

APPRECIATION OF THE ECOLOGICAL STATUS OF THE WESTERN SECTION OF THE “RÍO REAL”

(between Río Real and the Palm Beach chiringuito)

DECEMBER 9, 2020

First of all, it is interesting that the dune is adjacent to the mouth of the Río Real, which was declared a Special Conservation Area (ZEC in the Spanish term) and therefore is included in the European Union's Natura 2000 Network. In spite of this, its final channel, the river bed just before its entrance to the sea, was “cleaned”, - “destroyed” would be our description. Now it is totally barren, bereft of animal and vegetal wildlife. In addition, the lower channel is dry, even now that the rains have come. This is probably due to water being drawing off somewhere upstream.



Río Real

Fortunately, in the last few meters a small mass of reed (*Phragmites australis*) was left standing, most likely because the machinery was not able to get to it. The reed is very important for aquatic fauna and birds, and should not be radically eliminated.



Phragmites australis

As for the dune, the state of the vegetation is quite acceptable, with the spectacular growth of the maritime junipers (*Juniperus macrocarpa*). This species was introduced in the repopulation policy.



These junipers are bearing fruit quite well, and this year's fruits can be seen to be still green while others, two years old, are darker and ripe, and in some places are falling to the ground, although not in any great quantity.



Juniperus macrocarpa



Juniperus macrocarpa

Male specimens of maritime juniper are in full pollen production at this time.



Juniperus macrocarpa (flores masculinas)

Right beside the junipers there is a specimen of an interesting, less common bush, the Fleshy-leaved thymelaea (*Thymelaea hirsuta*). It is important because it flowers all year round except at the height of summer, its small flowers are therefore a good source of food for a multitude of pollen-consuming insects, among them - of course - bees.



Thymelaea hirsuta

As for the leading edge of the dune, it is quite active. Luckily it is not being eroded by the waves because in recent months the eastern currents have deposited sand which then accumulated there and left the sea line farther out. On the other hand, the westerly winds of recent days have set the sand in motion, and embryonic dunes are forming next to the clumps of vegetation that have withstood the trampling by beach-goers last summer, especially round the marine grass (*Elymus farctus*) as seen in the foreground of the photo.



Elymus farctus

Towards the centre of the plot there is a good example of Tamarice (*Tamarix africana*), a species unique to this dune and to some others close by, such as La Adelfa.



Tamarix africana

The eastern part of the section, close to the Palm Beach chiringuito, has been greatly improved in recent years, thanks above all to the marking out of the area. The dune vegetation also looks relatively

good and provides extensive ground cover although it is too close to the mobile dune, as is the case in the whole area.



As for other wild species found in the dune, the following should be highlighted:

- *Rosmarinus officinalis* (Rosemary)
- *Thymbra capitata* (Andalusian thyme)
- *Euphorbia terracina* (False caper)
- *Olea europea* var. *sylvestris* (Europ. Wild Olive)
- *Calicotome villosa* (Thorny broom): A large, rounded specimen, very thorny.
- *Thymelaea hirsuta* (Fleshy leaved thymelaea bufalaga), cited above.
- *Quercus suber* (Cork oak)
- *Quercus faginea* (Kermes oak)
- *Rhamnus oleoides* (Black hawthorn)
- *Dittrichia viscosa* (Sticky fleabane)
- *Phagnalon saxatile* (Tinder grass)
- *Pistacia lentiscus* (Mastic)
- *Sporobolus pungens* (Sand Dropseed)
- *Ammophila arenaria* (Marram Grass)
- *Cakile marítima* (Sea Rocket, mustard)
- *Eryngium maritimum* (Sea holly)
- *Phoenix dactylifera* (Date palm)
- *Silene nicaeensis* (Beach campion)
- *Pancratium maritimum* (Sea Daffodil)
- *Chamaerops humilis* (Dwarf Fan Palm)
- *Verbascum* sp. (Great Mullein)
- *Lotus creticus* (Bird's foot trefoil)



Chamaerops humilis

Among these species it is worth drawing attention to the palmetto or fan palm of which there are several healthy specimens. There are also very small cork and kermes oaks, probably the result of reseeded.

NEGATIVE ASPECTS (Invasive species)

As in other dunes, this is still the main problem, and it must be tackled in a methodical and nonstop way to avoid it spreading. We have found the following plants:

1. A medium-sized specimen of False Mimosa (*Acacia saligna*) in the middle of the leading edge of the dune, which must be eradicated urgently.
2. A specimen of another very invasive acacia species (*Leucaena leucocephala*) with plenty of pods and seeds.
3. Several specimens of Highway Ice Plant (*Carpobrotus edulis*), growing very quickly.
4. A small primary stand of cane (*Arundo donax*)
5. Some individual burdock plants (*Xanthium strumarium*), with its typical spiny-hooked seeds, close to the mouth of the river.
6. Creeping branches of ornamental honeysuckle (*Lonicera japonica*) near the edge of the urbanization
7. A California palm tree (*Washingtonia robusta*) next to the chiringuito. Although some people may claim its ornamental value, it is a species that produces a lot of seeds, and its invasive potential is very high. It should be removed.

The space being used as a dumping area for the remains of pruning or similar remains is also a problem. For example, some green and still vigorous specimens of Swedish Ivy (*Plectranthus australis*) have been spotted. This plant could begin to spread, although in principle it does not seem like an appropriate species to grow in this ecosystem.

The following photos will help identify these invasive species:



Acacia saligna



Carpobrotus edulis



Leucaena leucocephala



Arundo donax



Xanthium strumarium



Lonicera japonica



Washingtonia robusta

CONCLUSION

The overall state is satisfactory, and the introduction of more large species is not necessary. It would be interesting to move the pole and rope barrier a bit further down the beach to allow the formation of more embryonic dunes. However, it is important that urgent measures to eliminate invasive exotic flora be undertaken.

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