

The background image shows a natural landscape. In the foreground, there is a dense thicket of green plants with large, heart-shaped leaves and clusters of small white flowers. To the right, a narrow stream flows through the vegetation. In the background, a wide, flat expanse of land stretches towards a town with several buildings and a church spire under a clear sky.

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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and

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ENVIRONMENT
AGENCY

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(cover photo Sussex Wildlife Trust, map by Angel Design,
illustrations by Dr Catharine Hollman, photos by Dr Barry Yates)

Map of the Rye Harbour area



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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, now 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 Area of Conservation 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 formerly cultivated areas 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 flowers here 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.

Visiting

Access to the Nature Reserve is free, but restricted to the network of footpaths. These are shown on the map on the page before the Contents. 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 and all are accessible to some wheelchairs.

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 on most days when volunteers are available.

Another good source of information is the Nature Reserve's website,
www.wildRye.info

Please consider joining the Friends of Rye Harbour Nature Reserve to learn more about the reserve and to help support it.

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.

The 46 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. Photographs of some of these species are shown from page 44.

SHINGLE PLANT QUADRAT

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. The figures, shown on page 3, are mainly the number of plants in 10m x 10m quadrat, but for Sea Pea it is the area.

SHINGLE PLANT QUADRAT

year	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06
Herb Robert	1395	1	532	605	26	1411	107	32	3	19	50	7	6	42	12	0	0	0
Sticky Groundsel	607	13	1854	0	9	168	2689	195	0	13	44	16	161	1473	0	0	1	0
Red Hempnettle	105	0	318	452	363	243	44	258	22	15	15	0	1	5	0	0	0	0
Sea Kale	46	34	40	49	48	98	69	56	57	67	76	73	84	76	91	85	98	88
Sea Kale (flowering)	2	0	7	9	2	6	3	7	4	14	14	9	8	11	18	0	4	0
Sea Pea (sq.m.)	4.5	3.5	4.5	7	6	3	0.2	0.05	0	0	0	0	0	0	0	0	0	0
Curled Dock	18	4	9	17	19	9	6	4	7	6	1	1	0	0	1	0	0	0
Bittersweet	24	12	15	27	22	27	32	38	41	57	92	124	145	177	191	186	190	209
Grousel	41	0	0	0	0	13	4	0	0	0	1	0	0	0	0	0	0	0
Danish Scurvey-grass	7	9	37	57	140	23	36	53	49	73	203	0	0	0	1	0	0	0

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 fresh waters of the northern half of the SSSI.

* **SOFT HORNWORT**

Ceratophyllum submersum

A nationally notable species found mainly in the northern half of the SSSI.

Ranunculaceae – the buttercup family (12 species)

TRAVELLER'S JOY

Clematis vitalba

Widespread and increasing on the shingle ridges of the Beach Reserve and at and around 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, widespread on Rye Harbour Farm.

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 Rye 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 c.17,000 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

Photo. Near threatened in Britain, but occurs at Ternery Pool on the mud revealed by dropping summer water levels. Also recently found growing in several saline hollows on Beach Reserve.

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 in some years 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.

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. Increased grazing by Rabbits between 2002 and 2005 led to decline of this plant on the saltmarsh and this favoured Annual Sea-blite.

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 purslane 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 and at Ternery Pool.

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

Sagina procumbens

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.

ANNUAL PEARLWORT

Sagina apetala

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.

SEA PEARLWORT

Sagina maritima

Only known from one record south of Lime Kiln Cottage.

*** ANNUAL KNAWEL**

Scleranthus annuus

Only known from the old shingle ridges near Camber Castle.

GREATER SEA-SPURREY

Spergularia media

Mostly recorded from the saltmarsh of the Beach Reserve.

LESSER SEA-SPURREY

Spergularia marina

Mostly recorded from the saltmarsh of the Beach Reserve.

SAND SPURREY

Spergularia rubra

Found throughout the SSSI, especially along vehicle tracks on well-drained soils and along the old railway line of Castle Farm.

