



# The FLOWERING PLANTS



of



# Rye Harbour

# The Flowering Plants of Rye Harbour

Rye Harbour Fauna and Flora Volume 2

by Barry Yates

Dedicated to the memory of  
Breda Burt (1918 – 2001)  
She was the major contributor to our  
knowledge of the flora of Rye Harbour and  
a good friend of the Nature Reserve.

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ENVIRONMENT  
AGENCY

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Photographs starting top left and going clockwise;  
Sea Kale, Sea Pea, Least Lettuce, Herb Robert, White Horehound, Viper s Bugloss.

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### **Wildlife Recording**

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# Introduction

In 1965 **East Sussex County Council** published a report on the future development of the East Sussex Coast which included proposals to encourage the establishment of a Nature Reserve over the whole of the 728 hectares (c.1,800 acres) of the Rye Harbour Site of Special Scientific Interest (SSSI). In 1970 the shingle beach owned by the **Environment Agency** was declared a Local Nature Reserve (LNR) by the County Council, who also appointed a Management Committee to administer the LNR. This was the beginning of Rye Harbour Local Nature Reserve. Since then further land has been added by agreement with neighbouring landowners and the County Council and by purchase of land by the **Sussex Wildlife Trust** with the help of the **Friends of Rye Harbour Nature Reserve**. It is hoped that further areas of the SSSI will become part of the Nature Reserve and so this report covers the whole area.

The present extent of the Nature Reserve includes the seaward shingle ridges extending inland to, and including, the gravel pit known as Ternery Pool and the nearby excavation known as the Quarry (Beach Reserve), a large gravel pit (Castle Water), a large area of meadow land and shingle ridges around Camber Castle (Castle Farm) and a small area of saltmarsh fringing the western bank of the river Rother between Rye Harbour and the river mouth.

This report covers the Rye Harbour SSSI (often only referred to as the SSSI) and some of its immediate surroundings such as Winchelsea Beach and Rye Harbour. It lists 455 species of flowering plant recorded at Rye Harbour, the most important being Least Lettuce that is now only found in one other site in Britain. The vegetated shingle ridges have the EU designation of a Special Protection Area and many of the specialised plants are nationally scarce. The wetland habitats show the full range of salinity, from freshwater near Camber Castle to sea water at the saltmarsh, so the range of wetland plants is considerable. There is also a wide range of management practices, from the intensive arable cultivation of Harbour Farm, through to the non-intervention on some of the natural shingle ridges of the Beach Reserve. It is this mosaic of different habitats that has encouraged the great diversity in the Flowering Plants of Rye Harbour.



We hope that this report will encourage you to discover for yourself *The Flowering Plants of Rye Harbour* and inspire you to participate in its management by reporting your sightings and participating in the work of the Friends of Rye Harbour Nature Reserve.

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# Visiting



Access to the Nature Reserve is free, but restricted to the network of footpaths. To avoid disturbance to wildlife all visitors are particularly requested not to enter the sign-posted "Wildlife Sanctuary Areas" or any of the other fenced areas within the Nature Reserve or any of our neighbours land. There are four bird watching hides that are always open to the public.

Information is available at the Kiosk in the car park and at Lime Kiln Cottage Information Centre where there are information boards, leaflets, reports and voluntary wardens to help you discover the wildlife of the Nature Reserve. Lime Kiln Cottage is open when volunteers are available.

# Flowering Plants

Generally the status of flowering plants at Rye Harbour is poorly recorded when compared to birds. Our computerised records make it possible to produce distribution maps, but for most species data is sparse. Some maps of the less common species are included in the accounts below. The base map left (showing the distribution of Soft Hornwort) shows the outline of the coast, rivers, water bodies and villages. The large squares are the 1km OS grid. Compare it with the location map on page 2.



There is some quantitative data available for a few species. A permanent quadrat, 10m. x 10m. at TQ 9434 1784 on a natural shingle ridge on the Beach Reserve has been studied each year from 1989. In early July the number, or area, of each flowering plant species has been recorded and these counts are presented below for each species as tables headed shingle quadrat . It demonstrates how variable the populations of many species can be.

Species marked with an asterisk (\*) are considered to be either nationally scarce, or are included in the **Sussex Rare Plant Register** of scarce and threatened plants, bryophytes, charophytes and lichens published in 2001.

## Magnoliidae - the dicotyledons (with two seed leaves)

### Nymphaeaceae — the water lily family (2 species)

#### WHITE WATER-LILY

*Nymphaea alba*

Just one record, from the river Brede.

#### YELLOW WATER-LILY

*Nuphar lutea*

Two records, both from the river Brede. This has smaller flowers than the previous species and they are held above the water on a stalk and smell of wine dregs, so the old name is brandy bottles .

### Ceratophyllaceae — the hornwort family (2 species)

#### RIGID HORNWORT

*Ceratophyllum demersum*

Common and widespread in the northern half of the SSSI.

#### \* SOFT HORNWORT

*Ceratophyllum submersum*

A nationally notable species found mainly in the northern half of the SSSI. See the distribution map above.

## Ranunculaceae — the buttercup family (12 species)

### TRAVELLER'S JOY

*Clematis vitalba*

Widespread and increasing on the shingle ridges of the Beach Reserve and in the garden at Watch Cottage.



### MEADOW BUTTERCUP

*Ranunculus acris*

Common and widespread.

### CREEPING BUTTERCUP

*Ranunculus repens*

Common and widespread. It is a perennial that spreads vegetatively by runners that radiate out from the plant and root at the nodes, from which side shoots also grow. It flowers from April to October and the seeds are dispersed by snagging on passing animals.

### BULBOUS BUTTERCUP

*Ranunculus bulbosus*

Widespread.

### HAIRY BUTTERCUP

*Ranunculus sardous*

Scarce at the Beach Reserve.

### CELERY-LEAVED BUTTERCUP

*Ranunculus sceleratus*

Widespread throughout the SSSI, but only common at Castle Water and Farm. An annual plant that grows up to two feet tall in muddy ditches and pond sides. It flowers from May to September.

### LESSER SPEARWORT

*Ranunculus flammula*

Common in the reedbeds of Castle Water.

### LESSER CELANDINE

*Ranunculus ficaria*

Scarce, probably only occurring in imported soil. A tuberous plant that grows commonly in shady places. It flowers between February and June.

### BRACKISH WATER-CROWFOOT

*Ranunculus baudotii*

Common throughout the SSSI, even in the fresh water of Castle Water.

### THREAD-LEAVED WATER-CROWFOOT

*Ranunculus trichophyllus*

Common and widespread in the northern half of the SSSI.

### COMMON WATER-CROWFOOT

*Ranunculus aquatilis*

Scarce in the northern half of the SSSI.

### FAN-LEAVED WATER-CROWFOOT

*Ranunculus circinatus*

Widespread in the ditches of Castle Farm.



## Papaveraceae — the poppy family (3 species)

### COMMON POPPY

*Papaver rhoeas*

Common, especially in some years at Harbour Farm. It can be abundant in arable fields, having been a weed for at least two hundred years, and flowers throughout the summer. Each plant can produce c17,000 seeds which can remain viable in the soil for at least eighty years and probably over a hundred. The seedlings usually appear in spring.

### LONG-HEADED POPPY

*Papaver dubium ssp. dubium*

Recorded at Rye Harbour churchyard in 1994.

### YELLOW HORNED POPPY

*Glaucium flavum*

Common on the Beach Reserve, but scarce further inland. It grows in abundance where the shingle soil is disturbed.



## Fumariaceae — the fumitory family (1 species)

### COMMON FUMITORY

*Fumaria officinalis*

Scarce, growing on imported soil.

## Urticaceae — the nettle family (3 species)

### COMMON NETTLE

*Urtica dioica*

Extremely common and widespread, growing where there are high nutrient levels, such as on the top of shingle ridges where sheep sleep at night. It was a serious pest of agriculture four hundred years ago. Today it is very common and flowers from June through to October.

### SMALL NETTLE

*Urtica urens*

Common on the shingle ridges around Camber Castle.

### PELLITORY-OF-THE-WALL

*Parietaria judaica*

Common at Watch Cottages, Camber Castle and the Rye Harbour Martello Tower. It used to be an important plant in medicine for kidney and bladder stones.

## Fagaceae — the oak family (1 species)

### PEDUNCULATE OAK

*Quercus robur*

There is a group of three trees between Camber Castle and Castle Water that are thought to have been planted at the site of a crashed fighter plane in 1940 s. A seedling was found in a field at Castle Water prior to sheep grazing in 1993.

## Betulaceae - the birch family (2 species)

### SILVER BIRCH

*Betula pendula*

A few trees are found on islands at Castle Water and the Narrow Pits where they are protected from grazing. It flowers in April and fruits in June.

### ALDER

*Alnus glutinosa*

Found along the river Brede and some were planted in 1993 at Castle Water to screen the industrial skyline.

## Chenopodiaceae — the goosefoot family (18 species)

### OAK-LEAVED GOOSEFOOT

*Chenopodium glaucum*

Recorded just twice from Ternery Pool.

### RED GOOSEFOOT

*Chenopodium rubrum*

Common at Ternery Pool, growing just above the water level. Flowering is stimulated by short days and long nights and it flowers in August. The seeds usually germinate between mid-May and July.

### \* SALTMARSH GOOSEFOOT

*Chenopodium chenopodioides*

Near threatened in Britain, but occurs at Ternery Pool on the mud revealed by dropping summer water levels.

### MAPLE-LEAVED GOOSEFOOT

*Chenopodium hybridum*

Just one record, within the tetrad TQ91J, but exact location uncertain.

### \* STINKING GOOSEFOOT

*Chenopodium vulvaria*

A single plant was recorded at Rye Harbour in 1979. This was the last time it was recorded in Sussex where it may now be extinct.

### FAT HEN

*Chenopodium album*

A few records from Castle Water and Farm.

### SPEAR-LEAVED ORACHE

*Atriplex prostrata*

Uncommon in the shingle near the river mouth where it flowers in July and August

### BABINGTON'S ORACHE

*Atriplex glabriuscula*

Common along the shingle shoreline where it is the flowering plant growing closest to the high water mark. It forms a low mat of pale green plants in the splash zone where the previous winter storms scattered the seed into the spaces between the stones. In autumn the green stripe along the beach turns yellow.

### GRASS-LEAVED ORACHE

*Atriplex littoralis*

Common in the ungrazed saltmarsh along the river Rother.

### COMMON ORACHE

*Atriplex patula*

Only known from the northern part of the SSSI.

### SEA PURSLANE

*Atriplex portulacoides*

Very common along the river Rother. It is the dominant plant of the ungrazed saltmarsh.

### SEA BEET

*Beta vulgaris ssp. maritima*

Common on the shingle close to the shore, but not in exposed areas.

### \*PERENNIAL GLASSWORT

*Sarcocornia perennis*

A nationally scarce plant, but only confirmed from the wader pool.

### \*ONE-FLOWERED GLASSWORT

*Salicornia pusilla*

A nationally scarce plant, but only confirmed from the wader pool.

### PURPLE GLASSWORT

*Salicornia ramosissima*

A more common species, but again only confirmed from the wader pool

### LONG-SPIKED GLASSWORT

*Salicornia dolichostachya*

A more common species, but again only confirmed from the wader pool

### ANNUAL SEA-BLITE

*Suaeda maritima*

Common in areas of saltmarsh, including the small area at the west end of the Beach Reserve.

**\* PRICKLY SALTWORT**

*Salsola kali ssp. kali*

Only known from the area opposite the Camber dunes where it has crossed the river.

