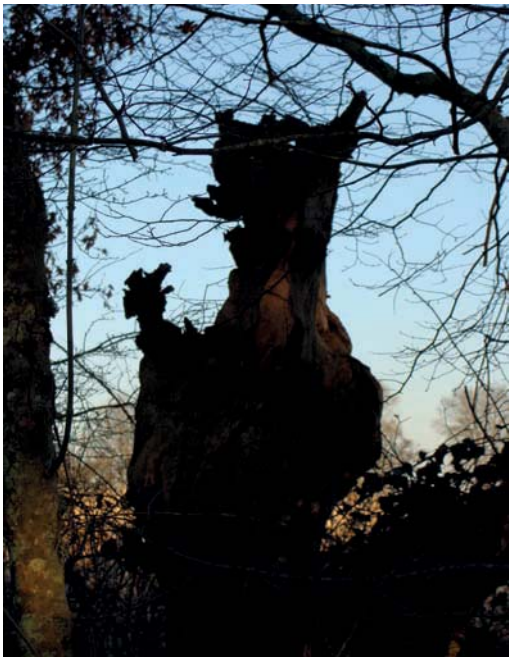
Frightening shapes, in country lanes at nightfall,
bizarre dancers, or monsters with upraised arms,
brooding over lanes,
run! run!
from the dead limbs hanging on for dear life,
from these threatening gargoyles of toughened wood.



Trognes, Tétards, Emondes, Plesses: the Multiple Aspects and Uses of the Farmer's Oak

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ABSTRACT

Ancestral techniques employed by farmers have created trees of greatly different morphology and stature than those managed by foresters. This presentation will show the multiple forms of the farmer's oak, destined to serve a vast array of situations and uses. Regularly pollarded, the life expectancy of these trees is surprisingly long which is why they are host to a rare and remarkable biological community. Long criticized by forestry and tree specialists, who value above all the quality of the timber, this empirical method for cultivating oaks deserves to be better studied and known. Used today for luxurious woodwork, the farmer's pollard has much to teach us, notably in agroforestry but also about biodiversity and sustainable development. And, if only for their extraordinary diversity of form, they merit our complete attention.

Keywords: oak, pollard, agroforestry

Introduction

Everyone in France knows the majestic, tall oaks in the Bercé National Forest in the Sarthe or the or the Tronçais forest in the Allier, superbly managed for timber production by the French National Forestry Commission. Here we will not be discussing the trees in these prestigious forests, but those of not so well known "forests", currently under much greater threat: I am referring to those forest formations composed of pollards and coppiced trees (that have over 200 regional names in French).

Also known as a high coppice, hanging forest, forest on stilts, or tree meadow forests, they have marked our landscapes for thousands of years. This traditional technique for managing oak trees (other deciduous species are also managed in this way) consists of cutting all the young trees off at the same height and pruning them back regularly at the same level(s) to provide renewable production of wood, leaves, and fruit, out of reach of grazing herbivores.

History

The oldest pollards were no doubt grown in pasture woodlands. These practices continue to survive in many European countries as in certain pasture woodlands of pedunculate oak (*Quercus robur* L.) in Béarn. In the Basque Country the height of the pollards is often quite remarkable, with some trained in candelabra shape (Photo 5). Some of these forests of pollard *Q. robur* and, to a lesser extent, *Q. pyrenaica* (Matt.) Liebl., continued to be maintained by the French Forestry Commission until the 1930s. Today, in some areas, these woodlands are still managed in the traditional way, in Poitou-Charente, for example by the Nature Conservancy.

1/ A traditionally managed pollard woodland in Deux-Sèvres.

In the Iberian Peninsula *dehesas* represent a very ancient form of agroforestry. Still today, in Spain, *dehesas* cover nearly 2 million hectares. Holm oak, *Q. ilex* L., is the most widely used species. The central part of each oak is pruned regularly so that it spreads out in a parasol shape, providing shade for cattle or crops. In the southern part of Aragon, also in Spain, you can still see old pollard holm oaks that must have been cut back to ground level at one time. Cork oak, *Q. suber* L., is also used, especially in the Portuguese *montado*.

Traditionally in France, large numbers of pollard oaks grew in the hedges surrounding small fields in the *bocage*. Pedunculate oak pollards are still a common feature of the landscape in the Rennes area of Brittany. This technique, intended to promote the production of a maximum number of side shoots, is not specific to this region, even if today it is most visible there.