SEA CAMPION

Silene uniflora

Common on the Beach Reserve, but in 2005 flowering was rare because of the impact of large numbers of Rabbits.



WHITE CAMPION

Silene latifolia

Common at Castle Farm. Each plant has either male or female flowers and the flowering period is from May to November.

RED CAMPION

Silene dioica

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

CORNCOCKLE

Agrostemma githago

Seen in 1986 from the track through Rye Harbour Farm.

Polygonaceae – the dock family (16 species)

REDSHANK

Persicaria maculosa

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.

PALE PERSICARIA*Persicaria lapathifolia*

Scarce at Castle Water and Farm.

WATER-PEPPER*Persicaria hydropiper*

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

KNOTGRASS*Polygonum aviculare*

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

AMPHIBIOUS BISTORT*Polygonum amphibium*

Seen in the river Brede.

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*

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. **See the numbers of plants growing in the shingle quadrat on page 3.** 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.

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 (2 species)

ROTTINGDEAN SEA-LAVENDER

Limonium hyblaenum

A small colony, just south of the red-roofed hut, was first found in 2002, but must have been there for several years.

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's-wort 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.

COMMON MALLOW

Malva sylvestris

Common and widespread.

DWARF MALLOW

Malva neglecta

Widespread, but uncommon.

* **MARSH-MALLOW**

Althaea officinalis

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

Frankeniaceae - the sea heath family (1 species)

* **SEA-HEATH**

Frankenia laevis

Photo. 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

Common at Castle Water and Farm. 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, Winchelsea Beach, 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

Scarce, found at Castle Farm.

Rorippa palustris

CUCKOO-FLOWER

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.

Cardamine pratensis

WAVY BITTER-CRESS

Recorded from Castle Water and Rye Harbour churchyard.

Cardamine flexuosa

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 23rd 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. **See the numbers of plants growing in the shingle quadrat on page 3.**

Cochlearia danica

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 old 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.

Diplotaxis tenuifolia

ANNUAL WALL-ROCKET

Also, just one record, in Rye Harbour village.

Diplotaxis muralis

RAPE

Common and widespread, following its widespread cultivation until 2003.

Brassica napus

BLACK MUSTARD

Common and widespread.

Brassica nigra

CHARLOCK

Recorded from Castle and Rye Harbour Farms. 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**

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

Cakile maritima

* **SEA KALE**

Photo. Abundant at the Beach Reserve, with only a very few plants further inland. See the numbers of plants growing in the shingle quadrat on page 3. The earliest flowering was noted on 23rd April.

Crambe maritima

SEA RADISH

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

Raphanus raphanistrum ssp. maritimum

Resedaceae – the weld family (1 species)

WELD

Common and widespread.

Reseda luteola

Primulaceae – the primrose family (4 species)

PRIMROSE

Some at Castle Water are probably garden escapes.

Primula vulgaris

SCARLET PIMPERNEL

Common and widespread.

Anagallis arvensis

SEA-MILKWORT

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

Glaux maritima

BROOKWEED

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

Samolus valerandi

Crassulaceae – the stonecrop family (5 species)

NAVELWORT

Common on the walls of Camber Castle.

Umbilicus rupestris

REFLEXED STONECROP

Recorded from a few locations at Beach Reserve.

Sedum rupestre

BITING STONECROP

Common and widespread, flowering from as early as 3rd June.

Sedum acre

WHITE STONECROP

Only recorded from Rye Harbour churchyard.

Sedum album

ENGLISH STONECROP

Common on the old shingle ridges around Camber Castle.

Sedum anglicum

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 22nd 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 is distinguished by having all leaves divided into three leaflets (five in *R. fruticosus*) and by having only a few individual drupelets in the fruit. The drupelets are covered with a pale 'bloom'. 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*

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*

Common in the north of the SSSI.

