

## *The Devesa Landscape*

### WALK

#### ROUTE

The route runs along the old *Camí Vell de la Devesa* (Old Devesa Road), which linked the city of Valencia with the village of El Perellonet. During the walk we can see the main dune slacks of the northern zone; the *Quarter*, *El Saler*, *Rambla*, *Redona* and *Llarga* dune slacks.

#### LENGTH OF THE WALK

Approximately 4,000 metres.

#### DURATION

Approximately 1 hour and 45 minutes.

#### WHAT TO DO

- \_RESPECT THE PLANTS AND ANIMALS. Do not pick flowers or leaves.
- \_RESPECT THE SOUNDS OF NATURE. Do not make noise.
- \_DO NOT LEAVE YOUR LITTER BEHIND. Use the bins and containers provided.
- \_DO NOT LIGHT FIRES.
- \_KEEP TO THE MARKED PATHS AND TRACKS.
- \_DO NOT GO BAREFOOT. Use appropriate footwear for walking.

#### USEFUL NUMBERS

DEVESA-ALBUFERA SERVICE	96 161 03 47
EL SALER FORESTRY PROTECTION CENTRE	96 183 00 12
FIRE AND EMERGENCY	112



# THE DEVESA LANDSCAPE WALK

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## 1st Stop

### THE QUARTER DUNE SLACK



From here we can see the dune slack known as the *Quarter*. The dune slacks are interdune depressions located among the pines, where muddy ground predominates. This ground is grey and impermeable, and this means that in the rainy season, mainly in autumn, pools develop, and then dry out in the hot season by evaporation which leads to a gradual salinization of the ground.

Man has used different techniques to avoid the formation of pools in the dune slacks of the Devesa, and this has caused grave alterations to this singular ecosystem. In particular the *Quarter* dune slack was filled with sand from the foredunes during the urban development process that was suffered by the Devesa at the end of the 1960s. Fortunately, in 1999, the dune slack was recovered and returned to its original state.

## 2nd Stop

### THE FRENCH TAMARISK



**The French Tamarisk (*Tamarix gallica* Webb)**, which is called *Taray*, *Taraje*, *Gatell* or *Tamarit* in the area, is a small tree or shrub of 6 to 8 metres high, with thin, flexible branches, characterized by their light feathery appearance. The glaucous green leaves are very small and hug the branches. The small flowers are white or pink and form dense bunches on the branches. They appear at the same time as the leaves between the months of April and June.

Normally, it can be found in areas close to water channels, saline depressions and coastal sand, although its ideal habitat is on the edges of fairly salty dune slacks.

## 3rd Stop

### EL SALER FORESTRY PROTECTION CENTRE



The El Saler Forestry Protection Centre was built in 1920 and currently is the headquarters of the forestry officers and the local police.

## 4th Stop

### THE OLIVE

The presence of this Olive tree and others, as well as other specimens such as Fig and Carob around the Devesa, demonstrate the existence of crops in the area in the past.

The Olive is a typically Mediterranean species that is adapted to the climate of the area, and is present in the landscapes of the Iberian Peninsula as one more element of Mediterranean ecosystems and culture.

## 5th Stop

### THE EUCALYPTUS



At the start of the 20th century, with the aim of drying out the *malflecoladas* (flooded areas) of the Devesa, the Eucalyptus was introduced; this is an allocthonous species from Australia that is capable of resisting temporary flooding, grows fast and needs a large amount of water. Furthermore as can be seen here, it was also used as an ornamental tree.

The Eucalyptus is a species that causes important damage to the ecosystems into which it is introduced because it competes at an advantage with the autocthonous vegetation for the water and nutrients in the ground, and because its leaves exude substances that impede the germination of other species.

## 6th Stop

### THE EL SALER DUNE SLACK



The low lying area we see here is called the *El Saler* dune slack. The vegetation that grows in dune slacks is distributed in concentric circles, which depend on the salinity and the composition of the soil. In the centre of the depression the soil is bare due to the concentration of salts, and it cracks in the summer due to the drying out of the mud.

