

Field Trip MPCW 26 October 2023

Coastal and cliff habitats. Plant Microreserves (PMR) and conservation translocations.

- 8:00 Botanical Garden València¹
- 9:45 Moraira (Teulada)
 - visit to the PMR Cala del Portitxolet
 - visit to plots with conservation translocations of threatened species.
 - Coffee break
 - visit to a restored wetland (El Senillar).
- 13:00 Cap de Sant Antoni (Xàbia)
 - visit to the PMR Cap de Sant Antoni
 - visit to plots with conservation translocations of threatened species.
- 16:00 The Albarda Garden (Pedreguer)
 - guided tour of the garden
- 19:00 The Botanical Garden València



MRF Cala del Portitxolet

¹ Field trip timetable (approximate)

The plant microreserve “Cala del Portitxolet” is one of the microreserves located at the marly soils at the sea coast from Moraira to Calp. It hosts the northernmost population of cat's head rockrose (*Helianthemum caput-felis*), a scarce coastal mediterranean species.

Cat's head rockrose is a half-shrub with hairy leaves that grows to a height of 35(50) cm. Its hermaphroditic flowers can be seen from March to June. It is a thermophilous plant which grows on calcareous rocky cliffs and also on sand dunes, rocky slopes bordering inland ravines and, rarely, in open wooded areas. *Helianthemum caput-felis* is distributed throughout the western Mediterranean Basin (SE Iberian Peninsula, Mallorca, Sardinia and NW Africa).



Convolvulus valentinus



Helianthemum caput-felis

Building pressure has reduced the surface covered by the natural plant communities. The actual vegetation located at the eastern side of the microreserve only grows on the first coastal line where we find species that can resist salt wind that comes from the sea, among them rock samphire (*Crithmum maritimum*) and sealavender (*Limonium virgatum*). At the southern side we can find the second line of vegetation, a scrubland with rosemary (*Rosmarinus officinalis*), shrubby globularia (*Globularia alypum*), valencian binweed (*Convolvulus valentinus*), cat's head rockrose (*Helianthemum caput-felis*) and *Thymbra capitata*. Another scarce plants we can see are golden star (*Asteriscus maritimus*) and heath-leaved rockrose (*Fumana ericoides*).



Rocky slopes colonized by cat's head rockrose at PMR Cala del Portitxolet

In 2019 and 2020 conservation translocations were developed in this area. The target species were *Medicago citrina* and *Helianthemum caput-felis*, both of them included in Order 2/2002 (updating of the Valencian lists of protected species of flora and fauna) as “in danger” and “vulnerable” respectively. Seeds were collected from natural populations not far away from here, tested and germinated in CIEF (Centre for Research and Experimentation in Forestry). 1 or 2 years old plants were introduced in areas holding ecological patterns so close to native ones.

El Senillar²

El Senillar is a coastal wetland, consisting of a lagoon separated from the sea by a submerged sandbank, where a chain of semi-permanent dunes is found. The water draining into the lagoon comes, mainly, from torrents, flowing all the year round.

The underground torrents correspond to the remains of a tiny aquifer on the Plana de les Sorts. The stratigraphic sequence consists of quaternary sediment levels (transported lime-clay and pebbles) settled in alluvial terraces on “tap” clay of the Miocene, a very waterproof material.

El Senillar includes two very different environments in a very small space: marsh and dunes. The marsh environment corresponds to the lagoon and its shores and has a very rich community of living creatures adapted to different degrees of depth or flooding.

The dunes, on the other hand, have a plant life community adapted to sandy substratum, poor in nutrients and easily movable by the action of the wind. In this case, the vegetation is that typical in

² information provided by the environmental department of the Teulada city council

semi-permanent dunes as the necessary conditions for the establishment of truly movable dunes do not exist.

The current situation of El Senillar is a consequence of the restoration works carried out by the Teulada city council during 2002. These works consisted on the elimination of the layers of earth and rubble dumped in the 80s, that covered the wetland completely. Once the waste was removed, new lagoons were excavated that gave shape to a new dune chain in the Platja de L'Ampolla. Finally, they tackled the vegetation restoration with indigenous species typical in marsh and dune ecosystems in the region of the Marina Alta. The works have been able to regenerate in good measure the original conditions, of the former wetland.

The lagoon itself has communities of chlorophycean algae, apart from some higher plants, such as Eurasian watermilfoil (*Miriophyllum spicatum*), common hornwort (*Ceratophyllum demersum*), or long-leaved pondweed (*Potamogeton nodosus*). On the surface there are plants adapted to living partly submerged, such as cattail (*Typha dominguensis*) traditionally used for the manufacture of chairs and baskets.