**Portulacaceae — the family (2 species)**

**SPRING BEAUTY**

*Claytonia perfoliata*

Only known from the area opposite the Camber dunes where it has crossed the river. It is an introduction from North America.

**BLINKS**

*Montia fontana*

Only known from the old shingle ridges around Camber Castle

**Caryophyllaceae — the campion family (24 species)**

**THYME-LEAVED SANDWORT**

*Arenaria serpyllifolia*

Common and widespread.

**SEA SANDWORT**

*Honckenya peploides*

Only known from the area opposite the Camber dunes where it has crossed the river.

**COMMON CHICKWEED**

*Stellaria media*

Common in the north of the SSSI. It is cosmopolitan and abundant in cultivated land in Britain where it has been a serious weed for at least two hundred years, especially on richer, heavier soils. It is prostrate with the leafy stems of one plant covering an area of several square feet. It produces several generations each year, each one taking as little as five weeks to mature, and flowers throughout as it is not affected by day length, though the individual flowers usually only last a single day, and each plant can produce c.2,500 seeds which are dispersed in mud and dust and known to viable for at least 25, and perhaps as many as 40, years in the soil. In theory, a single plant could give rise to 15,000,000,000 descendants in a single year.

**LESSER CHICKWEED**

*Stellaria pallida*

Mostly recorded from the Beach Reserve, but also from some of the poor soils at Castle Water.

**\* FIELD MOUSE-EAR**

*Cerastium arvense*

Common on the old shingle ridges around Camber Castle.

**SNOW-IN-SUMMER**

*Cerastium tomentosum*

A garden escape found near Lime Kiln Cottage and Rye Harbour churchyard.

**COMMON MOUSE-EAR**

*Cerastium fontanum*

Common throughout the SSSI. It is a hairy, cosmopolitan perennial plant with prostrate, barren shoots and ascending flowering spikes. It grows commonly in fields in Britain and can be a pest of cereal crops. It flowers from January to October and each plant can produce 6,500 seeds which can remain viable in the soil for over forty years.

**STICKY MOUSE-EAR**

*Cerastium glomeratum*

Common in the north of the SSSI.

**DARK-GREEN MOUSE-EAR**

*Cerastium diffusum*

Common in the north of the SSSI and also near the Quarry.

**LITTLE MOUSE-EAR**

*Cerastium semidecandrum*

Widespread, but not common.

**WATER CHICKWEED**

*Myosoton aquaticum*

Has long, trailing stems and grows along the river Brede. It flowers from June to August.

**\* UPRIGHT CHICKWEED**

*Moenchia erecta*

Only recorded from the old shingle ridges around Camber Castle.

**\* KNOTTED PEARLWORT**

*Sagina nodosa*

Widespread at the Flat Beach, but only first recorded in August 2000.

**PROCUMBENT PEARLWORT**

Only recorded from Castle Water and Harbour Farm. It is a prostrate rosette with the flowering period from May through to October and the seeds are dispersed in mud and dust.

*Sagina procumbens*

**ANNUAL PEARLWORT**

Common throughout the SSSI. The sub-species *Sagina apetala ssp. apetala* was recorded from Rye Harbour churchyard and the sub-species *Sagina apetala ssp. erecta* from Castle Water.

*Sagina apetala*

**SEA PEARLWORT**

Only known from one record south of Lime Kiln Cottage.

*Sagina maritima*

**\* ANNUAL KNAWEL**

Only known from the old shingle ridges near Camber Castle.

*Scleranthus annuus*

**GREATER SEA-SPURREY**

Mostly recorded from the saltmarsh of the Beach Reserve.

*Spergularia media*

**LESSER SEA-SPURREY**

Mostly recorded from the saltmarsh of the Beach Reserve.

*Spergularia marina*

**SAND SPURREY**

Only known from the north of the SSSI where it is found along the vehicle tracks on well-drained soils and along the old railway line.

*Spergularia rubra*

**SEA CAMPION**

Common on the Beach Reserve.

*Silene uniflora*



**WHITE CAMPION**

Common at Castle Farm. Each plant has either male or female flowers and the flowering period is from May to November. Each female plant can produce 5,000 to 15,000 seeds but initial germination is low and even after several years only c50% produce seedlings.

*Silene latifolia*

**RED CAMPION**

Known from just three widely scattered localities, it flowers from April to November.

*Silene dioica*

**CORNCOCKLE**

Seen in 1986 from the track through Harbour Farm.

*Agrostemma githago.*

**Polygonaceae — the dock family (16 species)**

**REDSHANK**

Quite scarce at Castle Farm. It grows commonly on damp and cultivated ground, preferring non-calcareous soils. The leaves are blotched and it flowers from June to November, each plant producing between 200 and 1,200 seeds which usually germinate the following April to June, though they can remain viable for about 45 years.

*Persicaria maculosa*

**PALE PERSICARIA**

Scarce at Castle Water and Farm.

*Persicaria lapathifolia*

**WATER-PEPPER**

Scarce, recorded only from Wader Pool, but not seen recently.

*Persicaria hydropiper*

**KNOTGRASS**

Scarce. A complex of several species, and as such is a common annual plant that can be a weed of arable and waste ground.

*Polygonum aviculare*

**AMPHIBIUS BISTORT**

Seen in the River Brede.

*Polygonum amphibium*

**JAPANESE KNOTWEED**

*Fallopia japonica*

Found in a few locations around the margin of the Nature Reserve. Along the river Brede and in the industrial area of Rye Harbour road. It flowers in September and October. First introduced into Britain in 1825 and now naturalized and common on waste ground. It is an invasive alien, so it is controlled wherever possible.

**BLACK BINDWEED**

*Fallopia convolvulus*

Present at Castle Farm where sandy soil is disturbed by cultivation or rabbits.

**SHEEP'S SORREL**

*Rumex acetosella*

Common on the thin soils of the old shingle ridges around Camber Castle.

**COMMON SORREL**

*Rumex acetosa*

Common and widespread, flowering from May to July.

**WATER DOCK**

*Rumex hydrolapathum*

Widespread, but uncommon along the ditches of Castle Farm. However, it is abundant in the ditch to the east of the old railway line at Castle Farm.

**CURLED DOCK**

*Rumex crispus*

The coastal sub-species is common throughout the Beach Reserve. The stem can reach a height of three feet, the branched taproot can reach the same depth and can produce new plants if broken, It flowers between May and August, with each plant capable of producing 30,000 seeds which need good light conditions for germination but can remain viable for 50 or 60 years. Two sub-species occur *Rumex crispus ssp. crispus* found on farmland and *Rumex crispus ssp. littoreus* found on the coastal shingle, where it is a pioneer species.

Shingle quadrat	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
No. plants	18	4	9	17	19	9	6	4	7	6	1	1	0

**CLUSTERED DOCK**

*Rumex conglomeratus*

Widespread on waste ground and a weed of cultivated land. The branched taproot can reach a depth of three feet and it flowers in July and August and normally germinates in late spring.

**WOOD DOCK**

*Rumex sanguineus*

Known from Camber Castle and Beach Reserve. It flowers from June to August.

**FIDDLE DOCK**

*Rumex pulcher*

Widespread and locally common on Castle Farm and Castle Water, especially where the poor soil is disturbed by livestock. The fiddle-shaped lower leaves give this plant its name and are useful for identification.

**BROAD-LEAVED DOCK**

*Rumex obtusifolius*

Only recorded from Harbour Farm.

**MARSH DOCK**

*Rumex palustris*

There is a record of this notable species from Castle Water, but it requires confirmation.

**Plumbaginaceae— the thrift family (1 species)**

**THRIFT**

*Armeria maritima*

Known from just a few locations on the Beach Reserve, including on the seaward side of the road near the Crittall hide.

**Clusiaceae — the st. john'swort family (1 species)**

**PERFORATE ST. JOHN'S-WORT**

*Hypericum perforatum*

Only known along the track from Rye Harbour to Watch Cottage and at Lime Kiln Cottage.

It is aromatic, the 'perforations' in the leaves being oil sacs, and it contains a poison that affects the nerve-endings just under the skin surface, causing intense irritation that is greatly exacerbated by sunlight. It flowers from June to September. Each plant can produce c.30,000 seeds which often lay dormant for up to three years and can remain viable for a decade.

## Malvaceae — the mallow family (4 species)

### MUSK-MALLOW

*Malva moschata*

Localised, including at the Beach Reserve, near the Wader Pool and at Castle Water near the viewpoint. Some of the groups of plants produce white flowers (left).

### COMMON MALLOW

*Malva sylvestris*

Common and widespread.

### DWARF MALLOW

*Malva neglecta*

Widespread, but uncommon.

### \* MARSH-MALLOW

*Althaea officinalis*

Nationally scarce, but widespread at Rye Harbour — found at Castle Water, Castle Farm and Beach Reserve. The plant is encouraged because it is the foodplant of the very rare Marsh-mallow Moth that occurs in the Rye Bay.



## Frankeniaceae - the sea heath family (1 species)

### \* SEA-HEATH

*Frankenia laevis*



Nationally scarce, but widespread along the upper margin of the saltmarsh, especially in the hollow south of the red-roofed black hut near Lime Kiln Cottage.



## Salicaceae — the willow family (8 species)

### CRACK WILLOW

*Salix fragilis*

It reaches a height of fifty feet and flowers in May.

### WHITE WILLOW

*Salix alba*

Widespread at Castle Water and Farm. It grows to a height of fifty feet and flowers in April and May.

### OSIER

*Salix viminalis*

Found only at Castle Water and flowers in May.

### GOAT WILLOW

*Salix caprea*

Found only at Castle Water and flowers in April.

### A WILLOW

*Salix caprea x cinerea (S. x reichardii)*

Recorded only from the Beach Reserve, but may have died out.

### GREY WILLOW

*Salix cinerea*

Common and widespread. Grows by all water bodies where grazing is restricted and flowers in March and April. It is the species that competes with *Phragmites* reed, so we are continually cutting and pulling it to maintain the reedbeds. It may all be the sub-species

*Salix cinerea ssp. oleifolia* .

### CREEPING WILLOW

*Salix repens*

A single record at the Beach Reserve, but not seen recently.

### BLACK POPLAR

*Populus nigra*

In January 2002 sixteen saplings were planted at Castle Water as part of English Nature s Species Recovery Programme. The saplings had been grown by the Royal Botanic Garden at Wakehurst Place and originated from native Sussex trees.

## Brassicaceae — the cabbage family (32 species)

### HEDGE MUSTARD

*Sisymbrium officinale*

Scarce, it flowers from April to September.

### GARLIC MUSTARD

*Alliaria petiolata*

Scarce at the west end of the Beach Reserve. It flowers from April to September.

### THALE CRESS

*Arabidopsis thaliana*

Scarce, at Castle Water only.

### WARTY CABBAGE

*Bunias orientalis*

Only known from the Beach Field, behind the Front Ridge, but not seen recently,

### WALLFLOWER

*Erysimum cheiri*

Common at Camber Castle, flowering from late February to June.

### WINTER-CRESS

*Barbarea vulgaris*

Common and widespread, flowering from May until August.

### AMERICAN WINTER-CRESS

*Barbarea verna*

Only known from the Beach Field, behind the front ridge, but not seen recently,

### WATER-CRESS

*Nasturtium officinale*

Common and widespread at Castle Water and Farm.

### MARSH YELLOW-CRESS

*Rorippa palustris*

Scarce, found at Castle Farm.

### CUCKOO-FLOWER

*Cardamine pratensis*

Common throughout the SSSI, but not at Beach Reserve. A perennial plant that is common in moist meadows. It grows up to two feet high and flowers from April to July.

### WAVY BITTER-CRESS

*Cardamine flexuosa*

Recorded from Castle Water and Rye Harbour churchyard.

