Vegetated shingle, Shingle Street (Emma Aldous)
Little Tern (Arthur Grosset), Rest Harrow Moth (Neil Sherman)

Coastal Vegetated Shingle

Vegetated shingle occurs at or above spring tide mean high-water. The ridges and lows influence plant growth, resulting in zones of vegetated and bare shingle.

Vegetation ranges from pioneer plant communities through a lichen-rich turf, to gorse scrub or bramble and, where grazed, to a species-rich turf.

Vegetation varies according to: shingle stability; distance inland; pebble size; amounts of fine material; water availability; and site management.

IMPORTANCE FOR WILDLIFE

Shingle beaches stable enough to support vegetation are rare and are important geomorphological features as well as home to a highly specialised range of flora and fauna. Approximately one-third of vegetated shingle in Europe is found in the UK. Early pioneers include deep-rooted plants such as Sea Pea, Sea Kale and Yellow Horned Poppy. Rarer species like Rock Samphire and Ray's Knotgrass grow near the tide line and Little Terns nest in shallow scrapes on shingle beaches. Further up the beach plants stabilise the shingle and a thin turf of acidic heath can develop supporting a range of lichens, mosses, rare clovers and succulents. The Whelk-shell Jumping Spider lives in empty whelk shells thrown up by storms. Sand hoppers inhabit the strandline and Grey Bush-crickets feed on herbs, grasses and flowers and small insects further inland.

IMPORTANT ASSOCIATED SPECIES

Birds
Herring Gull *Larus argentatus subsp. argenteus*
Little Tern *Sterna albifrons**
Ringed Plover *Charadrius hiaticula*

Bees and Wasps
Large Garden Bumblebee *Bombus ruderatus*

Butterflies
Wall *Lasiommata megera*

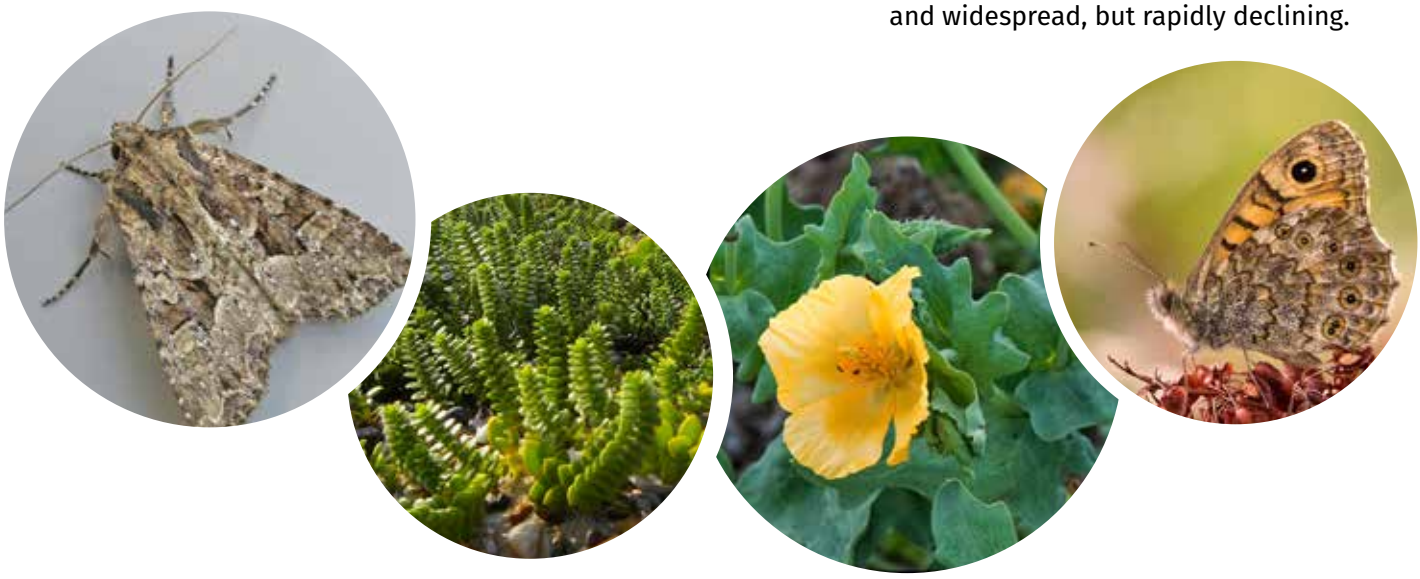
Moths
Rest Harrow *Aplasta ononaria*
Dusky Brocade *Apamea remissa***
Mullein Wave *Scopula marginepunctata***

Spiders
Heath Grasper *Haplodrassus dalmatensis*
Whelk-shell Jumper Spider *Pseudeuophrys obsoleta*