Shores are covered by reed beds and rushy areas, communities of vegetation typical of very humid or flooded soils. Reed beds are dominated by *Phragmites australis*. Rushy areas are much more diverse and have various species such as *Juncus bufonius*, *Juncus subulatus* and *Scirpus maritimus*, for example. Amongst these, some grasslands adapted to humidity can be found, *Lythrum junceum*, Boston horsetail (*Equisetum ramosissimum*) or yellow iris (*Iris pseudacorus*).

The dunes are fragile but dynamic and its most outstanding characteristic is the low capacity of retaining water and nutrients, as well as the mobility and instability of the substratum itself.

In the case of Platja de L'Ampolla, dunes have been formed in an artificial way, as part of the recovery works: these dunes correspond to the model of a semi-permanent dune, that is, partly fixed by vegetation but still with certain movement in the direction of the dominant winds.

It can be found typical species such as the European beachgrass (*Ammophila arenaria*), sea daffodil (*Pancratium maritimum*), *Crucianella maritima*, sea holly (*Eryngium maritimum*), or beach Nowadays, this area is a very fragile ecosystem, receiving very little addition of sand and that, due to this reason, has a tendency for erosion. Only a correct development of the Posidonia prairies, near to the coast, can ensure the holding back of sand, as well as the production of new sand from the skeletons of creatures. This is one of the reasons why the Posidonia prairies near the Moraira coasts should be preserved at any cost.

MRF Cap de Sant Antoni

This microreserve is located inside the Natural Park El Montgó, on the northern side of the Sant Antoni Cape. Even its reduced surface, this microreserve hosts many interesting botanical singularities that must be protected and showed to the people in this coastal place. On these sea-cliffs we find rupicolous vegetation where we can remark species such interesting as rock-dwelling scabious (*Scabiosa saxatilis*), valencian horseshoe-vetch (*Hippocrepis valentina*) and Rouyi's knapweed (*Centaurea rouyi*), all of them valencian endemics.

In shrublands we see during all of the year blue coloured toothed lavender (*Lavandula dentata*). These formations have also another species like pink (*Dianthus hispanicus* subsp. *fontqueri*), endemic of the central valencian seacoast and *Succowia balearica*, a scarce and scattered mediterranean in the Iberian Peninsula. Another interesting species is saint thistle (*Carduncellus dianius*), *diànic-pitiusic* (northeast Alicante and Ibiza) endemism.

Since 1992 several conservation translocations has been carried out in different parts of the Natural Park El Montgó, with species such as *Diplotaxis ibicensis*, *Medicago citrina*, *Convolvulus valentinus*, *Narcissus perezlarae* or *Serapias lingua*. The species that has been worked with the most is *Silene hifacensis*, since a recovery plan was approved in 2008.

At the national level, this species is included in the Spanish Catalog of Endangered Species (CEEAA), where it appears as "Vulnerable" for the Balearic Islands and "In danger of extinction" for the Valencian Community (Royal Decree 139/2011, of 4 February). At the regional level, it is included in the Valencian Catalog of Endangered Flora Species (Decree 70/2009, revised in Order 6/20131 and Order 2/2022) as "In Danger of Extinction".

The recovery plan (Decree 40/2008) establishes as a general objective "to achieve the values

population that justify the passage of plants from the endangered category to the vulnerable category. To obtain it, aims to establish at least 6 populations, whose total number of specimens reaches at least 250 adult specimens maintained in censuses carried out for 5 or more years, distributed in at least 6 UTM grids of 1 km on each side”.

Since 2017, the number of specimens of 250 plants has been exceeded. Likewise, the objective is reached in terms of number of grids 1 km (since 2013) and number of populations (2012).



Sea cliffs of PMR Cap de Sant Antoni

Jardí de l'Albarda

The garden of L'Albarda was created in 1990, covers an area of 50,000 m² and boasts more than 700 species of native plants, as well as an extensive collection of roses and palm trees.

In addition to its botanical biodiversity, L'Albarda has a formal garden, orchards and wild gardens. These recreate the ancient Renaissance gardens of Valencia which were widely influenced by Arab culture. Architectural features have a great importance in L'Albarda; visitors will be transported to ancient times as they wander the walkways, pergolas and areas of outstanding natural beauty.

Further information: <https://www.jardinalbarda.com/?lang=en>