**HAIRY BITTER-CRESS**

Recorded from Castle Water, Watch Cottages and Beach Field.

*Cardamine hirsuta*

**SWEET ALISON**

The only record was from the west end of the Beach Reserve, probably on imported soil.

*Lobularia maritima*

**COMMON WHITLOWGRASS**

Widespread and can be abundant on short grassland, flowering from as early as 23<sup>rd</sup> January. The seeds are a favourite of Linnets in the spring.

*Erophila verna*

**DANISH SCURVYGRASS**

Common and widespread on the Beach Reserve, especially alongside the tarmac road, flowering from mid-March.

*Cochlearia danica*

Shingle quadrat	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
No. plants	7	9	37	57	140	23	36	53	49	73	203	0	0

**SHEPHERD'S-PURSE**

Common and widespread.

*Capsella bursa-pastoris*

\* **SHEPHERD'S CRESS**

Scarce, only known from the old shingle ridges south of Camber Castle.

*Teesdalia nudicaulis*

**FIELD PENNY-CRESS**

Only recorded amongst the arable crops of Harbour Farm.

*Thlaspi arvense*

**GARDEN CRESS**

Scarce, only recorded from Beach Reserve.

*Lepidium sativum*

**NARROW-LEAVED PEPPERWORT**

Only known from the steps of the Crittall hide at Ternery Pool, but not seen since 1991.

*Lepidium ruderales*

**HOARY CRESS**

Recorded from the Rye Harbour churchyard and along Rye Harbour road.

*Lepidium draba*

**SWINE-CRESS**

Only recorded from Castle Water

*Coronopus squamatus*

**LESSER SWINE-CRESS**

Common and widespread, especially along vehicle tracks.

*Coronopus didymus*

**HARE'S-EAR MUSTARD**

Only recorded in 1980 from Beach Reserve on imported mud.

*Conringia orientalis*

**PERENNIAL WALL-ROCKET**

Just one record, in Rye Harbour village.

*Diploaxis tenuifolia*

**ANNUAL WALL-ROCKET**

Also, just one record, in Rye Harbour village.

*Diploaxis muralis*

**RAPE**

Common and widespread, following its widespread cultivation.

*Brassica napus*

**BLACK MUSTARD**

Common and widespread.

*Brassica nigra*

**CHARLOCK**

Recorded from Castle Farm. It flowers from April to August and each plant can produce 1,000-4,000 seeds that can remain dormant in the soil for many years.

*Sinapis arvensis*

\* **SEA ROCKET**

Only known from the area opposite the Camber dunes where it has crossed the river.

*Cakile maritima*

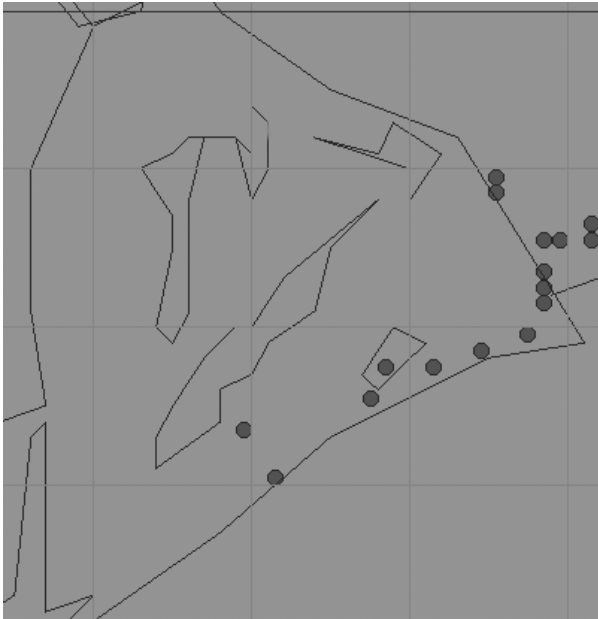
\* **SEA-KALE**

Abundant at the Beach Reserve, with only a very few plants further inland. The earliest flowering was noted on 23<sup>rd</sup> April.

*Crambe maritima*

Shingle quadrat	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
No. plants	46	34	40	49	48	98	69	56	57	67	76	73	84





**SEA RADISH**

*Raphanus raphanistrum ssp. maritimum*

Only known from the area opposite the Camber dunes where it has crossed the river.

**Resedaceae — the weld family (1 species)**

**WELD**

*Reseda luteola*

Common and widespread.

**Primulaceae — the primrose family (4 species)**

**PRIMROSE**

*Primula vulgaris*

Some at Castle Water are probably garden escapes.

**SCARLET PIMPERNEL**

*Anagallis arvensis*

Common and widespread.

**SEA-MILKWORT**

*Glaux maritima*

Abundant around the margins of all the pools at the Beach Reserve.

**BROOKWEED**

*Samolus valerandi*

Recorded from Castle Water and the Corner Pools at Harbour Farm.

**Crassulaceae — the stonecrop family (5 species)**

**NAVELWORT**

*Umbilicus rupestris*

Common on the walls of Camber Castle.

**REFLEXED STONECROP**

*Sedum rupestre*

Recorded from a few locations at Beach Reserve.

**BITING STONECROP**

*Sedum acre*

Common and widespread, flowering from as early as 3<sup>rd</sup> June.



**WHITE STONECROP**

*Sedum album*

Only recorded from Rye Harbour churchyard.

**ENGLISH STONECROP**

*Sedum anglicum*

Common on the old shingle ridges around Camber Castle.

**Saxifragaceae — the saxifrage family (1 species)**

**RUE-LEAVED SAXIFRAGE**

*Saxifraga tridactylites*

Known from only a few locations at Beach Reserve, flowering from as early as 22<sup>nd</sup> March.

**Rosaceae — the rose family (16 species)**

**MEADOWSWEET**

*Filipendula ulmaria*

Known from just a few locations at Castle Water and Farm, in places where sheep are excluded. It can reach a height of four feet and flowers between June and August.

**BRAMBLE**

*Rubus fruticosus*

Common and widespread. A species-complex in which the individuals are very hard to separate and, as a result, they are usually recorded as the aggregate. It flowers between June and November. At the Beach Field there is a distinctive, but as yet unnamed, form with finely divided leaves,

**DEWBERRY**

*Rubus caesius*

Known from just a few locations at Castle Water and Farm. One of the more distinctive species of bramble and grows on wet or calcareous soils. It flowers from May to July.

**SILVERWEED**

*Potentilla anserina*

Common and widespread. A stoloniferous plant that grows commonly on waste ground and roadside verges and in damp pastures.

**CREEPING CINQUEFOIL**

*Potentilla reptans*

Common in the north of the SSSI.

**HERB BENNET**

*Geum urbanum*

The only record is from Rye Harbour village.

**AGRIMONY**

*Agrimonia eupatoria*

Widespread, but not common.

**PARSLEY PIERT**

*Aphanes arvensis* agg.

Scarce, recorded only from Castle Water and Farm.

**SLENDER PARSLEY-PIERT**

*Aphanes inexpectata*

Scarce, recorded from Beach Reserve and the old shingle ridges near Camber Castle.

**DOG ROSE**

*Rosa canina* agg.

Common in the north of the SSSI.

**SWEET-BRIAR**

*Rosa rubiginosa* agg.

Common and widespread. The young leaves smell of apples when crushed.

**BLACKTHORN**

*Prunus spinosa*

Locally dominant, with some large thickets flowering as early as 28<sup>th</sup> March.

**PEAR**

*Pyrus communis*

There is a single pear bush near Ternery Pool.

**APPLE**

*Malus domestica*

Several small trees grow along the popular footpath that leads past Lime Kiln Cottage!

**WALL COTONEASTER**

*Cotoneaster horizontalis*

Only known from around Rye Harbour village.

**HAWTHORN**

*Crataegus monogyna*

A common and widespread shrub, flowering from as early as 28<sup>th</sup> April.

## Fabaceae - the pea family (37 species)

### GOAT'S-RUE

Found along Rye Harbour road.

*Galega officinalis*

### KIDNEY VETCH

A single group in Rye Harbour village.

*Anthyllis vulneraria*

### NARROW-LEAVED BIRD'S-FOOT-TREFOIL

A single plant near Ternery Pool did not persist.

*Lotus glaber*

### COMMON BIRD'S-FOOT-TREFOIL

Common and widespread. This plant has many common names, but a local name for it is shoes and stockings : just before the petals fall the stamens and then the petals can be removed just like the footwear!

*Lotus corniculatus*

### LARGE BIRD'S-FOOT-TREFOIL

Widespread, but uncommon in the north of the SSSI.

*Lotus pedunculatus*

### TUFTED VETCH

Only known from Castle Water and near the Wood.

*Vicia cracca*

### HAIRY TARE

Common and widespread. It can reach a height of two feet and flowers from May to July.

*Vicia hirsuta*

### SMOOTH TARE

Common at Castle Water, scarce elsewhere.

*Vicia tetrasperma*

### NARROW-LEAVED VETCH

Common and widespread. Grows on dry banks and grassy wasteland and in meadows. It flowers between May and October.

*Vicia sativa ssp. nigra*

### A VETCH

Only recorded at Castle Water.

*Vicia sativa ssp. segetalis*

### COMMON VETCH

Only recorded at Castle Water and Rye Harbour churchyard.

*Vicia sativa ssp. sativa*

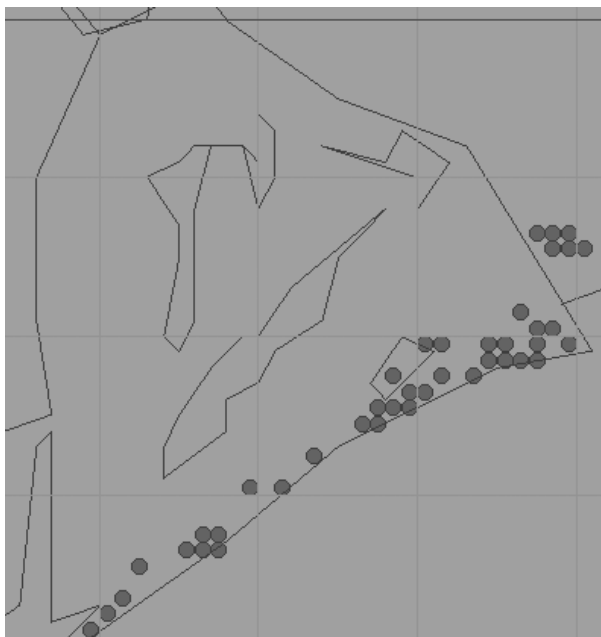
### SPRING VETCH

Common and widespread.

*Vicia lathyroides*

### \* SEA PEA

*Lathyrus japonicus*



A nationally scarce plant that is only found at the Beach Reserve, where it forms dark green, low growing mats on bare shingle. Extreme flowering dates are 21<sup>st</sup> April and 28<sup>th</sup> August. Although the plant has declined within the permanent quadrat, see below, it is doing well on the Beach Reserve. It was first recorded growing here in 1640 as Suffolke Sea Pease at Rie and Pensie in Sussex.

Shingle quadrat	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Area m2	4.5	3.5	4.5	7	6	3	0.2	0.05	0	0	0	0	0

**MEADOW VETCHLING**

*Lathyrus pratensis*

Common in the north of the SSSI on grassland with little grazing pressure.

**GRASS VETCHLING**

*Lathyrus nissolia*



Common and widespread in areas of ungrazed damp grassland. The characteristic bright red/mauve pea flowers appear from as early as 21<sup>st</sup> May and reveal the presence of this grass like plant.

**WHITE MELILOT**

*Melilotus albus*

Only found along Rye Harbour road.

