasionally naturalised.** * vc15, BEC Rep. 1937, p.519.

1) Woolwich Common, GMB.

4) Pegwell Bay Beach, 1961, Mrs. B. Dodds. Beach N. of Sandwich Bay, opp[osite] Princes Club Ho[use], 1962. Sandwich Shoddy 1960 DMcC MNE.

11) Fairbourne Heath, 1960, Mrs B. Dodds, det. D.Mcc. MNE.

*A. sterilis* (L.) Nevski


10) Otford, PCH. R[oa]dside, Eynsford, PCH. S. Darent PCH.


13) Southborough Common HNC.

14) 93 Woodchurch ES.


*A. tectorum* (L.) Nevski

2) 1 p[ant] on sea wall, Dartford Marshes, 1961, M. Swain.

*A. madritensis* (L.) Nevski

**It could have been native near Sandwich.**

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204 In the manuscript, all *Anisantha* species are subsumed into *Bromus*.

205 In the manuscript, given as *Bromus diandrus* Roth.

206 In the manuscript, given as *Bromus sterilis* L.

207 In the manuscript, given as *Bromus tectorum* L.

208 In the manuscript, given as *Bromus madritensis* L.
Old records for 4) Sandown Castle (Petiver 1716) and Walmer Beach, 1866, 16) C.P.S.K. “frequent”: none since 1866 (see Fl.K.).

**A. rubens** (L.) Nevski

Shoddy alien.

4) Sandwich, 1960, DMcC MNE.

**Ceratochloa** DC. & P. Beauv.

**C. carinata** (Hook. & Arn.) Tutin

†C. cathartica (Vahl) Herter


**Brachypodium** Beauv.

**B. pinnatum** (L.) Beauv.


13) Horshmonden New Church, abund[ant] on road verge.


**B. sylvaticum** (Huds.) Beauv.


209 In the manuscript, given as *Bromus rubens* L.

210 In the manuscript, given as *Bromus carinatus* Hook. & Arn., without any records.

211 In the manuscript, given as *Bromus uniloides* Kunth.

212 In the manuscript, preceded by *B. sylvaticum*. 
9) Sevenoaks E of Minster, 1956 MNE.
10) Rooks Hill, '55. Westerham Wood 82! Pastures N. of Farningham PCH.

Elymus L. 213
E. caninus (L.) L. 214

Native.
2) Bank of River Path, NW of Aylesford (Elm copse on Valley Terrace gravel, 1955 PC & JH; 1962! 718600) MNE. Copse S. of Snodland on alluvium, 705613, 1955 MNE. 66 Ham Wood stream, PCH.
5) Saltbox hill, Shade on chalk, 408605, 1955, MNE.

213 Treated, with Elytrigia, as Agropyron Gaertn.
214 In the manuscript, given as Agropyron caninum (L.) Beauv.
Elytrigia Desv.  

E. repens (L.) Desv. ex Nevski  

1) Blackheath. Shooters Hill. Ruxley pits. Crofton Heath PCH. N. Cray tip PCH. Farningham Wood 82!  
5) Mounts Rd, PCH. Swanscombe Wood 1945 MNE.  
6) Longbeach Wood ES.  
7) Bridge JG.  
8) R[oa]dside 1m. E. of Westerham 1955 MNE.  
10) R[oa]dside 1m. E. of Westerham 1955 MNE.  
11) E. repens x E. atherica = E. x oliveri (Druce) Kerguélen ex Carreras Mart. 217 [Sea Couch]  
15) Denge Beach, J. Hubbard.  

E. atherica (Link) Kerguélen ex Carreras Mart. 217  

E. juncea (L.) Nevski 219 

Native. Sanddunes, the main primary colonist and builder of foredunes: locally common in such habitats on the coast from All Hallows to Greatstone. Frequent in suitable places in Sussex, Essex and N. France.  
4) Beach, Pegwell Bay, 1946 MNE. Sandwich Bay to Shellness, abundant on foredunes and strand, 1946-62.  
9) Below cliffs, Pegwell Bay, 1946.  
E. atherica x E. juncea = E. x obtusiuscula (Lange) Hyl.\textsuperscript{220}  
Not infrequent with the parents, on the dune systems.

2) N. of Cuxton, 1943, MNE: but junceiforme does not occur here, and perhaps never did. Grain S. Beach, 1949, 1959 MNE. Shellness, Sheppey, 1959, MNE.
4) Sandwich Bay, 1945 MNE.
15) Romney Warren, 1945 MNE.

Leymus Hochst.\textsuperscript{221}
L. arenarius (L.) Hochst.
Native. White Sand dunes: extremely rare, and only recently found. Probably planted in Sussex.  
[Casual at 1) Murray Avenue, Bromley, 1946, G.W. Coxhead.]  
4) Sandwich Bay, c. ¾ m. N. of Princes Club House on fore-dunes, about seven clumps, 1962, C.A. Lister, who showed it to me shortly afterwards.

Hordelymus (Jess.) Jess. ex Harz  
H. europaeus (L.) Jess. ex Harz\textsuperscript{222}  16  1/51  Wood Barley
Native. In one Beechwood on calcareous soil derived from ragstone; extremely rare. It is strange that this species has not been found on the chalk downs of Kent: it occurs rarely (Effingham, Ranmore, Chipstead, etc.) on those of Surrey. It occurs in a wood on boulder clay near Thaxted in N. Essex, but is unknown in Sussex. The nearest French locality known to me is Forêt d’Eu in Normandy. It is of course common in the Chiltern and Cotswold Beechwoods.
10) Copse by Roadside, Riverhill, 1842, W. Borrer; Fl. Tonbr. suppl. p.26; 1955! in Beechwood on ragstone scarp on E. side A.21, not seen in 1960. It is remarkable that this locality appears to have been overlooked from Borrer’s time until 1955, but it does not appear every year.

Hordeum L.\textsuperscript{223}
H. distichon L.\textsuperscript{224}
H. murinum L.
3) Dry Pasture S. of Highstead, Hoath, 62.
6) Mounts Rd PCH. Swanscombe Wood PCH.
11) West Street, Harrietsham, BD. E. Malling. Maidstone MNE. By Pond E of Hale St[reet] CAS. Edenbridge Tip DPH.
13) Southborough Common HNC.
15) Lydd Airport DMcC.

H. murinum subsp. glaucum (Steud.) Tzvelev\textsuperscript{225}
Shoddy alien
4) Sandwich 1960, MNE.
9) Birchington 1960 MNE.
10) Brasted 1960. All DMcC.

H. secalinum Schreb.  
[Meadow Barley]
1) Shooters Hill, GMB.

\textsuperscript{220} In the manuscript, given as Agropyron junceiforme x pungens = A. x obtusiusculum Lange.
\textsuperscript{221} In the manuscript, given as Elymus, and its representative species as Elymus arenarius L.
\textsuperscript{222} In the manuscript the genus is cited as (Jessen) Harz and the species as (L.) Harz. The entry follows Hordeum.
\textsuperscript{223} The sequence of species in this genus is given as H. secalinum, H. murinum, H. marinum, hystrix, glaucum, trifurcatum.
\textsuperscript{224} Included in a note: Guizotia abyssinica, Hordeum distichon, Secale cereale – Longfield tip, 3657, PCH.
\textsuperscript{225} Given as H. glaucum Steud.

3) Swalecliffe.


8) Denton, meadow, DACL. Kingsdown, above Knights’ Bottom, B.N.


12) 93 Stubbs Cross Kingsnorth, 1952, MNE. 95 Meadow E of Ch[urch], Lenham, 1960 MNE.


14) 83 R[oa]dsid E of Cranbrook, DS.


16) 13 Postling Wents KDR.

H. marinum Huds. 15, 16 SeaBarley

Native. Sea-walls and dry banks near the sea, usually of clay: frequent to locally common in the Thames estuary from Stone to Shellness in Sheppey and Whitstable in 2), but rare in 4) and 15).


3) 16 Shore W of Whitstable HMW.

4) Kingsdown, beach, KDR.

15) Between the long pits, Denge Beach, J. Harper. [Dymchurch, 1902, Lady D.]

H. geniculatum All.226 Shoddy alien.

4) Sandwich, DMcC 1960; MNE.

11) Comp, DMcC 1960, 61 MNE.


Secale cereale227


Danthonia DC228

D. decumbens (L.) DC229


3) Minching Wood, Blean 1957 MNE. Heath, Church Wood, Blean, RGW.

4) Worth Minnis, 1950, MNE. Ham Fen, in meadow, 1956 MNE.

5) Downs in Chevening Park, 1961 MNE.

226 Given as H. hystrix Roth.

227 Included in a note: Guizotia abyssinica, Hordeum distichon, Secale cereale – Longfield tip, 3657, PCH.

228 Given as Sieglíngia Bernh. In the manuscript.

229 Given as S. decumbens (L.) Bernh. in the manuscript.
8) Chalk Downs, E. of Etchinghill. 1946-..  Covert Lane, Kingston, 1946 JG.

Molinia Schrank
M. caerulea (L.) Moench.  15, 16 23/52
3) 16 W Blean Wood, 1945.  15 W of Rough Common, 1954.  15 Church Wood, L.W.W.; RGW.  05-.
4) 35 Worth Minnis, 1946 MNE.
12) 94 Hothfield Common 1944-62 MNE.  04 Ashford Warren 1944-.  04 Willesborough Lees, 1944-55 MNE.
13) Highfield, Chiddingstone, 1954, MNE.
15) Dungeness, old ballast pit workings, 1958, Miss B. Nash, MNE.

Phragmites Adans.
P. communis 230 (Cav.) Trin. ex Steud.  15, 16 /51  Common Reed
Native.
*Bronze Age, Roman: macroscopic remains, Crossness, Spurrell, 1889.
1) [R][ail][w][a][y] Brockley to Honor Oak, 1946, ECW.  Ruxley pits, S&S.  424640 Pond, Lakes Wood, Keston., 1957, DPY.

230 Cited as Trin. In the manuscript.
6) Flooded chalk pits, Swanscombe, /S. of Northfleet.
10) TheMoors, Bat & Ball, 530575 CAS.
11) Pond E of Bethersden ES, 941402.  Pluckley Brickworks 919435, ES.
12) S.W. of Chilmington ES, 973400.  Spot Ho(use), 973341, ES.  Halfway Ho(use) S. of Kingsnorth by B2070, ES.
13) Furnace Pond, Horsmonden.  [Tunbridge Wells, WWR TLS.

Leptochloa fusca (L.) Kunth
1) Stonehill Green, shoddy, 1948, DMcC, det. CEH.

Eragrostis curvula (Schrad.) Nees
Sandwich, D.McClintock, 1960.

Eragrostis cilianensis (All.) Vignolo ex Janch.

Eleusine indica

Eleusine africana O’Byrne

Dactyloctenium radulans [(R.Br.)] P. Beauv.
1) Stonehill Green Shoddy, DMcC, det. CE Hubbard, 1948.

Chloris Sw.
Shoddy alien, at 4) Sandwich, 1959, DMcC, MNE.

Cynodon Rich.
2) Sheerness, 1964, Mrs. Hewson, plentiful on waste ground.
6) Longfield tip, DMcC, 1956 MNE.

*Cynodon incompletus* Nees
Shoddy alien: 4) Sandwich, 1956, DMcC.

*Spartina* Schreb.

*S. maritima* (Curt.) Fernald

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231 Given as *Diplachne fusca* (L.) Beauv.
232 Cited as (All.) Link ex Vign.
233 Placed after *Digitaria*. No ‘introduced’ symbol (†) given.
234 Cited as *L. and placed after Setaria*.
235 In manuscript, follows *Spartina*. No ‘introduced’ symbol (†) given.
236 Given as *C. hirsutus* Stent. In the manuscript.
237 Follows *Nardus* in the manuscript.

