

Kent Rare Plant Register

Draft species accounts

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Kent rare plant register

This section of the register covers:

Festuca arenaria
Filago pyramidata
Filago germanica
Fragaria vesca
Frankenia laevis
Fumaria bastardii
Fumaria parviflora
Fumaria reuteri
Fumaria vaillantii

It is issued in draft, pending further development. Records, photographs and information regarding the occurrences of these plants in Kent will be welcome.

The register accounts give priority to data from 2010 onwards, but some historic data are also included (however, in the data tables, generally no specific sites without post-1970 records) so as to indicate trends and where the plant may yet be discovered or rediscovered. Distribution maps for records from 2010 onwards show vice counties 15 and 16 in white (the boundary between is a black line) and local authority boundaries by red lines.

See the Kent webpage of the BSBI website at <http://www.bsbi.org.uk/kent.html> for the full Kent rare plant register list, the introduction to the register and a list of 'probably extinct' Kent plants.

Abbreviations used in the text:

Recorders' initials:

BBe Ben Benatt
 BW Brian Woodhams
 CO Colin Osborne
 DC David Carder
 DM Daphne Mills
 EGP Eric Philp
 FR Francis Rose
 GK Geoffrey Kitchener
 JA Jan Armishaw
 JBe Jim Bevan
 JG José Gibbs
 JLa Jacky Langton
 JRP J.R. Palmer

ML Mel Lloyd
 MN Martin Newcombe
 PHe Peter Heathcote
 PHo Paul Holt
 PW P.J. Wilson
 RG Bob Gomes
 RM Richard Moyse
 RMB Rodney Burton
 SB Sue Buckingham
 SC Steve Coates
 TI Tim Inskipp

Other abbreviations:

BM Natural History Museum
 herbarium
 KBRG Kent Botanical Recording Group
 MOD Ministry of Defence
 SLBI South London Botanic al Institute
 herbarium

Festuca arenaria Osbeck (Rush-leaved Fescue)

Draft account

vc 15

Rarity / scarcity status

Festuca arenaria is a nationally scarce plant, but fairly widely distributed around the coasts of Great Britain in appropriate habitats, primarily sand dunes and sandy shingle, and its conservation status is one of 'Least Concern' in both England and Great Britain as a whole. In Kent, it is **rare**.

Account

The history of Rush-leaved Fescue in Kent is complicated by the differing views which have been taken over its naming generally. Indeed, it is still a question as regards whether to recognise *Festuca arenaria* with two subspecies, subsp. *arenaria* and subsp. *oraria*, or whether these should both be subspecies of *Festuca rubra* (Red Fescue) instead. In the past, subsp. *oraria* has been treated as a separate species, *Festuca juncifolia*. Hanbury and Marshall (1899) considered whether *Festuca rubra* var. *arenaria* occurred in the county, having regard to its inclusion in Topographical Botany (1873-74) for East Kent on the authority of G.E. Smith. They came to the conclusion that they were not satisfied that it had really been found and noted that confusion over naming in relation to *Festuca rubra* did not help.

However, it appears that Rush-leaved Fescue must have been present after all. Most of the early modern Kent records came from Sandwich Bay, where various recorders noted it, at least from the 1930s onwards. Francis Rose described it (in

his unpublished Flora) as growing on 'fixed dunes, and white dunes becoming fixed; rare, but very locally abundant on the Sandwich dunes and at Shellness

in Sheppey'. The reference to Sheppey was based on a 1962 occurrence on shell sand in a community of *Ammophila arenaria* (Marram). Rush-leaved Fescue was noted in Philp (1982) as subspecies *arenaria* of *Festuca rubra*, present on coastal sand-dunes in the Greatstone and Sandwich Bay areas. Those two locations also provided the three tetrad records given in Philp (2010).

Littlestone. Photos by Liam Rooney, 5 June 2010

The species generally favours sand dunes in the county, although some plants at Littlestone occupy a more artificial habitat, being associated with the coastal road margin and its concrete structures where sand has blown or there is consolidated shingle. Eric Philp noted a strict zone limitation, by which the species grows in fairly open sand between



Elymus junceiformis (Sand Couch) and before the more closed *Festuca rubra* (Red Fescue) turf. Its Kent distribution is echoed by that of *Vulpia fasciculata* (Dune Fescue) and there is the potential for intergeneric hybridity, likely hybrids from Sandwich Bay having been reported in 1967 (probably from the early 1960s).

The Rush-leaved Fescue is recognisable from its stiff, rush-like leaves (stiffer in subspecies *arenaria* than in subspecies *oraria*, but both stiffer than Red Fescue). The upper ribs are densely hairy (Red Fescue's being scabrid or only sparsely hairy).

Site	Grid reference	Site status	Last record date	Recorder	Comments
Greatstone	TR0822		(1) 29 June 2013 (2) After 1990, before 2006	(1) TI (2) EGP (Philp, 2010)	(2) Record given as TR02W, so may relate to neighbouring monad.
Greatstone			19 June 2000	FR	Dunes, TR 082 233.
Littlestone	TR0825		5 June 2010	KBRG meeting	Clumps by Coast Road at TR 08692 25697, TR 0868 2567, more outside Romney Bay House and scattered southwards at least as far as TR 0865 2538. Det. BW.
Sandwich Bay	TR35P & 35U		After 1990, before 2006	EGP (Philp, 2010)	The TR3658 record below is also within TR35P.
Sandwich Bay	TR3559		26 May 2017	SB	
Sandwich Bay	TR3560		26 May 2017	SB	
Sandwich Bay	TR3561		8 September 1998	PW	TQ 351 619, in sand dunes with <i>Dianthus armeria</i> .
Sandwich Bay	TR3658		26 June 2013	SB	Patch on bare sand in dunes at TR 36046 58377 with <i>Bromus hordeaceus ssp thominei</i> .

Filago pyramidata L. (Broad-leaved Cudweed)

Draft account

vc 16; gone from vc 15

Rarity / scarcity status

The Broad-leaved Cudweed is nationally scarce and listed as **Endangered** in both England and Great Britain as a whole and so facing a high risk of extinction in the wild. It is an archaeophyte, or ancient introduction, whose presence as an arable weed in south east England has declined substantially, probably due to agricultural changes such as herbicide use and autumn cereal growing. It is treated as a UK Biodiversity Action Plan priority species for which the plan is to monitor populations, to restore favourable habitat at historic sites and to ensure that habitat conditions such as ground disturbance are maintained at extant sites. There are very few extant sites in Britain. Phil Wilson listed¹ 42 British sites (excluding misidentifications) from which the species had been recorded since 1945, and of these, only eight had records confirmed since 1990. The largest of these is currently the Plantlife reserve at Ranscombe Farm, West Kent. Although this site harbours millions of plants, in Kent the species is treated as **rare**.

Account

The first published record for *Filago pyramidata* in Kent is by J.T.B. Syme in the 3rd edition of *English Botany* (vol. 5, 1866), but this does no more than mention the county. It may well relate to a find by him at Darenth Wood in 1853 (specimen in the Natural History Museum), but it is preceded by an 1842 Dartford Heath specimen gathered anonymously for the Botanical Society of London and mis-labelled *Filago germanica* (= *Filago vulgaris*, Common Cudweed). Apparently the two species were subject to much confusion in the 19th century (and indeed, later). Hanbury and Marshall (1899) found Broad-leaved Cudweed to be local in fields and waste ground, chiefly on the chalk. Amongst their cited locations, Hanbury himself found it abundant in cornfields between Ringwoud and St Margaret's in East Kent and F.M. Webb contributed to the 1899 *Flora of Kent* an 1875 record near Luddesdown – presumably the present Ranscombe Farm site.