SWEET-BRIAR*Rosa rubiginosa.*

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

BLACKTHORN*Prunus spinosa*

Locally dominant, with some large thickets flowering as early as 28th 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 28th April.

Fabaceae - the pea family (38 species)

GOAT'S-RUE

Galega officinalis

Found along Rye Harbour road.

KIDNEY VETCH

Anthyllis vulneraria

A single group in Rye Harbour village.

NARROW-LEAVED BIRD'S-FOOT-TREFOIL

Lotus glaber

A single plant near Ternery Pool did not persist.

COMMON BIRD'S-FOOT-TREFOIL

Lotus corniculatus

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!

LARGE BIRD'S-FOOT-TREFOIL

Lotus pedunculatus

Widespread, but uncommon in the north of the SSSI.

TUFTED VETCH

Vicia cracca

Only known from Castle Water and near the Wood.

HAIRY TARE

Vicia hirsuta

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

SMOOTH TARE

Vicia tetrasperma

Common at Castle Water, scarce elsewhere.

NARROW-LEAVED VETCH

Vicia sativa ssp. nigra

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

A VETCH

Vicia sativa ssp. segetalis

Only recorded at Castle Water.

COMMON VETCH

Vicia sativa ssp. sativa

Only recorded at Castle Water and Rye Harbour churchyard.

SPRING VETCH

Vicia lathyroides

Common and widespread.

* **YELLOW-VETCH**

Vicia lutea

A small colony was found near the River Mouth in 2006.

* **SEA PEA**

Lathyrus japonicus

Photo. A nationally scarce plant that is only found at the Beach Reserve, where it forms dark green, low growing mats on bare shingle. **See the numbers of plants growing in the shingle quadrat on page 3.** Extreme flowering dates are 21st April

and 28th 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.”

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 21st 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

Photo. A nationally scarce plant thought to be localised at Rye Harbour, but a survey in 2005 found it to be widespread in north of the SSSI.

* **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. Some plants have been killed to maintain open shingle habitat.

Halagaraceae– the milfoil family (1 species)

SPIKED WATER-MILFOIL

Myriophyllum spicatum

Common and widespread in fresh water 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. This patch of plants has increased dramatically during the last 5 years, now with thousands of plants.

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. **See the numbers of plants growing in the shingle quadrat on page 3.** The extreme flowering dates are 5th May and 26th November. Numbers much reduced by the large number of Rabbits present in 2003-5

COMMON STORK'S-BILL

Erodium cicutarium

Common and widespread, growing on sandy soils, especially where there is much rabbit grazing. It is important here as the food plant 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. In 2005 a small group of plants were found and destroyed at the north end of the old railway line on Castle Farm. 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 and at Lime Kiln Cottage.

Apiaceae – the carrot family (25 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

Smyrniolum 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. It is colonising parts of the shingle and the Nature Reserve is trying to control it.

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

Present in a few of the ditches in the north of the SSSI.

HEMLOCK WATER-DROPWORT

Oenanthe crocata

Scarce in the north of the SSSI.

FINE-LEAVED WATER-DROPWORT

Oenanthe aquatica

Grows in a few ditches of Castle Farm.

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

Photo. 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 (not seen recently at the latter site). The number of plants is very variable between years.

WILD CELERY

Apium graveolens

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

FOOL'S WATER-CRESS

Apium nodiflorum

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

GARDEN PARSLEY

Petroselinum crispum

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

CORN PARSLEY

Petroselinum segetum

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

STONE PARSLEY

Sison amomum

Just two records, at Harbour Farm and Castle Water.

WILD ANGELICA

Angelica sylvestris

Found at Castle Water and from along the river Brede. It has a hollow, purple stem and flowers from July to October.

WILD PARSNIP

Pastinaca sativa

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

HOGWEED

Heracleum sphondylium

Only recorded from Camber Castle and along Rye Harbour road.

UPRIGHT HEDGE-PARSLEY

Torilis japonica

Uncommon with records from Castle Water and Rye Harbour village.