3) Whitstable, RGW.

*S. alterniflora x maritima = S. x townsendii* H. & J. Groves

Native. Salt marshes, now abundant. This allotetraploid hybrid appears to have arisen naturally in this country in Southampton Water. It is an aggressive colonist of mud flats and even of the lower Aster saltmarshes. It is not easy to separate natural and planted localities; it is often planted now to consolidate mud flats prior to reclamation. App[eared] 1870 in Brit[ain]. 1st record for 15: for 16. Now common on the Essex coast.


**Tragus racemosus** (L.) All,

*Panicum* L.


2) Snodland, 1955 MNE.

6) Longfield tip, 1956, DMcc MNE,
9) Pegwell Bay Cliffsend, 1958 LRAG MNE.
10) Sevenoaks tip DMcc.
11) Yalding Rubbish tip, 1961, CAS.
12) Deanery Canterbury MEM. Stadium C[anter]bury MEM.

**Echinochloa** [P.]Beauv.

1) Hayes gravel pit, 1915, AED MNE. 1934, DMcc.

8) Walmer allotments, 1959, BN.
12) Goldwell qy, 64 ES. Chylmington quarry ES.

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238 Given thus, but most of these records must be of *Spartina anglica*.
239 Placed after *Dactylocenium*.
240 Given after *P. capillare* and named as *P. laevifolium* Haeck.
241 Follows *Cynodon* in the manuscript.
E. frumentacea [Link]

Setaria (P.) Beauv. 242
S. pumila (Poir.) Schult. 243
1) Beckenham, A.E.D., 1934 MNE. Shortlands, 1897, 1900, Dr D.T. Playfair. Green Street Green, Farnborough, 1938, DMcC MNE.
4) Carrot field, Stodmarsh, MEM. Beet field, Ebbsfleet MEM.
6) Broomhill, Strood, G.C.P. Bush Rd, Cuxton, GCP.
8) Denton, garden, Miss D.A.C. L., 1958 MNE. Ottinge, Elham, 1940, EH Solly.

S. verticillata (L.) P. Beauv.
1) Eltham FF.
6) Longfield Dump, DMcc. Wickham (Strood) F.F.

S. viridis (L.) [P.] Beauv.
4) Walmer, Miss Schon & Miss B. Nash, 1960, MNE.
6) Longfield Dump DMcc.
10) Sevenoaks tip, B[at] & Ball CAS.
11) East Malling, JHL. Allotments close to Tonbridge Castle, 1950, KEB.
12) Deanery Garden Canterbury MEM.
var. weissmanii Sturry DMcc.

S. italica (L.) [P.] Beauv.
1) Green Street Green, Farnborough, 1938, D.McC, MNE. E Wickham tip, DMcc.
6) Longfield tip, 1956, D.McC., MNE.
11) Yalding rubbish tip, 1961, CAS.

Digitaria Haller 244
†D. ischaemum (Schreb. ex Schweigg.) Muhl. 245

†D. didactyla Willd.
1) Stonehill Green, shoddy, 1948 DMcc, det. CEH.

†D. sanguinalis (L.) Scop.
1) Chislehurst; Bickley, DMcc (BEC (1937) 516).
11) Addington, in arable, 1950, MNE.
16) Garden weed, Folkestone Lees, 1957, F. Clarke, Hb. DPY.

†Sorghum halpense

Zea L. 246
Z. mays L.
10) Sevenoaks Dump, DMcc,’51.
13) Several plants, edge of Matfield Green, 1953, K.E.B.

242 Follows Panicum in the manuscript. Given in order S. viridis, verticillata, lutescens, italic.
243 Given as S. lutescens (Weigel) Hubbard.
244 Cited as P.C. Fabr.
245 Cited as (Schreb.) Muhl. and no entry given.
246 Placed after Chloris.
Sparganium L. 247
S. erectum L. 15, 16 9/51 [Branched Bur-reed]
subsp. erectum
Native. Streambanks, ponds and ditches, in fresh base-rich water: widespread but only locally common: the distribution of the segregate, however, is incompletely known.
1) By small Pond on Keston Common, 1961, H.A.S.
2) 57 Dartford Marshes, 543772 & 541761, ’62.
6) 77 Pond, Northward Hill, High Halstow, 1958 MNE.
11) Medway, above and below Tonbridge CAS. 84 Pond at Leighbridge Headcorn 813454, ’62. 84 Beult S. of Headcorn Ch[urch], 831440, ’62. 84 Pond ¼ m SE of Smarden 879417, ’62.
12) Ashford JG.
14) 82 Pond, Palstre Court, 1½ m W. of Wittersham, Oxney, 1958 MNE. 02 Brenzett; New Romney.
15) 93 Shirley Moor, near B.2080, 1945 MNE. 92 Appledore, dike near Station, 1959 MNE.

S. erectum L (agg.)
* Bronze Age, Roman: fruit stone, Crossness, Spurrell, 1889, Reid, 1899.
1) Elmers End, Beckenham, 1915 AGD MNE. Shooters Hill, GMB. Ruxley Pits, S&S. R. Cray, N. Cray PCH.
2) Erith Marshes, PCH. Birling Common, 1943 MNE. High Halstow 1958 MNE. (Sheppey AGD, 1918 MNE.) Ripney Hill Fm, 942735, O.D. 86 stream, Lower Halstow, 1962. Waystreet Fm Hernhill, HMW. Luddenham Marshes, HMW.
3) pond, Denstroude, 093608, H.M.W.
10) 45, 55, 56
12) Gibbons Brook, Mrs MJ Comyn
14) Beals Fm Ponds, Redbrook St, Woodchurch, HW Adams. Palstre Court, Wittersham, 1958, MNE.
15) Shirley Moor, by B.2080 1945 MNE. Appledore by Station 1959 MNE.

(sssp. oocarpum and microcarpum have not yet been recorded in Kent.)
subsp. neglectum (Beeby) [K. Richt.]248
Native. Streambeds, ponds, swamps and ditches: common in such habitats, but segregate distribution probably not fully worked out.
2) 67 Northfleet. 77 S. of Cliffe. 76 Holborough Marshes. 65 Lunsford. 06 Faversham Ponds. 77 Higham. 77 Cooling. 76 Birling Common 1943 MNE. 86, Stream, [lowe]r Halstow 857669. 57 Ditch by Clay below Crayford, 1944.
11) 44 Edenbridge, E.S. Salmon. 74 N. of Marden, 1948 MNE. 74 ½ m W. of Marden, by Teise, 1956 MNE. 54 Pond, Hildenborough, ESM. Medway, above and below Tonbridge, CAS. 74 Beult, Cross at Hand. Staplehurst 1963. 74 Beult E of Marshes, 1963. 74 Pond W. of Staplehurst 1963. 84 R. Beult / Moatenden, Headcorn. 84 Sherway, Headcorn. 74 E of Marden 1963. 54 W & E of Tonbridge. 54 Leigh. 64 Beltring. 74 Yalding. 54 W. of Penshurst. 54 N of Penshurst. 84 S. of Smarden. 84 Pond by River ½ m SE of Golden Square, Smarden, ’62, 886411. 93 Beult E of Buckhall, Bethersden, 1962, 917397. 849437, 1m E of Headcorn in Pond 1962. Near Brook Wood, SW of Headcorn, 1960 MNE.
12) 94 Pond W. of Hothfield Common. 04 Ashford, ESM. 04 Willesborough Lees ESM. 03 E. Stour near Sellindge, ESM.
13) 54 Pond N. of Penshurst. 54 South Park Lake, Penshurst, 1962. 54 Pond ½ m N. of Penshurst, 1955.

247 Follows Wolffia in manuscript.
248 Cited in manuscript as (Beeby) Schinz. & Thell.

S. emersum Rehm. (S. simplex Huds. pro parte)  

[Unbranched Bur-reed]

2) Greenhithe, 1860 MNE. Snodland Brook, 1870 MNE. 06 Nagden Marshes, C.T.  

45, 44, 54, 65, 64, 85, 84, 82, 94, 93, 04, 03

S. emersum Rehm. (S. simplex Huds. pro parte)


25, 35, 16, 26


45, 57

11) Medway below Maidstone, 1897, H. Lamb MNE. 54 Medway, above Tonbridge, CAS. 74 Ditch by B.2162, N. of Collier St[reet], Yalding. Bubhurst, Frittenden, RAC. 84 R. Shreway, Headcorn, 1944. 94 New Ho[use] Fm, Pluckley, V.F.P.D.  

54, 74, 84

13) Mersham Mill, E.S. 04 Stour. 94 Stour.  


83, 93

S. natans L.  

Native. Dikes in calcareous fens: very rare, but still locally abundant beteen Worth and Hacklinge: a relic of the flora of the primaeval fens of this area.

4) Fen dike, Worth Minnis, 1950-1960 MNE. Dike, ½ m E. of Hacklinge, 1960 MNE.

Typha L.

T. latifolia L.  

Native. Ponds, streamsides, swamps, and ditches: common in these habitats and occurring in all districts except 5), 7) and 9), but (naturally) rare in 6) and 8).

1) Ruxley pits, S&S. Pond S. of Joydens Wood, PCH.  

36, 46

2) Plumstead Marshes, 1944. Northfleet Brooks, 1944. Dartford Marshes (Longreach) PCH. Snodland S. Marshes, 1944. Tonge Pond, J.M. 96 Luddenden Marshes, H.M.W. Oare Meadow and Pond HMW. Pits E of Oare Creek, HMW. 06 Sealsalter HMW.  

76, 86, 96, 06, 47, 57, 67, 77, 87, 97

3) Dentroude, Pond, 093608, HMW.  

4) Hacklinge Marshes. West Bere Marshes MEM.  

25, 35, 16, 26, 36

5) Pond, Downe village, 1960, FHB.  


8) Dour, River, KDR.  

24, 34


45, 55, 56


44, 54, 64, 74, 84, 65, 75, 85, 66


94, 04, 14, 95, 05, 15

13) Lake, South Park, Penshurst ’62. Southborough Common, SW pond HNC. Bayham CAS. Boggy Wood SW of Pembury, 614395 PCH.  

53, 63, 73

15) Romney Warren.  

72, 01, 82, 92, 02, 83, 93, 03, 13, 23

16) Gault ponds, Folkestone Warren, ’65, BN.  

T. angustifolia L.  

Native. Ponds, swamps, and ditches, in base-rich fresh or brackish water: locally common in 2), 4), 15), and on the Weald Clay in 11) and 12): rare in 1), 6), 10) and 13): unrecorded in 3), 5), 9), 14) and 16).  

1) Ruxley pits, GMB; S&S.  

46


86, 96, 06, 57, 77, 87, 97

249 In the manuscript, S. minimum Wallr.
6) Marshy chalk pit, SW of Cliffe 63.
10) Greatness moors RAC. 55
11) Edenbridge, A. Beadell. Pluckley Brickworks ES. Hartlake Bridge, JRW, 1943. 44, 54, 64, 74, 84, 65
12) Eastwell Lake ES. 94, 04, 14
13) Penshurst Place.

LILIACEAE250

Narthecium Huds.
N. ossifragum (L.) Huds. 15, 16 Bog Asphodel 3/51
Native. Valley bogs and wet-heath: very rare, but very abundant locally at Hothfield Common; elsewhere now only at Keston Bog and Hawkenbury. Still locally common on bogs and greensand heath in W Sussex and in E. Sussex on Ashdown Forest: unknown in Essex, and long extinct in Pas de Calais.
* 1746: Bogs nr. Caesars Camp, Bromley, Blackstone, p.72.
12) Hothfield Common, GES in FGEK; abundant in Valley bogs II, also in III and IV; H. Lamb, 1900-01 MNE; 1943-62 MNE →1996!
† Hemerocallis L.
† H. fulva (L.) L.
1) Ruxley pits, S&S.