The plant community which grows closest to the centre is made up of herbaceous annual succulent species that give it a reddish look in autumn; species such as *Salicornia emerus* and *Suaeda marítima* are particularly important. Around the previous group, or replacing it, is a community of more robust perennials, which form isolated groups in the bare soil. Species such as *Sarcocornia fruticosa* and *Arthrocnemum macrostachyum* dominate. In the more outlying circles there are communities of rushes, sedges, grasses and plantains that prefer less saline and moister soil and form dense meadows.

## 7th Stop

### CREEPER SPECIES



In this landscape the Sarsaparilla stands out (*Smilax aspera* L.), this is a creeper which climbs shrubs and the naked trunks of trees to reach the light it needs for photosynthesis.

Other creepers and lianas we will see on this route climbing up trees and shrubs are the Honeysuckle (*Lonicera implexa* Air.) and the Fragrant Virgin's Bower (*Clematis flammula* L.).

## 8th Stop

### THE INLAND DUNES



This is the internal dune system, the oldest in the Devesa. In this ecosystem the coastal *maquia* grows, this is the most evolved plant community in the Devesa, made up of a much more complex vegetation with a tree layer principally made up of Aleppo Pine, a shrub layer of great diversity and wide cover, with species such as False Olive, Mastic, Myrtle, Palestine Buckthorn and a wide range of herbaceous and subarbustive species.

## 9th Stop

### PLUME GRASS



Plume Grass

The Plume Grass (*Erianthus ravennae* (L) Beauv.), also known here as the *cesguera*, is a reed of medium height, which grows in moderately wet depressions. It flowers in autumn with dramatic feathery plumes.

As a curiosity it is worth mentioning that the stem of this plant is used in fireworks displays to fire rockets, since it is hollow.

## 10th Stop

### RUSHES



Rush beds are common in less saline dune slacks with a certain degree of moisture. From this point we can see two types of reed, *Juncus acutus* L. and *Juncus marítimus* L., both of which have pointed leaves, but can be distinguished easily because the first has more compact groups of flowers.

Another species we can see from here is *Scirpus holoschoenus* L., which is identifiable because its flowers are grouped in brown spherical shapes.

## 11th Stop XYLOPHAGE INSECTS

Here we see a tree trunk that is being decomposed by xylophage insects and fungi that have their home and their source of nutrition in the wood. It is worth indicating that some xylophage insects can be identified due to the type of perforation they make in the wood.

## 12th Stop THE REDONA DUNE SLACK

From here we can see the *Redona* dune slack, one of the many depressions that were altered with the intention of drying them out, using different systems. The oldest system for which there are references consisted of digging a network of small canals known locally as "*anguileras*", which allowed the water to flow from the dune slacks to the sea. Later, plantations of Eucalyptus were used. Just before the initiation of the Devesa urban development project, the technique used was to dig a series of parallel ditches through the dune slack that broke the impermeable layer and allowed it to drain. Then, during the urban development process itself the strategy was to fill almost all the dune slacks with sand from the foredunes and some were even built over, with roads or buildings. As can be seen, the *Redona* dune slack is currently filled in, which has caused a strong imbalance in the plant community.

## 13th Stop VENTA DE TOROS (BULLS INN)

From here we can see the *Venta de Toros* (Bulls Inn), a facility that belongs to the Provincial Government of Valencia, and which is sometimes used to house the bulls used for the bullfights in the city.

## 14th Stop LICHENS



The lichens that can be seen on the trunks and branches of these Tamarisks and Mastic, are called epiphytes. They are characterized by the fact that they do not grow on the ground but on some kind of substrate such as a tree trunk, rocks or even walls, and depend totally on the nutrients that are transported by the air. These lichens are used as indicators of the quality of the air, since they are very sensitive to atmospheric pollution. When the levels of pollution rise they tend to disappear.

## 15th Stop PLA DE GARROFER



In 1980 in this area, known as the *Pla del Garrofer*, there was a great fire. Soon the first regrowth and germination took place, mostly of fire-favoured species as in other fire-damaged areas. Species such as the Kermes Oak and the Mediterranean Fan Palm quickly re-sprouted, and Pine and Rockrose germinated too. Nowadays we can see that the process of natural regeneration, without any kind of human intervention, is proving successful.

