



# Set A - Sand dune super species

## Bird's-foot trefoil *Lotus corniculatus*

- Plant
- Producer
- Common
- Habitat - semi-fixed dunes, fixed dunes and dune slacks
- Flowers from June to September
- Superpower - it is an important foodplant for the caterpillars of the common blue, silver-studded blue and wood white butterfly and its flowers are an excellent source of nectar for bees.



## Dillwyn's dung beetle

### *Onthophagus nuchicornis*

- Animal > invertebrate > insect
- Secondary consumer - omnivore
- Common
- Habitat - semi-fixed dunes
- Superpower - disposes of dead matter, where there is a scarcity of dung it can be found in dog faeces.



## Grey bush cricket

*Platypleis albopunctata*

- Animal > invertebrate > insect
- Secondary consumer - omnivore
- Least concern
- Habitat - rough vegetation on all dunes
- Superpower - camouflage and jumping



## Chough

### *Pyrrhocorax*

- Animal > vertebrate > bird
- Secondary consumer - omnivore (invertebrates and berries)
- Rare
- Habitat - all coastal areas
- Superpower - acrobatic flight.  
65% of the UK population live in Wales.





## Small blue butterfly

### *Cupido minimus*

- Animal > invertebrate > insect
- Primary consumer - herbivore
- Rare
- Habitat - all dunes and coastal grasslands
- Superpower - the small blue tends to live in small colonies of up to 30 individuals. Both sexes can be found in communal roosts, facing head down in the grass.



## Least puffball

*Bovista pusilla*

- Fungi
- Decomposer
- Common
- Habitat - semi-fixed and fixed dunes
- Superpower - burst spraying its brown dust-like spores.



## Creeping willow

*Salix repens*

- Plant
- Producer
- Common
- Flowers from April to May
- Habitat - fixed dunes and dune slacks
- Superpower - it can change its growth form from upright to horizontal when engulfed by sand.



## Dune tiger beetle

*Cicindela maritima*

- Animal > invertebrate > insect
- Secondary consumer - carnivore
- Rare
- Habitat - mobile dunes
- Superpower - can rapidly fly and run in search of prey. Its larvae are also predatory.





## Vernal mining bee

*Colletes cunicularius*

- Animal > invertebrate > insect
- Primary consumer - herbivore
- Rare
- Habitat - mobile dunes
- Superpower - coats inside of burrows with waterproof membrane.



## Dune robber fly

*Philonicus albiceps*

- Animal > invertebrate > insect
- Secondary consumer - carnivore
- Rare
- Habitat - mobile dunes
- Superpower - injects poison to paralyze prey.



## Vineyard or striped snail

### *Cerņuella virgata*

- Animal > invertebrate > mollusc
- Primary consumer - herbivore
- Common
- Habitat - fixed dunes and grassland
- Superpower - the snail makes and uses love darts to try and attract a mate.



## Early marsh orchid

*Dactylorhiza incarnata*

- Plant
- Producer
- Occasional or locally frequent
- Flowers from May to mid-July
- Habitat - dune slacks
- Superpower - super food source for pollinators, with up to 50 flowers on one stem.





## Early gentian

### *Gentianella anglica*

- Plant
- Producer
- Rare
- Flowers from March to July
- Habitat - mature dunes and coastal grassland
- Superpower - it is endemic to the UK so is found nowhere else in the world!



## Willow poisonpie

*Hebeloma vaccinum*

- Fungi
- Decomposer
- Rare
- Habitat - dune slacks
- Superpower - it links with the roots of the Creeping willow to help it grow.



## Great crested newt

### *Triturus cristatus*

- Animal > vertebrate > amphibian
- Secondary consumer - carnivore
- Declining - European protected species
- Habitat - dune slacks
- Superpower - has been known to have lived on earth for at least 40 million years.



## Natterjack toad

*Epidaleia calamita*

- Animal > vertebrate > amphibian
- Secondary consumer - carnivore
- Rare - European protected species
- Habitat - dune slacks
- Superpower - pioneer species, the first to colonise a new habitat.





## Slow worm

### *Anguis fragilis*

- Animal > vertebrate > reptile
- Secondary consumer - carnivore
- Common
- Habitat - fixed dunes
- Superpower - can shed their tails to escape from predators.



## Sand lizard

### *Lacerta agilis*

- Animal > vertebrate > reptile
- Secondary consumer - carnivore
- Rare - European protected species
- Habitat - semi-fixed and fixed dunes
- Superpower - uses rabbit burrows for shelter and hibernation and digs own burrows off them. The burrows can be as deep as 1 meter but very small in diameter.



## Dune inkcap

*Coprinopsis ammophilae*

- Fungi
- Decomposer
- Becoming rare
- Habitat - mobile and semi-fixed dune
- Superpower - salt tolerant inkcap species, grows amongst roots of Marram grass.



## Winter stalkball

*Tulostoma brumale*

- Fungi
- Decomposer
- Rare
- Habitat - fixed dunes
- Superpower - the lollipop-like fungus can be easily overlooked among snail shells and other sand dune debris, as it is so well camouflaged.