Convallaria L.
C. majalis L. 15, 16 Lily of the Valley 16/51
Native. Dry woodlands, particularly of sessile oak, on light acid soils: on Eocene sands and gravels in 1), 3) and 6E), on Pliocene sands in 8), on lower Greensand in 10), 11) and 12), and on Tunbridge Wells Sand in 13); widespread but only locally frequent; but locally dominant in the field layer in many woods in 1), 3), 6E) and 11). Much rarer in Surrey, Sussex and Essex: locally frequent in Pas de Calais.
47, 46, 45, 57, 56, 67, 65, 64, 73, 85, 99, 05, 16, 15, 14
10) 45 Brasted Chart, probably an escape, 1957, RAC.
12) 94 Ashford Warren, E. Scott: 1954!

250 The sequencing of Liliaceae here is as given in Stace (1997), on the basis that Francis Rose had begun revisions which might have been expected to bring the various species ordered in accordance with that sequencing. But the manuscript treats Liliaceae, beginning with Narthecium, as starting after Zannichellaceae, and has a narrower concept of Liliaceae (so separating out some species under Amaryllidaceae, so as to follow Luzula).
Polygonatum Mill.

† P. odoratum (Mill.) Druce Alien in Kent.

[1] Reported at Joydens Wood in Hooker, Fl. Lond., Fl. K.: evidently an error, or confusion of nomenclature. I suspect that Convallaria was intended!

13) Naturalised in planted woodland, Capel Place, Horsmonden, 1946.

P. multiflorum (L.) All. 15, 16 Solomon’s Seal 15/51

Native. Dry woodlands, mainly on sands and gravels: widespread and certainly native in old woodlands on the Eocene sands and gravels (especially the Blackheath Pebble Beds) in N. Kent, in 1, 6) and 3), and also on Pliocene and other sandy drift soils, and the chalk in 8): less certainly native, thought probably so, in 10) and 7). Only naturalised in 13), the plants appear to be of hybrid origin at least at Lamberhurst. As a native, very rare in Surrey and confined to the extreme west in Sussex: extinct in Essex (formerly in Epping Forest), abundant in woods on a range of soils in Pas de Calais.


2) 75 By old lane up downs, 794588, on chalk, Detling, Coombe to N.W., 1944: 1957, HMW. Chalk Wood, Cades, Whitehill, REW. 76 Wood nr Westfield Sole, on loam over chalk, E. Philp.


7) 75 By old lane up downs, 794588, on chalk, Detling, Coombe to N.W., 1944: 1957, HMW. Chalk Wood, Cades, Whitehill, REW. 76 Wood nr Westfield Sole, on loam over chalk, E. Philp.


12) 05 on alluvial gravels, Shalmsford St[ation], alder wood by Stour, 2m NE of Chilham.


16) 13 Asholt Wood, R.E. Wood, on Gault.

(Maiathemum Weber

M. bifolium (L.) Schmidt

It formerly occurred in Ken Wood, Middlesex, where it may have been native. This Continental species is abundant in dry, acid woodlands in the more inland parts of the Pas de Calais and Nord departments.

13) Naturalised in the grounds of Scotney Castle, Lamberhurst, teste K.E. Bull.)

Paris L.²⁵¹

P. quadrifolia L. 15,16 Herb Paris 24/51

Native. Woodlands on moist base-rich or calcareous soils: very common in coppice on moisture-retaining loams derived from the chalk, over the greater part of districts 7) and 8), though apparently absent in 8) NE of the line L(tower) Hardres – Womens wold – Barfreston – Waldershare – Dover, and in 7) E. of the line Milsted – Doddington – Stalisfield. Unrecorded in 5); in 6) only near Halling. Frequent and characteristic of coppice-woods on the Gault belt from Westerham in 10) across 11) and 12) to Postling Wents in 16). In eighty ash-elm

²⁵¹ In the manuscript, this entry follows that for Colchicum.
woods on the ragstone between Plaxtol and Elmstone Hole in 11); on Folkestone Sand at Sandling 11), and on Sandgate Beds at Klin Wood, Lenham and Park Wood, SMEETH. Very rare and possibly now destroyed on the Thanet Sand in 7), still in 5 locations on this formation in 3); in the Weald only at Hawkhurst on calcareous Wadhurst Clay in 14), absent elsewhere. Probably commoner on the E Kent chalk area than elsewhere in Britain. It is very rare in Surrey (nearly confined to the extreme east) and has one E. Sussex [location] and a few West Sussex ones. Rare in Essex [except in the north on Boulder clay; abundant in N. France. Its rarity on the chalk of West Kent is at first sight strange, but the cause may be climatic: there may be an association between the wetter climate of the East Kent chalk country and the development of the deeper, moisture-retentive calcareous loams that Paris seems to require; other species (Allium ursinum, ..., Stellaria, Angelica) show a similar pattern.

1) 439663. High Wood, Crofton, WCRW, 3 infl[orescences LFB C. Swain, 1957! MNE, now destroyed. 462679. Broom Wood, St Mary Cray, WCRW. 432647, ... Ninians252 Wood, Locks Bottom, WCRW. 46
5) no records
76 Westfield Wood. 86 Bredhurst Hurst 1944 MNE. 76 Wigmore, 1944. 75 N. of Detling 1942. 96 Cromer Wood, N of Milsted, 907604, J. Felton. 85 Wood S of 3 Squirrels [pub], 1958, 840605 MNE. 85 Longton Wood, 827597. Squirrels Wood, 45. Lords Wood, BC. Hempstead, BC. Monkdown Wood, BC. 85 Hucking, NW of Pond Fm, 838593. SE of Rumsted Court, 1939, 875755 & to SW, 871569. 85 Trundle Wood, Milsted, 1956 MNE, 888586. 95 Windsted Wood, Wishing, 901553, 1958 MNE. 95 Filmer Wood 925558. 95 Oaken pole Wood, 922546. 95 coppice ½ m N of Ch[urch], Stalisfield, 970531. 95 coppice ¼ m E of Ch[urch], Stalisfield, 971518. 95 Wishing Wood 909555. 95 W. of Payden St, 916542. 95 Spuckles Wood, Stalisfield, 960525. 95 Kennelling Wood, Stalisfield, 956520. 85, 95, 66, 76, 86, 96 (also 05)
10) 45 Westerham Wood, 445553. Gault copse SW of Chevening (of S. Combe Bank Fm), EP. 55 Copse S. of Kemsing, 563585.

252 Presumably Ninehams Wood.
253 Annotations of ‘(ch[all]k)’ and ‘MNE’ belong either to this entry or the next.
Asparagus L.
A. officinalis L. subsp. officinalis 15, 16 7/51
Alien, inland: but it may well be native on coastal fixed dunes as at New Romney and Sandwich. This subspecies occurs on dunes in Sussex, and in Pas de Calais, where it is common on the dunes, and is regarded as a native by some French Botanists.

1) Ruxley pits, S&S. Ravensbourne, Bromley, 1915, AG Davis MNE. Dartford Heath, in scrub, 1962, HAS.
4) Deal Links: plentiful on fixed dunes, Sandwich Bay, H. Elgar, 1896 MNE: St George’s: Prince’s Links; Shellness 1946-62 MNE. First noted here by E.S.M. in Fl. K., but it may have been here for a long time. Lampen Wall, Stodmarsh, Mrs. B.
6) Stone, 1960, H.M.P.

Asphodelus L.
† A. fistulosus L.254
Alien: waste ground.
1) Beckenham, A.G. Davis, 1934 MNE.
1) Eltham, Mrs. Wedgewood, BEC Rep. 1921, p.400.

[Colchicum L.255
C. autumnale L. Meadow saffron, Autumn Crocus
Alien
3) Swalecliffe churchyard, 1950, R.E.W.
This may have been native formerly NE of Shooters Hill in moist fields (Cooper, Fl. Met., p51) but it is certainly now extinct: the other records are improbable as native localities (Littlebourne and Cranbrook, Fl. K., N of New Hythe F.F.) for this species whose British distribution is markedly midland to western, though it is common in Central Europe. It has been commonly cultivated in Kent gardens for a long time. In Surrey it is probably extinct, if ever native, but may still occur very rarely as a native in both E. and W. Sussex. Extinct in Essex: not uncommon inland in Pas de Calais and Nord, but absent near the coast.]

Ruscus L.
R. aculeatus L. 15, 16 Butcher’s Broom 36/51 (31/52 native)
Native. Dry woods, mostly of oak or beech; commonest on the Eocene Sands and gravels of N. Kent in 1), 3) and 6E), but also frequent on the chalk and on the moderately acid soils of the Lower Greensand country: rare in the Weald, absent

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254 This species appears twice in the manuscript, with different records for district 1), both given here.
255 In the manuscript, this entry follows that for Muscar.
from the alluvial marsh areas. Locally frequent in Surrey and Sussex, though rare in the Wealden areas: rare in Essex: very rare in Pas de Calais: Oceanic Southern.


4) (Planted by D.... Road, Sandwich 35 planted only 5) 45 Copse, Chevening Park, 1943, JRW.


7) 86 Queen Down Warren, 1962. 76 Lords Wood, BC. 86 Borden, 1946. 95 Milstead, 1946. 95 Kennaways, 1946. 94 NW of Westwell, 981485, ES. 04 By White Hill, 036492, ES. 04 Soakham, 047496, ES. 04 Godmersham, 057500, ES. 05 Kings Wood, Molash, 1946. 05 Park Wood, Chilham, 042524, ES. 05 E of Lees Park, 032555, 030556, CT. 05 E of Badlesmere, 023549, CT. 05 Chalky roadbanks, Old Wives Lees to Stone Stile Fm, 1943, DHK. Mulberry Hall, Chilham, DHK.


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 recorded elsewhere in the past. On the Continent it comes no nearer than E. France; this is against it being a native of Britain.


Fritillaria L.

[F. meleagris L. Fritillary, Snakeshead [15, 16]

256 Written as Blean in error.
Possibly native formerly in alluvial meadows of the Thames and Medway Valleys; but now extinct: modern records probably refer to escapes or planted colonies.

1) Near Bromley, Curtis, c.1782: Fl.K.
6) Highfield, Shoreham, R. den Halher.
7) Above Detling, H. Elgar, 1896 MNE.
11) nr. Trottiscliffe, W. Bridge, 1921 MNE.

Formerly native, now extinct, by the Thames in Surrey (Mortlake); in N France, in the Somme Valley nr. Abbeville.

Tulipa L.
\[ T. sylvestris \]

\[ T. gesneriana \] (Garden Tulip) occurs as an escape at 1) Ruxley pits, S&S.

T. sylvestris L.

Alien, long naturalised.

1) Chislehurst, Wollaston; Fl.K.
11) Ightham Court. Asylum Grounds, W. Malling, H. Lamb, Fl.K.; E. Bartlett 1882 MNE; 1944-51! MNE.

Gagea Salisb.

G. lutea (L.) Ker-Gawl.

It is doubtful if this species has ever occurred as a native in Kent, within historical times at least. The two records are without confirmation and the habitats seem very improbable.

1) West Coombe Park (Greenwich) C. Finch: Fl.Met.

“Dartford”, Masters.

Not known as an indigenous species nearer than N. Hants (Preston Candover), though many examples of woodland on calcareous loam apparently suitable for it exist in Kent.

Ornithogallum L.

O. umbellatum L. 15, 16 17/51 Star of Bethlehem

Alien, well naturalised in sandy fields and heathland in several places: rare. It occurs as an alien in all the adjacent counties, but may be native in the Suffolk Breckland: it is regarded as native in Pas de Calais, though rare.