## 16th Stop URBAN DEVELOPMENT

At the end of the 60s a process of urban development that seriously altered the three existing ecosystems of the Devesa began. The foredunes were destroyed almost completely and replaced by a sea promenade, the dune slacks were filled in with sand from the seaward dunes and the inland dune system was broken up by the construction of buildings, roads, and hydraulic and electric infrastructure, as can be seen from this point. The devastation was so obvious that it produced a very strong response from the citizens, who with the help of university and conservation groups managed to stop the urban development at the end of the 1970s.

## 17th Stop ALLOTHONOUS PLANTS



Century Plant



Ice Plant

The buildings we can see here, evidence of the urban development process, have gardens with a wider range of allocthonous species which we will see from here to the next stop.

Before us is a plant called the Century Plant or Maguey (*Agave americana* L.) which is originally from Mexico. It is known for flowering only once in its life, after 10-15 years, in summer. It produces a large stalk, up to 10 metres high, at the top of which are the flowers. After flowering, the plant dies.

Next we see the Ice Plant (*Carpobrotus* sp.), a plant that is originally from South Africa. It is characterized by its tendency to cover the ground it inhabits very rapidly, which is a danger for autochthonous vegetation. On the right of the route we can see hedges with two allocthonous species, the *Pittosporum* and the *Myoporum*, which are frequently used in gardening.

## 18th Stop A CHANGED LANDSCAPE

From this point we can get an idea of what the Devesa would look like now if the urban development process had not been stopped. There would be luxury hotels like the Sidi Saler, semi-detached housing, a multitude of buildings with gardens and allocthonous species, an extensive road network with parking areas such as those in front of us, and a permanent population of more than 40,000 people.

## 19th Stop ANGUILERA

The oldest known system for drying out dune slacks consisted of a network of small canals known locally as "anguileras", which allowed water to flow from these depressions to the sea. On the right of the path we can see an old "anguilera". The name "anguilera" is due to the fact that eels (*anguila* in Spanish), which were very abundant until the 1960s, used this network of canals to move between the sea and the Albufera lagoon.

## 20th Stop PLANTAIN

In this depression, which is very wet with low salinity, there are communities of rushes, sedges, grasses and plantains. The presence on both sides of the route of *Plantago crassifolia* Forsk is worth noting. This plant lives on the edges of depressions and forms fairly dense lawns which can be distinguished by the linear, fleshy, semi-cylindrical leaves, which sometimes have serrated edges.

## 21st Stop REEDS



On the right of the path, we can see a bed of reeds. This perennial plant, which grows in temperate regions, can be found in wet soils, shallow water, wetlands and rivers. It is characterized by its tall slender stalk covered with long wide leaves. It flowers at the end of summer and in autumn, and forms dramatic plumes at the top of the stalk.

The reed, together with other graminaceous plants, has been for a long time a raw material for many domestic applications, since it was available for anyone to use.

## 22nd Stop SALT MARSH VEGETATION



Glaucous Glasswort



Sea Lavender

To the left of the path we can see two species that are normally found in depressions with wet and strongly saline clay soil. These are the Glasswort (*Sarcocornia fruticosa* (L.) A. J. Scott) and the Glaucous Glasswort (*Arthrocnemum macrostachyum* (Moric.) Moris). They are small shrubs, with fleshy articulated stalks, and leaves that are no more than small scales.

These plants are easy to confuse, we can recognize them because the flowers of the glaucous glasswort appear on young branches, and therefore appear at the top of the plant, while the flowers of the glasswort appear inside the plant.

Nearby we can also see a plant that is characteristic of saline soils that are not continuously flooded, the well known Sea Lavender (*Limonium* sp).

## 23rd Stop THE LLARGA DUNE SLACK



The interdune depression we see here is known as the *Llarga* dune slack. It was recovered in 2004. The regeneration consisted of using an excavator to remove the sand that covered the dune slack down to the impermeable layer of grey mud that characterizes this ecosystem. Later the perimeter of the dune slack was remodelled with soft slopes, with the object of providing easy access for avian fauna.

## 24th Stop THE MUNTANYAR DE EL PUJOL AND THE ARTIFICIAL LAKE

From this point we can see the *Muntanyar del Pujol*, which together with the *Muntanyar de la Rambla* were the only fore dune ecosystems that were saved from the urban development process. From 1984 these areas have been closed to the public due to their great ecological value. From here we can also see the well-known artificial lake which was constructed during the urban development process over a large depression, and was intended to be the start of a future yachting marina.