## Ringed plover

*Charadrius hiaticula*

- Animal > vertebrate > bird
- Secondary consumer - carnivore
- Declining
- Habitat - mobile dunes and sandy/shingle beaches
- Superpower - they run at speed and then stand still to draw insects to the surface.



## Kestrel

*Falco tinnunculus*

- Animal > vertebrate > bird
- Tertiary consumer - carnivore
- Declining
- Habitat - all sand dune areas
- Superpower - can see UV urine 'wee' trails.



## Little tern

### *Sternula albifrons*

- Animal > vertebrate > bird
- Secondary consumer - carnivore
- Rare
- Habitat - sandy/shingle beaches often below the high-water mark
- Superpower - migrate to West Africa in winter; a round trip is almost 19,000 miles.



## Marram grass

*Ammophila arenaria*

- Plant
- Producer
- Common
- Flowers from July to August
- Habitat - mobile, semi-fixed and fixed dunes
- Superpower - is a xerophyte, so can withstand dry conditions. It has extra long underground stems which enable the plant to survive sand burial. Leaf blade is rolled to reduce water loss.





## Petalwort

*Petalophyllum ralfsii*

- Plant
- Producer
- Rare
- Habitat - dune slacks
- Superpower - during the summer it is not visible as it survives underground until the wet weather returns from autumn onwards.





## Prickly saltwort

*Salsola kali*

- Plant
- Producer
- Flowers from July to September
- Habitat - strandline & mobile dunes
- Superpower - succulent halophyte plant (salt tolerant). When burnt it produces sodium carbonate, which was used to make glass and soap.



## Pyramidal orchid

*Anacamptis pyramidalis*

- Plant
- Producer
- Occasional or locally frequent
- Habitat - semi-fixed to fixed dunes
- Superpower - it provides nectar and pollen for pollinators.



## Sea holly

### *Eryngium maritimum*

- Plant
- Producer
- Frequent or locally abundant
- Flowers from July to September
- Habitat - strandline, mobile and semi-fixed dunes
- Superpower - it was once used to treat flatulent disorders and the roots can be eaten boiled or roasted. It was used to make a jelly or sweets called "kissing comfits".



## Meadow pipit

*Anthus pratensis*

- Animal > vertebrate > bird
- Secondary consumer - carnivore
- Common
- Habitat - mobile, semi-fixed and fixed dunes
- Superpower - favourite foster parent to cuckoo chicks.





## Redshank

*Tringa totanus*

- Animal > vertebrate > bird
- Secondary consumer - carnivore
- Declining
- Habitat - saltmarsh and dune grassland
- Superpower - males perform an elaborate aerial display as part of their courtship ritual.





## Peregrine falcon

*Falco peregrinus*

- Animal > vertebrate > bird
- Tertiary consumer - carnivore
- Rare
- Habitat - all dune areas
- Superpower - fastest bird in the world, reaching 390km per hour in a dive.



## Fox

### *Vulpes vulpes*

- Animal > vertebrate > mammal
- Tertiary consumer - carnivore
- Common
- Habitat - all sand dune areas
- Superpower - foxes eat just about anything, including berries, insects, small mammals and birds. This year-round food source means they don't need to hibernate.



## Rabbit

### *Oryctolagus cuniculus*

- Animal > vertebrate > mammal
- Primary consumer - herbivore
- Common
- Habitat - fixed dunes
- Superpower - nature's lawnmowers, helping small plants to grow and churning up sand.



## Parasol

### *Macrolepiota procera*

- Fungi
- Decomposer
- Common
- Habitat - fixed dunes
- Superpower - in Wales fairies supposedly use the parasols as umbrellas. They often grow in circles or 'fairy rings'.





## Sea sandwort

*Honckenya peploides*

- Plant
- Producer
- Locally common
- Flowers from May to August
- Habitat - strandline, embryo dunes and mobile dunes
- Superpower - the shoots and leaves are rich in vitamin A and vitamin C and can be used as a green, leafy vegetable either raw or cooked.





## Shore dock

*Rumex rupestris*

- Plant
- Producer
- Endangered - European protected species
- Flowers from June to August
- Habitat - coastal
- Superpower - fruit floats in and is dispersed by seawater and this enables it to colonize new locations.



## Horse

### *Equus caballus*

- Animal > vertebrate > mammal
- Primary consumer - herbivore
- Common
- Habitat - all grassland habitats including mobile and fixed dunes
- Superpower - will eat courser material allowing more light to reach the ground which helps our rarer, less competitive species, to persist.



## Fen orchid

*Liparis loeselii*

- Plant
- Producer
- Endangered - European protected species
- Flowers from June to July
- Habitat - dune slack
- Superpower - it needs to be next to a mycorrhizal fungi to be able to germinate.





## Sand couch grass

*Elymus farctus*

- Plant
- Producer
- Common
- Flowers from June to August
- Habitat - embryo dune, mobile dune and semi-fixed dune
- Superpower - pioneer species, it is one of the first plants to colonise fresh sand.





## Sea stock

*Matthiola sinuata*

- Plant
- Producer
- Very rare
- Flowers from June to August
- Habitat - embryo and mobile dunes
- Superpower - after flowering the dry flower head, containing seeds, can float off to a new site.