1) 46 Hayes, field behind church, 1946 MNE.
3) 96 Bysing Wood, 1959 MNE. Trenley Park Wood by cotts, REW.
4) 35 Dunes N of Deal, 1963, Miss I. Moore. Sandwich Bay; Stodmarsh MEM.
5) Cudham Ch[urch] Y[ar]d, D.PY.
8) Copse E of Bridge Hill, RGW.
10) 45. 55 Ivy Hatch, D.McC. 55 Seal, copse E of Godden Green Road, Miss Booker, 1947. B55 40 yrs at copse at Stone Street, Blakes Green Hill, 1948 Mrs D. Warrett, 1949!
11) 65 Piney Toll, West Malling, in sandy field, 1942-56 MNE. Addington, P. Grattan. 75 E. Farleigh, A. Golding, 1905, MNE. Penenden Heath, copse edge, 773 578, 1956, O.D.

(O.pyrenaicum L. is native in woods in the Pas de Calais but in England no nearer than Hants and Berks, though it occurs as a probable introduction in W. Sussex and also as a garden escape at 8) Pickersden, Wye, 1951, CNP.)

Scilla L.

[S. autumnalis L. 16]
Former native, now apparently extinct. Dry gravelly pastures and commons; very rare. Still in Surrey, Essex and Middlesex, but very rare; unrecorded in Pas de Calais.


6E) Gravel pits, Chalk, Pocock. Shorne Warren, 1829, NBG. Not recorded since.}

**Endymion**

*E. non-scriptus* (L.) Garcke

- **Native.** Woodlands, or in shady hedge banks and road-cuttings, particularly on well-drained soils: extremely abundant throughout Kent wherever there is woodland, or remains of it. It is rare in beechwoods on shallow dry chalk soils, in ashwoods on shallow ragstone soils, but frequent on the deeper calcareous soils which prevail in valley bottoms on chalk and ragstone. It becomes scarce, though usually still present, on stiff gleyed clay soils with high water-table and poor drainage. It is most abundant on sands and gravels, except where highly acid and podsolised, and on the clay-with-flints and sandier drifts of the chalk plateau. It is absent from the alluvial sandier drifts of the chalk plateau. It is absent from the alluvial margins of 2), 4) and 15), and from 9): but occurs as far east as Fenn Street in the Hoo Peninsula and in one oakwood at Brambledown in Shippey on London Clay. Very common throughout SE England and Pas de Calais: fades out in NE France.


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257 The Chelsfield Gravel Formation may be intended here.


6) Shoreham, 1926 W.B. Turrill, J. Bot (1930) 68, p112 (fl[ower]s white, perianth long & narrow, new to Britain.)

† E. hispanicus (Mill.) Chouard
   Alien, naturalised at:


Muscar Mill.
   Alien in Kent, occasionally escaping and becoming naturalised. Native in East Anglia, but not in any adjacent county, nor in Pas de Calais.

4) Grove Ferry, REW.

6) abundantly naturalised on Rly. cutting, Halling, 1943-49 MNE. Stone, well nat[uralised], 1940, PCH.

11) Hadlow, 1871, FWE Shrivell TLS.

16) casual, Brockhill, Saltwood, LJM.258

[M. comosum Mill. occurs on the dunes in Pas de Calais.]

Allium L.259
   † A. ampeloprasum
      Alien:

11) Addington, 1947, DMcC.

A. vineale L. 15, 16 Crow Garlic

258 This line is placed as in the manuscript, possibly qualifying the M. comosum entry rather than continuing that for M. atlant[icum].
259 Rose placed Allium under Amaryllidaceae, following the treatment of that family by J. Hutchinson (The Families of Flowering Plants, 1926-34).
175

Native. Fixed dunes, dry grass-heaths, turfed shingle beach, dry banks: locally common to abundant on the coast, rather rare inland. Local in Surrey and Sussex, common in Essex as a weed of cultivated land. Frequent on dunes in Pas de Calais.


3) Swalecliffe, mouth of brook, RGW. Chestfield, P.R. Bell.

4) Deal links; Sandwich Bay 1945-62 MNE (vars _capsuliferum_ and _vineale_; St Georges; Princes Links, abundant). W. side Lampen Wall, Stodmarsh, REW. Roadside, Stodmarsh, MEM.

6) Green Street Green 1946; 1963, HAS (vars _vineale_ and _compactum_). Shorne by Windmill, 1946, MNE. Shorne, R[o]ad verge, S of Kings Fm, 702726, HMP.


16) Folkestone Leas, ‘46.

_A. oleraceum_ L. 15, 16 3/51
Possibly native. Dry hedgebanks and grassland; very rare.


8) Roadside ¾ m N. of Street End, L[owe][r Hardres, 1959, BJB.


_A. roseum_ L.

Alien, naturalised in one pace, formerly in another.

4) Beach opposite Walmer Castle, 1950 MEM; 1951, 1953, Miss D.A.C. Long, MNE.


† _A. scordoprasum_

2) Landward side of ditch behind sea wall, 2m. E of Gravesend.

† _A. triquetrum_ L.

one clump established in wet patch, Bull’s Hollow, Rusthall, 1950, KEB; large patches, 1952, KEB.

† _A. paradoxum_ (Bieb.) G. Don

13) Claremont Rd., Tunbridge Wells, 1962-63, KEB.

† _A. moly_ L.

11) 1 plant in grassland by railway, W. of Tonbridge, CAS.

_A. ursinum_ L. 15, 16 Ramsons 38/52
Native. Damp woodlands on base-rich moisture-retentive, but well-aerated loams or peats, under Alder or Ash coppice, and also on deep calcareous loams on the chalk; local and mostly on spring lines on the Eocene areas of 1) and 3), widespread and locally very abundant on the chalk, unknown in 5), very rare in 6) and 7) but plentiful locally in 8) from Wye to Dover and Adisham; abundant on the Ragstone of 10), 11) and 12), and along the river valleys on the Greensand, and on the Gault into 16; very rare on the Weald clay; abundant in gills in 13) and 14) wherever soils are base-rich; absent in the alluvial marshes of 2), 4) and 15). About 120 localities known. Locally common similarly on the Greensand and High Weald areas of Surrey and Sussex; local in Essex, locally common in Pas de Calais, especially in the Boulonnais.
1) NW part of Petts Wood (spring line) 1954, MNE. Kid Brook SW of Petts Wood. Wood by R[ail][way] NE of Kevington, St Mary Cray, 1954 MNE. ...Sundridge Park Avenue, Chislehurst, WCRW. 47 Abbey Wood, R. Burton. Darrick Wood 443652 F & C Swain.

2) NW of Eccles, 1944. [Aylesford, 1880, Hb. Lamb MNE.]

3) NE corner Thorden Wood, 1947. Damp copse SW of Hernhill Church, 1958 MNE. SW Chestfield, R.E. Wood. SE of Frogs Island Fm/ SW of Share & Coulter Farm, Thornden Wood Rd/½ m S of this, E side Rd/REW. 06, 16

6) Wingate Wood, Cuxton, very local, 1945 MNE. Meopham, Miss Barnsdale.

7) Copse, Hillfield Grange, Detling, '55.


Tenterden Golf Course 903337, ES, 47. Copse, Buckhurst Br[idge], 915349, ES, 46. Bottoms, Appledore, J. Ridley, 1908 MNE.

16) Asholt Wood. Mill Leese Shaw nr old Sta[tion], Hythe, LJM. Oak Banks, Stone Fm, satwood, LJM. Holywell, Folkestone, 1948, B.W.

†A. cepa L.
1) Escape, Ruxley Pits, S&S.

Tristagma Poepp.360
† T. uniflorum (Lindl.) Traub361

Alien, occasionally escaping and becoming naturalised.
3) Whitstable Castle, REW.
11) Oaken Wood, near North Pole Inn, Teston.

Leucojum L.
† L. vernum L.
13) Groombridge, Mrs. Robinson, 1952, MNE.
16) Naturalised at Brockhill, LJM.

L. aestivum L.
Former native, now extinct, of alluvial marshes by the Thames and Medway. It now exists no nearer than the Thames and Loddon Banks in Berkshire.
2) [½ mile below Orchard House Ferry, Greenwich, on Thames bank, 1821, C. Johnson, Hortus Delineatus.]
11) [Nr Tudeley, 1877, F.W.E.S., TLS.]
16) Naturalised at Brockhill, LJM.

Alien, naturalised in ornamental woodland in a few places.
11) Tinley Lodge, Tonbr[idge], Mrs D. Warnett.
12) Brook, MEM, in ditch by ...

Galanthus L.
† G. nivalis L. Snowdrop

Alien, naturalised in a few woods and near churchyards. Possibly native by the Mole in Surrey, but not in Kent.
3) Kenesdale, 1959, Mrs. B.; RGW.
5) Chevening Ch[urch] y[ar]d and copse NE of Rectory RAC.
8) N of Westwood Fm, Upper Hardres 608683, E. Robinson.
10) Wilmott Hill, 1943.
Woodlands S. of Court Lodge, Harrietsham, 1961, B. Dodds. Spinney E. of Rectory, Harrietsham, 1961, B. Dodds.
13) Lamberhurst Churchyard, J.R.W.; 1961, CAS, and on Golf Course and by main road, CAS. [Angley Wood, formerly ASK.]
16) Naturalised at Brockhill LJM.

Narcissus L.
N. pseudonarcissus L. 15, 16 Daffodil 12/52

Native. Dry woodlands on sands and loams, rather rare and local, but locally abundant in a number of scattered localities, particularly in the gills of the High Weald. Formerly it appears to have been much

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360 In the manuscript given as Ipheion Raf.
361 In the manuscript given as I. uniflorum (Grah.) Raf.
commoner, particularly near London in 1). Locally plentiful in several parts of the Weald of Surrey and Sussex, very local and nearly confined to the N. in Essex: very local in Pas de Calais.


Garden Narcissi occur at Ruxley pits as escapes, S&S.

[?]N. major Curt. Pickledon, Chartham, DHK.

IRIDACEAE

*Sisyrinchium* L.

Iris L.

I. foetidissima L. 15, 16 33/51 Gladdon, Stinking Iris, Roast-beef Plant

Native. Woodland, mostly of Beech and Ash, scrubland and hedgebanks, mostly on chalk and ragstone; on sea-cliffs in *Ligustrum-Rubia* scrub association; occasionally in woodlands on clay or loam; widespread, but with its greatest abundance on the chalk and ragstone of S.E. Kent in 8) and 16); common westward particularly on the escarpments of these formations in 5), 6) and 7), and in 10) and 11) more locally; on weald clay near the old coastline and on the gault in 12), and rarely in gills on Wadhurst Clay in the SW part of 14); not rare on the Thanet Sand in 1) and 6E). Unknown native in the Marsh districts 2), 4) and 15), on the Western and Central High Weald in 13) and 14), and on the weald clay in 11) and the west part of 12). It shows a somewhat oceanic distribution. In Surrey almost confined to the chalk; in Sussex common on the chalk and in the Hastings area on Wealden sands and clays near the coast; rare to mostly on the Boulder clay in Essex; unknown in N. France E. of Normandy.

1) 56 Farningham Wood PCH.
2) Tonge church ;’57 J Moor.
3) Not 06 & 16, not 26
9) 36 – planted in Thanet.
10) Rooks Hill, scarp woods.
12) 04 Nackholt Wood, 065425, ES. 03 NW Park WoodBilsigton 042363, ES. 03 Horns Wood W of Bilsington 032342 ES. 03 Copse by B2070 N of Ham St[reeet], 000341, ES. Chilham Castle nr lake. Sellindge Ch[urch] Y[ar]d RAC. 94, 93, 03 (rag[stone])
14) 92 On Wadhurst Clay at top, gill W. of Tophill Fm, Wittersham, 1962. 83 Gill NE of Benenden, 1954 (Wadhurst Clay) MNE. 982 Planted in W Oxney,) 93 —. (82 planted), 92, 83 one loc[ation]

I. pseudacorus L. 15, 16 Yellow Flag, Fleur-de-lis 48/51

Native. Streambanks, ponds, ditches, and swamps; very common throughout Kent, except in the chalk districts where, however, it occurs in a few ponds in 6) and 8); and in the Sheppey Swale area, where it is very rare. Most plentiful in 2), 4), 15), and on the clay areas of 10), 11) and 12). Very common in the adjacent counties and in N France. Unrecorded 96, 97, and 23.