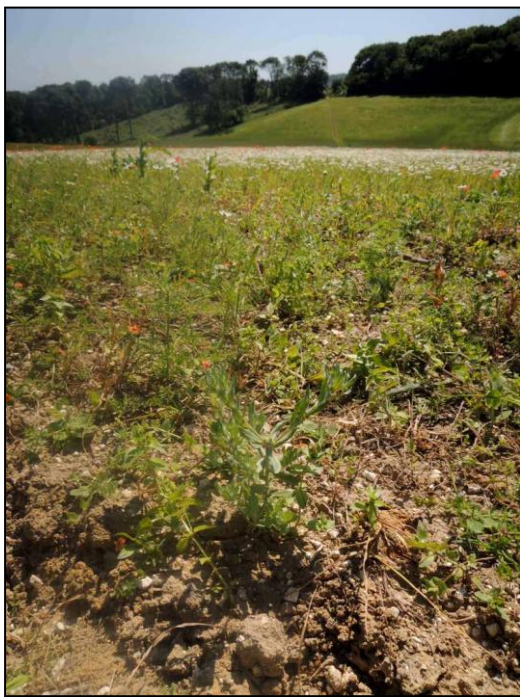
Ranscombe Farm. Photo by Richard Moyse / Plantlife, 2011

The range of 19th century sites in Kent does not seem to be sustained beyond 1900, which may suggest that the agricultural changes suggested as a cause for national decline (operating primarily in the mid- to late 20th century) may not be applicable locally. There is evidence of the continued existence of the Ranscombe Farm population, with records from T.J. Foggitt in 1924, A.R. Horwood in 1928 and Francis Rose from 1943 to 1960. The adoption of the species nationally by Plantlife as part of the 'Back from the Brink' project led to a series of population assessments and reports, giving totals for Ranscombe of 60,000 plants in 1994, 20,000 in 1995, 10,000 in 1996, 5-10,000 in 1998 and over 1,000 in 2000. This must be set against variable earlier estimates (e.g. over 500 in 1985), but suggests a decline latterly in spite of management under an agreement with English Nature

¹ P.J. Wilson. *Filago pyramidata* in 1998: Plantlife Report no. 124 (1999).

from 1985. However, in 2005 Plantlife established the farm as a nature reserve and changed conventional agricultural use to management targeted specifically for arable wild plants.

The effect of targeted management is described by Richard Moyse (2013)², from which much of the following account is drawn – overall, plant numbers at Ranscombe reached over three million in 2012.



Kitchen Field, Ranscombe Farm – habitat. Photo by Liam Rooney, 24 July 2012

The classic location at Ranscombe has been Kitchen Field (TQ 698 681), which stretches across a valley on chalk providing north- and south-facing aspects. This is an SSSI and carries an exceptionally rich arable weed flora, including *Agrostemma githago* (Corncockle), *Ajuga chamaepitys* (Ground-pine), *Lysimachia foemina* (Blue Pimpernel) *Anthemis cotula* (Stinking Chamomile), *Euphorbia exigua*, (Dwarf spurge), *Malva setigera* (Hairy Mallow) and *Roemeria argemone* (Prickly Poppy) – all Kent rare plant register species. Population totals for the Broad-leaved Cudweed up to 2005 relate to this field. Although limited fertiliser and herbicide applications were provided before, these were discontinued from this year, whilst crop sowing and minimum tillage continued, but with autumn tillage moved to spring over 2011-12. The consequence is that there has been no harvestable crop here at least for

the period 2011-13, but the Broad-leaved Cudweed has flourished, with a total of 166,000 plants estimated in Kitchen Field in 2012.

Longhoes Field, Ranscombe Farm. Photo by Richard Moyse / Plantlife, July 2012

The management changes since 2005 have, as well as increasing plant numbers in Kitchen Field, seen the expansion of the species to other locations at Ranscombe where not noted before. Longhoes Field (TQ 715 673) has a southern exposure on chalk and was provided with an uncropped margin from 2005, in which *F. pyramidata* soon appeared for the first time. With cultivation being changed to a similar regime as for Kitchen Field, the population has expanded dramatically and while distribution has been patchy overall, plants have at times been so dense as to reach 400 in a quadrat of just 0.5 x 0.5 metres. The estimated total for this field in 2012 was 3,040,000 plants.



² R.J. Moyse. Response of broad-leaved cudweed *Filago pyramidata* to cultivation under Environmental Stewardship at Ranscombe Farm Reserve, Kent, UK: *Conservation Evidence* (2013) **10**, 72-76.

Additionally, plants have been found in Twenty Acre Field (in the margin from 2006, with thousands of plants present in 2012 along a 450m headland, TQ 699 679 to TQ 703 679) and along 75m of a headland (TQ 705 674 to TQ 705 675) where there were dozens of plants in 2012. Individual plants or small groups of plants have also been seen in open woodland and on an arable margin north of Longhoes Field, in a ride above Great Wood (TQ 705 686, 2011), and in an experimental chalk 'scrape' created within grassland in the south-west of the reserve (TQ 692 675, over 500 m from the nearest known population).

It seems likely that the rapid appearance of substantial numbers of plants in areas such as Twenty Acre Field and Longhoes Field derives from buried seed. Although there appear to be no earlier records which specifically indicate those localities, there is a 1970 record by Eric Philp for TQ7067 which could be for either of these, but in any event would lie outside Kitchen Field. However, the other, relatively small-scale occurrences suggest recent accidental transmission from the main populations. Further evidence of the potential for accidental movement is given by a 2010 record at Crutches Lane, Rochester (TQ7069) where about 100 plants were seen on a residential driveway. The occupier considered it to have been present for about six years and spreading rapidly; he believed that it may have been a consequence of regularly walking his dog at Ranscombe Farm.

Filago pyramidata is a species of nutrient-poor, well-drained and disturbed terrain. In Kent, these preferences are met by its presence in thin soil over chalk in, or at the edge of arable, preferably unfertilised so as to reduce competitive growth. It is an annual, cited as having a peak for germination between October and December, but with a smaller peak in March; the overwintering plants may become many-branched, whilst the spring plants may be a tenth of the size, with a single flowering head. Ploughing Kitchen Field in spring 2012, rather than autumn 2011, however, did not prevent a substantial population arising during 2012 and Joyce Pitt³ regarded it as in Kent primarily germinating during spring to early summer.

Broad-leaved Cudweed is a whitish-grey-haired annual, sometimes confused with *Filago germanica* (Common Cudweed). The former, however, is generally more sprawling (rather than erect); has main stems leaves widest above the middle (whereas *F. germanica* leaves are widest below the middle, or oblong); and has leaves around the main flower head cluster of which one or more overtop it (not overtopped at all in *F. germanica*). *F. pyramidata* also usually has less capitula per cluster: (5)10-20(25), as against (15)20-c.40 in *F. germanica*.



Photos by Liam Rooney. Left, *Filago pyramidata* with subtending leaves overtopping flower head cluster. Right, *Filago germanica* with subtending leaves below top of cluster and with more capitula making up the cluster.

³ J. Pitt, Vascular Plants, in *The Kent red data book: a provisional guide to the rare and threatened flora and fauna of Kent*, ed. A. Waite (2000).

