

## 6. The plants

Below, you are invited to discover which are the vegetal species on the dunes. These photographs will help you in identifying the ones most usually found.



Marram grass (*Ammophila arenaria*)



Sea wormwood (*Artemisia chrithmifolia*)



*Helichrysum picardii*



Sea holly (*Eryngium maritimum*)



*Crucianella maritima*



*Malcomia littorea*



*Scrophularia frutescens*



Sea spurge (*Euphorbia paralias*)



*Cyperus capitatus*



*Lotus creticus*

We remind you that the following actions are forbidden:



Abandoning the path



Driving bicycles



Disturbing the environment



Entering pets



Throwing rubbish



Making disturbing noise

The conservation of this singular sites depends on all of us Thank you for your co-operation

**112**  
Emergencias

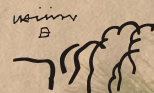
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CONSEJERÍA DE MEDIO AMBIENTE

## 4. The Dunar Path

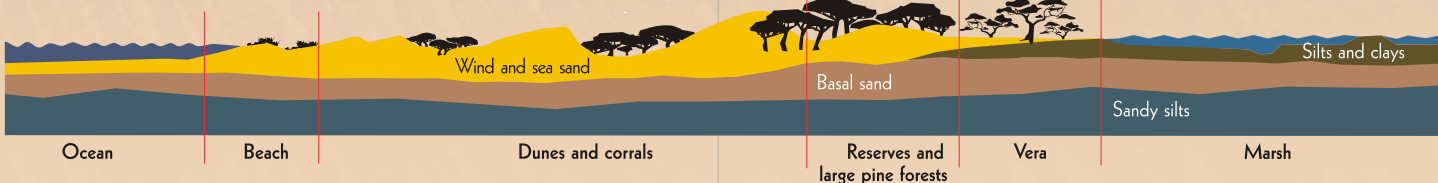




You will be getting into the most important system of live or mobile dunes still existing in the Iberian Peninsula and into one of the most spectacular landscapes of the Doñana National Park.

The Dunar system is 25 km long and parallel to the coastal line. Its width ranges between 500 and 5000 metres and it reaches a height of 30 metres at the Ánsares Hill, the most emblematic dune in this National Park. It contains successive ridges of dunes advancing towards the inner land while pushed by the dominant SW wind, which is locally called “foreño” (coming from fuera = “outside” = the Atlantic Ocean). Between the ridges, you will find interdunar valleys, known as “corrals”, which are authentic vegetation islands on that sand sea.

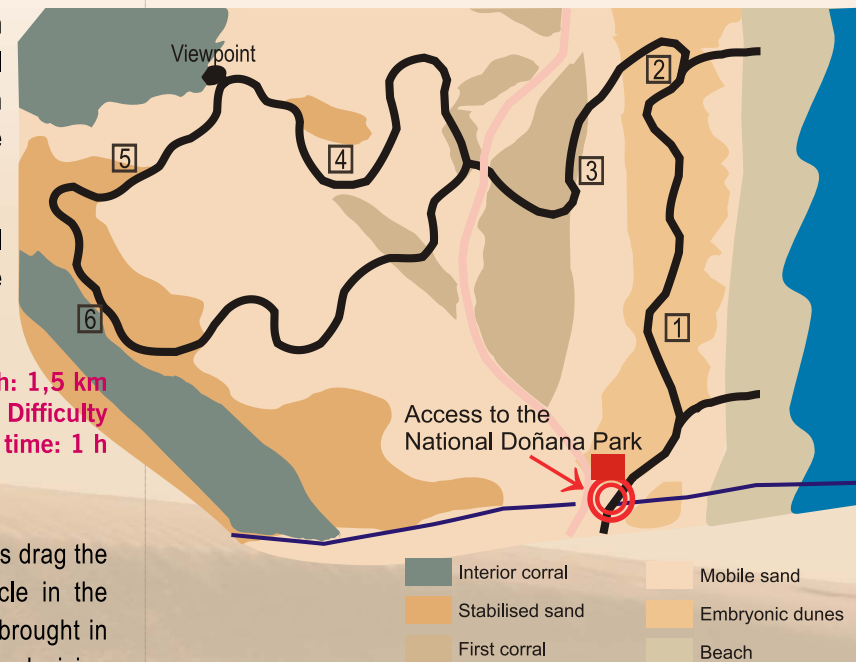
Why do the dunes in Doñana keep moving? During the XVIth and XVIIth centuries, the workers of the trap-netting fisheries, today inexistent, settled on the coastal areas during the tuna fish migration seasons and used the coastal vegetation for building their fishing gear and their huts, as well as as a fuel. This intensive uprooting led to the disappearance of the vegetation layer that kept the dunes stable and favoured the mobilisation process.



The path you will follow is approximately 1.5 km long and will allow you to visualise several subsystems ranging from the embryonic dunes on the edge of the beach to the first corral, where the first big-sized trees appear.

Please, follow the numbered poles. Below, you will find some interesting comments about these enclaves.

Total length: 1,5 km  
Low Difficulty  
Estimated time: 1 h



### 1. Embryonic dunes

Dunes start to develop on the beach when the winds drag the sand and accumulate it around any small obstacle in the relief. These hillocks grow as a result of the sand brought in by the wind and start advancing, joining others and giving shape to huge dunes located at hundreds of metres from the coast.

### 2. Prickly juniper (*Juniperus oxycedrus subsp. macrocarpa*), Phoenician juniper (*Juniperus phoenicia subsp. turbinata*) and tamarisk (*Tamarix gallica*)

In the past, the junipers and the savines constituted actual forests on the coastal sands; nowadays, only a few groups of specimens can be found scattered on the dunes.

Junipers have a rooting system that allows them to “ride” on the sand, thus preventing them from being covered by the advancing dunes. Here, you can visualise how this circumstance has favoured the survival of savines and salt cedars, the latter being an indication of the presence of humidity in the subsoil.

### 3. First corral

The small corrals close to the beach are covered by several species of herbs and shrubs because the mobility of the sand and the intensity of the wind do not allow the growth of bigger plants. At this point, you can prove how the vegetation colonises the most sheltered areas.

### 4. Mobile dunes

When the sand accumulated by the wind surpasses a certain height, it loses stability and starts moving. The sand grains are dragged by the slope of the dune towards the crest, from where they plunge; this is why the front side of a dune has a far more marked slope than its backside. After advancing, a dune shall join others and constitute actual advancing ridges that submerge the vegetation.

### 5. Interior corral

The mobility of the dunes is lesser as their size increases. The valleys are deeper and more protected, and the underground water is closer to the surface. This contributes to the growth of small pine forests in the interior corrals, which serve as a shelter for the fauna.