*Roman; seed, Crossness, Spurrell 1889, Reid 1899.

262 Suomi, mentioned here and elsewhere, was the address of E. Scott, who contributed records.
4) 67 Chalk pit, Swanscombe, HAS.
5) Pond, Garden Wood, Acrise, DACL. Pond, Gate Fm.
6) Copse, Durlock, Minster, A.G.S.
7) Westerham, E. Armstrong, stream at 440535, DPY. Rivebank, Otford, PCH. Lullingstone, F. Swain. Darenth Meadows PCH.
11) 13) Commonly naturailsed around Tunbridge Wells, 1960, CAS.
12) Crocosmia Planch. C. x crocosmiiflora [(Lemoine) N.E. Br.]
13) Dargate → Monument, path through trees, Mrs B.
14) Sevenoaks tip CAS.
15) Edenbridge tip DPY.
16) Stream NE of Asholt Wood BW. Newton Moor.

H. “germanica L.”
   Alien. A favourite garden plant which sometimes becomes naturalised when thrown out of gardens.

1) Ruxley pits, S&S.

Crocus L.

†C. vernus (L.) Mill. 263
1) Ruxley pits, S&S.
2) Naturalised in Lamberhurst Churchyard, 1961, CAS>

C. nudiflorus [Sm.]
10) SE of Crockham Hill in copse, 1960, RAC.

Crocosmia Planch.
C. x crocosmiiflora [(Lemoine) N.E. Br.]
3) Dargate → Monument, path through trees, Mrs B.
10) Sevenoaks tip CAS.
11) Edenbridge tip DPY.
13) Commonly naturalised around Tunbridge Wells, 1960, CAS.

†Gladiolus L.
   Alien, scarcely naturalised.

†G. communis
9) Naturalised in gardens, Margate, Minster, and Monkton, L.W.W.]

DIOSCOREACEAE

Tamus L.

T. communis L. 15, 16 Black Bryony 48/51

263 Here named as in Stace, 2nd edition, but given in the manuscript as C. purpureus, without author citation.
Native. Woodlands, scrub, and hedgebanks’ very common throughout Kent except in the Marsh districts 2) and 4), where it is very rare: seemingly absent from Romney Marsh 15), and in Sheppey only at Warden point.

2) Grain, PCH. Warden point.
6) Darent Wood, PCH. Mounts Road, PCH. Dunstill Woods, Shoreham, PCH. Romney Street, PCH. Preston Hill, PCH. Wingate Wood, Halling PCH.
10) Westerham Wood 82! Horton Kirby PCH.
11) Hedge, Green Lane E of Headcorn 849437.

The Orchids of Kent265

ORCHIDACEAE

After Hants, Kent is the richest British county in Orchidaceae – 35 species have been recorded, of which 30 still occur. It is even more notable for the relative abundance of a number of species which are rare, or very rare, elsewhere, such as Orchis purpurea, Ophrys spegodes, and Aceras anthropophorum.

“Enough orchids grow in Cobham Park to pleasure all the seamen’s wives in Rochester”. Robert Turner, Botanologia, 1664.

Cephalanthera Rich.

C. damasonium (Miller) Druce 15,16 24/52 Common White Helleborine

Native. Beechwoods, on chalk, very constant and often abundant: coppice and scrub on chalk, frequent but not abundant: very rarely in other soils – in one wood on ragstone and two on Gault clay. [Districts] 5-8, 10, 11 and 12.


264 No location stated, but the gridreference is near New Addington, barely within the vc16 boundary.
265 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 its sequence and naming of species has been followed here, rather than as given in the MS. There was also a list of orchid-rich sites with their constituent orchids headed ‘Flora of Kent Orchid-rich downlands’.
Hazelwood, N. of Cudham. Nr Westerham Hill top, 440562, DL. Salt Box. Downe Golf Course 427605. 433635


10) Broadhoath Wood, S. of Stone Street on ragstone escarpment, 1950 MNE.


12) Cadmans Wood, Brook, on gault, 1946, C.N. Pope.

[C. longifolia (L.) Fritsch] [15,16] Sword-leaved Helleborine

Beech woods on chalk and in Oakwood on Hythe Beds. Very rare. It has become very rare in Surrey, but still exists in West Sussex very locally, and more plentifully in Hants. Not in Essex. In Pas de Calais (very rare, Hesclin, Le Touquet): less rare in Somme.

[5] above Dunton Green, Mrs Tristram, BEC Rep. 1920; seen by her in 1927, not in 1929.]


7) [Boxley Warren, F. Forsyth c. 1930.]


[C. rubra (L.) Rich.]

Of very doubtful occurrence in Kent.

5) High Elms, several plants. A.D. Webster in British Orchids 1899.

7) Beechwood ¼ m W. of Wormshill, F. Forsyth etc., c.1930. Not seen since, 1942-62, though many searches of this spot have been made.


I doubt if any of these records were correct, except perhaps the Wormshill one. No specimens are known to exist to settle the matter.]

Epipactis Sw.

\[266\] This grid reference is neither very legible nor (apparently) accurate.

\[267\] Inaccurate gridreference.

\[268\] At this point in the MS there is an abbreviated list of orchid taxa, which looks just to be an aide memoire.
**E. palustris** (L.) Crantz  
Native. Calcareous Dune slacks, fens, and a damp disused chalk pit: very rare, but locally still abundant in 4) and 6). This beautiful delicately-tinted plant with its frilled cravat-like labellum, is now probably extinct in Surrey and Essex, and exists probably in only one Sussex locality (Balcombe): in the Pas de Calais it is however still abundant in the dune slacks and in certain fens to their near [sic].

[1] old records for the Cray Valley between St Mary Cray and Bexley (Fl. K.).


26, 35, 36, 37


[8] Formerly under the undercliff N of St Margarets Fl. K.


26, 57, 25, 36, 35, 34

**E. purpurata** Smith  
Native. Dark Woodlands and shaded roadside verges and Banks: widespread and locally frequent on clay-with-flints in 5)-8), also scattered in many places in 11) on weald clay and in 13) and 14) on Hastings sands and clays: rare in 1) and 3): unrecorded in 2), 40, 15) and 16). Not uncommon on clay with flints in Surrey and in the Weald of Surrey and Sussex; very rare in Essex: so far unrecorded in Pas de Calais.

1) Roundabout Wood, Crofton Heath, P.C. & J. Hall.

3) 05 Perry Wood, Selling, DHK, 1945. 15 Bigberry Wood, Harbledown, 1954 MNE.


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269 Corrected from 127653. This is likely to be a mound in Shoulder of Mutton Shaw.
E. purpurata x E. helleborine = E. x schulzei P. Fourn.


E. helleborine (L.) Crantz  15, 16 Broad-leaved Helleborine 34/52

Native. Woodlands and shady road banks, on a variety of well drained soils; frequent: commonest by far on the chalk in 5)-8), but widely distributed over the Weald in 10)-14), and present but rare in 1) and 3): unrecorded in 2), 4) and 15). Frequent in Surrey and Sussex, rarer in Essex, frequent in Pas de Calais.

1) Wet Wood by R. Cray, N. Cray, PCH.


12) 04 Cadmans Wood. 03 Bourne Wood 005332, ES.

270 An entry follows referring to ‘also lane to W...1953, D.L.’, in which several grid references are deleted. One not clearly deleted reads 498605, but this must have been intended to be 605498.


16) 1 pl. Paraker Wood, Horn Street; 2 pl. on Lake Island, Brockhill 1957089 LJM. 271

E. leptochila (Godfery) Godfery 15 Narrow-lipped Helleborine

Native. In two woods on the chalk in 8) in hornbeam-ash coppice: extremely rare. The Kent form has a wider epichile to the lip than the Surrey plant.

Very rare, in 3 localities on the chalk in Surrey, and in one locality in W. Sussex; unrecorded for Essex and for Pas de Calais, but now known in seine-Maritime (Forêt d’Eu) so it may be found in N. France.


Now destroyed. Alkham, E. Philp.

E. phyllanthes G.E. Smith E. vectensis (Godfery) Brooke & Rose 15, 16 3/52

Very rare in Surrey and Sussex, unrecorded for Essex and N. France.


8) Rubery Down, Menswold, J. Jacob (as E. leptochila Godfr. in BEC '33 Rep, 543.): BJB & F.R., 1939! (then described as a species distinct from leptochila): 13 plants, 1946 MNE; 1 pl. 1954, DACL. 8 spikes, 1955, Mrs B. & J. Gurr.

[E. atrorubens (Hoffm.) Schult.]

This species has been reported for Kent, certainly in error; but it exists on hot S. facing open chalk slopes in Pas de Calais (Hesdin) and, more plentifully, in the Somme Valley. Our northern British plants may be a different ecotype.

[E. mülleri Godfr. Occurs in Pas de Calais (Desvres) and in Somme (Abbeville) in Woods on chalk, so may be found in Kent sometime.]

Neottia Ludw.

N. nidus-avis (L.) Rich. 15, 16 31/52

Native. A saprophyte of humus in woodlands, mostly beechwoods on chalk: locally common in 5) 8), rather rare off the chalk but widespread, and in all parts of Kent except the marsh districts 2), 4) and 15) and Thanet 9).

Frequent on the North Downs in Surrey, and in the South Downs beech woods in W Sussex and Hants: rarer in E. Sussex, very rare in Essex. Frequent on chalk in N. France.


3) 05 Wood at Upper Ensinge, DHK 1945.


271 An entry which apparently post-dates the chart of 10k square records.
10) Wilderness, Seal, under Castanea, 1956, B. Smith.
14) 93 Cole Wood Woodchurch ES. 93

Listera R. Br.

L. ovata (L.) R.Br. 15, 16 44/52

Native. Woodlands of all types on more or less base-rich soils, from Alder carr to beechwoods on chalk: grassland, scrub, and old orchards: very common except in the Marsh districts of 2) and 15), which are almost devoid of shade: certainly our commonest orchid, f

2) 87 Copse, E of Fenn Street, 1955 MNE. 07 Warden copse.


14) [Finchcoks, Goudhurst 1898 J. Stirling TLS.]272 Knock Wood E of Tenterden! RAC. Fraxinus plantatio[n], Cole Wood, Woodchurch, ES. Shirkoak Wood, etc.

16) Postling Wents. Coombe Wood, Etchinghill BW.

Spiranthes

Rich.

S. spiralis (L.) Chevall. 15, 16 32/52

Native. Dry short grassland, frequent locally on the chalk, rare and scattered elsewhere, but often abundant in its localities. It sometimes appears suddenly in quantity on garden lawns. Frequent in Surrey and Sussex on the downs and in the weald, very rare in Essex, frequent in Pas de Calais.

2) 07 Warden Cliffs. 07


4) 35 [nr. Sandown Castle, 1833, Miss Harvey, Hb. FJH.] Fixed beach opp. Walmer Castle, 1957, B.N.


8) Down above Winchcombe Fm, Crundale, ’55, BBC. 04 Wye Hill Race Course, Worlmal. 14 Down in Covert Wood, Miss DACL, 1945: JB. 24 Above Coombe Fm., Dover, Miss DACL & FR, 1945 MNE. Temple Hill, KDR.

272 Record duplicated, see above.


11) golf links, Bearsted, 1910, J. Ramsay MNE, 1912, H. Elgar. [Staplehurst, WHP senior.]