KNOTTED HEDGE-PARSLEY

Torilis nodosa

Common in the north of the SSSI.

WILD CARROT

Daucus carota

Widespread and locally common, for example along the path to Lime Kiln Cottage.

Gentianaceae – the gentian family (3 species)

COMMON CENTAURY

Centaurium erythraea

Common at the northern end of Castle Water and occasional at Beach Reserve..

LESSER CENTAURY

Centaurium pulchellum

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

YELLOW-WORT

Blackstonia perfoliata

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

Menyanthaceae – the bogbean family (1 species)

FRINGED WATER-LILY

Nymphoides peltata

Seen in the river Brede.

Apocynaceae – the periwinkle family (1 species)

LESSER PERIWINKLE

Vinca minor

Common at Watch Cottage and Lime Kiln Cottage.

Solanaceae – the nightshade family (5 species)

BITTERSWEET

Solanum dulcamara



Widespread, but only common at the Beach Reserve. **See the numbers of plants growing in the shingle quadrat on page 3.** 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.

BLACK NIGHTSHADE*Solanum nigrum*

Common and widespread on disturbed or cultivated ground.

APPLE OF PERU*Nicandra physalodes*

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

*** HENBANE***Hyoscyamus niger*

Photo. Widespread, but uncommon, occasionally found where sandy soil is disturbed by rabbits. One reliable site is inside the electric fence near the river mouth.

THORN-APPLE*Datura stramonium*

Recorded in 1997, growing in a fodder crop north of Camber Castle, but since 2003 it has been regular at Castle Water.

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)**COMMON COMFREY***Symphytum officinale*

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

WATER FORGET-ME-NOT*Myosotis scorpioides*

Common in the north of the SSSI.

TUFTED FORGET-ME-NOT*Myosotis laxa*

Common in the north of the SSSI.

FIELD FORGET-ME-NOT*Myosotis arvensis*

The only record was from the north of Castle Water.

EARLY FORGET-ME-NOT*Myosotis ramosissima*

Common and widespread.

CHANGING FORGET-ME-NOT*Myosotis discolor*

Common in the northern half of the SSSI.

HOUND'S-TONGUE*Cynoglossum officinale*

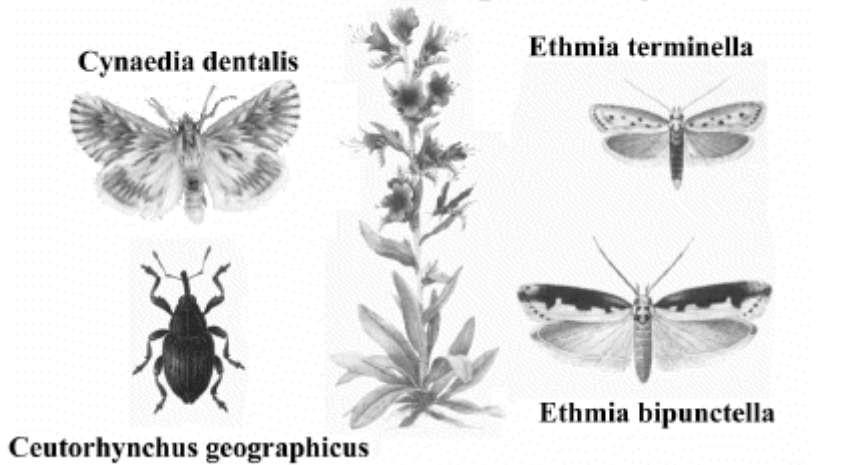
Common and widespread.

VIPER'S BUGLOSS

Echium vulgare

Common and widespread throughout the SSSI, especially on disturbed soil. The extreme flowering dates are 7th May and 18th 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 food plant of several rare and endangered insects and it is a reliable nectar source for Bumble Bees.