Filago germanica L. (*Filago vulgaris* Lam.) (Common Cudweed)

Draft account

vc 15 and 16

Rarity / scarcity status

Common Cudweed, despite its name, is regarded as **Near Threatened** in both England and Great Britain as a whole because a trend of decline is bringing it close to qualifying as at risk in the wild. Whilst still fairly widespread in the British Isles, the species has been markedly diminishing in south and west England and in Ireland, probably through changing agricultural practices and cultivation of marginal land. A comparison of its area of occupancy in England over the periods 1930-1969 and 1987-1999 produced a calculated decline of 24% in the likelihood of recording the species. In Kent, the number of sites means that it is not regarded as rare or scarce; and data since 1971, if anything, suggest that, in contrast to the wider national position, the species is increasing substantially in the county.

Selling. Photo by Liam Rooney, 10 July 2010

Account

The first published record of Common Cudweed in Kent may well be a reference by Thomas Johnson to *Gnaphalium vulgare* in his *Iter Plantarum* (1629), as encountered on a journey between Gravesend and Rochester. Hanbury and Marshall (1899) equated this plant name with Common Cudweed; but Francis Rose considered that *Gnaphalium uliginosum* (Marsh Cudweed) was a possible alternative identification. The species was treated by Hanbury and Marshall as common throughout the county in dry fields and on banks, and so not requiring enumeration of any individual records.



However, by the time of Philp (1982), it was rather local and uncommon, being recorded in only 23 tetrads, generally on dry roadside banks, quarries and waste places on sandy soil. Against a background of national decline, it is surprising that the survey recorded in Philp (2010) showed an increase to 41 tetrads. The basic distribution remained the same with very little in West Kent, a scatter in East Kent and a line following the Folkestone Sands from Maidstone south-eastwards. The distribution on sandy ground, however, was more pronounced, with a noticeable increase around Maidstone. Whilst this might be an artefact of recording methods; subsequent recording supports the status of the species as one which is increasing in Kent.



Strood, habitat. Photo by David Steere, 31 July 2016

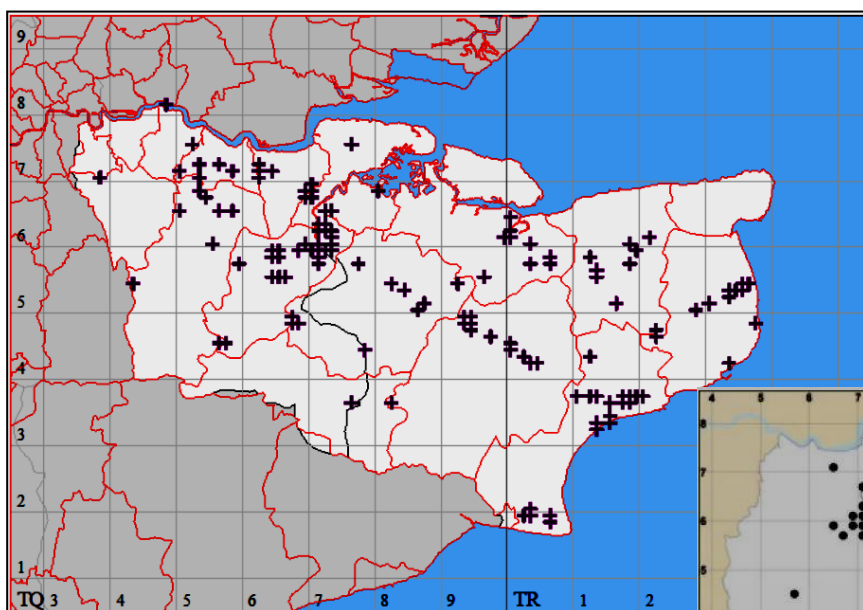
Filago germanica is an annual, spring- or autumn-germinating, of dry, open ground. In Kent it has been recorded on motorway banks; colliery spoil; gravel pits; dunes; consolidated shingle; arable margins; dry gravelly heath; sandy ground in quarries, fields or on roadsides; and more rarely on calcareous ground, such as in stubble on chalk and in association with cement works.

It is, with *Gnaphalium uliginosum* (Marsh Cudweed), the cudweed most likely to be encountered in Kent. It may be distinguished from *Filago pyramidata* (Broad-leaved Cudweed) by the characters mentioned in the account for that species. Very small plants may resemble *Logfia minima* (Small Cudweed), but the latter species should have eight or less capitula in each head, whilst *F. germanica* has between eight and 40. Within the range of five to fourteen capitula, however, there can be a degree of overlap and so it is best to check the outer phyllaries around an individual capitulum (not to be confused with the leaves which subtend the entire head of capitula). The phyllaries are blunt in *Logfia minima*, long-tapering in *F. germanica*.

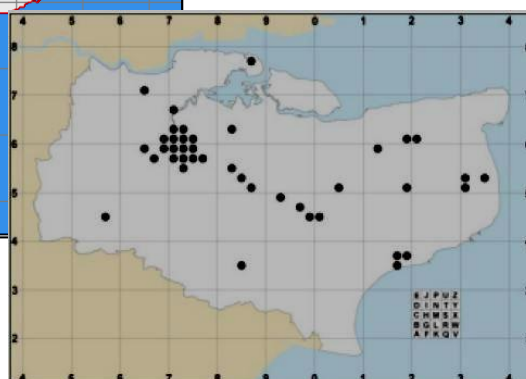


Selling. Photo by Liam Rooney, 10 July 2010. Over 30 capitula are visible on this head.

As Common Cudweed is not particularly rare in Kent, the distributional data maintained in this register will be at 1km square (monad) level. This will entail recording at a finer scale than the tetrads given in Philp (2010), from which the following 1991-2005 map is taken (with kind permission of the late Eric Philp and the Kent Field Club). From the 2010-18 recording map it will be seen that, except around Maidstone, the recent records demonstrate more records (126 monads, equivalent to 95 different tetrads) and a wider distribution. Additional populations have been found in many places, including on sandy shingle at Dungeness where Philp (1982) has only one tetrad record, and Philp (2010) has none. The number of tetrad records is for 2010-18 over four times that for 1971-82 and it looks as though the species has never been so common in the county as now.



Filago germanica (Common Cudweed) 2010-17



Filago germanica (Common Cudweed) 1991-2005

*

Fragaria vesca L. (Wild Strawberry)

Draft account.

vc 15 and 16

Rarity / scarcity status

Wild Strawberry is common throughout the British Isles and its conservation status in Great Britain is regarded as of 'Least Concern'. Whilst it is also common in England alone, there is sufficient evidence of decline that it is now treated as being **Near Threatened**. A comparison of its area of occupancy in England over the periods 1930-1969 and 1987-1999 produced a calculated decline of 29% in the likelihood of recording the species. Similarly, in Kent it is a frequent plant, indeed it is the commonest in the rare plant register, but between the county surveys of 1971-80 and 1991-2005 there has been a fall of 23% in the number of tetrads in which it is recorded.