**RIBBED MELILOT**

*Melilotus officinalis*

A small group has persisted at the roadside near the river mouth for many years.

**SMALL MELILOT**

*Melilotus indicus*

Just a single record from the Beach Reserve.

**BLACK MEDICK**

*Medicago lupulina*

Common and widespread.

\* **BUR MEDICK**

*Medicago minima*

A nationally scarce plant found in the south of the SSSI and in Rye Harbour churchyard.

\* **TOOTHED MEDICK**

*Medicago polymorpha*

A nationally scarce plant with just three widespread records.

**SPOTTED MEDICK**

*Medicago arabica*

Common and widespread.

**BIRD'S-FOOT CLOVER**

*Trifolium ornithopodioides*

Widespread, but not common, with just six records from shingle areas.

**WHITE CLOVER**

*Trifolium repens*

Common and widespread. A closely creeping and rooting plant that is frequently included in grass seed mixtures. It flowers from May to November.

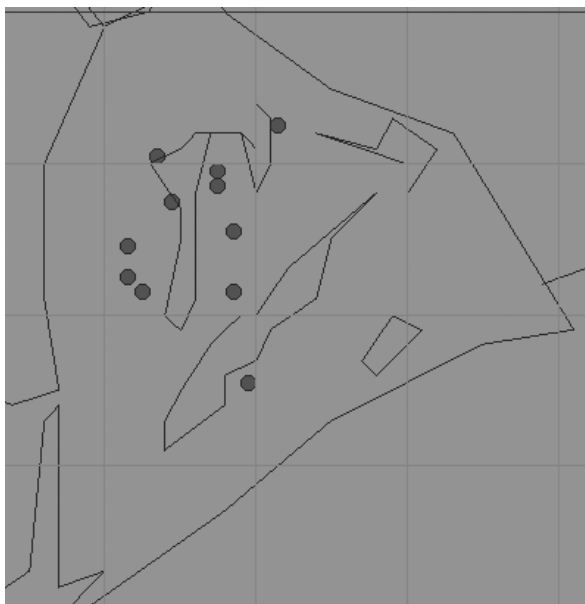
\* **CLUSTERED CLOVER**

*Trifolium glomeratum*

A nationally scarce plant, with just nine records from shingle areas.

**\* SUFFOCATED CLOVER**

*Trifolium suffocatum*



A nationally scarce plant that is common on the sheep grazed pasture on old shingle ridges in the north of the SSSI.

**STRAWBERRY CLOVER**

*Trifolium fragiferum*

Common and widespread. The pink flowers develop into inflated seed heads that resemble a strawberry.

**HOP TREFOIL**

*Trifolium campestre*

Widespread, but not common in the north of the SSSI.

**LESSER TREFOIL**

*Trifolium dubium*

Common and widespread in pastures and banks and flowers from May to October.

**SLENDER TREFOIL**

*Trifolium micranthum*

Common and widespread.

**RED CLOVER**

*Trifolium pratense*

Common and widespread. Was introduced into Britain in 1633 as a farm crop, though it was not widely cultivated until the eighteenth century. Today it is an abundant pasture plant that flowers from May to November.

**KNOTTED CLOVER**

*Trifolium striatum*

Widespread, but not common.

**ROUGH CLOVER**

*Trifolium scabrum*

Widespread, but not common, with just six records.

**HARE'S-FOOT CLOVER**

*Trifolium arvense*

Found on Beach Reserve near the old lifeboat house and on the old shingle ridges near Camber Castle.

**SUBTERRANEAN CLOVER**

*Trifolium subterraneum*

Found on the old shingle ridges, especially at Castle Water and near Camber Castle.

**BROOM**

*Cytisus scoparius*

Localised, with the largest group on the Beach Reserve near the Quarry and individual plants at Castle Water.

**GORSE**

*Ulex europaeus*

Common and widespread flowering throughout the year.

**Elaeagnaceae — the buckthorn family (1 species)**

**SEA-BUCKTHORN**

*Hippophae rhamnoides*

Found at Beach Reserve and Castle Water. Although the plant is considered to be nationally scarce the plants here are thought to be from introduced stock.

## Halagaraceae— the milfoil family (1 species)

### SPIKED WATER-MILFOIL

*Myriophyllum spicatum*

Common and widespread in ponds and ditches, flowering in July.

## Lythraceae— the loosestrife family (1 species)

### PURPLE-LOOSESTRIFE

*Lythrum salicaria*

Uncommon at Castle Water and along the river Brede.

## Onagraceae — the willowherb family (6 species)

### GREAT WILLOWHERB

*Epilobium hirsutum*

Common and widespread in ditches and beside pits. It reaches a height of four feet and flowers between June and October.

### HOARY WILLOWHERB

*Epilobium parviflorum*

Widespread, but uncommon with just five records.

### AMERICAN WILLOWHERB

*Epilobium ciliatum*

The only record was at Camber Castle.

### MARSH WILLOWHERB

*Epilobium palustre*

The only record was at the Beach Reserve in 1982.

### ROSEBAY WILLOWHERB

*Chamerion angustifolium*

Most records are from Beach Reserve, but one from Castle Water. It establishes itself by means of creeping underground stems. It flowers from May to November and each plant produces c.80,000 plumed seeds which are wind-dispersed and need good illumination for germination.

### LARGE-FLOWERED EVENING-PRIMROSE

*Oenothera glazioviana*

Most records are from the northern part of Castle Water, but one is from the Beach Reserve.

## Aquifoliaceae — the holly family (1 species)

### HOLLY

*Ilex aquifolium*

There is a single large bush just south of Camber Castle and several in Rye Harbour churchyard.

## Euphorbiaceae — the spurge family (4 species)

### ANNUAL MERCURY

*Mercurialis annua*

The only record is from Watch Cottage.

### CAPER SPURGE

*Euphorbia lathyris*

The only record is from Rye Harbour churchyard.

### PETTY SPURGE

*Euphorbia peplus*

The only record is from Rye Harbour churchyard.

### SEA SPURGE

*Euphorbia paralias*

The only record is from the Beach Reserve, in the area opposite Camber dunes.

## Linaceae — the flax family (1 species)

### FAIRY FLAX

*Linum catharticum*

Only found in the grassland around Castle Water.

## Aceraceae — the maple family (1 species)

### SYCAMORE

*Acer pseudoplatanus*

Widespread, but uncommon. It is one of the few trees able to grow close to the sea and withstand the salt spray, but on the poor shingle soils it grows very slowly. It is believed to have been introduced into Britain by the Romans, though it may have been as late as the fifteenth century.

## Geraniaceae — the crane s-bill family (6 species)

### CUT-LEAVED CRANE'S-BILL

*Geranium dissectum*

Widespread in the north of the SSSI.

### HEDGEROW CRANE'S-BILL

*Geranium pyrenaicum*

Only known from a few locations, north end of Castle Water, northeast part of Harbour Farm and Rye Harbour churchyard.

### DOVE'S-FOOT CRANE'S-BILL

*Geranium molle*

Common and widespread. A biennial or winter annual with glandular leaves. It is very common on cultivated and waste ground, being an important weed on the former. It flowers in May and June and the 1,500-2,000 seeds produced by each plant are catapulted as much as twenty feet from it and usually germinate in late summer, though some remain dormant until the following spring.

### SHINING CRANE'S-BILL

*Geranium lucidum*

Only known from Lime Kiln Cottage and Rye Harbour churchyard.

### HERB-ROBERT

*Geranium robertianum.*

Common at the Beach Reserve, where the maritime sub species, *maritimum*, grows as small rosettes on bare shingle. The extreme flowering dates are 5<sup>th</sup> May and 26<sup>th</sup> November.

Shingle quadrat	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
No. plants	1395	1	532	605	26	1411	107	32	3	19	50	7	6

### COMMON STORK'S-BILL

*Erodium cicutarium* agg.



Common and widespread, growing on sandy soils, especially where there is much rabbit grazing. It is important here as the foodplant of the weevil *Limobius mixtus* that is found in Britain only at Rye Harbour.

## Balsaminaceae — the balsam family (1 species)

### INDIAN BALSAM

*Impatiens glandulifera*

Only known from the river Brede, but it could pose a problem in the future. A robust, invasive alien that was first introduced from the Himalayan part of India in 1839 and was known as problem weed by the end of last century. It is naturalized and now grows alongside rivers and, less commonly, on waste ground and can reach a height of six feet. It flowers from July to October, with each plant producing c.800 seeds which are thrown several feet away when the capsules which contain them rupture violently.

## **Araliaceae — the ivy family (1 species)**

### **IVY**

*Hedera helix*

Common outside of the Nature Reserve, for example at the Martello Tower, but recorded from Castle Farm growing on old willow trees.

## **Apiaceae — the carrot family (24 species)**

### **MARSH PENNYWORT**

*Hydrocotyle vulgaris*

Common at Castle Water, but also at Harbour Farm, growing in wet grassland.

### **ROUGH CHERVIL**

*Chaerophyllum temulum*

The only record is from Rye Harbour churchyard.

### **COW PARSLEY**

*Anthriscus sylvestris*

The only record is from Castle Water.

### **BUR PARSLEY**

*Anthriscus caucalis*

Common and widespread.

### **ALEXANDERS**

*Smyrniium olusatrum*

Widespread and in a few locations dominates the vegetation, shading out all competitors, for example Rye Harbour churchyard and the roadside north of Lime Kiln Cottage.

### **GROUND-ELDER**

*Aegopodium podagraria*

The only record is from Castle Farm

### **ROCK SAMPHIRE**

*Crithmum maritimum*

Several patches grow alongside the shore road of the Beach Reserve.

### **TUBULAR WATER-DROPWORT**

*Oenanthe fistulosa*

Common in the ditches in the north of the SSSI.

### **PARSLEY WATER-DROPWORT**

*Oenanthe lachenalii*

Uncommon in the ditches in the north of the SSSI.

### **HEMLOCK WATER-DROPWORT**

*Oenanthe crocata*

Scarce in the north of the SSSI.

### **FENNEL**

*Foeniculum vulgare*

Only recorded at the roadside south of Lime Kiln Cottage.

### **HEMLOCK**

*Conium maculatum*

Occurs north of Lime Kiln Cottage, at Ternery Pool, west part of Harbour Farm and the Beach Field. A plant that has been used medicinally, and is known from Roman times. It grows to a height of six feet with mauve-spotted stems and poisonous foliage and flowers from June and July.

### **\* SLENDER HARE'S-EAR**

*Bupleurum tenuissimum*



This nationally scarce plant conceals itself amongst the grass at two locations on the Beach reserve, at the Chalk Curve and near the Wader Pool. The number of plants is very variable between years.



**WILD CELERY**

Only known from Castle Farm and the Rye Harbour car park.

*Apium graveolens*

**FOOL'S WATER-CRESS**

Common in the ditches in the north of the SSSI. Vertical stems arise from a creeping base and it flowers in July and August.

*Apium nodiflorum*

**GARDEN PARSLEY**

Only one record from the LNR and several from Rye Harbour car park.

*Petroselinum crispum*

**CORN PARSLEY**

Just two records of this nationally scarce plant, at Harbour Farm and Castle Farm.

*Petroselinum segetum*

**STONE PARSLEY**

Just two records, at Harbour Farm and Castle Water.

*Sison amomum*

**WILD ANGELICA**

The only record was of one along the river Brede. It has a hollow, purple stem and flowers from July to October.

*Angelica sylvestris*

**WILD PARSNIP**

Widespread and locally common, for example, at the roadside north of Lime Kiln Cottage.

*Pastinaca sativa*

**HOGWEED**

Only recorded from Camber Castle and along Rye Harbour road.