Rare insects of Viper's Bugloss



Lamiaceae – the dead-nettle family (17 species)

MARSH WOUNDWORT

Stachys palustris

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

BLACK HOREHOUND

Ballota nigra

Common and widespread.

WHITE DEAD-NETTLE

Lamium album

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

RED DEAD-NETTLE

Lamium purpureum

Widespread, but uncommon

*** RED HEMP-NETTLE**

Galeopsis angustifolia

Photo. This nationally scarce plant is common at the Beach Reserve and was also found among the arable crops of Rye Harbour Farm if missed by the herbicide. **See the numbers of plants growing in the shingle quadrat on page 3.** It is the food plant of the rare beetle *Dibolia cynoglossi*. It is vulnerable to grazing by Rabbits.

*** WHITE HOREHOUND**

Marrubium vulgare

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

WOOD SAGE

Teucrium scorodonia

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

*** WALL GERMANDER**

Teucrium chamaedrys

Photo. It grows at Camber Castle where it was described in 1715 as growing “plentifully 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

Glechoma hederacea

Common at the northern part of Castle Water.

SELFHEAL

Prunella vulgaris

Widespread, but uncommon.

BALM

Melissa officinalis

Only at Watch Cottage.

BASIL THYME

Clinopodium acinos

The only record was from Ternery Pool in 1982.

GIPSYWORT

Lycopus europaeus

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

WATER MINT

Mentha aquatica

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

SPEAR MINT

Mentha spicata

The only record is from Castle Water.

WILD CLARY

Salvia verbenaca

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

SKULLCAP

Scutellaria galericulata

Seen along the river Brede.

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 - the figwort family (17 species)

AN EYEBRIGHT

Euphrasia sp.

The only record is in pasture south of Camber Castle.

TWIGGY MULLEIN

Verbascum virgatum

This tall plant is found along the track between Rye Harbour and Watch Cottage, and along the shore road.

GREAT MULLEIN

Verbascum thapsus

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

WATER FIGWORT

Scrophularia auriculata

Common at Castle Water, Ternery Pool and along the river Brede, but scarce elsewhere. Grows mostly in wet ditches and on the margins of ponds, but also on bare shingle. 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

Veronica serpyllifolia

Scarce in the north of the SSSI.

GERMANDER SPEEDWELL

Veronica chamaedrys

Only one record, from the north of Castle Water.

PINK WATER-SPEEDWELL

Veronica catenata

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

WALL SPEEDWELL

Veronica arvensis

Common and widespread.

COMMON FIELD-SPEEDWELL

Veronica persica

Common and widespread.

IVY-LEAVED SPEEDWELL

Veronica hederifolia

The only record was from near Lime Kiln Cottage.

YELLOW-RATTLE

Rhinanthus minor

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

Orobanchaceae – the broomrape family (1 species)

COMMON BROOMRAPE

Orobanche minor

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.

Lentibulariaceae – the bladderwort family (1 species)

* **BLADDERWORT**

Utricularia australis

Widespread, but uncommon in the ditches of Castle Farm.

Campanulaceae - the bellflower family (1 species)

TRAILING BELLFLOWER

Campanula porscharskyana

Two plants were found in 2005 near the gate at the Corner Pools.

Rubiaceae – the bedstraw family (8 species)

FIELD MADDER

Sherardia arvensis

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

FEN BEDSTRAW

Galium uliginosum

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

COMMON MARSH-BEDSTRAW

Galium palustre

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

A COMMON MARSH-BEDSTRAW

Galium palustre ssp. palustre

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

LADY'S BEDSTRAW

Galium verum

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.

HEDGE BEDSTRAW

Galium mollugo

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

UPRIGHT HEDGE BEDSTRAW

Galium mollugo ssp. erectum

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

CLEAVERS

Galium aparine

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.

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. The Nature Reserve is controlling this plant to prevent it from dominating large areas of shingle to the detriment of native flora.



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 November.

ROUGH HAWKBIT

Widespread, but scarce.

LESSER HAWKBIT

Widespread, but scarce.

