



Groundsel bush

(*Baccharis halimifolia*)

Experiment in managing groundsel bushes using sheep in the Rostu marshes

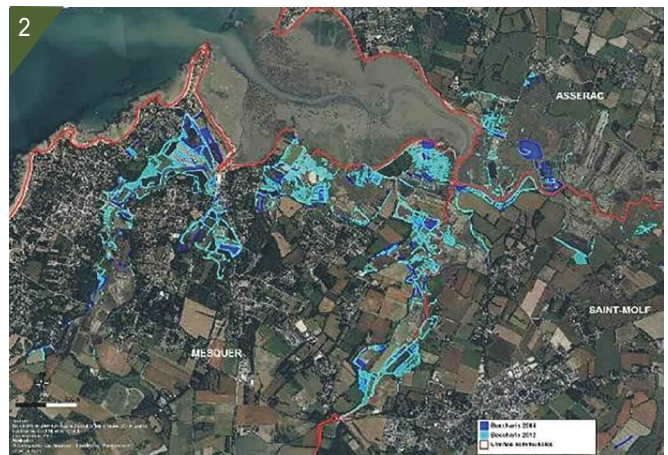
(Mesquer, Loire-Atlantique department)

The Collectif Anti-baccharis (CAB)

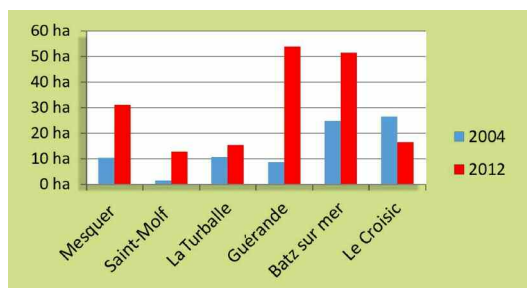
- This anti-groundsel non-profit federates environmental-protection associations on the Atlantic coast in their efforts against the development of groundsel bushes.
- The objective is to prepare and undertake all work to reduce the surface areas colonised by the plant (management of work sites, awareness raising, etc.).
- The “Amis des sites de Mesquer” association, a member of CAB, decided to experiment with grazing animals as a management technique.
- Contact: Patrice Pervez, president of CAB and of the “Amis des sites de Mesquer” - patrice.pervez@free.fr

Intervention site

- The experiment was run in the town of Mesquer (Loire-Atlantique department), on the Rostu Marshes Natura 2000 site (FR1100315), that belongs to the Seaside and Lake Conservation Trust, and in the salt ponds operated by the Duchesse salt company. The vegetation of these sites is typical of salt marshes and numerous species of birds live there (little egrets, terns, avocets, stilts, etc.).
- The sites are managed by the Cap Atlantique intermunicipal board in view of maintaining the traditional activities (salt production, oysters), preserving sensitive habitats, encouraging the presence of birds and opening the site to the public.
- Groundsel bushes were first introduced as ornamental plants in 1915 and have developed rapidly over the past few years on the Guérande peninsula. In the town of Mesquer, surface areas colonised by the plant increased from ten hectares in 2004 to over 30 ha in 2008.



1. Grazing sites (red dots).
2. Spread of groundsel bushes. Presence in 2004 = dark blue, presence in 2008 = light blue.



Surface areas colonised by groundsel bushes on the Guérande peninsula (source: Cap Atlantique).

Disturbances and issues involved

- The species has a major impact on the ecosystem. The embankments of the marshes have been invaded by groundsel bushes several metres high, forming hedgerows, blocking air and light, hindering the development of herbaceous plants and locally reducing biodiversity.

■ The hedgerows are a significant problem for salt production. By blocking the wind, an essential factor in the production process, they reduce evaporation in the salt ponds and thus hinder production. Extensive maintenance work is required each year to cut and remove the new growth.

Interventions

■ History

■ Each year, the local governments organised work projects to cut the plants in an effort to limit their spread. Unfortunately, the techniques used (brush cutters and shears) were ineffective because the plants grew back the next year and continued to spread.

■ In 2015, two non-profits, the Hiboux du Mès (salt producers) and the Amis des sites de Mesquer, in conjunction with the manager of the Cap Atlantic Natura 2000 sites and the town of Mesquer, decided to run a trial using sheep to curb the growth of the groundsel bushes.

■ They convinced a former sheep farmer to restart his business and to let the sheep graze on the marsh embankments that the group put at his disposal.

■ Some 30 Vendean ewe lambs were set out to pasture on 21 hectares in the Rostu marshes. The farmer was pleased to note the high palatability of the groundsel bushes and satisfactory growth rates for the lambs. Plant toxicity was not an issue.

■ The positive results of the first year led to a prolongation of the operation in 2016. An agreement was signed with the farmer, whereby he noted the size of each lot, the number of animals grazing the lot and the dates of their arrival and departure.