Plaxtol. Photo by Liam Rooney, 13 May 2012

Account

Wild Strawberry is known as a dietary item in mediaeval Kent, the remains having been found in an 11th century cesspit at Canterbury⁴. What may have been its remains (determined as 'strawberry/cinquefoil') were also discovered in the excavation of Roman pits at Maidstone⁵. The first published record of *Fragaria vesca* in Kent, however, was made by Thomas Johnson on 13 July 1629 (Iter Plantarum, 1629), who saw it by the main road between Gravesend and Rochester. He also encountered it on his second Kentish Journey, in 1632, in Thanet (*Descriptio Itineris*, 1632). The earlier botanists have



little to say about the species in Kent other than along the lines of 'In Woods – very common' (Edward Jacobs, *Plantae Favershamienses*, 1777), or 'Common in all the woods and lane' (Thomas Forster, *Flora Tonbrigensis*, 1816). Hanbury and Marshall (1899) considered it common in suitable situations (woods and banks) throughout the county. And so it remained up to the 1971-80 county survey (Philp, 1982), when *Fragaria vesca* was to be found in woods, scrub, chalk downland and roadside banks in 603 tetrads across the administrative county, i.e. 58% of all tetrads (and part tetrads). Those areas where the species was thin on the ground comprised Grain, Sheppey, the grazing marshes and other low ground of North Kent, Thanet, the Low Weald and Romney Marsh.

Court Wood. Photo by Liam Rooney, 8 June 2005

By the time of the 1991-2005 survey (Philp, 2010), however, Wild Strawberry was still regarded as frequent, except in coastal marshes and other wet areas, but had reduced to 466 tetrads, so that the species was now only known in 45% of all tetrads (and part tetrads) in the

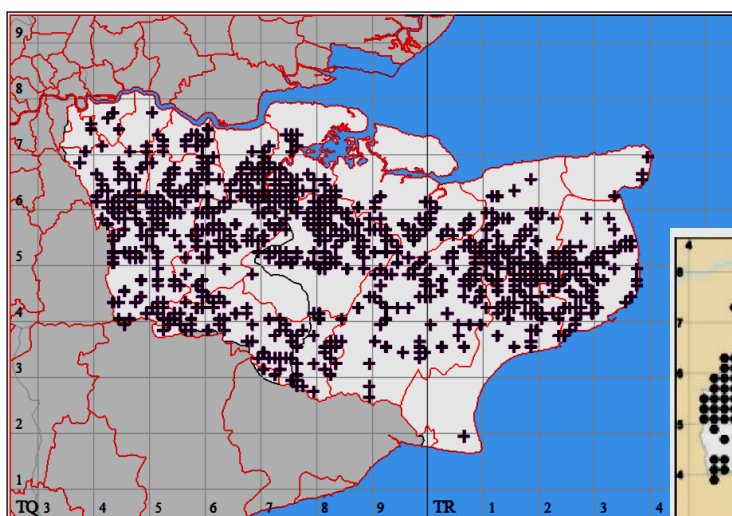
⁴ M.G. & A. Hicks (2001). St Gregory's Priory, Northgate, Canterbury: excavations 1988-1991.

⁵ C. Edwards (2007). Excavations at Fremlin Walk, Maidstone. *Archaeologia Cantiana* **127**: 73-106

administrative county. This still indicates a common plant; but the rate of decline is concerning. The cause is not obvious. The plant's habitat preferences are reasonably wide; it is, in the British Isles, not at the outer range of its distribution such as might give rise to sensitivities to climate change. It seems least common in the more treeless areas – Sheppey, the north Kent marshes and Romney Marsh.

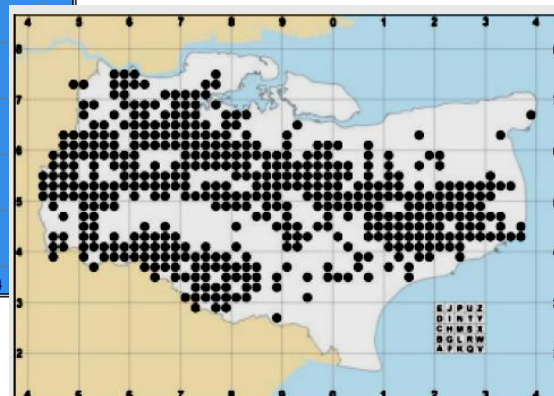
As Wild Strawberry is common in Kent, the distributional data maintained in this register will be at 1km square (monad) level. This will entail recording at a finer scale than the tetrads given in Philp (2010), from which the accompanying 1991-2005 map is taken (with kind permission of the late Eric Philp and the Kent Field Club). The 2010-18 distribution map is consistent with the earlier one (but covers a larger area, as including metropolitan West Kent). It covers 473 tetrads (equivalent to 761 monads), in comparison with 466 tetrads in Philp (2010). So, although metropolitan records have to be discounted for a more accurate comparison, this is

not material evidence of further decline.



Fragaria vesca (Wild Strawberry) 2010-18

Fragaria vesca (Wild Strawberry) 1991-2005



Fragaria vesca is a perennial, sending out long, arching stolons which root so as to result in an expanding patch of the plant. It is shade-tolerant, but may often be found at the edge of a hedge or wood where it is lighter. On steep roadbanks it is favoured by highway cutting which prevents coarser vegetation or shrub development from dominating.

It may be confused with *Potentilla sterilis* (Barren Strawberry), which occupies similar habitats, but which has the terminal tooth of its leaflets shorter than the adjoining teeth, sepals clearly visible between the petals, and flowers which are smaller than those of Wild Strawberry. Escaped *Fragaria ananassa* (Garden Strawberry) is larger in all its parts (flowers 20-35mm across v. 10-20mm). *Fragaria moschata* (Hautbois Strawberry) also tends to be larger, but with an overlap in flower size (15-30mm across); its uppermost pedicels have spreading or reflexed hairs whilst those of *Fragaria vesca* are appressed or ascending. There are forms of *Fragaria vesca* grown in gardens and so potentially capable of escaping: forma *roseiflora* with pink petals; forma *alba* with white fruits; and forma *semperflorens*, which flowers and fruits throughout the year. The usual wild form, forma *vesca*, may also be found as a garden plant and has long been cultivated as such and can escape: suburban records are often of this status.



Yockletts Bank. Photo by Lliam Rooney, 21 May 2009

***Frankenia laevis* L. (Sea-heath)**

Draft account

vc 15

Rarity / scarcity status

Sea-heath is a coastal plant known from the Channel Islands and south east England, extending to Lincolnshire. Scattered records further west in England and Wales are considered likely to be of planted origins, including escapes from rock gardens, and one of the Kent sites (Margate) is of similar origins. It is considered to be Near Threatened in both England and Great Britain as a whole, although much of its decline may be historic, associated with coastal development and the construction of sea defences. In Kent, it is **scarce**.

Account

The earliest published record for Kent is by William Hudson in his *Flora Anglica* (1762), where he accounted for it as found plentifully in the Isle of Sheppey. In the second edition (1778), Thanet was added as a location. By the time of Hanbury and Marshall (1899), it was regarded as very local, with a scattering of current records along the east coast from Pegwell Bay down to New Romney. There has been long continuity for some of these east coast locations. Gerard Smith knew it upon moist chalk-cliffs near Lydden Spout (*A Catalogue of Rare or Remarkable Phaenogamous Plants, collected in South Kent*, 1829); this was still at the foot of the cliffs there for Francis Rose in 1945 and regarded as abundant by Philp (2010). The species remains very local in the county.

Pen Bars. Photo by Sue Buckingham, 20 August 2011



Frankenia laevis may be found in Kent in two main types of habitat. One is bare or semi-bare, damp, saline ground, generally free-draining sand/shingle, which can be at the upper level in transition to saltmarsh. The association of this species in such a habitat with *Suaeda vera* at Lydd Ranges is paralleled by the situation at Blakeney,

Scolt Head Island, Burnham Overy Staithe and Brancaster (all Norfolk) noted by Brightmore (1979)⁶.