12) Golf Course, Ashford, ES. Pasture, Westenhanger Sta, UIM.


15) 01 Dungeness, by Long Ballast Pit. 02 Romney Warren, on Golf Links.

16) Sandling Park, Major Hardy, 1961.

(S. aestivalis (Poir.) Rich. occurred formerly in the Pas de Calais.)

274 Goodyera repens (L.) Br. This was discovered in a pine plantation on the le Touquet dunes, Pas de Calais, on a BSBI Expedition in 1959: otherwise it is known no nearer than Norfolk.

Liparis Rich.

[L. loeselii (L.) Rich. [15] Extinct. Formerly in a calcareous fen: extremely rare. In Britain the type is only found now in Norfolk and Suffolk, where it is rare and local, the var. ovata occurs plentifully locally in the dune slacks of S Wales. Still in 3 localities in Pas de Calais, abundant in 2 of them (Dune slacks at Beach Fen E. of Cucq), rare in one (Ameloteuse dune slack).

4) Boggy ground about Ham Ponds, O.B.G. 1802. (In Fl. K. It is reported that Duthie saw a specimen in Herb. Univ. Edinburgh labelled “Kent”.) Ham Fen was formerly a very wet calcareous mossy fen, and ponds remained in this state as late as 1947; but a general improvement of drainage of the area by lowering the level of the North Stream has rendered it very unlikely that Liparis will reappear now in the area, although much of the fen has never been disturbed by cultivation of any kind.

Hammarbya Kuntze

275[H. paludosa (L.) Kuntze) [16] Long extinct in Kent: formerly in acid bogs, extremely rare.

13) Nr. Rifle Butts, Frizley Bog, 2m. N. of Cranbrook, E.W. Bowell, per A.W. Hudson; Fl. K. Frizley Bog still exists in part, but probably owing to the enclosure and cultivation of the former acid heathland of Cranbrook Common, it is now poor fen with rank vegetation and quite unsuitable for Hammarbya. An Ancient record also exists for Tunbridge Wells (Ray Syn ed.3, p385 and “Tun Wells Kent”, E. Jenner, Hb. FJH). It may have been widespread in the Weald and on the bogs of the Folkestone Sand in ancient times, but we have no direct evidence. It existed in a valley bog in Ashdown Forest, E. Sussex until at least 1952, and my still reappear there. Apparently extinct in Surrey: unrecorded from Essex and N. France: but still locally abundant in the New Forest.]

Herminium R. Br.

H. monorchis (L) R.Br. 15, 16 9/52 Musk Orchid

273 The manuscript is difficult to interpret at this point, and the entry may be tie in with one referring to meadow on Wadhurst Clay, Schoolhams, Miss A. Graseman 1947.

274 This entry was placed after Neottia nidus-avis in the manuscript.

275 This entry was placed before Liparis in the manuscript.
Native. Chalk grassland in short turf: well distributed and locally abundant, but not common, except very locally. 23 localities. In several places on chalk in Surrey, and frequent along the Sussex Downs: unknown in Essex: very locally frequent in Pas de Calais.

5) 439613 Down N. of Darwin’s Bank, Downe, 1945-50: to 1955, JEL. Not seen since, but it may reappear now that the turf is kept raked. 505603 Downs above Tunnel mouth and to SW, Polhill, 1946-62 MNE. 488587 Chevening Park, NW Coombe, 1951-55 MNE, FR, DL. 411603 Down SW of Saltbox, Biggin Hill, R.A. Clarke.


7) [Bluebell Hill, H. Lamb, 1899 MNE: not recently observed.] W side A.229, abundant, till 1991 when destroyed in roadworks. Down above Allington E.P.

Platanthera Rich.

P. cholorantha (Custer) Reichb.

Native. Woodlands and scrub on chalk and on base-rich clays and loams: widespread and fairly frequent, and locally in abundance. Unrecorded in the marsh districts 2), 4) and 15), and rare in 1), 13), and 14).

Fairly frequent in Surrey and Sussex and locally so in Essex: common in Pas de Calais, where it often occurs in open chalk grassland.


10) 45 Westerham Wood, 1947 MNE. 55 Cockney’s Wood, Kemsing on gault. 45, 55


P. bifolia (L.) Rich. 15, 16 15/52
Lesser Butterfly Orchid

Native. Woodlands, mostly coppice, but also of beech, on chalk or on overlying loam, also on the Gault. Very rare in W. Kent in two localities in 6): fairly frequent in E. Kent in 7) and 8). Very rare in 11) on Gault. Formerly in the acid bog at Keston, as the ovate lanceolate leaves. Now very rare in Surrey, occasional in Sussex, extinct in Essex, rare in Pas de Calais.

1) [Keston Bog, to c.1930, C. West.]


11) 75 Horish Wood – on Gault, 1943 MNE.

276 This entry is placed last amongst the orchids in the manuscript.

278 The gridreference given is east of the pit, not west.
Cliff. 04, 14, 24, 34, 15, 25

10) 45 Dry Hill Ragstone Pit Chevening 496549 DL.
12) 04 Mersham Ragstone Quarry, by A.20, 1946.
13) 53, 1 plant among Aegopodium, Broadwater Lane, T[unbridge] Wells, 1957, KEB.
14) 02 fixed dunes, Greatstone, 1947.
15) (Pseudorchis albida A. Löve & D. Löve) [15]
Possibly native, but if so long extinct.
8) Lyminge; gone by 1873, Wolleston: FLK.
This could have been an error for Herminium, though Wollaston was a good botanist. It was known in Ashdown Forest and neighbouring localities in both E. and W. Sussex until at least 1935, but has not been seen since World War II. The nearest modern localities are in Wales, the Pennines, and central France.

G. conopsea (L.) R.Br. 15, 16
Native. Old chalk grasslands, very common and fairly constant, and sometimes in very great abundance. Not recorded off the chalk in Kent. Not now in Dartford-Gravesend area, nor in Thanet.
Common on the chalk in Surrey and Sussex: in Essex now extremely rare (Thurrock). V. common in Pas de Calais.
Mr. M. Chalmers-Hunt reports Plusia gamma (Silver y moth) and Ochlodes venata (Large Skipper) visiting the flowers of this species at Downe in 1958, but it is not known if pollination was effected.


278 This entry is placed before Platanthera in the manuscript and is there treated as Leuchorchis albida (L.) E. May ex Schur.
279 This entry follows Coeloglossum in the manuscript and is there treated as G. conopsea subsp. conopsea.

280 G. densiflora (Wahlenb.) Camus, Bergon & A. Camus
Fens and calcareous marshes: very rare and probably now extinct.
It occurs in a chalk pit at Offham E.Sussex (C.A. Lister), and in a calcareous bog at Balcombe, E. Sussex, and on chalk grassland (N aspect) at Heyshott, W Sussex (1976), Ditchling Beacon; and formerly occurred in fen at Westbourne, W. Sussex; not recorded for Surrey nor Essex, but in fens in Hants.. On chalk in Pas de Calais, and in fen in Somme.

1) [North Cray Brooks, Hb. Sim: Fl.K.] [Keston Common A.G. Davis MNE 1916]
4) [Little Britton, Wingham, FGEK.] Ham Fens, c.1920, G.L. Davidson, the exact site is now completely altered. N end wds, SE of Ham Road (61/3)
6) Bogs...between Northfleet & Thames, Merrett, 1666.]

281 Coeloglossum Hartm.
Native. Chalk grassland: formerly in at least 12 localities, now confined to Crabble near Dover, where however it is abundant. Extremeny rare and erratic in its appearance in Surrey (3 localities known in the last 20 years): rather common on the Sussex Downs: apparently extinct in Essex: very rare now in Pas de Calais, and still in Nord (Ardennais).

6) [Downs NW of Crookhorn Wood, 1926, F. Forsyth; not observed recently.]
[Downs NW of Birling, M. Atkins, c.1932; not observed recently.]
[Formerly nr. Canterbury ( Oxenden 1873)] Ospringe (Blackstone, Pl. Fav.) Folkestone Warren, Ulyett: Sellinge: Horton FGEK: Stowting FGEK: Brook, ESM: Wye, W.R. Jeffrey its disappearance may be due to ploughing and the spread of Brachypodium pinnatum.]

Dactylorhiza (Klinge) Vermeul.
D. fuchsii (Druce) Soó subsp. fuchsii 15, 16 Common Spotted Orchid 47/52

280 In the manuscript, given as Gymnadenia conopsea subsp. densiflora (Walenb.) G. Camus, Bergon & A. Camus. Francis Rose championed the separation of taxa formerly lumped under G. conopsea, certainly at least to subspecific level, and he considered that they could merit specific status (which has since been recognised). Not dealt with in the Flora manuscript is his belief (pers. comm.) that subsp. densiflora was present at Parkgate, which post-dates dated G. conopsea records in the account (latest, 1998). Subsequent observations have not supported this determination.

281 This entry follows Herminium in the manuscript.
Native. Woodlands, scrub and grassland on base rich soils, particularly on chalk, clay and ragstone; disused claypits, chalk and ragstone quarries; marshes, fens, meadows, and dune slacks: very common and often abundant. Common in the adjacent counties and in N. France.

1) Holwood Park, 1954 MNE. Ruxley gravel pits, F. Holroyd: SB5. 56 Farningham Road, PCH.

2) 97 Landslips on cliffs East End, E. of Minster in Sheppey, 970734, 990732, 1954 MNE. 87 Copse E of Fenn St., St Mary Hoo, 1955. 07 Warden Point cliffs, Sheppey, 020726, 1955 MNE. 87, 97, 07


D. fuchsi x incarnata

4) Plucks Gutter


Authority cited as in checklist; Flora manuscript gives (Druce) Vermeul.
D. fuchsii × praetermissa

Common where the parents occur together, forming hybrid swarms, in fen-meadows and damp disused chalkpits.

3) 15 N. side Canterbury Golf Course, RGN.
4) 35 Ham Fen, JEL, 1925: 1949-60! 35 Sandwich Bay, Mrs Dodds, 1959 MNE. 25 fen SE of Wingham.
7) 76 CR pit, Woodlands Lane Gillingham, 1955, OD.
10) 55 Meadow W. of Otford Rd, Sevenoaks, 1950 MNE.

D. maculata (L.) Soó

Native. Wet-heaths, valley-bogs, and moist heathy rides in woods on acid soils: only locally frequent. Frequent in 12) and 13), rare to very rare in 1), 3); 10) and 11): unrecorded elsewhere. Widespread locally common on the heathlands of Surrey and Sussex, rare in Essex and in Pas de Calais, where heaths are scarce.

1) 46 Keston Bog, 417642; 1917 AGD MNE; plentiful, 1944, 1945. 1958, HMP.
3) 15 Heathy area, Church Wood, Harbledown, RGW. 16 Heathy ride, Minching Wood, Blean N.R., 1957. 06 Old Sandpit, Forstal, / Hernhill, H.M. Wilks. 05 Small colony nr. stream, Rhode Common, 1962, Mrs Brickenden & J. Gurr. 15 abundant in acid marsh E. of Canterbury, Scotland Hills, 166587, 1963, R. Gorer. 05, 15, 06, 16
4) Hacklinge, 1952, BJB.
8) Westwood, B. Nash.
12) 94 Hothfield Heath, in northern valley bog, 1942, MNE.

D. maculata subsp. ericetorum × praetermissa (Orchis hallii Druce)

12) Hothfield Heath, in northern valley bog, 1942, MNE.

D. incarnata (L.) Soó

Native. Fens and calcareous fen-meadows: rare and local. It appears to be now confined to 2), 4), 11) and 12), and to have become extinct through ploughing in 10). The Kent colonies are all of plants with flesh-coloured flowers except some of those at Chilham which have purple flowers. It occurs rarely in Surrey, mainly as the subsp. pulchella in mildly aciid flush bogs; and rarely too in Sussex and Essex as the type. It is frequent in the coastal duneslacks and fens of the Pas de Calais in several colour forms.