■ Monitoring the groundsel-bush population

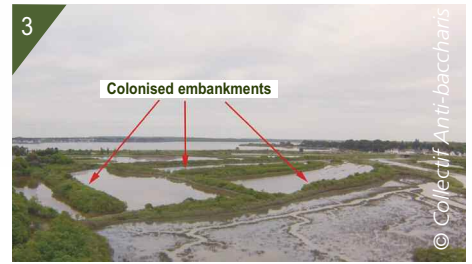
■ Plant-counting zones for population monitoring were set up in conjunction with Cap Atlantique and their GPS coordinates were noted. The monitoring campaign covered a non-grazed zone near the Pigneux salt pond, where groundsel bushes had been cut in 2014, and the grazed zones near the Kervarin marsh and the Duchesse salt pond.

■ The plants were counted on circular plots, 10 square metres in size, around a spike of steel rebar with a golf ball on top to assist in finding it. A nylon cord, 1.78 metres in length with a loop at each end, was used to determine the circle perimeter.

■ While turning around the stake, the plants were counted along the cord, differentiating between the sizes of plants (sprouts, < 50 cm, > 50 cm). A second observer noted the data called out by the observer counting the plants.

■ The initial counting campaigns were carried out during the summer of 2015.

■ Twelve counting plots were established, but in October 2016, only seven still existed due to earthwork on the embankments and the removal of the stakes.



3. Marsh colonised by groundsel bushes.
4. Sheep grazing in the marshes.
5. Counting groundsel bushes.



Results and costs

■ Results

■ In 2016, 113 sheep grazed a total of 21.20 hectares. The year-round stocking rate was 0.8 livestock units per hectare, i.e. 5.33 sheep per hectare.

Surface areas of the grazed lots.

Grazed lots	Surface area (hectares)
La Saline Neuve	3.50
La Saline Creuse	3.30
Gougny et Grand Bernard	2.72
Le Marais rond	1.20
Le Goile	2.40
Notre Dame - Rostu	1.20
Kervarin Bréhérin	1.00
La Chouette	1.70
La Saline Rouge	1.70
La Duchesse	1.50
La Deudessé	1.30



6. Grazed plants without leaves.

7. The sheep also eat the plants on the sides of the embankments.

■ In the areas grazed in 2015, no plants larger than 50 centimetres were observed. Not all the plants had disappeared, but they were weak and had lost their leaves, which limited their flowering and capacity to disperse.

In the Kervarin marsh

■ The initial population was very small, consisting of young sprouts. After one year of grazing, all the plants had disappeared.

Around the Duchesse salt pond

■ After two years of grazing, the young sprouts and the plants larger than 50 cm has disappeared. They represented 72% of the groundsel bushes counted at the start of the intervention.

Around the Pigneux salt pond

■ This zone, where the groundsel bushes were cut in 2014, was not grazed. In 2015 and 2016, the bushes grew rapidly, however the smallest plants disappeared.

Table of the monitoring results in 2015 and 2016.

Dates of counts	Kervarin marsh		Duchesse salt pond		Pigneux salt pond (groundsel bushes cut in 2014, not grazed)	
	02 Sept. 2015	27 Oct. 2016	24 July 2015	27 Oct. 2016	02 Sept. 2015	27 Oct. 2016
Young sprouts	3	0	56	0	20	0
Plants < 50 cm	0	0	32	26	13	0
Plants > 50 cm	1	0	6	0	10	4
Average number per square metre	0.4	0	9.4	2.6	4.3	0.4

■ Costs

■ The farmer assumed the high costs of the fencing. As payment for the work, he received a lump sum of 5 000 euros from the intermunicipal board, the town of Mesquer and the non-profit Amis des sites de Mesquer.

■ In 2017, further fencing for extended grazing zones was required and funding requests were made to the Pays-de-la-Loire region (8 000 €), the town of Mesquer (500 €) and the non-profit Amis des sites de Mesquer (1 500 €). The requests were granted.

Information on the project

■ A presentation on this project was made to the participating local governments and to the association of salt producers.

■ A visit to the sites was organised for the general public during the summer of 2016. Two visits for a total of approximately 30 people were also organised in 2017 in conjunction with the Loire-Océan Centre for environmental initiatives (CPIE).

■ The experimental results were also presented on the internet site of the non-profit group.

Outlook

■ The initial results of the experiment are highly positive and demonstrated that grazing of groundsel bushes by sheep is an effective alternative to manual cutting of the plants.

■ Several years of grazing are required to significantly reduce the presence in colonised areas with large plants. However, in areas where only young sprouts are present, a single grazing season is sufficient to completely eradicate the plants.

■ Grazing by sheep has been continued in the marshes.

■ In that the farmer is not registered in a subsidised agricultural activity and given the considerable expenses incurred for the fencing, CAB decided to study the profitability of the project. A technical and economic study will be carried out in 2017 and 2018 in conjunction with the Loire-Atlantique Chamber of agriculture.

Authors: Patrice Pervez, president of CAB, and Doriane Blottière, IUCN French committee. January 2018.

For more information

■ CAB internet site:
www.collectif-anti-baccharis.org