The other type of habitat is on or at the foot of sea cliffs. The presence of the species in an undercliff community (as at Abbot's Cliff) is remarked by Brightmore (1979) as in Britain only to be found between Dover and Folkestone, and then had been adversely affected by cliff falls and sea defence works. The presence of the

⁶ D. Brightmore. *Frankenia laevis* L. Biological Flora of the British Isles. *J. Ecol.* (1979) **67**: 1097-1107.

species on the cliffs themselves was studied by Martin Newcombe (1991⁷), which involved being lowered over the edge of Abbot's Cliff. *Frankenia* was found over an area of about 0.1 hectare, in exposed places being frequently the only species present. Its main associates were *Thymus pulegioides* (Large Thyme) and *Sedum album* (White Stonecrop), both also plants with an ability to exploit bare, soil-less terrain. Other species present included *Blackstonia perfoliata* (Yellow-wort), *Brassica oleracea* (Wild Cabbage), *Centaureum erythraea* (Common Centaury), *Echium vulgare* (Viper's-bugloss) *Helianthemum nummularium* (Common Rock-rose) and *Limonium binervosum* (Rock Sea-lavender). *Rubia peregrina* (Wild Madder) was found on a subsequent visit.

Sea-heath is a mat-forming perennial anchored by a strong taproot, bearing evergreen leaves with glands from which salt may be excreted. It is not readily confusable with other species.

Site	Grid reference	Site status	Last record date	Recorder	Comments
Lydd Ranges	TR01D		30 May 1993	EGP & JBe (Philp, 2010)	In Philp (2010): a few plants on the edges of saline pools. <i>In litt</i> : a small colony with <i>Suaeda vera</i> with two or three plants found in saltmarsh in the administrative county of Kent (but both sides of county border are in vc15).
Lydd Ranges	TR01I		(1) BBe (2) 30 May 1993	(1) 7 August 2017 (2) EGP & JBe (Philp, 2010)	(1) TR 03460 17240, small patch, Wickmaryholme. (2) In Philp (2010): a few plants on the edges of saline pools. <i>In litt</i> : flourishing with many healthy plants on bare ground at the north side of Wickmaryholm Pit, although part of site had been destroyed by building up and widening sea wall. Known at the Wicks, 1946, FR.
Dungeness, Pen Bars	TR0616		(1) 20 August 2011 (2) 2007 (3) 27 June 1996	(1) SB (2) RG (3) EGP (Philp, 2010)	(1) Abundant on sand and shingle in sea seepage gully from TR 06403 16978 to TR 06503 16772. (2) TR 065 167. (3) Recorded as at TR01T, in good quantity on shingle at Pen Bars.
Abbot's Cliff	TR2738		(1) 30 September 2013 (2) 11 July 1990	(1) SB (2) MN	(1) Western margin of brackish pool at base of Abbot's Cliff. Spread of plants 20 x 2 metres at TR 27555 38518 and smaller area at eastern margin at TR 27609 38514. (2) At TR 276 386, 200-250 plants over about 0.1 hectare on level terraces along cliff face (accessed by abseiling). Also visited by EGP on 22 July 1990. Recorded at Abbot's Cliff by FR 1947-60.
Samphire Hoe	TR2838		(1) 27 January 2014 (2) 9 July 2013	(1) PHO (2) CO	(1) Two plants on front edge of Hoe above fenced concrete slope and near pool, c. TR 2875 3871,

⁷ M. Newcombe. Sea Heath and other plants on a degraded cliff face. *Transactions of the Kent Field Club* (1991) **11**: 93.

					possibly derived from original sowing or planting on the area ⁸ . (2) Apparently a different site - one patch about 2 ft. sq, located 5-10 metres up the side of chalk cliffs between Samphire Hoe and beachside house, c. TR282387.
Dover, Shakespeare Cliff	TR3039		(1) 22 July 2010 (2)) After 1990, before 2006 (3) 26 May 1988	(1) SC (2) EGP (Philp, 2010) (3) EGP	(1) Five clumps. (2) Recorded as at TR33E, a few plants on the chalk cliffs. (3) TR303395. Also recorded here on dry chalk rubble of undercliff by FR in 1958 and by P. Moring in 1904 (BM).
Margate	TR3270, TR3370		(1) 9 July 2018 (2) 19 May 2015 (2) 23 June 2011 (3) 2 January 2011	(1) JG (2) CO (2) SB (3) SB	(1) TR3270, on chalk cliff face. (1)(a) On cliffs below ornamental planting, TR3270, as previously recorded. (b) One plant on promenade by road down from cliff-top at c. TR 330 700. (2) Well-established for 15m on low chalk cliff TR 32972 70512, escaped from flower bed on cliff top; similarly escaped at TR 3295 7050. (3) TR 32961 70512 many plants on low chalk cliffs above promenade, probably at least 30m.



Abbot's Cliff, habitat (plant grows on margin above green algae at end of pool). Photo by Sue Buckingham, 30 September 2013

⁸ A small number of plants was apparently grown on from seed deriving from the Abbot's Cliff site, for planting out at Samphire Hoe, according to Kershaw, K.R., Helliwell, D.R. & Warren, C.D., Ecological and environmental geology, in (eds.) Harris, C.S., Hart, M.B., Varley, P.M. & Warren C.D. (1996) *Engineering Geology of the Channel Tunnel*.

Fumaria bastardii Boreau (Tall Ramping-fumitory)

Draft account

vc 15, long gone from vc 16

Rarity / scarcity status

Fumaria bastardii is an agricultural weed not uncommon in Britain and Ireland, except for the south east and midlands, from which it is virtually absent. In England and in Great Britain as a whole its conservation status is regarded as of 'Least Concern'. In Kent, it has appeared several times recently after a long absence. It is difficult to assess how far these may yet be casual appearances, but some are of small populations, which may indicate potential for continuity. The local status of the species is now moving from **rare** towards **scarce**.



Account

The Tall Ramping-fumitory has always been unusual in Kent. The first publication of its presence in the county was in Hanbury and Marshall (1899) under the name of *Fumaria confusa*. Marshall had found it at Kennardington; Hanbury had seen it between Bidborough and Speldhurst and between Mockbeggar and Yalding; and F.M.Webb (a botanist who was mostly involved with the flora of the Liverpool area and who died in 1880) was credited as the first finder, with discoveries near Ashford and Harbledown. However, all these finds are likely to have been preceded by an 1854 specimen from Kits Coty near Maidstone which was identified as this species by Pugsley (1912)⁹ as then in the herbarium of the late Frederick Townsend (now **SLBI**).