*Heracleum sphondylium*

**UPRIGHT HEDGE-PARSLEY**

Uncommon with records from Castle Water and Rye Harbour village.

*Torilis japonica*

**KNOTTED HEDGE-PARSLEY**

Common in the north of the SSSI.

*Torilis nodosa*

**WILD CARROT**

Widespread and locally common.

*Daucus carota*

**Gentianaceae — the gentian family (3 species)**

**COMMON CENTAURY**

Common at the northern end of Castle Water.

*Centaurium erythraea*

**LESSER CENTAURY**

The only record is from Ternery Pool, but not seen recently.

*Centaurium pulchellum*

**YELLOW-WORT**

Only found at the west end of the Beach Reserve, just where the sea wall ends.

*Blackstonia perfoliata*

**Menyanthaceae — the bogbean family (1 species)**

**FRINGED WATER-LILY**

Seen in the river Brede.

*Nymphoides peltata*

**Apocynaceae — the periwinkle family (1 species)**

**LESSER PERIWINKLE**

Common at Watch Cottage and Lime Kiln Cottage.

*Vinca minor*

**Solanaceae — the nightshade family (5 species)**

**APPLE OF PERU**

Occasionally abundant in Wood and once found on an island at Ternery Pool.

*Nicandra physalodes*

\* **HENBANE**

Widespread, but uncommon, occasionally found where sandy soil is disturbed by rabbits.

*Hyoscyamus niger*

**BLACK NIGHTSHADE**

Common and widespread on disturbed or cultivated ground.

*Solanum nigrum*

**BITTERSWEET**

*Solanum dulcamara*

Widespread, but only common at the Beach Reserve. It is the variety *marinum*, growing low to the ground. It flowers from May to November. In the autumn many plants show a fuzzy growth where the flowers do not develop and the cause is not understood.



Shingle quadrat	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
No. plants	24	12	15	27	22	27	32	38	41	57	92	124	145

**THORN-APPLE**

*Datura stramonium*

Only recorded in 1997, growing in a fodder crop north of Camber Castle.

**Convolvulaceae — the bindweed family (3 species)**

**FIELD BINDWEED**

*Convolvulus arvensis*

Common and widespread. It has creeping underground stems and a root system which can penetrate to over fifteen feet into the soil and spread over thirty square yards in a year. The shoots twine around other plants, climbing over them. It flowers from June to September, the perfumed flowers, which may be white, pink or a mixture of the two, opening in the early morning and closing at dusk or in cold, damp weather

**HEDGE BINDWEED**

*Calystegia sepium*

Recorded from Castle Water and Harbour Farm. It flowers from July to October.

**GREAT BINDWEED**

*Calystegia sepium ssp. sepium*

Only recorded from Castle Water.

**Boraginaceae — the borage family (8 family)**

**VIPER'S BUGLOSS**

*Echium vulgare*

Common and widespread throughout the SSSI, especially on disturbed soil. The extreme flowering dates are 7<sup>th</sup> May and 18<sup>th</sup> December. In the autumn many plants show a fuzzy growth where the flowers do not develop and the cause is not understood. Although it is not a rare plant here at Rye Harbour it is the foodplant of several rare and endangered insects and it is a reliable nectar source for Bumble Bees.

**Rare insects of Viper's Bugloss**

*Cynaedia dentalis*



*Ceutorhynchus geographicus*



*Ethmia terminella*



*Ethmia bipunctella*

**COMMON COMFREY**

There is a small colony near to Rye Harbour on Harbour Farm.

*Symphytum officinale*

**WATER FORGET-ME-NOT**

Common in the north of the SSSI.

*Myosotis scorpioides*

**TUFTED FORGET-ME-NOT**

Common in the north of the SSSI.

*Myosotis laxa*

**FIELD FORGET-ME-NOT**

The only record was from the north of Castle Water.

*Myosotis arvensis*

**EARLY FORGET-ME-NOT**

Common and widespread.

*Myosotis ramosissima*

**CHANGING FORGET-ME-NOT**

Common in the northern half of the SSSI.

*Myosotis discolor*

**HOUND'S-TONGUE**

Common and widespread.

*Cynoglossum officinale*

**Lamiaceae — the family (17 species)**

**MARSH WOUNDWORT**

Found along the river Brede, Beach Field and Castle Water.

*Stachys palustris*

**BLACK HOREHOUND**

Common and widespread.

*Ballota nigra*

**WHITE DEAD-NETTLE**

Common and widespread. Grows on waste ground and roadsides. It flowers throughout the year.

*Lamium album*

**RED DEAD-NETTLE**

Widespread, but uncommon

*Lamium purpureum*

**\* RED HEMP-NETTLE**

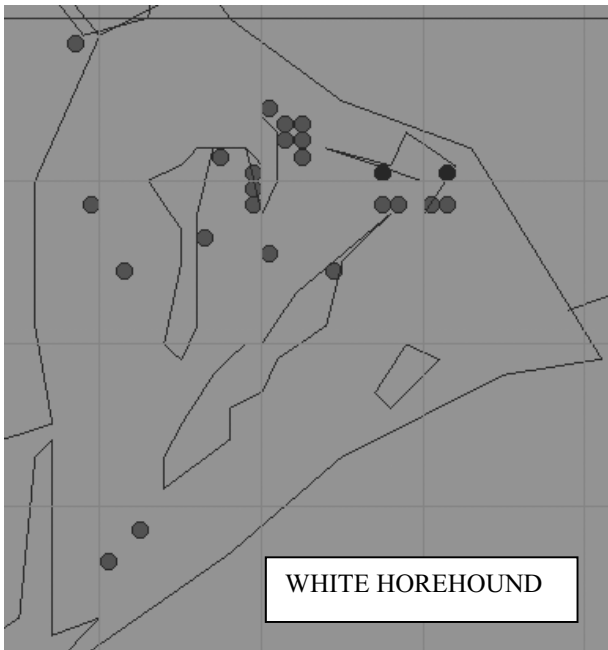
This nationally scarce plant is common at the Beach Reserve and also found among the arable crops of Harbour Farm if missed by the herbicide. It is the foodplant of the rare beetle *Dibolia cynoglossi*.

*Galeopsis angustifolia*

Shingle quadrat	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
No. plants	105	0	318	452	363	243	44	258	22	15	15	0	1



**\* WHITE HOREHOUND**



***Marrubium vulgare***

Another nationally scarce plant doing well here. It is found at Castle Water and other places, growing in sandy soils. It is the foodplant of the rare plume moth, *Pterophorus spilodactylus* - the adult (below) can look like the white flower and the caterpillars and pupae resemble the green sculptured leaf surface.



**WOOD SAGE**

Scarce, only two records from the old shingle ridges south of Camber Castle.

**\* WALL GERMANDER**

It grows at Camber Castle where it was described in 1715 as growing pentifully on ye walls and ruins... It was still there in 1934, but noted as in danger of extinction by the repairs to the castle. In 1990, despite extensive consultation, it was accidentally sprayed by contractors and exterminated. However, this was not the end of the story as a longstanding workman had cultivated the plant in his garden from stock obtained at the castle. In 1997 some of these plants were reintroduced to the castle site where they have struggled to re-establish, but there is now also a healthy group at Watch Cottage.

**GROUND-IVY**

Common at the northern part of Castle Water.

**SELFHEAL**

Widespread, but uncommon.

**BALM**

Only at Watch Cottage.

**BASIL THYME**

The only record was from Ternery Pool in 1982.

**GIPSYWORT**

Common and widespread along ditches and pit margins that are ungrazed. It grows three feet tall and flowers in August.

**WATER MINT**

Common in the north of the SSSI. Grows in ditches and other wet places and flowers in August.

**SPEAR MINT**

The only record is from Castle Water.

**WILD CLARY**

Found in Rye Harbour churchyard and the north of Castle Water.

**SKULLCAP**

Seen along the river Brede.

***Teucrium scorodonia***

***Teucrium chamaedrys***

***Glechoma hederacea***

***Prunella vulgaris***

***Melissa officinalis***

***Clinopodium acinos***

***Lycopus europaeus***

***Mentha aquatica***

***Mentha spicata***

***Salvia verbenaca***

***Scutellaria galericulata***

## **Callitrichaceae — the starwort family (1 species)**

### **WATER-STARWORT**

*Callitriche sp.*

Common in ditches in the north of the SSSI.

## **Plantaginaceae — the plantain family (4 species)**

### **BUCK'S-HORN PLANTAIN**

*Plantago coronopus*

Common and widespread.

### **SEA PLANTAIN**

*Plantago maritima*

Scarce in the saltmarsh near Lime Kiln Cottage.

### **GREATER PLANTAIN**

*Plantago major*

Common and widespread. It flowers from May to October and each plant can produce up to 15,000 seeds.

### **RIBWORT PLANTAIN**

*Plantago lanceolata*

Common and widespread. It grows commonly in pastures and flowers from April until October, and needs long day length to stimulate flowering.

## **Oleaceae — the ash family (2 species )**

### **ASH**

*Fraxinus excelsior*

Widespread, but uncommon. Can grow close to the shore, for example there is one close to the Crittall hide.

### **WILD PRIVET**

*Ligustrum vulgare*

Found in Rye Harbour churchyard.

## **Scrophulariaceae (17 species)**

### **AN EYEBRIGHT**

*Euphrasia sp.*

The only record is in pasture south of Camber Castle.

### **TWIGGY MULLEIN**

*Verbascum virgatum*

This nationally scarce plant is found along the track between Rye Harbour and Watch Cottage.

### **GREAT MULLEIN**

*Verbascum thapsus*

Common and widespread. It is the foodplant of the Mullein Moth that has spectacular gold spotted larvae in late June and early July.

### **WATER FIGWORT**

*Scrophularia auriculata*

Common at Castle Water and along the river Brede, but scarce elsewhere. Grows in wet ditches and on the margins of ponds. Its quadrangular stem has raised edges and it flowers from May to September.

### **SNAPDRAGON**

*Antirrhinum majus*

Found in Rye Harbour churchyard

### **IVY-LEAVED TOADFLAX**

*Cymbalaria muralis*

Common at the Beach Reserve, growing in the shingle where it can form large extensive mats. It is an introduced plant commonly seen growing on old walls.

### **SHARP-LEAVED FLUELLEN**

*Kickxia elatine*

The only record is of one at Ternery Pool in 1991.

### **COMMON TOADFLAX**

*Linaria vulgaris*

Grows at two sites on the Beach Reserve, near the old lifeboat house and at the river mouth road junction.

### **PURPLE TOADFLAX**

*Linaria purpurea*

Widespread, but scarce.

**THYME-LEAVED SPEEDWELL**

Scarce in the north of the SSSI.

*Veronica serpyllifolia*

**GERMANDER SPEEDWELL**

Only one record, from the north of Castle Water.

*Veronica chamaedrys*

**PINK WATER-SPEEDWELL**

Common along the margins of ditches and pits in the north of the SSSI.

*Veronica catenata*

**WALL SPEEDWELL**

Common and widespread.

*Veronica arvensis*

**COMMON FIELD-SPEEDWELL**

Common and widespread.

*Veronica persica*

**IVY-LEAVED SPEEDWELL**

The only record was from near Lime Kiln Cottage.

*Veronica hederifolia*

**YELLOW-RATTLE**

Scarce south of Lime Kiln Cottage, probably from seed crossing the river where the plant is abundant. It flowers in May to July.

*Rhinanthus minor*

**Orobanchaceae — the broomrape family (1 species)**

**COMMON BROOMRAPE**

The only known site is at the end of the sea wall at the west of the Beach Reserve, where it is parasitic on Field Scabious.