Bugs
A Mirid Bug *Orthotylus rubidus**

Plants
Stinking Goosefoot *Chenopodium vulvaria*
Red Hemp-nettle *Galeopsis angustifolia*
Prickly Saltwort *Salsola kali*
English Stonecrop *Sedum anglicum*
Wall Pepper (Biting Stonecrop) *Sedum acre*
Sea pea *Lathyrus japonicus*
Yellow Horned Poppy *Glaucium flavum*
Sand Catchfly *Silene conica*
Sea Kale *Crambe maritima*
Sea Rocket *Cakile maritima*
Sea Sandwort *Honckenya peploides*
Sea Holly *Eryngium maritimum*
Sea Spurge *Euphorbia paralias*
Henbane *Hyoscyamus niger*
Sea Campion *Silene uniflora*
Slender Hare's Ear Bupleurum tenuissimum

*Suffolk Priority species
**Priority - Research Only. Common and widespread, but rapidly declining.



Images: Top – Ringed Plover (Steve Roach). Bottom, left to right – Dusky Brocade (Paul Kitchener), Sea Sandwort (Charles Cuthbert), Yellow Horned Poppy (Roger Flory), Wall Brown (Chris Upson).

FACTORS AFFECTING HABITAT IN SUFFOLK

- A lack of sediment supply. Shingle is unstable and requires a steady supply of new material. This natural process may be disrupted by the building of coastal defence structures, offshore aggregate extraction or artificial redistribution of material.
- Stability. Many shingle beaches are subject to continuous long-shore drift with shingle being transported and sorted by wave action. The dynamic nature of shingle is an important aspect of the habitat, but it means that shingle features are rarely stable in the long term.
- Development can cause damage to these fragile habitats e.g. around Sizewell nuclear power station and Felixstowe / Landguard port development.
- Water quality and pollution – pollution resulting from dumping at sea can have a serious impact. Oil is a particular problem on shingle beaches as it is difficult to clean and disperse.
- Recreation. Shingle beaches are extremely fragile and so recreation activities can cause significant damage through trampling of plants, disturbance to ground-nesting birds, dog fouling and litter. Vehicle access to beaches has degraded many sites with loss of vegetation and lack of regeneration.
- Grazing by livestock only occurs on a few shingle sites such as Simpson's Saltings on the Alde-Ore Estuary where there is a matrix of vegetation types. Over-grazing will damage the habitat.

Sea Pea, Sea Campion (both Colin Jacobs), Sea Holly (Charles Cuthbert).

HABITAT MANAGEMENT ADVICE

- The best management practice for coastal vegetated shingle is to leave it alone. Shingle communities establish slowly and can be easily damaged by disturbance. The natural processes of wind and waves will maintain the various successional stages if allowed to do so.
- Prevent damage by human disturbance, such as trampling e.g. by erecting fences and boardwalks where appropriate.
- Control dog-walking to prevent damage through fouling and disturbance to ground-nesting birds.
- Maintain habitat diversity by ensuring that all successional stages from bare shingle to short vegetation and taller grassland, and any seepage areas, are preserved.
- Leave adjacent areas of flower-rich grassland to benefit bees and other insects. Continue any traditional management regimes of cutting and grazing. Tussocky vegetation will provide shelter for many invertebrates. Ensure that some grasses and flowering plants can set seed each year as the larval stages of some flies live in the flowerheads.
- Prevent scrub encroachment, although some stands of broom, blackthorn, bramble and willow are beneficial and support invertebrate populations.
- Leave tidal debris, driftwood and seaweed on the beach as these provide habitat for some invertebrate species.
- Ensure tidal patterns are maintained through sensitive coastal planning. Shingle features can deteriorate if tidal patterns are altered by construction works.

VISION FOR SUFFOLK

1. Improve knowledge of extent and quality of coastal vegetated shingle.
2. Maintain the existing extent of coastal vegetated shingle to ensure no net loss.
3. Encourage the restoration and improvement of degraded coastal vegetated shingle.
4. Re-create coastal vegetated shingle as opportunities arise.

WHERE TO FIND FURTHER INFORMATION

A Flora of Suffolk. Martin Sanford and Richard Fisk. 2010. D.K. and M.N. Sanford

Buglife – advice on managing BAP habitats
- https://www.buglife.org.uk/resources/habitat-management/coastal-vegetated-shingle

Buglife – Notable invertebrates associated with coastal vegetated shingle (pdf)
- https://cdn.buglife.org.uk/2019/07/09-Notable-invertebrates-associated-with-coastal-vegetated-shingle.pdf

Common Standards Monitoring Guidance for Vegetated Coastal Shingle Habitats. JNCC 2004
- http://data.jncc.gov.uk/data/7607ac0b-f3d9-4660-9dda-0e538334ed86/CSM-VegetatedCoastalShingle-2004.pdf