Westbere. Photo by Colin Osborne, 18 June 2015

It has, however, been little seen since until recently. A plant claimed near Canterbury in 1912 may not be this species; but Francis Rose found it in 1948 in hospital grounds at Coxheath and it was in this area that Dr Cyril West also recorded it, in the 1950s. Then, after an absence of record, on 7 September 2011 a fumitory was found by members of the Sussex Botanical Recording Society which was determined as this species by Rose Murphy, the BSBI referee. The discovery was written up as 'Return of *Fumaria bastardii* to Sussex' in *BSBI News* (2012) 119:39. Whilst it was claimed for Sussex as part of recording in vc14, the map reference given (TQ 9918 1818) is in the administrative county of East Sussex, but for botanical recording purposes is in vc15, East Kent. The position is complicated in that the fumitory could not be found when Kent botanists visited the site in 2012, and the map reference appeared to be incorrect. Upon enquiry it seems that the plant was originally found somewhat south of the published location, in the near vicinity of a group of coastal properties, Jury's Gap House and Jury's Gap Coastguard Cottages. The published location is about 250m Kent-wards of the vice county boundary and the actual location is understood to be about 300m inside East Kent. The site was re-visited by Kent botanists in 2013, when it appeared that the flower bed in which it had originally been seen had been excavated and spread over other parts of the grounds, albeit that the fumitory had not reappeared in the process.

⁹ H.W. Pugsley. The genus *Fumaria* L. in Britain. Supplement to the *Journal of Botany* (1912) vol. 50.



Westbere, habitat. Photo by Colin Osborne, 18 June 2015

On 18 June 2015 a further plant was found by Colin Osborne, subsequently confirmed by Tim Rich from photographs, just within the railway fence by the former level crossing at Walnut Tree Lane, Westbere, TR 1965 6101. Its presence is perhaps associated with crossing closure works by Network Rail in the preceding year or so. Further investigation by Lliam Rooney (25 June 2015) revealed a small population, c.20 plants ranging from small and scraggy to robust, scattered by a footpath parallel to the railway, both within and outside railway land. *Fumaria muralis* (Common Ramping-fumitory) was also present.

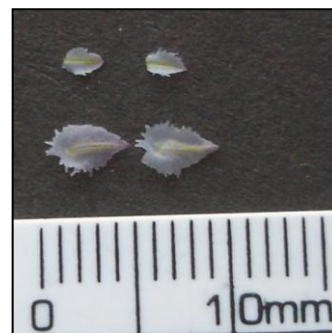
A colony was also discovered by Lliam Rooney at Graveney Road, Faversham on 10 October 2015. A very large plant was seen sprawling for 3m along the ground and up 1.5m into windbreak trees at TR 02910 61057; two small specimens were at TR 02979 61051; another very large fumitory grew at TR 02986 61052, spreading 2m x 1.5m up the fence with two or three small plants 0.5m away. Then there was a small collection of small plants scrambling along the ground and a swathe of larger plants in the hedge for 12m, the middle grid reference being TR 02999 61057 going into TR0361. Both Westbere and Faversham populations seem to have a reasonable expectation of continuance, although all fumitories require a degree of continued disturbance if not to remain as casuals.

Further scattered populations were found in 2017: by Sue Buckingham near Richborough, at TR 3341 6113, on sand by a fence off the A256; and at Ash (East Kent), TR 2984 5809, on a sandy roadside bank; and with Lliam Rooney near Tyler Hill, TR 1415 6103, on a sandy laneside. In 2018, Danny Chesterman found it in Broadstairs station car park, TR 39070 68039.

Tall Ramping-fumitory is elsewhere in Britain commonest on cultivated or other disturbed land. It is a fairly large-flowered fumitory (the Westbere corollas measured 11mm) with small sepals (2 x 1.5mm for the Westbere plant) bearing jagged, forwardly-directed teeth. The commonest variety has salmon-pink flowers without any other colour markings, but the Westbere flowers were whitish, very pale pink, the key feature being that the upper petal is concolorous without a dark tip, and in this respect it may be distinguished from all other British large-flowered fumitories.



(Left) From Westbere plant, showing small sepal and concolorous upper petal. Photo by Colin Osborne, 18 June 2015



(Right) From Westbere plant, showing small sepals above, compared with those below from nearby *Fumaria muralis* (Common Ramping-fumitory). Photo by Colin Osborne, 18 June 2015

Fumaria parviflora Lam. (Fine-leaved Fumitory)

Draft account

vc 15 and 16

Rarity / scarcity status

Fumaria parviflora is an ancient introduction, or archaeophyte, which is in the British Isles almost entirely restricted to arable fields on chalk. With other arable weeds, it has declined after the middle of the 20th century as a result of agricultural intensification, with herbicidal treatments and high fertiliser levels. This trend has led it to be regarded as **Vulnerable** in Great Britain and so at high risk of extinction in the wild, albeit that in England it is assessed only as **Near Threatened**. In Kent it was initially assessed as rare, based on the limited records in Philp (2010), but further recording suggests that it may not even qualify as **scarce**.

Account

The first record in Kent is given by John Gerard in his *Herball* (1597), who tells us that 'I founde the [Fine-leaved fumitory] growing in a cornefielde between a small village called Charleton and Greenwich'. Hanbury and Marshall (1899) described the plant as to be found in chalky fields; rather rare, though usually abundant where it occurs. They listed a number of records across the county from Erith to Ramsgate with a concentration, it appears, in the Cobham / Cuxton area, which has remained a location for this species. Francis Rose recorded it extensively, always in its characteristic habitat: in a chalky field by Watling Street, Bishopsbourne (1946-48); in a chalk cornfield north east of Cuxton station (1951); west of Pitt Wood, in a chalky arable downland field (1955); in a cornfield on chalk east of Knowlton (1958); at Lad's Farm, Snodland, in a cornfield on chalk (1960); and half a mile north east of St Margaret's at Cliffe in arable on chalk at the cliff's edge (1962).

From Gerard's *Herball* (1597)



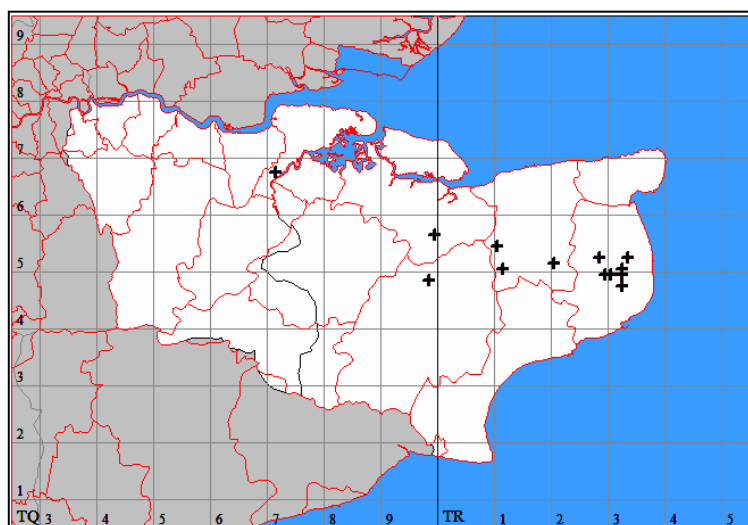
Near Chillenden. Photo by Sue Buckingham, 26 June 2012

Philp (2010) considered Fine-leaved Fumitory to have declined in recent years, giving only three tetrad records (Cuxton and Westwell), whereas ten were given in Philp (1982). However, out of those ten tetrads recorded earlier, five were clustered inland of Walmer/Kingsdown, and more recent investigation has shown that the species still remains in this area, with finds made near East Studdall and Chillenden; so the assessment of decline needs to be taken with caution. Additionally, new locations have emerged since 2010, so that there are thirteen recent tetrad records, more than as recorded in the 1971-80 survey, but not necessarily the same tetrads. It is now almost entirely an East Kent plant.



