

Site 05: Urehoved, Dejrn

5.1 Change of the site by project activities:

The project site Urehoved – Dejrn consists of two separate sites:

- 1) The small hilly island Dejrn with grazed meadows, a large coastal lagoon and a few ponds, and
- 2) The grassland part of the peninsula Urehoved, with partly overgrown salt meadows and two prominent coastal lagoons.

On Urehoved the large meadow areas, shallow depressions and lagoons – the main breeding and foraging ground for the toads – were overgrown with rank vegetation. Moreover, there were no suitable breeding ponds for the amphibians available on Dejrn. In order to create possibilities for meadowbirds, avocets and terns to reestablish populations at Urehoved, a well-managed coastal lagoon habitat complex with sufficient grazing was necessary.

At the beginning of the project, grazing had been abandoned on one private plot and on one public plot on Urehoved. On some sites on Urehoved and Dejrn horses and cattle were still being kept in the summer.

On Urehoved, the ungrazed areas were fenced in 2010 and Icelandic horses were introduced on the private site. In 2011 Dexter cattle, purchased by the project were introduced to the public area. One cattle pond was made on the public land. The public site was overgrown to a large extent by *Rosa rugosa*. Some of these patches were cleared in 2010. The restoration of one lagoon and of one natural depression was carried out on Urehoved in 2010 and in 2011 a natural depression was restored and another pond was made.

Phragmites australis around lagoons and *rosa rugosa* was cut by brushcutters and removed and the Dexter cattle were able to keep the vegetation low thereafter.

On Dejrn, two ponds were created and two natural depressions were restored; one larger coastal lagoon was restored by removing nutrient rich sediment. At this locality a drain was removed. Instead a pipe was built in at a certain height which will allow in future times to precisely regulate the salinity inside the lagoon as needed. But in general it is our conclusion that the lagoon should have a very low salinity.

Urehoved was also foreseen as a locality where reserve populations for *Bufo calamita* and *Bufo viridis* should be built up. To do so, an intensive rearing program started in 2010 and 2011 and is to be continued until 2012. The rearing comprises different jobs: A) collecting of eggs or larvae at the source populations (Halmrn [site 6] and Skarrn), B) rearing of the embryos/larvae until their metamorphosis/late larval stage and C) release of the animals at the project sites. The different sub-activities were carried out in the following manner.

A) Collection of eggs/larvae: The source populations were visited several times in the year under good weather conditions in order to obtain eggs. Several visits per site are necessary because eggs cannot always be found and in order to get a maximum of genetic variation (some animals spawn early in the year, others later). If an egg-string is found, one third up to one half of it is taken to the rearing station. If the site was not visited during the time window when the embryos had not yet hatched (depending on weather 3-6 days), small larvae could be caught directly out of the pond and transported to the rearing station.

B) Rearing of the embryos/larvae: In 2010 the collected embryos were reared at the breeding station in Odense. The embryos were divided into several outdoor containers. There they were supplied with oxygen, food and heating (optional, if the weather was cold). Additionally, the containers were cleaned on a daily basis. The containers were protected against birds by wire nets. In 2011 the collected embryos were reared on both Odense and Ærø breeding station. The Ærø breeding station was taken in to use to have more space for large pools for larger tadpoles.

C) Release of the animals: as soon as the larvae had reached a certain size or had finished their metamorphosis they were transported to the target sites on Urehoved. A small percentage (5%) of the animals was kept in a net cage in another pond on Ærø, which is known to have good food supply for both tadpoles and small toads. The latter method was tested for the first time and proved to be a good tool for growing strong toads. It will be extensively used in 2011. Animals that were to be released were transported in buckets from Odense to Urehoved and released into suitable sites at the target ponds (good vegetational cover, presence of collembolan-rich mud-flats etc.). In order to release the animals, several trips were necessary as not all animals grew at the same speed or started their metamorphosis simultaneously. Appr. 50% of the animals were released as big larvae directly into the target ponds.

In 2010, 7050 (4700 *Bufo calamita* and 2350 *Bufo viridis*) animals could be released at Urehoved.

In 2011, 13660 *Bufo calamita* could be released at Urehoved.

The grazing is now very good on the whole of Urehoved.

In 2011 both species of toad could be seen foraging on the roads of Urehoved and one male of *Bufo viridis* was calling from a restored lagoon.

In 2012 both species were seen migrating in March on the roads and so far 2 calling *Bufo viridis* and 1 calling *Bufo calamita* was heard from the restored lagoons.

5.2 Remaining challenges and actions:

In the future, still more negotiations with the municipality and private land owners are needed and ongoing in order to remove more unwanted vegetation, such as *Rosa rugosa*. In this way more grey dunes and sandy habitats can be created for *Bufo viridis*

and *Bufo calamita*. Also negotiations for restoring more lagoons have been carried out successfully. The remaining work will be carried out in 2012.

5.3 Public perception:

From the beginning of the project the public landowners were supporting the concept of the project, as some of the staff were well aware of the value of the coastal lagoon habitat complex. A first plot of public land was fenced in already in 1991 – a local priest was a hobby ornithologist and had suggested this idea to Fyn County, whereafter the fence was erected. Horse grazing was initiated; especially the drier habitats and the edges of the lagoons took great benefit. The central parts of several lagoons however remained overgrown until this project was started. One citizen of the municipality had repeatedly suggested to the municipality to remove *Rosa rugosa* which was slowly taking over the whole peninsula. As the site is situated close to the town and many citizens were enjoying the flowering roses and its tasty berries, it was not a popular suggestion. Further, the fencing in of gray dunes and other threatened habitats that used to be accessible for the citizens, thus cutting them off from their home beach, was a very unpopular move. Local politicians from the municipality council, which is dominated by farmers, did react strongly when the fence was built in 2010 on public land. Comments were made like: “Why to waste public money on these low-value sandy bits when we have to pay for hospitals and streets”

Because of this, hard efforts in the PR-section such as guided tours were necessary to inform the public about the value of the coastal meadows and lagoons, the necessity to remove *Rosa rugosa* and *Scirpus maritimus* and the dire need for freshwater in the area. In the end, these efforts were successful and the public opinion is changing.

This lesson about public opinion we had learned. When in 2010 a cattle pond was to be built at Urehoved, many visits were paid to neighbouring house owners, asking them if they would accept a pond for cows with the cattle grazing around it in front of their houses. To us it seemed like a definite improvement, especially close to the old-peoples home that houses many mentally weak people. Shallow ponds with grazing cows and a vivid bird life would make the view from the homes more interesting. But alas we were wrong again – one of the owners only complained about an expected plague of mosquitos and cattle flies and the decreasing worth of her property. After many coffee-talks she finally agreed, only to complain in an article in the local newspaper a bit later. Therefore we decided to only dig one out of three planned cattle ponds in 2010, in order to test the public reaction and to get an idea about the to-be expected waterlevel in the still planned ponds for 2011. Heavy snowfalls in December 2010 helped us decide to push the remaining work until fall 2011.

Dejrø is owned by the land owner board, consisting of several farmers. They wanted to join the project because they wanted the cattle ponds restored and thus secure continued grazing. They also liked the idea of improving hydrology in the old lagoon, as it usually went dry in summer and turned into a mudflat.

In 2005 first overflow installation was made in order to keep more water in the lagoon and see the future development. Restoring two natural depressions turned out to be quite complicated, as that means that the owner's grassland will be reduced and therefore his support from the agro-environmental schemes will be lower. After tough

negotiations it was finally possible to carry out the work in 2010, moving digging machines to the island. After the work was done, the owners were quite satisfied with the results.