2) Holborough Marshes, 1980→
4) 26 Plucks Gutter, BJB, etc.; 1951-62, several observers! MNE. 35 Hacklinge Fen, BJB etc.; 1945-54! MNE. 35 Ham Ponds, 1925 J.E.L. N. end of Ham Fen, 1957, KDR. Preston Marshes, Mrs. B. Dodds. 35, 26
10) [Water meadow N. of Shoreham, G.M.B., 1954! MNE since ploughed up.]
11) [66 Birling Marshes, 1942-43 MNE.]

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283 Name as in checklist. In the manuscript, given as D. maculata (L.) Vermeul. subsp. ericetorum (E.F. Linton) Vermeul.
284 Hawkenbury Bog was not in vc16 West Kent.
285 Name as in checklist, in manuscript given as D. incarnata (L.) Vermeul.
286 Brackets of original drafting indicate that species was gone from West Kent; but the addition of Holborough Marshes from 1980 is not reflected in this.
12) 080537 Water Meadows, Chilham, abundant, 1946, BJB; 1947-59! NW of Mill; & SE of Village, 1965. Abundant (100s) in meadows below Chilham, Mrs B. 14 S. of Stowting, in calcareous fen-meadow; c.100 plants, 1954, MNE. 04 N. of Willesborough, E.S.

13) 82?

(Subsp. cocinea (Pugsl.) H.-Harrison f. has been planted in a dune-slap S. of the Guilford Hotel, Sandwich Bay.)

D. incarnata x praetermissa


11) Birling Marshes, 1943, det. A.J.W. MNE.

D. praetermissa (Druce) Soó 287

Native. Fens, fresh-water-marshes, duneslacks, alluvial meadows, and disused chalk pits: widespread in the N. and NE parts of Kent; far commoner than D. incarnata and less restricted in habitats, but unrecorded from most of the Weald Clay and the whole of 13), 14) and 15): not noted either for 1). Scattered in 11) and 12) but hardly common in Surrey and Sussex: Rare in Essex: common in Pas de Calais near the coast in dune slacks and fens, and rare also in chalk grassland inland.

2) 65 Marshes N of Lunsford. 76 Burham, 1911, K. Peters, MNE. 97 Landslips on clay cliffs, E. end, Minster in Sheppey, 1954. 65 S. Snodland Marshes.


175607 Sturry Hill Gravel Pit 1955, Jane Hyde. 15


15, 25, 35, 26, 16, 36

6) 57 Chalk pit N. of Craylands Lane, Swanscombe, 1946-50 MNE, 596750. 77 Wet Chalk pit SW of Cliffe, 1963, HAS & A. Ruck. 6 Great pit, Holborough, a few plants, G.L. Davidson 1961. 56, 67, 77

7) 86 Chalk pit, Berengrave Lane, Rainham, Jolly, ’76. Chalk pit, Woodlands Lane, Gillingham, 1955, OD. 96 Hightsted pits, Tunstall, 1958, DMcc. 76 Chalk pits, Eccles, E end, 1953, REW.

8) 35 chalk pit N. of Hacklinge, 1960-67 MNE.


65, 75, 85


16) 23 Darnley Vale, Chriton, 1955 MNE.

D. praetermissa ssp. junialis 288

This distinct looking plant, as I understand it, is not the hybrid D. praetermissa x fuchsii, but a ring-spotted-leaved variety of praetermissa.

287 Name as in checklist, in manuscript given as D. praetermissa (Druce) Vermeul.

288 Name as in checklist, in manuscript given as O. pardalina “Pugsl.” and var. junialis Verm.

It occurs in Pas de Calais.

(D. \textit{purpurella} (T. & T.A. Stephenson) Vermeul. occurs in Hants. as a remote outlier from its northern area of distribution, so could occur in Kent.)

(D. \textit{traunsteineri} (Sauter) Vermeul. occurs in Suffolk and Berkshire, but this “Continental” marsh orchid occurs in no adjacent county nor in Pas de Calais.)

\textbf{Dactylorchis}^{289} \times \textbf{Gymnadenia}

\textbf{D. fuchsii} \times \textbf{G. conopsea} (\textit{Orchigymnadenia heinzeliana} (Reichardt) Camus)

5 or 6) nr. Sevenoaks, H. Pierson, 1898: \textit{J. Bot.} (1898) p.288; \textit{J. Bot.} (1907) p.278.

8) Pett Street Down, 1946 MNE.

\textbf{Orchis L.}

\textbf{O. mascula} (L.) L.^{290} 15, 16 Early purple Orchid 44/52

Native. Woodlands, scrub, and occasionally grassland on more base-rich loams, clays and sands; very common and frequently abundant locally in all wooded areas of Kent: unrecorded recently for te Marsh districts 4) and 15), for Thanet 9) and very rare (on the Tertiaries only) in 2): now very rare in 1) due to suburban developments. Common in all adjacent counties and in N. France. After \textit{Listera ovata}, this is our commonest orchid, occurring in hundreds of localities and it is still a normal feature of our acid woodlands everywhere, but its tom-cat-like odour at night should discourage pickers.


2) 56 Farningham Wood, 1949: PCH. Joydens Wood Miss M Wythes, ’57. 86 Hawes Wood, Newington, 1954. 87 Copse N.E. of Fenn Street, St Mary Hoo; 1955 MNE. 07 Warden, Sheppey, 1918, AG Davis MNE: 1956!


4) (not 26, 36)


Sic, although \textit{Dactylorchis} has been changed to \textit{Dactylorhiza} elsewhere.

In the manuscript, \textit{O. mascula} follows \textit{O. morio}, preceded by \textit{O. ustulata}, before which is \textit{O. simia}.

The 10k square numbers in the margin of the manuscript do not correlate well here with the text.


11) Copse on Gault S. of Saltbox, 409604, 1 plant, 1961, D.L. 1 plant SW of Biggin Hill, 1948, B.W.


O. morio (L.) 15, 16 Green-winged Orchid 33/52

Native. Grasslands on clay, loam and chalk: formerly common, and abundant in many old permanent pastures throughout Kent: now far rarer, due to the conversion of such pastures to leys or arable, and becoming more confined to the chalk, where it is less vigorous in growth, though still widespread and found in all districts except 9) and 16), and locally abundant on London Clay in Sheppey 2) and 3). In Surrey, Sussex, Essex, and N. France, but becoming rarer as in Kent through the same factors.

2) 07 W of Warden Point, AG Davis; Mrs. B. Welch, 1947; 1955 MNE. 07 S. of Warden Point, 1918 MNE, 1959.

Native. Grasslands on clay, loam and chalk: formerly common, and abundant in many old permanent pastures throughout Kent: now far rarer, due to the conversion of such pastures to leys or arable, and becoming more confined to the chalk, where it is less vigorous in growth, though still widespread and found in all districts except 9) and 16), and locally abundant on London Clay in Sheppey 2) and 3). In Surrey, Sussex, Essex, and N. France, but becoming rarer as in Kent through the same factors.

2) 07 W of Warden Point, AG Davis; Mrs. B. Welch, 1947; 1955 MNE. 07 S. of Warden Point, 1918 MNE, 1959.


12) 94 Westwell, ES. 934499 wet meadow on gault (122 pl[ants]) SE of Lenham, 1960. P.G.W. Meadow by Stour nr footbridge, Olantigh, 1946, D.HK.


(O. palustris Jacq. This species, closely allied to O. laxiflora Lam., occurs in the fens near the coast in Pas de Calais (Merlimont, Cucq!) but is unknown in the British Isles.)

O. 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.


7) 86 Queen Down Warren 829629/ 1880, Fawcett Osborne MNE: 1905, MNE. 1923 MNE. 86

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
1947 1955 1962
1948 – 5 infl. 1963

[Formerly near Bluebell Hill and Favershams, Fl. K.]

O. purpurea Hudson

Native. Scrubland, woodland (both beech forest and coppice), and, more rarely, grassland on chalk: widespread in 5)-8) from near Knockholt in the west to Betteshanger, Waldershare and Dover in the east, and locally frequent and locally abundant in the east part of 6), the west half of 7), and throughout much of 8). Also in one wood on the Gault in 12).

This magnificent orchid still occurs in some 130 localities in Kent, and in abundance in about 25 of them, with from 100-400 spikes flowering in “good” seasons. It is however now very rare from Meopham westwards, and absent from much of 7) between Frinstead and Milstead on the west and Challock on the east. It is almost confined in Britain to Kent today: it exists in Surrey as a single locality and in Sussex and Oxford only as single plants within the last 25 years. In Essex it is long extinct: in Pas de Calais and N. France generally, however, it is common and locally abundant on the chalk: clearly Kent lies at the extreme margin of its main European range, which is Continental-Southern in character.

The wasp Ancistrocerus parietum (L.) is a known pollinator.

5) [1 plant E of Jewells Wood, C.1925, Fagg.] 46 Lattice coppice, Pratts Bottom, 473613, many 1936, Miss B[urnaby]-Atkins; 1947 (4 pl. in fl) -1962! (5 pl., 3 infl[orescences]) MNE. 7 st[ems], 1950, FSEF; 195, 1 infl[orescence]; 1956 - 10 st[ems], 2 infl[orescences], DL; new site, 1991, E of road, 3 infl[orescences].


O. purpurea × Aceras anthropophorum = X O. melsheimeri Rouy

[No account is given in the manuscript, but the discovery of this hybrid in private woodland in vc15 was written up by Francis Rose as: A new orchid hybrid for Britain – X Orchiceras melsheimeri (Aceras anthropophora × Orchis purpurea), BSBI News (1998) 79: 19-20.]

(O. militaris L.)

This species has been reported from Kent on a number of occasions, but there is no convincing evidence that it has ever really been found: all the specimens appear to be of O. purpurea.292 Apparently correctly recorded, though long extinct, in Surrey; only known today in Britain in Bucks, Oxford (2 localities), and Suffolk (one locality); apparently extinct in Pas de Calais, but locally abundant in Somme in several places.

"nr. Deal, 1908" GW Harris. “Near Deal, Kent", 1910, HB. Druce, det. G.C. Druce, RAG & VS examined these two specimens in 1958 and concluded that they were abnormal forms of O. purpurea. “Kent", Hb. Merrell ex HB. Backhouse junior K. “Kent", 1846 K.

[Cobham, 1836, Joseph Woods, Herb. Bolton Museum (determined by FR; has oval-lanceolate sepal 19mm long, labellum c.8mm long, narrow side lobes).]

O. simia Lam.

15, 16 Monkey Orchid 1/52: [2/52]

Native. Continental – southern. Chalk grassland and chalk coppice: extremely rare: at present confined to two localities, one in East Kent, where 33 spikes appeared in 1963 and c.240 in 1965; and one in W. Kent, where the solitary plant was moved from Otford to a safer place nearby in 1956, but has not been observed since 1957. There are several old records from the districts 6), 7) and 8). Otherwise confined now in Britain to

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292 Thus the original manuscript. But Francis Rose became subsequently persuaded that there was good evidence for the occurrence of O. militaris. By 1998 he had authenticated an 1836 specimen as indicated by the note which he added at the end of this species account.
one locality in Oxfordshire and one in E Yorkshire (Spurn). Recorded in Pas de Calais a a single plant on the dunes at Dannes, 195[ ] but very rare in Northern France, commoner in central and southern France.

*1777, E. Jacob.

6) Otford, Rev. E. Elder, 1952; V.S. 1952; 1954 1 spike; 1955 1 spike; 1956 1 spike MNE 6st. Moved, Nov. 1956, to Dunstill Woods, where there developed 1 fine spike, 1957, not since to 1963.


[“Downs nr Winchcombe, Crundale, 1920, R.J. Deacock, “Kentish Express”, 1.1.1921.]