Near Chartham. Photo by Sue Buckingham, 29 July 2013

Fumaria parviflora in Kent has been found associated with arable weeds also characteristic of chalky arable margins, such as *Anisantha sterilis* (Barren Brome), *Fallopia convolvulus* (Black-bindweed), *Papaver rhoeas* (Common Poppy), *Viola arvensis* (Field Pansy). It has also been recorded in conjunction with other fumitories:



Fumaria densiflora (Dense-flowered Fumitory) and *Fumaria officinalis* (Common Fumitory). It may be distinguished from those species by its small (5-6mm) flowers and sepals (rarely more than 1mm long), but perhaps is most easily picked out by the whitish flower colour (unless going over), the other species being pink.

***Fumaria parviflora* (Fine-leaved Fumitory) 2010-17**

See also the account for *Fumaria vaillantii* (Few-flowered Fumitory) for

differences in relation to that species. Register data are being maintained in tabular form, but in view of the number of 2010-18 records, these are also mapped here.

Site	Grid reference	Site status	Last record date	Recorder	Comments
Longfield	TQ56Z		16 July 1979	JRP	Chalky arable field north of Pinden Farm. [Presumably TQ5969.] EGP also referred to it as seen in the 1970s from the NW-SW footpath in TQ5968. [Not found, 2012, GK – area was subject to extensive agricultural herbicide treatment.]
Snodland	TQ66V		After 1970, before 1981	Philp (1982)	
Detling/Boxley	TQ75Z		1981-90	EGP	Taken from EGP's card index.
Cuxton (Ranscombe)	TQ76D & 76E	Owned by Plantlife and Medway Council, and managed with regard to arable weed flora	(1) 5 June 2014 (2) 19 June & 9 July 2013 (3) After 1990, before 2006	(1) & (2) RM (3) EGP (Philp, 2010)	(1) TQ 715 673. Longhoes Field. (2) Six plants found in June at TQ7162 6736, in Longhoes Field, Ranscombe Farm, near the car park. Two more nearby, around TQ 7142 6730 in July. (Also seen by JA, 28 June 2013 at TQ 71415 673170). (3) Tetrad references only given.
Westwell-Charing	TQ94U		After 1970, before 1981	Philp (1982)	
Westwell	TQ9848		29 August 2013	JLa	Westwell Down, TQ 9813 4808, in wheatfield on one side of which sweet corn had been planted in July or early Aug, so disturbing the ground from which the <i>Fumaria</i> emerged. This monad is the location for the record given (erroneously) as TQ94E Westwell in Philp (2010). It was found just below the North Downs Way, probably around TQ9897 4801. [Not located 2012, when field under rape and heavily sprayed, GK.]

Throwley	TQ95X		After 1970, before 1981	Philp (1982)	
Wilgate Green	TQ9956		(1)16 July 2018 (2) 9 June 2016	(1) & (2) AW	(1) & (2) TQ.995 563, arable field.
Chartham	TR1054		29 July 2013	SB	Nine plants in arable on chalk at TR 108 541 amongst thinly sown barley. Private farmland under High Level Stewardship scheme benefiting notable arable plants.
Chartham	TR15H		1981-90	EGP	Taken from EGP's card index.
West of Petham	TR1150		16 May 2015	SB	A single flowering plant at TR 11293 50839 in unsprayed top corner of arable field. Field sown with wheat crop.
Kingston	TR2051		30 July 2013	SB	Ileden Farm, two plants in arable margin at TR205 518, edge of barley field.
Near Chillenden	TR2852		26 June 2012	SB	Four plants at margin of Flax crop on chalk at TR 28934 52131, spaced out along 30 metres with <i>Fallopia convolvulus</i> , <i>Anisantha sterilis</i> , <i>Viola arvensis</i> . One plant at TR28960 52403 in margin of flax crop on chalk with <i>F. densiflora</i> , <i>Anisantha sterilis</i> . May be same location as TR25W, recorded in Philp (1982).
Malmains Farm	TR2949, TR3049		6 July 2017	KBRG meeting	Thousands of plants spread over a 100 metre wide x 1 kilometre long arable margin on shallow chalk soil from around TR299 490 to TR303 498. Malmains Farm was operating a stewardship scheme with Natural England and the plot was drilled with a grass/brassica mixture and left unsprayed.
East of West Langdon	TR3247		4 July 2017	SC & ML	
Ashley - Studdal	TR34E		After 1970, before 1981	Philp (1982)	[Not found, 2012, SB – search focused on TR 317 489 where recorded in 1962 and now heavily sprayed.]
East Studdal	TR3249		(1) 23 June 2016 (2) 29 June 2011	(1) KBRG meeting (2) SB	(1) A few scattered plants alongside the margin of a wheat field at TR 3266 4998. (2) TR 32320 49969, one large sprawling plant, arable field margin on chalk. May be same location as TR34J, recorded in Philp (1982).
East Studdal	TR3250		23 June 2016	KBRG meeting	A considerable number of plants on both sides of Northbourne Road from TR 32600 50026, westwards to TR 32397 50191. These plants on the narrow margin of a wheat crop with <i>Fumaria officinalis</i> and <i>F. densiflora</i> . At TR 3260 5005 on a gigantic manure heap, sealed with an ash layer were many more plants of <i>F. parviflora</i> also with <i>Papaver hybridum</i> .
Betteshanger	TR35B		After 1970, before 1981	Philp (1982)	[Not found 2012, SB, area being intensively farmed.]
North of East Studdal	TQ3250		29 June 2011	SB	TR 32587 50039, 10 plants at margin of arable field on chalk, north side of road. TR 32605 50018, some six sprawling plants at margin of arable field on chalk, south side of

					road. May be same location as TR35F, recorded in Philp (1982).
Minster (Thanet)	TR36C		After 1970, before 1981	Philp (1982)	
Northbourne	TR3352		20 August 2014	SB	Four very large spreading plants at margin of wheat crop on chalk at TR 33530 52378 and alongside the footpath across it at TR 33531 52392 on Northbourne Court estate. Associated arable species: <i>Fumaria densiflora</i> , <i>Viola arvensis</i> , <i>Sherardia arvensis</i> .



Near Chillenden, habitat. Photos by Sue Buckingham, 26 June 2012

Fumaria reuteri Boiss. (Martin's Ramping-fumitory)

Draft account

vc 15

Rarity / scarcity status

The status of *Fumaria reuteri* in the British Isles is to a degree uncertain, as to whether it is a native (as has long been maintained), an archaeophyte (an ancient introduction) or a relatively recent introduction, the first record being in 1904. It is nationally rare (albeit that its conservation status is apparently treated as of 'Least Concern' in England and Great Britain as a whole) and its recorded distribution has until recently been essentially southern, and it shrank in the 1980s to Cornwall and the Isle of Wight. From 2006 onwards, however, there have been several widely scattered new finds: as well as additional sites in the Isle of Wight, it has been found in garden ground, a raised hedgebank and a potato field in Scotland (2006-09); a raised plant bed in Surrey (2010); on allotments and in a turnip field in Hampshire (2010-11); and on a guided bus route in Cambridge (2012). There is no obvious common factor which might suggest a particular means of introduction; the relationship with disturbed ground being a characteristic of fumitories generally. In Kent, *Fumaria reuteri* is likely to have been introduced, and is regarded as very **rare**.



A229. Photo by Brian Laney, June 2011

Account

There are no historic records for Martin's Ramping-fumitory in Kent. In June 2011, several sites associated with roadworks in relation to the improvement of the A299 near Manston airport were discovered by Brian Laney, whose determinations were confirmed by Rose Murphy (BSBI referee).