*Orobanche minor*

**Lentibulariaceae — the bladderwort family (1 species)**

\* **BLADDERWORT**

Widespread, but uncommon in the ditches of Castle Farm.

*Utricularia australis*

**Rubiaceae — the bedstraw family (8 species)**

**FIELD MADDER**

The only known site is on the old shingle ridges north of Camber Castle.

*Sherardia arvensis*

**FEN BEDSTRAW**

The only record was from the north of Castle Water in 1997.

*Galium uliginosum*

**COMMON MARSH-BEDSTRAW**

Common in the marshy areas of the north of the SSSI.

*Galium palustre*

**A COMMON MARSH-BEDSTRAW**

This sub-species was identified by Dr Francis Rose in the marshy areas in the north of the SSSI.

*Galium palustre ssp. palustre*

**LADY'S BEDSTRAW**

Widespread, but only common on the old shingle ridges in the north of the SSSI. A common plant of dry places and reaches a height of eighteen inches. It flowers in July and August.

*Galium verum*

**HEDGE BEDSTRAW**

Widespread, even growing on the bare shingle near the old lifeboat house.

*Galium mollugo*

**UPRIGHT HEDGE BEDSTRAW**

This sub-species was identified by Dr Patrick Roper in 1991 close to Lime Kiln Cottage.

*Galium mollugo ssp. erectum*

**CLEAVERS**

Common and widespread. It flowers from April to August and the hooked fruits are dispersed by snagging on passing animals. They usually germinate in autumn but the young plants can be killed by hard winters and the ones that germinate in spring then replace them.

*Galium aparine*

## Caprifoliaceae — the honeysuckle family (3 species)

### ELDER

*Sambucus nigra*

Common and widespread, even growing on bare shingle close to the shore. It flowers from May until September.

### GUELDER-ROSE

*Viburnum opulus*

The only plant on the Nature Reserve is at Castle Water and is visible from the viewpoint.

### HONEYSUCKLE

*Lonicera periclymenum*

Known from two sites, near to the Rye Harbour allotments and at the Beach Field.

## Valerianaceae — the valerian family (2 species)

### COMMON CORNSALAD

*Valerianella locusta*

Known from three sites, the old shingle ridges south of Camber Castle, Rye Harbour churchyard and just south of Lime Kiln Cottage.

### RED VALERIAN

*Centranthus ruber*

Very common in the south of the SSSI. It occurs in three colour forms, pink is the most common, white and red is the least common. This introduced plant has found the shingle to its liking and dominates large areas.



## Dipsacaceae — the scabious family (3 species)

### WILD TEASEL

*Dipsacus fullonum*

Widespread and locally abundant, growing on poor sandy or shingle soils.

### FIELD SCABIOUS

*Knautia arvensis*

Only found at the west end of the Beach Reserve.

### SWEET SCABIOUS

*Scabiosa atropurpurea*

Found in Rye Harbour churchyard

## Asteraceae — the daisy family (61 species)

### GLOBE-THISTLE

*Echinops exaltatus*

Only found near Lime Kiln Cottage.

### CARLINE THISTLE

*Carlina vulgaris*

Found in the shingle area north of the caravan site at Rye Harbour.

### LESSER BURDOCK

*Arctium minus*

Widespread, but uncommon.

**SLENDER THISTLE**

*Carduus tenuiflorus*

Widespread and locally abundant on sandy soils, especially in the north of the SSSI. Locally known as the poor ground thistle, it provides a reliable nectar source for bees and the seeds are a favourite of Turtle Doves.

**SPEAR THISTLE**

*Cirsium vulgare*

Common and widespread, it is a significant weed problem on heavily grazed pasture.

**DWARF THISTLE**

*Cirsium acaule*

Common on the old shingle ridges around Camber Castle.

**CREEPING THISTLE**

*Cirsium arvense*

Common and widespread, it is a significant weed problem on heavily grazed pasture.

**COTTON THISTLE**

*Onopordum acanthium*

There are just three records from the north of the SSSI.

**COMMON KNAPWEED**

*Centaurea nigra*

Found at the north of Castle Water, along Rye Harbour road and near Lime Kiln Cottage.

**CHICORY**

*Cichorium intybus*

It grows along Rye Harbour road and near gardens at Beach Field, but there is one record from the Beach Reserve.

**NIPPLEWORT**

*Lapsana communis*

The only site is Rye Harbour churchyard.

**CAT'S-EAR**

*Hypochaeris radicata*

Widespread, but only common on the old shingle ridges in the north of the SSSI.

**\* SMOOTH CAT'S-EAR**

*Hypochaeris glabra*

This nationally scarce plant is only known from the old shingle ridges around Camber Castle and at Castle Water.

**AUTUMNAL HAWKBIT**

*Leontodon autumnalis*

Widespread on the poor grassland of shingle ridges. It has a branched, glabrous stem and flowers from July to September.

**ROUGH HAWKBIT**

*Leontodon hispidus*

Widespread, but scarce.

**LESSER HAWKBIT**

*Leontodon saxatilis*

Widespread, but scarce.

**BRISTLY OXTONGUE**

*Picris echioides*

Common and widespread.



**HAWKWEED OXTONGUE**

*Picris hieracioides*

The only record is from along Rye Harbour road.

**GOAT'S-BEARD**

*Tragopogon pratensis*

Common and widespread. It flowers from May to August and forms large, round, white seed heads. It has a common name of Jack-go-to-bed-by-noon.

**A GOAT'S-BEARD**

*Tragopogon pratensis ssp. minor*

This sub-species was identified near Lime Kiln Cottage by Mrs Breda Burt.



**A GOAT’S-BEARD**

*Tragopogon porrifolius x pratensis*

This hybrid used to grow near Lime Kiln Cottage, but it has not been seen since 1991 when the floodbank was raised.

**SALSIFY**

*Tragopogon porrifolius*

This mauve flowered relative of Goatsbeard is common near Lime Kiln Cottage and forms very large, round, brown seed heads. The flowers close by mid-day.

**PERENNIAL SOW-THISTLE**

*Sonchus arvensis*

Common and widespread.

**SMOOTH SOW-THISTLE**

*Sonchus oleraceus*

Common and widespread. It is an annual or biennial plant, depending on whether the seedlings appear late or early in the year, flowers from April to November and each plant can produce c.6,000 seeds (though up to 40,000 is possible) which can remain viable in the soil for at least a decade.

**PRICKLY SOW-THISTLE**

*Sonchus asper*

Common and widespread. It is an annual or biennial plant, depending on whether the seedlings appear late or early in the year, and the flowering stem may reach a height of six feet. It flowers from June to November, each plant producing 20,000-25,000 seeds (though up to 60,000 is possible).

**PRICKLY LETTUCE**

*Lactuca serriola*

Found in the SSSI around Rye Harbour. It is noticeable as the upper leaves are vertical and point roughly north-south and it flowers from June to September.

**GREATER LETTUCE**

*Lactuca virosa*

Recorded from Rye Harbour churchyard and at the Beach Reserve.

**\* LEAST LETTUCE**

*Lactuca saligna*



Widespread at the Beach Reserve. The easiest place to see this great rarity is within 1m. of the tarmac road about 150m. west of the old lifeboat house (left) — search for long green leaves with a very pale mid-rib.

Most plants are tiny and rabbits frequently nibble the large ones. Extreme flowering dates here are 14 July and 13 September. The flowers are small (8mm across) and they close by mid-day. The seeds have been collected for the Millenium Seed Bank at the Royal Botanic Garden, Wakehurst Place.

**DANDELION**

*Taraxacum officinale agg.*

Common and widespread. It is a complex of about 200 species, which probably evolved during the late Glacial period, but is normally recorded as the aggregate and as such is very common in fields, lawns, waste places and roadsides. Some of the microspecies prefer marshy fields while others do well in drier and calcareous soils. The flowers, which close completely at night, are mainly recorded in May and the c.2,000 fruits produced by each plant are wind-dispersed.

**LESSER DANDELION**

*Taraxacum laevigatum*

All five records are from the old shingle ridges in the north of the SSSI. All were identified by Dr Francis Rose.

**SMOOTH HAWK'S-BEARD**

*Crepis capillaris*

Widespread, but mainly from the old shingle ridges in the north of the SSSI.

**BEAKED HAWK'S-BEARD**

*Crepis vesicaria*

Widespread, but mainly from the shingle ridges in the south of the SSSI and in Rye Harbour churchyard.

**\* STINKING HAWK'S-BEARD**

*Crepis foetida*

An endangered species thought to have become extinct in Britain around 1980. There has been experimental re-introduction at Dungeness by Dr Brian Ferry and in May 2000 he planted 37 plants at the Beach Reserve as part of English Nature's Species Recovery Program. In 2001 he located just three plants, so its hold here is tenuous.

**MOUSE-EAR-HAWKWEED**

*Pilosella officinarum*

Common and widespread, growing in poor soils with short grass.

**A HAWKWEED**

*Hieracium scotostictum*

Only found at the west end of the Beach Reserve, just where the sea wall ends. The black spotted leaves are obvious for much of the year.

**MARSH CUDWEED**

*Gnaphalium uliginosum*

Only found at the margins of the Castle Water.

**COMMON FLEABANE**

*Pulicaria dysenterica*

Common and widespread, growing in damp grassland or at the edge of water bodies.

**SEA ASTER**

*Aster tripolium*



Common in saltmarsh or brackish water bodies, especially at Ternery Pool. The fluffy white seeds (left) are attractive in October and eaten by many ducks in November. There is a variety without any ray florets so appears all yellow, called *discoideus* (right).



**BLUE FLEABANE**

*Erigeron acer*

Only three records, at Castle Water, Rye Harbour churchyard and Beach Reserve.

**CANADIAN FLEABANE**

*Conyza canadensis*

Only three records, all in the sandy soil at the northern end of Castle Water.

**DAISY**

*Bellis perennis*

Common and widespread.

**FEVERFEW**

*Tanacetum parthenium*

Recorded from Watch Cottage and Rye Harbour churchyard.

**SEA WORMWOOD**

*Seriphidium maritimum*

Common at the highest level of the saltmarsh near Lime Kiln Cottage. The leaves are aromatic when crushed.

**MUGWORT**

*Artemisia vulgaris*

Common around Rye Harbour and Lime Kiln Cottage. The leaves are aromatic when crushed.

**YARROW**

*Achillea millefolium*

Common and widespread in grassland. It flowers from April to November and the flowering heads can grow one foot tall.

**OXEYE DAISY**

*Leucanthemum vulgare*

Common at Rye Harbour churchyard and along the track towards Watch Cottage. It flowers from May until October.

**SCENTED MAYWEED**

*Matricaria recutita*

Just one record, from the north end of Castle Water.

**PINEAPPLE WEED**

*Matricaria discoidea*

Recorded at Harbour Farm. It spread rapidly along roadside verges in the early years of this century and is now common on waste ground and trodden paths. It flowers in almost every month and each plant produces 6,000-7,000 seeds that are dispersed in mud and rainwash adhering to boots and car tyres.

**SCENTLESS MAYWEED**

*Tripleurospermum maritimum*

Common at the Beach Reserve.

**SCENTLESS MAYWEED**

*Tripleurospermum inodorum*

Recorded from the north of the SSSI.



**COMMON RAGWORT**

*Senecio jacobaea*

Common and widespread. An abundant biennial plant of neglected pasture and particularly frequent on light soils, even growing on sand dunes. It contains the toxic alkaloid Jacobine and can cause cirrhosis of the liver and fatal jaundice if consumed in large amounts, leading to it being known as Stagger-wort. It can grow to a height of three feet and flowers throughout the year. Each plant can produce 50-60,000 wind-dispersed seeds, though particularly large ones have the capacity to produce three times this number. They germinate in the autumn or the following spring.