Traditionally, the trunk of a pollard belonged to the landowner whereas the coppiced wood to the tenant farmer. This often led to conflicts between the landowner and his tenant, as the former wanted to produce valuable timber by growing tall trees and the latter wanted to pollard them as much as possible!

The history of pollards sometimes intersects with major events: during the First World War observers on the front lines were posted in pollard hollows and, during the Second World War, there are trees that can still be seen today that are known to have served as hideouts for those trying to escape the German concentration camps.

From certain historical remains it is possible to have an idea of how old these pollarding and coppicing techniques are. To name but a few, a pollard found in the River Trent in England, has been dated at 3,400 years old, whilst a coppiced tree, discovered in the Meuse river in Belgium, was estimated at a mere 1,800 years!

2/ Pollards with bent branches at the bottom are often the remains of pleached hedges used to fence fields or woods.

What they were used for

In many countries, firewood was the main resource drawn from pollards. Hundreds of millions of bundles of firewood were burnt in fireplaces; bread and hemp ovens; brick, tile, lime, and plaster kilns, etc. Before coal became widely used, small logs, or *charbonnettes*, were turned into charcoal fuel for forges, iron and glass furnaces, etc. Some farmers still continue to coppice trees to produce logs for firewood. Small firewood and *charbonnettes* are often burnt in the fields.

Pollards were also used in many regions as boundary markers. The coppiced wood was shared between the neighbouring farmers. Oak leaves were not prized as animal feed, unlike those of ash (*Fraxinus excelsior* L.) and elm (*Ulmus minor* Mill.) trees. However, during the heat wave of 2003 in France, farmers in the Sarthe revived this practice by partially trimming their pedunculate oak pollards and feeding the leafy shoots and acorns to their cattle.

Certain pollard forests that can be seen today in the Basque Country and on the outskirts of London were created by the use of this technique for the production of large quantities of charcoal. Certain trees were specially trained to make curved timbers for shipbuilding whilst logs from long pollards were used to make roof timbers for houses and furniture. And, of course, acorns were used to feed the pigs.

Biological and ecological considerations

Pollards adapt remarkably to landscape constraints, spreading their branches and achieving harmony with both artificial and natural obstacles.

In pollarding, swellings develop where branches are cut and from these swellings new trunks often grow. Additionally, pollard shoots often produce roots high on their own trunk, in hollows filled with compost. These shoots are considered trees rather than branches! The compost that forms in these hollows used to be collected for flower pots, flower beds and vegetable gardens. In the Perche region, this compost is known as “pollard blood”. Many seeds borne by wind or animals germinate in this compost. Trees may even

3/ Chemin des Trognes (Boursay).

4/ "Dancing" pollards.

grow there and their roots work their way down to ground level. I have seen a weeping birch (*Betula pendula* Roth.) growing in compost on a pollarded pedunculate oak. Its roots reached the ground, the compost disappeared when the branch split, uncovering a birch root which has since become a trunk growing inside the trunk of the oak tree. Now there is a pollard willow inside a pollard oak that the farmer prunes back at the same time!

Conservation

In recent years, pollards have been pillaged to make luxury furniture without any concern for replacing them, or for the fate of any of the rare or more common protected species sheltered in them. The combined factors of the mechanization of agriculture in the latter half of the twentieth century and the substitution by fossil fuels and synthetic materials for many of the products that came traditionally from pollarding, has led to the disappearance of these noble trees.

In 1999, to raise awareness of this loss, I set up the Pollard Garden at the International Garden Festival in Chaumont-sur-Loire, featuring 27 pedunculate oak pollards that had been destroyed by farmers in my home village of Boursay. This installation was maintained until 2001 when it was dismantled and the pollards returned to Boursay, to be installed with 15 other specimens along a special path: the Chemin des Trognes. In 2003, the Maison Botanique (inaugurated in 2000) opened the Centre Européen des Trognes and, in 2006, the first European symposium on pollards, held in the Vendôme, brought together 24 speakers from 8 countries throughout Europe. An exhibition on pollards is currently on display in a small barn adjoining the Maison Botanique.

5/ Pollards in the Basque Country.

Creating new pollards and envisaging the future

The Maison Botanique encourages and monitors the creation of new pollards. The future of pollards will involve the woodchip industry, capable of processing all pollard wood with minimal handling, as well as agroforestry projects to put pollards back into the fields. These are intended to promote local production of wood chips for mulch or biomass, as well as enhance biodiversity and fix carbon.

Photographers. Title page: Dominique Mansion (sculptures by André Morvan). Photos 1-5 and p. 130: Dominique Mansion.

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