BRISTLY OXTONGUE

Common and widespread.

Leontodon hispidus

Leontodon saxatilis

Picris echioides



Picris hieracioides

HAWKWEED OXTONGUE

The only record is from along Rye Harbour road.

GOAT'S-BEARD

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

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

A GOAT'S-BEARD

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

SALSIFY

Photo on back cover. This mauve flowered relative of Goat’s-beard is common near Lime Kiln Cottage and forms very large, round, brown seed heads. The flowers close by mid-day.

PERENNIAL SOW-THISTLE

Common and widespread.

Tragopogon pratensis

Tragopogon pratensis ssp. minor

Tragopogon porrifolius x pratensis

Tragopogon porrifolius

Sonchus arvensis

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

Photo. 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 – 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

Photo. 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. In 2005 rabbit proof fencing was installed and resulted in 47 flowering plants in 2006.

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 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*.

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.

SEA MAYWEED

Common at the Beach Reserve.

Tripleurospermum maritimum

SCENTLESS MAYWEED

Recorded from the north of the SSSI.

Tripleurospermum inodorum

COMMON RAGWORT

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.

Senecio jacobaea

HOARY RAGWORT

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

Senecio erucifolius

OXFORD RAGWORT

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.

Senecio squalidus

GROUNDSEL

Common and widespread. **See the numbers of plants growing in the shingle quadrat on page 3.** 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.

Senecio vulgaris

STICKY GROUNDSEL

Common in the south of the SSSI, even growing in bare shingle. **See the numbers of plants growing in the shingle quadrat on page 3.** 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.

Senecio viscosus

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 (2 species)***LESSER WATER-PLANTAIN***Baldellia ranunculoides*

First found at Castle Water in 2003, with 2 plants. Then 12 in 2004 and 100+ in 2006. This plant colonises bare mud at the margin of freshwater and has benefited from the re-profiling work and wetland creation at Castle Water.

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*

Photo. 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 Rye 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

Juncus gerardii

Found in sheltered intertidal areas at Beach Reserve.

TOAD RUSH

Juncus bufonius

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.

JOINTED RUSH

Juncus articulatus

Common at Castle Water flowering from June until September.

SEA RUSH

Juncus maritimus

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

HARD RUSH

Juncus inflexus

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.

SOFT RUSH

Juncus effusus

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.

COMPACT RUSH

Juncus conglomeratus

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

FIELD WOOD-RUSH

Luzula campestris

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 sub-globose.

Cyperaceae – the sedge family (17 species)

COMMON SPIKE-RUSH

Eleocharis palustris

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

MANY-STALKED SPIKE-RUSH

Eleocharis multicaulis

Only one record, from the south of Castle Water.

SEA CLUB-RUSH

Bolboschoenus maritimus

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

WOOD CLUB-RUSH

Scirpus sylvaticus

The only record is from the river Brede.

COMMON CLUB-RUSH

Schoenoplectus lacustris

Widespread, but uncommon.

GREY CLUB-RUSH

Schoenoplectus tabernaemontani

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.

FALSE FOX-SEDGE

Carex otrubae

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

SPIKED SEDGE

Carex spicata

Only recorded from Castle Water.

GREY SEDGE

Carex divulsa ssp. divulsa

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

* **SAND SEDGE**

Carex arenaria

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

* **DIVIDED SEDGE**

Carex divisa

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

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 (54 species)

RED FESCUE

Festuca rubra

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.

ITALIAN RYE-GRASS

Lolium multiflorum

Common at Rye Harbour Farm.

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

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

COCK'S-FOOT

Dactylis glomerata

Common and widespread, 'flowering' from March until December.

FERN-GRASS

Catapodium rigidum

Widespread.

SEA FERN-GRASS

Catapodium marinum

Only recorded from the Beach Reserve.

HARD GRASS

Parapholis strigosa

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

*** CURVED HARD GRASS**

The only record was in 1992 on mud near the lifeboat house in Rye Harbour village.

