



LIFECHARCOS

“Conservation of Temporary Ponds in Southwest Coast of Portugal”

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Autumn rainfall gave life to ponds!

The last autumn rainfall allowed the filling of ponds and life began! The year 2015 will be a good year for biodiversity, especially for those associated with this habitat. We have seen new generations of flora and amphibian fauna, large branchiopods, among others, that naturally colonize the Mediterranean Temporary Ponds of the Southwest Coast of Portugal. The importance of rain for biodiversity is huge because the amount of water available and the period of time that the pond has



water (hydroperiod) is crucial for the endemic, rare and endangered species that are dependent on this habitat. However, the hydroperiod is variable from year to year, and in particular its beginning and duration, depending on weather conditions. This year the hydroperiod started early and it looks to be higher than the previous year.

The project team.



Southwest coast: the Paradise for Temporary Ponds

The southwest coast of Portugal, from north to south orientation, goes from the county of Sines, goes through Santiago de Cacém, Odemira, Lagos, Vila do Bispo and also covers a part of the municipality of Lagos.

This coastal strip has a land area of 99,457 ha and extends for about 125 km, with a variable width between 5 and 15 km. It features 49 natural habitats, among which 25% are considered a priority by the Habitats Directive (92/43 / EEC).

Due to the ecological diversity and several endemic species that occur here, the Southwest portuguese Coast has the European recognition of "Site of Community Interest" (SCI) and is also considered as one of the Mediterranean biodi-



versity hotspots. Most of the SCI area is also classified as a Natural Park of Southwest Alentejo and Vicentina Coast (NPSAVC).

Of all the natural values present in the area stand out Mediterranean Temporary Ponds (priority natural habitat 3170) that has long been a dominant elements of the Portuguese southwest landscape. Despite the degradation of this habitat that has been felt in recent decades, the SCI's southwest coast is still in the country, where there is a greater number of temporary ponds with these characteristics, especially in the county of Odemira and Vila plateau bishop.



Meeting about “the knowledge” of the Territory of NPSAVC

In the open week of the Natural Park of Southwest Alentejo and Vicentina Coast the "Meeting on the knowledge on the territory of NPSAVC" took place at 8th July in the Park headquarters in Odemira. The objective was to disseminate the studies that have taken place or are being developed in the region, in order to establish a network for sharing knowledge. At the meeting there were several presentations related to biodiversity conservancy, fisheries, geology, archaeology, landscape, etc., in which a presentation was made about the biodiversity of temporary ponds, conducted by the biologist Rita Alcazar, general coordinator of the project LIFE CHARCOS.



International conference — Wetlands 2014

Project technicians from LIFE CHARCOS, LPN and UÉvora, were in Huesca, Spain at the IX International Conference of Wetlands - Wetlands in 2014. It was held between 14 and 18 September and attended by over 300 participants from five continents.

LIFE CHARCOS Project was presented at the satellite session of the Congress, for the Community Programme LIFE were another 9 European projects were also presented that are undergoing in Spain, Portugal, Hungary and Slovenia. At this congress was also exposed a poster of LIFE CHARCOS and a communication from the University of Évora was presented that aimed to demonstrate how banks germplasm (seeds) can be important tools for the restoration of Mediterranean Temporary Ponds.

The participation in this conference, in addition to the dissemination of our work, allowed for an exchange of experiences with other international projects. Prospects were also created for the ecosystem services of the integration of the discussion provided by wetlands in the socio-economic development of the population and territory.



Technical seminar about invasive plant species

On 24th of November was held in Odemira the Technical Seminar on Invasive Flora in the Southwest where the LIFE CHARCOS team was present. The day was organized by the Association of Mira' Beneficiaries with the promotion of Elizabeth Marchante, a researcher at the University of Coimbra, and aimed to promote and raise awareness of this problem of invasive plants. Species such as thorn tree, silver wattle, giant cane or the ice plant are invasive because they are plants from other regions of the world with large reproductive capacity, resistance, rapid growth, easy adjustment and easy dispersion without the help of man .

Invasive plants have proliferated throughout the country but there is a special concern in the southwest coast because the losses and costs that cause the agricultural and forestry activities in the irrigation perimeter are significant. Globally, it is estimated that the losses of invasive species equivalent to 5% of the world economy.

