

## **PST01 - The rock pool type of Mediterranean temporary ponds in the Algarve**

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Portugal is one of the main focus countries for Mediterranean temporary ponds. Important sites of this habitat (3170\*) are well known from the West coast of the Algarve (Costa Vicentina). In 2013, for the first time, the rock pool type of Mediterranean temporary pond was discovered near Lagoa, in the South coast of the Algarve. The presentation includes this and three other similar sites found in March 2014 by the author, all in the same area.

The coastline of Lagoa is formed by limestone rock from the Upper Miocene. Within the famous multicoloured cliff coast formed mainly by softer material, about 20 million year old shell and algae deposits have formed rocky outcrops.

In some areas, often on top of the cliff line or only some hundred meters inland, those hard limestone rocks form more or less flat, non cracked plates with nearly no woody vegetation.

The special geological situation with large limestone plates is preventing major organic deposits of the surrounding Mediterranean shrub land vegetation, helped by the wind as a common factor at the shoreline.

As the average rainfall at this coast is less than 500 mm per year, it might often happen that very few or even no water will accumulate in the basins. Those ecological conditions and nearly the absence of any substrate for rooting is not a problem for the vegetation of Mediterranean temporary ponds because it is highly adapted to this irregular presence of water.

The rock pools with the highest water filling - up to 10 cm - located at West of Carvoeiro were populated by *Callitriche*, a species not found in the Eastern pond areas where the same kind of rock pools were covered by *Damasonium* or *Ranunculus*. As most of the rock pools are smaller than 1 m<sup>2</sup>, it is not surprising that they all were species-poor with normally one dominating species (*Ranunculus*, *Damasonium* or *Callitriche*). The only exception from this is *Elatine* which occurred together with the later two. *Crassula* occurred either alone or together with *Elatine* in very few exemplars.

The total absence of any species of the *Juncaceae* family is notable, but it may be explained by the alkaline reaction of the pond substrate and water, as a lot of Mediterranean pond species of this family prefer acid soils.

Unfortunately most of the Algarvian cliff coast has no protection status which means not only a high threat by tourists and related construction but as well no investigation activities to register the pond habitats.