Parapholis incurva

REED SWEET-GRASS

Recorded in the river Brede.

Glyceria maxima

FLOATING SWEET-GRASS

Recorded in the river Brede, Castle Farm and Castle Farm. It grows to a height of three feet and flowers from May to August.

Glyceria fluitans

SMALL SWEET-GRASS

Recorded in the river Brede.

Glyceria declinata

FALSE OAT-GRASS

Abundant at the Beach Reserve and occurs elsewhere.

Arrhenatherum elatius

WILD OAT

Common in the arable crops of Harbour Farm.

Avena fatua

YELLOW OAT-GRASS

Common and widespread.

Trisetum flavescens

CRESTED HAIR-GRASS

Widespread on shingle ridges.

Koeleria macrantha

YORKSHIRE-FOG

Common and widespread, flowering from June to August.

Holcus lanatus

SILVER HAIR-GRASS

The only record, by Dr Francis Rose is from the old shingle ridges south of Camber Castle.

Aira caryophyllea

EARLY HAIR-GRASS

Widespread on shingle ridges.

Aira praecox

SWEET VERNAL GRASS

Common in the north of the SSSI. It has an unbranched stem and flowers from April to June.

Anthoxanthum odoratum

REED CANARY-GRASS

Common along the river Brede. It can reach a height of five feet and flowers from July to August.

Phalaris arundinacea

COMMON BENT

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.

Agrostis capillaris

CREEPING BENT

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.

Agrostis stolonifera

PERENNIAL BEARD-GRASS

Agrostis stolonifera x Polypogon monspeliensis

A single record, in 1965, from the north of the SSSI.

*** WOOD SMALL-REED**

A single record, from the Beach Reserve by Mrs Breda Burt.

Calamagrostis epigejos

*** ANNUAL BEARD-GRASS**

Polypogon monspeliensis

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

MEADOW FOXTAIL

Alopecurus pratensis

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

MARSH FOXTAIL

Alopecurus geniculatus

Widespread in the north of the SSSI.

TIMOTHY

Phleum pratense

Common and widespread.

SMALLER CAT'S-TAIL

Phleum bertolonii

Widespread in the north of the SSSI.

***SAND CAT'S-TAIL**

Phleum arenarium

Photo. One record from Harbour Farm and one from close to the River Mouth..

SOFT-BROME

Bromus hordeaceus

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

BARREN BROME

Anisantha sterilis

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.

***COMPACT BROME**

Anisantha madritensis

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

COMMON COUCH

Elytrigia repens

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.

SEA COUCH

Elytrigia atherica

Common in the south of the SSSI.

SAND COUCH

Elytrigia juncea

Only recorded from just south of Lime Kiln Cottage

WALL BARLEY

Hordeum murinum

Common in the north of the SSSI.

MEADOW BARLEY

Hordeum secalinum

Common in the north of the SSSI.

***SEA BARLEY**

Hordeum marinum

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

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*

Photo. 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

Recent counts have not been made because the colony is thriving.

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.

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 212,000 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 9 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.***

Photographs of selected scarce plants.



Top left - Sea Heath
Top right - Saltmarsh Goosefoot
Bottom - Marsh Mallow





Top left - Sea Rocket
Top right - Sea Kale Seeds
Bottom - Sea Kale





Top - Sea Pea
Bottom right - Clustered Clover
Bottom left- Slender Hare's ear





Top left - Red Hempnettle
Top right - Henbane
Bottom left- Wall Germander
Bottom right - White Horehound





Top two - Stinking Hawksbeard
Left - Frogbit
Bottom left - Lesser Water Plantain
Bottom right - Least Lettuce





Top left - Marsh Helleborine
Top right - Bulbous Meadow-grass
Bottom left - Sand Cat's tail
Bottom right - Annual Beard-grass





Salsify near Lime Kiln Cottage, Rye Harbour Nature Reserve