Invasive plants are also a major threat to Mediterranean temporary ponds, including the ice plant or various species of acacia, which will gradually gaining ground to other native species, causing a rapid and sometimes irreversible disturbance, degrading the condition this priority habitat.

For more information see <http://invasoras.pt/en/> or <http://lifecharcos.lpn.pt/en/pagina.php?id=892>



Acacia saligna



Penachos
Cortaderia selloa

Bons-dias
Ipomoea acuminata



OpenNESS—Natural Capital and ecosystem services

The area of the Natural Park of Southwest Alentejo and Vicentina Coast was the chosen region in Portugal for a case study for international research project Openness - Operationalization of the Natural Capital and Ecosystem Services, which aims to create practical solutions to integrate ecosystem services in management and planning of the territory.

The openness of the project consortium includes 35 partners, including 10 SMEs from 14 European countries and four non-European. The CENSE, Research Centre for Environment and Sustainability, FCT-New University of Lisbon, is the partner of openness in Portugal. To frame the project in the study area and set lines of action, an Advisory Board, which includes a number of key players in the Southwest Alentejo and Vicentina Coast region was formed.

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The intention of this project is that the management of economic activities and the definition of public policies integrate the concepts of ecosystems and natural capital services. This is because, biodiversity functionality is re-

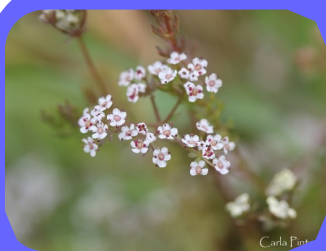
flected in the ecosystem processes that produce goods and services for humans, such as: minimizing soil erosion; regulating the climate; pollinate crops and balance the water cycle, among many other functions.

LIFE CHARCOS Project was represented at this workshop by technicians LPN in order to deepen the knowledge about ecosystem services from the perspective of its application in the definition of temporary ponds conservation strategies that are present in the Natural Park.

The LIFE CHARCOS Project will also conduct a survey of ecosystem services that it provides, so this exchange it is of great relevance.



Biodiversity of Ponds: *Caropsis verticillato-inundata* & *Branchipus cortesi*



Caropsis verticillato-inundata, is a perennial plant, i.e., its life cycle is longer than one year. This plant has creeping stems that form small rugs. The leaves are divided into small

segments with circular arrangement around the stem. The white flowers are arranged in the form of a small umbrella. This plant grows in temporary ponds and other ephemeral flood sites. It is considered endemic in western Europe, being distributed in Portugal, Spain and France. Their populations are small, residual, globally threatened and described in red lists conservation as a vulnerable species. Is also legally protected by the European Habitats Directive.

More information at:

<http://www.lifecharcos.lpn.pt/flora.php?id=19>



Branchipus cortesi is part of Anostraca Order, being a Great Brachiopods. It can reach 22mm.

Known as shrimp fairy, these organism have the ability to swim with the ventral part up and are exclusively found in temporary ponds. The active phase of the life cycle begins with the start of flooding the pond and extends up to 4 months. As filter feeders they feed on debris and bacteria. Females carry the cysts (eggs) in a black bag with white central bulge. It is an Iberian endemism. In Portugal was observed in the Southwest Coast from Vila Nova de Milfontes to Vila do Bispo and in the area of the Guadiana Valley Natural Park.

More information at:

<http://www.lifecharcos.lpn.pt/invertebrados.php?id=30>





Opinion of Margarida Serrano, professor at Budens Nursery

“The LIFE CHARCOS awoken much interest in me, had no knowledge on this topic and that to me is a challenge. I find it very important to include actions of Environmental Education in nurseries and primary schools so that we can disclose the project information into the community. This is the strong matter of this project. I think it is a very direct way that the children take the information home. The local population does not participate in seminars, so in this way they get the information in their house, directly through the children. It is a very good strategy and a very important aspect of this project. However, it is important that people can receive at home some feedback as the project develops. Not sure how but I suggest that either we created a small leaflet with some activities in the school but in addition it would be nice to have a newspaper or anything that the children can take home with information about the project and that the parents do not forget it.”



Learn all about the project in:

<http://lifecharcos.lpn.pt/en/>

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