JNCC Habitat Description (pdf)
- https://data.jncc.gov.uk/data/4b9e595b-c337-48c7-9880-b1611d02acbb/UKBAP-BAPHabitats-10-CoastVegShingle.pdf

MAGIC website – interactive mapping information including designations • https://magic.defra.gov.uk/

Making Space for Nature, a Review of England's Wildlife Sites and Ecological Network 16 Sep 2010. Chaired by Professor Sir John Lawton CBE FRS. Defra website (pdf) • https://webarchive.nationalarchives.gov.uk/ukgwa/20130402151656/http://archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf

National Trust Orford Ness National Nature Reserve Coastal Vegetated Shingle and shingle heath • https://www.nationaltrust.org.uk/orford-ness-national-nature-reserve/features/coastal-vegetated-shingle-and-shingle-heath-on-orford-ness

Natural Environment White Paper June 2011 – *The Natural Choice: securing the value of nature* (pdf)
- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/228842/8082.pdf

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Images: Orfordness (Terri Tarpey), Sea Rocket (Colin Jacobs).

SUFFOLK COASTAL VEGETATED SHINGLE: NOTABLE INVERTEBRATES

Species	Designation
Spiders and allies (Arachnida: Araneae and Pseudoscorpiones)	
Arctosa fulvolineata	RDB3
Pseudeudeuophrys obsolete	RDB3
Haplodrassus minor	RDB3
Trichoncus affinis	RDB2
Trichoncus hackmani	RDB2
Agraecina striata	Nb
Argiope bruennichi	Na
Sitticus inexpectus	Na
Zelotes petrensis	Na
Centipedes (Chilopoda)	
Lithobius lapidicola	RDBK
Pachymerium ferrugineum	Nb
Millipedes (Diplopoda)	
Thalassisobates littoralis	Nb
Woodlice (Isopoda)	
Miktoniscus patiencei	Nb
Trichoniscoides saeroeensis	Nb
Stenophiloscia zosterae	Nb
Grasshoppers, crickets and cockroaches (Orthoptera/Dermaptera/Dictyoptera)	
Platycleis albopunctata	Nb
Ectobius panzeri	Nb
True Bugs (Hemiptera)	
Heteroptera	
Corizus hyoscyami	Local
Leafhoppers, planthoppers, froghoppers, treehoppers & cicadas (Auchenorrhyncha)	
Trigonocranus emmeae	Nb
Beetles (Coleoptera)	
Ground beetles (Adephaga)	
Cymindis axillaris	Na
Leaf beetles (Chrysomelidae)	
Longitarsus ganglbaueri	Notable A
Weevils (Curculionoidea)	
Ethelcus verrucatus	RDB3
Lixus scabricollis	RDBK
Rove beetles and allies (Staphylinidae/Scydmaenidae/Silphidae)	
Medon brunneus	Local
Ants, bees and wasps (Hymenoptera: Aculeata)	
Bombus humilis	BAP Priority
Hylaeus spilotus	RDB3

Definitions of Designations

RDB3 – Red Data Book category 3. RARE	Species which occur in small populations and, although not currently either Endangered or Vulnerable, are at risk. Rare species exist in 15 or fewer 10km squares, or are more widespread than this but dependent on small areas of especially vulnerable habitat.
RDB2 - Red Data Book Category 2. VULNERABLE	A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium term future. Rare species exist in 15 or fewer 10km squares, or are more widespread than this but dependent on small areas of especially vulnerable habitat.
Nb – Nationally Scarce Category B	Species which do not fall within Red Data Book categories but which are nonetheless uncommon in Great Britain and thought to occur in between 31 and 100 10km squares of the National Grid, or for less well recorded groups, between eight and twenty vicecounties.
Na – Nationally Scarce Category A	Species which do not fall within Red Data Book categories but which are nonetheless uncommon in Great Britain and thought to occur in 30 or fewer (typically between 16 and 30) 10km squares of the National Grid, or for less well recorded groups, in seven or fewer vice-counties.
RDBK	Species appear in the Red Data Book but the status is unknown, although they are thought to be rare.
Local	Found in restricted habitats.
Notable A	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid or, for less well-recorded groups, within seven or fewer vice-counties. The same as 'Nationally Scarce'.
Notable B	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in between 31 and 100 10km squares of the National Grid or, for less-well recorded groups between eight and twenty vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.
N – Nationally Scarce	Species which do not fall within Red Data Book categories but which are nonetheless uncommon in Great Britain. This status category has been used where information has not been sufficient to allocate a species to either Na or Nb. These species are thought to occur in between 16 and 100 10km squares of the National Grid.
BAP Priority Species	Listed under Sec 41 of the Natural Environmental and Rural Communities Act 2006 as priorities for conservation action.