**HOARY RAGWORT**

*Senecio erucifolius*

Widespread, but not common. It flowers later than Ragwort and is a paler yellow.

**OXFORD RAGWORT**

*Senecio squalidus*

Only recorded at Harbour Farm where it may have been imported with soil. It was introduced to the Oxford Botanic Garden from Sicily, where it grows on volcanic ash, in 1690 and was noted as a wild plant in Oxford a hundred years later. It has since spread along railway lines, the turbulence caused by the passage of trains dragging the wind-dispersed, plumed fruits along the suitable, if linear, habitat, has become naturalized and now flourishes in small patches of nutrient deficient soils, such as between paving stones, on old walls and even on

chimney pots as well as in larger areas of ash and clinker. It can reach a height of one foot and flowers throughout the year with records from March to December. Each plant produces c.10,000 fruits.

**GROUNDSEL**

*Senecio vulgaris*

Common and widespread. It has several generations each year, the period from one generation producing flowers until the next one does can be as little as five weeks, and it flowers in every month of the year. Each plant can produce c.1,000 viable seeds which, theoretically, could mean 1,000,000,000 offspring of one plant within one year. Each fruit has a parachute and is wind-dispersed but is also sticky when wet and can be transported on birds' feet and on boots.

Shingle quadrat	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
No. plants	41	0	0	0	0	13	4	0	0	0	1	0	0

**STICKY GROUNDSEL**

*Senecio viscosus*

Common in the south of the SSSI, even growing in bare shingle. A stout, alien plant which was introduced from southern or western Europe and first noted in Britain in 1666, though it remained scarce and restricted until the middle of this century, when it underwent an abrupt expansion. It has glandular hairs on the stem, which make it sticky to the touch. It flowers from July to September and each plant produces c.6,000 wind-borne fruits.



Shingle quadrat	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
No. plants	607	13	1854	0	9	168	2689	195	0	13	44	16	161

**COLT'S-FOOT**

*Tussilago farfara*

Common and widespread. The hairy leaves have been used for making a herb tobacco and cures for coughs and asthma. It flowers between January and May. The flowers close up at night and in cold weather and the seeds are wind-dispersed.

**WINTER HELIOTROPE**

*Petasites fragrans*

Found along the verges of Rye Harbour road and Dog s Hill road, Winchelsea Beach.

**POT MARIGOLD**

*Calendula officinalis*

Only recorded in Rye Harbour village.

**SHAGGY SOLDIER**

*Galinsoga quadriradiata*

Only recorded in the north of Castle Farm.

**NODDING BUR-MARIGOLD**

*Bidens cernua*

Just one record, from Castle Water.

**HEMP-AGRIMONY**

*Eupatorium cannabinum*

Common and widespread.

## Liliidae — the monocotyledons (with one seed leaf)

### Butomaceae — the flowering rush family (1 species)

#### FLOWERING RUSH

*Butomus umbellatus*

Found along the river Brede and in a ditch near the north of the old railway line at Castle Farm.

### Alismataceae — the water-plantain family (1 species)

#### WATER-PLANTAIN

*Alisma plantago-aquatica*

Common at the margin of ditches and pits in the north of the SSSI. It has ovate leaves spikes of pinkish-white flowers in July and August.

### Hydrocharitaceae — the frogbit family (3 species)

#### \* FROGBIT

*Hydrocharis morsus-ranae*



This notable floating miniature water lily is common in the ditches and sheltered pit margins in the north of the SSSI. It has white, 3 petalled flowers that are raised above the water level, but the seeds are formed under the water as the stalk bends over. The seeds have been collected for the Millennium Seed Bank at the Royal Botanic Garden, Wakehurst Place.

#### CANADIAN WATERWEED

*Elodea canadensis*

The records of this species may relate to the following, similar species.

#### NUTTALL'S WATERWEED

*Elodea nuttallii*

This introduced aquatic plant is abundant at Castle Water and Castle Farm. It was first recorded in Britain in 1966, probably from plants introduced to aquaria from North America. It is now abundant and forms thick mats, even in the deep water of gravel pits. It is yet another example of the impact of an alien species.

### Juncaginaceae — the arrowgrass family (1 species)

#### MARSH ARROWGRASS

*Triglochin palustre*

The only known site is at Castle Water.

**Potamogetonaceae — the pondweed family (6 species)****BROAD-LEAVED PONDWEED***Potamogeton natans*

Common in the ditches of Castle Farm. The submerged leaves are thin and bract-like while the floating ones are broad and elliptical. It flowers from May to August.

**SHINING PONDWEED***Potamogeton lucens*

The only record is from the river Brede.

**PERFOLIATE PONDWEED***Potamogeton perfoliatus*

Known from the river Brede and Castle Water pit.

**LESSER PONDWEED***Potamogeton pusillus*

Known only from the Castle Water pit.

**CURLED PONDWEED***Potamogeton crispus*

Known from the river Brede and the ditches of Castle Farm.

**FENNEL PONDWEED***Potamogeton pectinatus*

Common and widespread.

**Ruppiaceae — the tasselweed family (2 species)****\* BEAKED TASSELWEED***Ruppia maritima*

Known only from the brackish pool at the west of Harbour Farm.

**\* SPIRAL TASSELWEED***Ruppia cirrhosa*

This species is considered nationally scarce and is also known only from the brackish pool at the west of Harbour Farm.

**Zannichelliaceae — the family (1 species)****HORNED PONDWEED***Zannichellia palustris*

The only record was from the wader pool in 1987, before the sea water had access under the road.

**Araceae — the arum family (1 species)****LORDS-AND-LADIES***Arum maculatum*

The only record is from the Beach Field.

**Lemnaceae — the duckweed family (5 species)****GREATER DUCKWEED***Spirodela polyrhiza*

Only recorded from the river Brede.

**FAT DUCKWEED***Lemna gibba*

Recorded from Castle Farm and the river Brede.

**COMMON DUCKWEED***Lemna minor*

Common in the north of the SSSI. It floats on the water surface with a single trailing root. The flowering period extends from May into July.

**IVY-LEAVED DUCKWEED***Lemna trisulca*

Common in the north of the SSSI and also a pool at Harbour Farm. It is often submerged and 'flowers' in June and July.

**\* ROOTLESS DUCKWEED***Wolffia arrhiza*

This nationally scarce plant was recorded from the ditches of Castle Farm and the Beach Field. It is best described as green hundreds and thousands .

## Juncaceae — the rush family (8 species)

### SALTMARSH RUSH

Widespread at Beach Reserve.

*Juncus gerardii*

### TOAD RUSH

Common at Castle Water in ditches and muddy places. It varies from one to eight inches in height and the flowers may be solitary or in groups of two or three.

*Juncus bufonius*

### JOINTED RUSH

Common at Castle Water flowering from June until September.

*Juncus articulatus*

### SEA RUSH

There is a record from the Brach Reserve, but its presence needs confirming.

*Juncus maritimus*

### HARD RUSH

Common in the north of the SSSI. It is dark green and glaucous, growing two feet high. It flowers from June to September, and each plant can produce over 200,000 seeds.

*Juncus inflexus*

### SOFT RUSH

Found at Castle Water and along the river Brede. It is a pale glossy green and reaches a height of two and a half feet. It flowers from June until November.

*Juncus effusus*

### COMPACT RUSH

Only found at Castle Water. It is a greyish green and flowers from May to August.

*Juncus conglomeratus*

### FIELD WOOD-RUSH

Grows commonly in grassy places in the north of the SSSI and reaches a height of six inches. It flowers in April and May, has prominent anthers and the seeds are subglobose.

*Luzula campestris*

## Cyperaceae — the sedge family (17 species)

### COMMON SPIKE-RUSH

Common in the north of the SSSI, especially in marshy areas around Castle Water and flowers from May to August.

*Eleocharis palustris*

### MANY-STALKED SPIKE-RUSH

Only one record, from the south of Castle Water.

*Eleocharis multicaulis*

### SEA CLUB-RUSH

Common and widespread, even in the fresh water of Castle Water.

*Bolboschoenus maritimus*

### WOOD CLUB-RUSH

The only record is from the river Brede.

*Scirpus sylvaticus*

### COMMON CLUB-RUSH

Widespread, but uncommon.

*Schoenoplectus lacustris*

### GREY CLUB-RUSH

Common and widespread. It has glaucous stems that grow between three and four feet tall. It grows in wet, peaty places, usually near the sea. It flowers in June and July.

*Schoenoplectus tabernaemontani*

### FALSE FOX-SEDGE

Common and widespread. It has a triangular stem and is common in damp, shady places. It flowers in May and June.

*Carex otrubae*

### SPIKED SEDGE

Only recorded from Castle Water.

*Carex spicata*

### GREY SEDGE

The only record is by Dr Francis Rose from the ridges north of the Camber Castle.

*Carex divulsa ssp. divulsa*

### \* SAND SEDGE

Only known from the sandy area at the north of Castle Water.

*Carex arenaria*

### \* DIVIDED SEDGE

Four records from Castle Water, where it grows in sandy, marshy ground amongst rushes.

*Carex divisa*

**HAIRY SEDGE**

*Carex hirta*

Found at the sandy area at the north of Castle Water, along the river Brede and along Rye Harbour road.

**GREAT POND-SEDGE**

*Carex riparia*

Found along the river Brede.

**CYPERUS SEDGE**

*Carex pseudocyperus*

Found along the ditches of Castle Farm.

**GLAUCOUS SEDGE**

*Carex flacca*

Widespread in the north of the SSSI.

**DISTANT SEDGE**

*Carex distans*

Widespread, but uncommon.

**SMALL-FRUITED YELLOW SEDGE**

*Carex viridula ssp. viridula*

The only record is from Rye Harbour churchyard.

**Poaceae — the grass family (53 species)**

**RED FESCUE**

*Festuca rubra agg.*

Common and widespread. It has long rhizomes and narrow, inrolled leaves. It is a very common grass and 'flowers' from May to August.

**FINE-LEAVED SHEEP'S-FESCUE**

*Festuca filiformis*

Recorded from the old shingle ridges around Camber Castle.

**PERENNIAL RYE-GRASS**

*Lolium perenne*

Common and widespread. A perennial, tufted grass that grows up to two feet tall. It is an abundant pasture grass and 'flowers' from May to August.

**SQUIRREL-TAIL FESCUE**

*Vulpia bromoides*

Common on the old shingle ridges around Camber Castle.

\* **PURPLE FESCUE**

*Vulpia ciliata ssp. ambigua*

This nationally scarce grass is recorded from the Beach Reserve and the old shingle ridges around Camber Castle.

**CRESTED DOG'S-TAIL**

*Cynosurus cristatus*

Common and widespread growing up to two feet tall and 'flowers' from May to August.

**REFLEXED SALTMARSH-GRASS**

*Puccinellia distans*

The only record was from the shingle near the red roofed hut, south of Lime Kiln Cottage.

\* **BORRER'S SALTMARSH-GRASS**

*Puccinellia fasciculata*

Just three records of this nationally scarce grass, all from the Beach Reserve.

\* **STIFF SALTMARSH-GRASS**

*Puccinellia rupestris*

Just one record of this nationally scarce grass, from the shingle near the red roofed hut south of Lime Kiln Cottage.

**MEADOW-GRASS**

*Poa annua*

Very common and widespread. A loosely-tufted, cosmopolitan plant which is abundant everywhere in Britain. It is normally an annual and 'flowers' all year round with several generations through the year. The seeds are dispersed in mud and dust.