A229 roadworks, habitat. Photo by Geoffrey Kitchener, June 2011

It was first recorded on 11 June at TR 31173 65723, growing at the base of a south facing bank on the south side of the A299 by Mount Pleasant roundabout. Here was semi-bare ground, with the recently graded slope carrying its first germination of weeds such as *Chenopodium album* (Fat-hen), *Fumaria officinalis* (Common Fumitory), *Galium aparine* (Cleavers), *Mercurialis annua* (Annual Mercury), *Polygonum aviculare* agg (Knotgrass) and *Sonchus*

oleraceus (Smooth Sow-thistle). On the same day the species was recorded on a south-facing road slope of the A299 at TR 32577 65513. At this location, the grass sown on the embankment had scarcely germinated by the end of the month, but there was an associated weed flora of *Chenopodium album*, *Galium aparine*, *Mercurialis annua*, *Papaver rhoeas* (Common Poppy), *Polygonum aviculare* agg, and *Sinapis arvensis* (Charlock). On 19 June 2011, the fumitory was also recorded by Brian Laney at TR 31986 65627, on a wide disturbed strip between airport and the north side of the A299.

The evidence points to *Fumaria reuteri* being amongst the first plants to germinate once the reconstructed road had been laid out and seeded. The likelihood is that there is an association with foreign seed, rather than disturbance of a seedbank from previously unrecognised occurrences. However, as introduction cannot be definitely demonstrated or ruled out, the species is being maintained on the county rare plant register. Its reoccurrence at the original locations is likely to rely upon further disturbance, once the grassing over of the highway slopes has thickened (which it had done by 2014). The seed bank is likely to be long-persistent – Wiggington (1999¹⁰) refers to cases of appearance following cultivation of fields which have been in permanent pasture for many years.



Martin's Ramping-fumitory is an annual, most noticeable by virtue of the size of the flowers (11-13mm). Other distinctive characteristics are the recurving of the flowers, their rose-pink colour and blackish-red tips and almost entire sepals not more than 5mm long.

A229. Photo by Brian Laney, June 2011

¹⁰ Wiggington, M.J. (1999). *Fumaria reuteri* Boiss. (Fumariaceae), in ed. Wiggington, M.J., *British Red Data Books 1 Vascular Plants*, JNCC, Peterborough.

Fumaria vaillantii Loisel. (Few-flowered Fumitory)

Draft account. Kent photograph of typical arable habitat needed.

vc 15 and 16

Rarity / scarcity status

Fumaria vaillantii is a nationally scarce archaeophyte or ancient introduction, whose distribution in the British Isles is largely restricted to south east and south central England, where the species favours chalk arable. It is one of the rarest fumitories in the British Isles and appears to have declined since 1950 due to agricultural intensification. In consequence it is regarded in Great Britain as **Vulnerable**, facing a high risk of extinction in the wild, albeit that in England (where nearly all its records lie) it is assigned a higher risk rating, viz. **Endangered**. In Kent, it is a **rare** plant.

Account:

The Few-flowered Fumitory was first identified in the British Isles from Kent material by Professor John Henslow, in 1831. The species had been named in 1809 by Loiseleur-Deslongchamps, but British botanists had not recognised its presence until Henslow wrote in *The Magazine of Natural History* (1832):

Fumaria Vaillantii, a British Plant. — I had gathered this plant on Chatham Hill, Kent, about five years ago, and had placed it in my herbarium as a variety of *F. parviflora*; when, accidentally looking over some of the species of this genus with Professor Lindley, a specimen caught my attention which I immediately identified with the Chatham Hill plant. This specimen was subscribed *F. Vaillantii*; and upon my return to Cambridge, I forwarded my own specimen to Professor Lindley, that he might compare it with his. He has decided it to be the same, and I therefore do not hesitate to add this species to our British list. — *J. S. Henslow. Cambridge, Sept. 16. 1831.*

Hanbury and Marshall (1899) regarded it as very rare, in chalky cornfields. They cited relatively few records and challenged a claim in *Flora Thanetensis* (1847). They did not include a possible specimen from Greenhithe gathered in 1860 which, when put to an expert a century later, elicited a response, ‘Possibly...I would not commit myself to determination of such appalling material’.



Maidstone. Photo by Daphne Mills, 12 August 2012

Records remained sparse afterwards, although Francis Rose saw it in 1948 on chalky broken land at Morants Court Hill, along the same range of chalk downs as Brasted Hill, where Ray Clarke claimed it in 1972. Philp (1982) had only one confirmed record for the 1971-80 county survey, at Gillingham; and the 1991-2005 survey (Philp, 2010) lists only two records, one from a cornfield at Horton Kirby and the other from disturbed chalky soil near Snodland. This last record points to the potential for what is basically a rare chalk cornfield weed to appear, even more rarely, in a disturbed non-agricultural habitat. That is echoed by a 2012 find by Daphne Mills on ground disturbed by the construction of fencing around a new stadium for Maidstone United.

Fumaria vaillantii is distinguishable by its small (5-6mm) flowers and minute sepals (no more than 1mm long). Its usually pale pink flowers should separate it from the white (at first) flowers of *F. parviflora*. The latter also has channelled leaf-segments (flat in *F. vaillantii*) and bracts at least as long as fruiting pedicels (shorter in *F. vaillantii*). The colour of the flowers might lead it to be confused with Common Fumitory, *Fumaria officinalis*

subsp. *wirtgenii* (which also has relatively few flowers per raceme, as with the Few-flowered Fumitory). However the sepals of Common Fumitory are twice as large as those of Few-flowered Fumitory.

Site	Grid reference	Site status	Last record date	Recorder	Comments
Biggin Hill	TQ4057		21 June 2015	RMB	Edge of oat crop TQ 4072 5709, W and SW of Lusted Hall Farm.
Near Farningham	TQ5466, TQ5565, TQ5566		25 July 2013	RMB	(a) East side of byway from Priory Lane, Eynsford to Beesfield Farm, Farningham, TQ 548 660 and TQ 549 660. (b) East side of same byway, TQ 550 660 and TQ 551 660. (b) Field border going uphill south west of Beesfield Farm, TQ 552 659.
Horton Kirby	TQ56T		28 June 2002	EGP & PHe (Philp, 2010)	Cornfield.
North of Goudhurst	TQ73J		1988	EGP	[A surprising record, if correct, off the chalk.]
Maidstone (vc15)	TQ7556		12 August 2012	DM	TQ 75536 56386, conf. EGP, an area roughly 2 x 5ft beside fairly newly installed fence at Maidstone United's football ground, straggly and mixed with <i>Lepidium didymum</i> .
Near Snodland	[TQ76A]		After 1990, before 2006	EGP (Philp, 2010)	Disturbed chalky soil. It is unclear, however, whether this record for tetrad TQ76A given in Philp (2010) is in addition to or in conflict with the following record.
Burham	TQ7162		7 June 1995	EGP & DC	TQ 715 624, seen as part of a meeting (per SP, who recollects it at a field margin, det. EGP). This map reference is on the vc15 side of the River Medway and may equate with a record given in EGP's database for tetrad TQ76B (called Holborough, but the naming probably does not distinguish between the different sides of the river and vice counties). It was omitted from Philp (2010), presumably as an oversight.



Maidstone, an atypical habitat. Photo by Daphne Mills, 12 August 2012