O. simia x Aceras anthropophorum = X O. bergonii (Nanteuil)

Aceras R. Br.

A. anthropophorum (L.) W.T. Alton

Native. Chalk grassland, wood borders, banks, scrub and coppices on the chalk, widespread on the North Downs, and quite common from the Surrey border to a line from Wingham to Denton, Elmsted and Wye, rare east of this; very common locally most abundant from the Darent valley to the Wye downs towards the coast: also on calcareous fixed dunes at Sandwich, in a disused ragstone pit at Sundridge, and in a railway cutting on Gault at Leeds: 5)-8), 4), 10) and 11). Over 100 localities [142 localities] exist on the Kent chalk. The headquarters in Britain are the North Downs of Kent and Surrey, though in W. Surrey it becomes rarer. Very rare in Sussex on the South Downs, where only 4 or 5 localities are now known: in Essex, only in one chalkpit near the Thames at Thurrock [1997, only 2]: in Pas de Calais very rare, and known only on dunes at Le Touquet and Étaples and on chalk at Wavrans. Hence its abundance with us is not a direct continuation of any similar abundance in N. France.

2) Tower Hill Upnor, on chalk outcrop, D.McC et al., MNE 1959.


293 This seems to be a quotation set down here without working into a context within the Flora. Var. ‘macra’ is a term which has been used for Oxfordshire O. simia specimens in distinguishing them from Continental plants (macra being Lindley’s specific name for the British plant).

294 Cited as (L.) Ait. f. in manuscript.


10) 45 Old Ragstone quarry, Dry Hill, Chevening, FSEF: 1961! MNE.


Himantoglossum Spreng.

293 H. hircinum (L) Sprengel

Native. Chalk grassland and calcareous fixed dunes: very rare, and usually occurring as sporadic single plants, but long established in quantity in 4). Very rare downs single orchid in Surrey, Sussex, and Essex: rare but persistent in several places on chalk downs in Pas de Calais.

4) Fixed dune grassland, St. Georges Links, Sandwich Bay, 360578 etc. 1924, C.G. Field-Marsham in Hb. FJH. 1944 reported; 1949, Mrs. Moore-Brabazon; 1949 DACL: 1949-62! MNE BM; 70 pl. '49, >200, '50; >400, '51 (372 FR); '52; 12, '53; 10, '54; 25, '55; 3 infl[]orescences], '56; 3 only, '57; 50 to 60, '58; '59; '60; '61; 42, '62; '63; '64, '65. Beach opposite Walmer Castle, Miss Long. By ... S. of Guilford Hotel, 1958, Mrs. K.D.R.

6) [Dartford, 1921, AC Tagg.] 1 pl. nr. water tower, above Trosley 635612, D.V. Woods, c.1950. ...field (Longfield?) Hb. Druce. Foxendown, Meopham, formerly, Baker.

293 In the manuscript, this follows Ophrys.
[Inserted in the MS Flora at this point is a sheet headed ‘Himantoglossum in Kent – all records traced to 1933: compiled by P.M. Hall & W.H. Pearsall sen. on behalf of the B.E.C.’. This had been copied out (not quite verbatim) by Francis Rose from a typescript in his Flora of Kent related papers, to which he had added the number of the botanical district into which the relevant record fell, as well as some further records.]

9) Manston Wood Thanet before 1776 (Fl.K.).
7) bet. Chatham & Maidstone before 1820 (Fl.K.)
9) nr Margate before 1839 (Fl.K.).
8) Broome Park, Barham, 1859, Oxenden (Hb. E. Kent NHS (where is this?)
7) nr Maidstone 1875, Tempere (Hb. K).
8) Sibertswold, 1885, J. Jacob, Fl.K.: 1908, JB.
8) Adisham Rly bank 1908-1933. Discovered by A. Fox (ganger of platelayers) in 1908: in 1917 Fox cut a fruiting spike and scattered the seeds; in 1921, 27 plants appeared. J. Jacob saw it annually from 1908 to 1933; numbers varied from 2 to 27.
7) Boxley, 1909, Groom.
8) Lyminge, 1910, 1924, 1925, C. Clark.
8) Bifrons Park, Bridge, 1911, teste W.H.P.
11) nr. Great Chart, 1912, White (Hb. Mus. Brit.).
8) nr Folkestone, 1915; 1923; 1924; C’ Clark & Andrews: 1930, Walker, in BEC (1930).
8) Waldershare, 1921, Scutt.
8) Dover 1924, 1927, 1930, teste W.H.P.
8) Betteshanger, 1924, James.
7) Harrietsham, 1924, SE Gazette, 15.7.24.
8) Petham, 1925, 3 pl, teste J. Jacob.
..) Otterden, nr Faversham, 1925, Maryon & Page, BM.
7) Eastling, 1926, Kentish Express
8) Brabourne, 1926, Bentley.
8) Bishopsbourne (Charlton Park) 1926, 32, 33, J. Jacob.
15) Brenzett Sims 1926.
8) St Margarets at Cliffe, 1928, 1933, J. Jacob.
8) Alkham 1933, J. Jacob.
8) Postling, c.1938 or 9, J. Jacob.
8) Crundale, c.1938, reported to FR (“many plants”(?)!).
6) Gravesend (1760-1830) Hb. BM.
6) Greenhithe 1878-9 Fl.K., 1878 Glenny (Hb. ...Wales).
6) Dartford, v many records.
6) Eynsford 1921 Hodgson (Photo, CGE).
6) Sevenoaks 1933, Knight, “The Times”.
6) Dartford Wood Hb Turner 1775-1858 K.
1) Crayford →Dartford, Johnson 1641, Fl.K.
1) Puddledock K, 6) Lobfield = Longfield? (Hb. Druce).
1) Sutton at Hone, c.1800, Pocock.
6) Dartford, Hb. Banks, 1847-9, BM.
1) Wilmington (Stanhill) 1807, Peete, CGE.
1) W[Wilmington] Hackstable 1842 CGE.

296 Mistranscribed as 1959.
297 The source gives 1928.
6) Darenth 1831 Peete CGE.
6) Green St Green (Trulling Down) 1840 Peete (Fl.K.); 1840, Salmon, CGE.
6) Dartford 1841 Ansell (Hb. Druce); 1847, Potter BM; 1847-9, Woods in Hb. Borrer.
1) Bexley 1851, Wollaston CGE. Darenth Wood, 1843, Wollaston DVR.
5) Shoreham →Farningham before 1846 (Fl.K.); 1840, Salmon, CGE.
5) Knockholt, before 1845 BM.
5) Chevening K after 1845.
6) Ash 1850 Potter BM.

11) nr. Leeds Castle, L. Smith 1914 MNE.
12) nr. Ashford, 1922, M Corden, MNE. Gt Chart, 1912, AE White.
15) Roadside, Brookland to Brenzett, J. Ridley, 1909 MNE.

299Ophrys L.

O. insectifera L. 15, 16 21/52

Native. Woodlands, scrub and grassland on chalk, widely distributed and common, often in abundance, in 5)-8); woodlands on ragstone and gault, very rare, in 11) and 21). Much less common, though locally frequent, on the chalk of Surrey and Sussex; apparently extinct in Essex; common on chalk in Pas de Calais.


298 Mistranscribed as 1454.
299 In the manuscript, the sequence is O. apifera, O. fuciflora, O. sphegodes, O. insectifera.


11) Ryarsh Wood, on gault, 1936: 1943 **MNE**. Allington Wood, on ragstone, 1880, 1882 **MNE**: 1945!

12) Cadmans Wood 078432 DL,'57. “Myosotis” copse on gault SE of Lenham, 1946, WJLS.

A monstrosity has been reported nr. Canterbury with extra anthers: E. Ogden, BEC Rep. 1920, p.49.

**O. insectifera** x **sphegodes** = **O. x hybrid**a Pokorny

Sepals of **sphegodes**: petals like **insectifera**: lip brown, almost as narrow as **insectifera**.


**O. sphegodes** Miller 15, [16] 7/52 Early Spider Orchid

Native. Chalk grassland: rare, but locally very abundant in 7) at Queendown Warren; and in 8) near Wye, and in many places near the coast between Etchinghill and Deal. Apparently extinct in W. Kent. Extinct as a native in Surrey; still locally abundant in a few localities in E. Sussex, and rare in one locality in W. Sussex: extinct in Essex: extremely rare in Pas de Calais (Boffles!). The Queendown Warren plants flower always three weeks earlier than those of eastern Kent.


4) Sandwich, St Georges Golf Links, 1880, 1882, Fawcett Osborne **MNE**; 1887, H.L. **MNE**; 1903, JB Green, **MNE**; 1905, Mrs Sil.... **MNE**; 1920, H. Elgar **MNE**; 1939 [abundant]; 1942 [very] [abundant]; 1944 [rare]; 1945 [abundant]; 1996, KWT. Kingsdown Beach. P. Gay, 1998.


| QDW | Shakespeare C. | 86 |
| Crown | T. Ewell | 05 |
| Crundale | Dover C. | 04 |
O. apifera Hudson

Native. Chalk grassland and chalk pits, very widespread and general, but only locally in abundance:
	ragstone quarries, sandpits, and road verges off the chalk, quite rare and rather sporadic. Common on chalk, rare off it, in Surrey and Sussex, rare in Essex, common in Pas de Calais.


2) Stone marshes, on chalk rubble GMB.


4) 35 Beach opp. Walmer Castle, 1950, M.E.M.; 1957 BN.


O. apifera Hudson

15, 16 25/52 Bee Orchid


O. apifera x fuciflora = O. x albertiana Camus


O. apifera x phægodes = O. x pseudapifera Caldesio

8) a plant which may be this at Brook Hillock 1942-58. Folkstone Downs. Cheriton Downs.

(O. trollii does not occur in Kent.)

O. fuciflora (Crantz) Moench 15 4/52 Late Spider Orchid

Native. Chalk grassland: rare, and now confined to about 16 localities in 8) between Wye and Folkstone: formerly in 7). This species occurs nowhere else in the British Isles. It appears to have become extinct in Pas de Calais (at Blanc Nez till 1939), but it is still plentiful in the Somme above Amiens.

(6) Trosley 666618 Mrs. DVS Woods, 1 pl.) [Ospringe, extinct]


301 The figure 4 in 596459 has been deleted, but the entire grid reference is incorrect for Dry Hill and should presumably be 500552. It has been ruled off from the entry below, at Basted Quarry, but a reference of 596559 would not be far from that location.

302 Given by Francis Rose as O. x pseudoapifera Caldesio, but, irrespective of the validity of either version of the name, the cross is not currently recognised as part of the British flora.

303 Winchcombe site recognised by Francis Rose as in error (note on letter from Nick Stewart, 16 February 1998).

304 This passage is unclear.

O. fuciflora x sphegodes = O x obscura G. Beck


O. scolopax Cav.

[Given in Francis Rose’s The Orchids of Kent List, but no account in manuscript.]

Serapis cordigera L.

[Given in Francis Rose’s The Orchids of Kent List, but no account in manuscript.]

---

305 This gridreference is incorrect; TR 216 382 may have been intended.
306 Alkham Valley site recognised by Francis Rose as in error (note on letter from Nick Stewart, 16 February 1998).
## List of abbreviations in Francis Rose’s manuscript Flora of Kent.

Recorders’ names are generally given as initials, and abbreviations are also used for the standard county flora and some other things. No list was given in the manuscript by which these references may be interpreted, so the following list has been pieced together by surmise and with reference to Francis Rose’s correspondence, to labels on herbarium specimens, to the list given in Rose (1960) and those occasional cases in the manuscript where a name has been expanded.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Name</th>
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<td>BC</td>
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<td>BM</td>
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Acknowledgements

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Geoffrey Kitchener, 2016-20