**ROUGH MEADOW-GRASS**

*Poa trivialis*

Widespread. A stoloniferous plant whose leaves are keeled and rough on the upper surface though glossy beneath. It is very common and 'flowers' in June and July.

**SPREADING MEADOW-GRASS**

*Poa humilis*

Widespread, but only common in the north of the SSSI.

**SMOOTH MEADOW-GRASS**

*Poa pratensis*

Common in the north of the SSSI. It has slender rhizomes and tufted stems and is common in old pastures and on roadside verges and 'flowers' from April to July.

\* **BULBOUS MEADOW-GRASS**

*Poa bulbosa*

This nationally scarce grass is widespread, growing on light, sandy soils.



<b>COCK'S-FOOT</b>	<i>Dactylis glomerata</i>
Common and widespread, 'flowering' from March until December.	
<b>FERN-GRASS</b>	<i>Catapodium rigidum</i>
Widespread.	
<b>SEA FERN-GRASS</b>	<i>Catapodium marinum</i>
Only recorded from the Beach Reserve.	
<b>HARD GRASS</b>	<i>Parapholis strigosa</i>
The only record was from the shingle near the red roofed hut, south of Lime Kiln Cottage.	
<b>* CURVED HARD GRASS</b>	<i>Parapholis incurva</i>
The only record was in 1992 on mud near the lifeboat house in Rye Harbour village.	
<b>REED SWEET-GRASS</b>	<i>Glyceria maxima</i>
Recorded in the river Brede.	
<b>FLOATING SWEET-GRASS</b>	<i>Glyceria fluitans</i>
Recorded in the river Brede, Castle Farm and Castle Farm. It grows to a height of three feet and flowers from May to August.	
<b>SMALL SWEET-GRASS</b>	<i>Glyceria declinata</i>
Recorded in the river Brede.	
<b>FALSE OAT-GRASS</b>	<i>Arrhenatherum elatius</i>
Abundant at the Beach Reserve and occurs elsewhere.	
<b>WILD OAT</b>	<i>Avena fatua</i>
Common in the arable crops of Harbour Farm.	
<b>YELLOW OAT-GRASS</b>	<i>Trisetum flavescens</i>
Common and widespread.	
<b>CRESTED HAIR-GRASS</b>	<i>Koeleria macrantha</i>
Widespread on shingle ridges.	
<b>YORKSHIRE-FOG</b>	<i>Holcus lanatus</i>
Common and widespread, flowering from June to August.	
<b>SILVER HAIR-GRASS</b>	<i>Aira caryophyllea</i>
The only record, by Dr Francis Rose is from the old shingle ridges south of Camber Castle.	
<b>EARLY HAIR-GRASS</b>	<i>Aira praecox</i>
Widespread on shingle ridges.	
<b>SWEET VERNAL GRASS</b>	<i>Anthoxanthum odoratum</i>
Common in the north of the SSSI. It has an unbranched stem and flowers from April to June.	
<b>REED CANARY-GRASS</b>	<i>Phalaris arundinacea</i>
Common along the river Brede. It can reach a height of five feet and flowers from July to August.	
<b>COMMON BENT</b>	<i>Agrostis capillaris</i>
Common in the north of the SSSI. Grows as a rhizome from which stems can reach a height of two feet. It is abundant everywhere and 'flowers' from June to August.	
<b>CREEPING BENT</b>	<i>Agrostis stolonifera</i>
Common and widespread. A perennial grass with branching, leafy stolons that spread along the ground surface, rooting and forming a mat. Stems grow upwards from this mat to a height of about one foot. It is common everywhere and 'flowers' from June to August.	
<b>PERENNIAL BEARD-GRASS</b>	<i>Agrostis stolonifera x Polypogon monspeliensis</i>
A single record, in 1965, from the north of the SSSI.	
<b>* WOOD SMALL-REED</b>	<i>Calamagrostis epigejos</i>
A single record, from the Beach Reserve by Mrs Breda Burt.	

**\* ANNUAL BEARD-GRASS**

This attractive nationally scarce grass has been noted from the north of Castle Water and along Rye Harbour road. It occurs on dredged mud for a couple of years and then disappears.

*Polypogon monspeliensis*



**MEADOW FOXTAIL**

A single record, in 1990 by Mrs Breda Burt, from the north of the SSSI.

*Alopecurus pratensis*

**MARSH FOXTAIL**

Widespread in the north of the SSSI.

*Alopecurus geniculatus*

**TIMOTHY**

Common and widespread.

*Phleum pratense*

**SMALLER CAT'S-TAIL**

Widespread in the north of the SSSI.

*Phleum bertolonii*

**SAND CAT'S-TAIL**

A single record from Harbour Farm that requires confirmation.

*Phleum arenarium*

**SOFT-BROME**

Common and widespread. An annual grass that reaches a height of two feet and is softly hairy and 'flowers' from May to August.

*Bromus hordeaceus*

**BARREN BROME**

Widespread on poor shingle soils. An annual grass with hairy leaves. It grows commonly on roadside verges and waste places and 'flowers' from April to August.

*Anisantha sterilis*

**\*COMPACT BROME**

The only record of this near threatened grass was near Ternery Pool in 1970 by Mrs Breda Burt.

*Anisantha madritensis*

**COMMON COUCH**

Common and widespread. A perennial grass that has long rhizomes that are able to regenerate into new plants if broken, and flat leaves with slender ribs. It has been a serious weed in arable and waste ground for at least two hundred years. It can reach a height of three feet, is self-sterile and 'flowers' between June and August.

*Elytrigia repens*

**SEA COUCH**

Common in the south of the SSSI.

*Elytrigia atherica*

**SAND COUCH**

Only recorded from just south of Lime Kiln Cottage

*Elytrigia juncea*

**WALL BARLEY**

Common in the north of the SSSI.

*Hordeum murinum*

**MEADOW BARLEY**

Common in the north of the SSSI.

*Hordeum secalinum*

**\*SEA BARLEY**

This nationally scarce grass is found at the upper margin of saltmarsh and has been recorded from the Beach Reserve.

*Hordeum marinum*

**COMMON REED**

*Phragmites australis*

Common and widespread. This familiar, stout grass can grow up to nine feet tall. It grows commonly in marshes, pools and fens and flowers from July to October. In some years it is affected by moth caterpillars living in the stem: these cause obvious brown, dead stems.

**TOWNSEND'S CORD-GRASS**

*Spartina alterniflora x maritima*

This hybrid was confirmed in 2000 by examination of the pollen by the Royal Botanic Garden, Kew. The sample was taken from the saltmarsh near Rye Harbour village.

**COMMON CORD-GRASS**

*Spartina anglica*

The more common Cord-grass, but only found in small patches on the saltmarsh.

**Sparganiaceae — the bur-reed family (2 species)**

**BRANCHED BUR-REED**

*Sparganium erectum*

Common and widespread in the ditch system in the north of the SSSI. The stem is branched and the leaves are keeled. It flowers from June to August.

**UNBRANCHED BUR-REED**

*Sparganium emersum*

The less common species of Bur-reed has only three records, all from the north of the SSSI.

**Typhaceae — the bulrush family (2 species)**

**REEDMACE or BULRUSH**

*Typha latifolia*

This is the less common reedmace at Rye Harbour. Found along ditches and in the shallow parts of Reedbeds. The conspicuous flowering spikes occur in June until November.

**LESSER REEDMACE or LESSER BULRUSH**

*Typha angustifolia*

Common and widespread, found along ditches and on the deep water fringe of reeds growing at the margin of the gravel pits.

**Liliaceae — the lily family (2 species)**

**BLUEBELL**

*Hyacinthoides non-scripta*

Found at Beach Reserve and Castle Water, but probably only as an introduction on imported soil.

**SPANISH BLUEBELL**

*Hyacinthoides hispanica*

Recorded from Rye Harbour churchyard.

**Iridaceae — the iris family (2 species)**

**YELLOW IRIS**

*Iris pseudacorus*

Only recorded from a few scattered locations away from the Beach Reserve.

**STINKING IRIS**

*Iris foetidissima*

Only recorded from Rye Harbour churchyard and at the northern end of the old railway at Castle Farm.

**Orchidaceae — the orchid family (8 species)**

\* **MARSH HELLEBORINE**

*Epipactis palustris*

Several groups of plants are known, but all are outside of the LNR. There is only one other known location in Sussex. One colony was discovered in 1990 and the number of flowering spikes has been counted regularly:

1990	1991	1993	1994	1995	1996	1997	1999	2000
15	16	94	86	196	259	110	200	390

The development of scrub is a big threat to this species and the colony above has been managed by cutting bramble and grey willow to reduce shading.

**COMMON TWAYBLADE**

*Listera ovata*

This green orchid has only been recorded from one area of grassland in the north of Castle Water. The number of flowering spikes counted has ranged from none to eight. It is also threatened by scrub encroachment.

**AUTUMN LADY’S-TRESSES**

*Spiranthes spiralis*

Widespread, but scarce in the short grassland of Castle Water and also near the river mouth. The numbers seen vary greatly between years. The reduction in grazing pressure at Castle Water is probably detrimental to this species, but it is hoped that the general reduction in herbicide application there will compensate for this.

**PYRAMIDAL ORCHID**

*Anacamptis pyramidalis*

Widespread, but only common in one area of grassland in the north of Castle Water where up to 1,000 flowering spikes have been counted. It is also threatened by scrub encroachment.

**COMMON SPOTTED-ORCHID**

*Dactylorhiza fuchsii*

Widespread, but only common in one area of grassland in the north of Castle Water where up to 5,000 flowering spikes have been counted. It is also threatened by scrub encroachment.

**SOUTHERN MARSH-ORCHID**

*Dactylorhiza praetermissa*

Only 2 records of this orchid and they may refer to the same specimen!

**GREEN-WINGED ORCHID**

*Orchis morio*

The only record was in 1970 s on imported chalk at the Beach Reserve, but it did not persist.

**BEE ORCHID**

*Ophrys apifera*

Widespread, but only common in one area of grassland in the north of Castle Water where up to 100 flowering spikes have been counted. It is also threatened by scrub encroachment. The most visible colony is at the roadside near the Wader Pool where 32 flowering spikes were counted in 2000.



BEE ORCHID



MARSH HELLEBORINE



PYRAMIDAL ORCHID



COMMON SPOTTED- ORCHID

# Wildlife Recording

The Nature Reserve keeps its wildlife records on a computer database called RECORDER, which enables a large amount of data to be kept safely and accessible. It can produce maps, tables, graphs, summaries and species lists for small areas, or the whole of Rye Bay. The database currently holds 160,000 records of more than 6,000 species.

You can help to add to this information, which will help us to protect and manage the wildlife, and assess the populations and distribution of the many rare and endangered species that occur in the area.

## What makes a useful record ?

A useful record does not need to be of an unusual species, we are lacking a lot of information on the distribution of many common species.

An acceptable wildlife record needs four basic parts;

- the name of the species - please indicate if you are not 100% certain.
- its location - preferably a name and a six figure grid reference e.g. Watch Cottage at TQ928175 .
- date - preferably 09 October 1997, but October 1997, autumn 1997, but 1997 or before 1997 can be used.
- your name and anyone else involved in identifying the species.

other information is useful;

- abundance - an exact count, or 1, 10, 100, 1000, or
- DAFOR- dominant, abundant, frequent, occasional, rare.
- sex/stage - male, immature, or flowering, rosette, seeding.
- record type - sighting, dead on road, trapped.....
- associated species - e.g. feeding on leaves of White Willow.
- comment - e.g. seen on road after heavy rain or found under stone.

*Please make sure that you keep to public places, or, footpaths, or, that you have the landowner s permission.*