Management of historic elements in Dutch forests

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Abstract

The attention for the history of Dutch forestry has come and gone in the last decades. The oldest books on Dutch forestry date from the start of the 19th century. But only after the establishment of the State Forest Organization in 1899 (Staatsbosbeheer), books on the practice of forestry were more common.

The first publication on the history of Dutch forestry appeared in the second half of the 20th century. Relatively few studies have been done on this subject in the Netherlands compared to surrounding countries, such as Great Britain, Germany and France. The first dissertation on forest history appeared in 1958 and the first sentence reads as follows: 'It is important for foresters to know the history of the forest'. Only in 1974 the second dissertation on this subject appeared. The major study on this subject was written by Jaap Buis in 1984. It is called 'Historia Forestis' and accounts an amazing 1058 pages. Since then a couple of minor studies have been done.

Almost all studies focused on socio-economic factors and only a few articles have been written on historic elements in the Dutch forests. This is amazing since that's the kind of information forest managers need for their day to day management: the historic elements are the physical part of the cultural heritage. Until today, only forest managers with a personal interest in the history of their forest and the historic forest elements in their area, pay attention to the preservation of these elements. There are a few exceptions to this rule, mainly archaeological elements such as burial chambers and Celtic fields. A lot of historic elements have therefore disappeared and even more will disappear if we do not raise the attention for these elements in our forests.

It was therefore necessary to broaden the knowledge on historic elements in Dutch forests and to communicate this information to forest managers. Almost three years of research (not full time) by myself and my colleague Mark van Benthem have been spent on finding all relevant information on the existing historic elements in the Netherlands. This has not been an easy task, since a lot of information was missing and most was very scattered. The findings have been published in a 128 pages full colour book, focusing on all major historic elements, such as: fire corridors, pools, 'sprengen', 'boombos', 'rabattenbos', embankments, anthropogenic hills and ditches, etc.

Of all elements the history is described, the way to recognize them and suggestions are given for their management. Most Dutch forests are managed in a way that all forest functions and services are integrated. This forest management system is called 'Geïntegreerd bosbeheer' or integrated forest management. It is the aim of this new book to see the cultural heritage grow as an integral part of our forests and our forest management.

Paper

In the Netherlands there is an increasing interest in our cultural heritage. It is widely recognized that not only urban areas but also landscapes with a historical entity are highly appreciated by their inhabitants and visitors. Rural tourism is an increasing economic driving factor for the Netherlands. Therefore, several initiatives for increasing awareness of the cultural heritage have been

started, but this attention has so far focused mainly on elements outside the forests and natural areas. This is surprising since Dutch forests are rich in historical elements and are an integral part of our history.

Attention for the history of the Dutch forests and forestry has come and gone in the last decades. The oldest books on this subject date from the start of the 19th century. But only after the establishment of the State Forest Organization in 1899 (Staatsbosbeheer), books on the practice of forestry became more common. The first publication on the history of Dutch forestry appeared in the second half of the 20th century. Relatively few studies have been carried out on this subject in the Netherlands compared to surrounding countries, as Great Britain, Germany and France. The first dissertation on forest history appeared in 1958. Only in 1974 the second dissertation on this subject appeared. The major study on this subject was written by Jaap Buis in 1984. It is called 'Historia Forestis' and accounts an amazing 1058 pages. Since then only a few minor studies have been carried out. Almost all studies focused on socio-economic factors and only a few articles have been written on historic elements in the Dutch forests. This is surprising since this is the kind of information forest managers need for their day to day forest management. Up to today only forest managers with a personal interest in the history of their forest and the historic elements it contains, pay attention to the preservation of these elements. There are a few exceptions to this rule, mainly archaeological elements like barrows and Celtic fields can count on some attention, and the rest stays hidden and hopefully conserved. However, this is often not the case. A lot of historic elements have therefore disappeared and even more will disappear if we do not raise the attention for these elements in our forests.

Lack of knowledge forms a serious threat to the conservation of the historic elements, left alone without restoration. Probos, the Dutch Institute for Forestry and Forest Products, gave itself the task to broaden the knowledge on historical elements in Dutch forests and, even more important, to communicate this information to forest managers foremost, but also to policy makers and other interested parties. It was not an easy task to find all relevant information on the existing historical elements in the Netherlands, since a lot of information is missing and most was very scattered. The findings have been published in a 128 pages full colour book called 'Historische boselementen, geschiedenis, herkenning en beheer', focusing on all major historic elements, such as: mounds, embankments, pools, fire corridors, relicts of hunting activities, pits, historical roads, etc. Of all these elements the history, how to recognise them in the field and their current ecological and (social) cultural meaning are described. Besides, suggestions for management are given and folk tales are presented. Stone (buildings) constructions were not within the focus of the book.

This paper gives a brief introduction to the various elements, but to get an idea of the cultural heritage in the Dutch forests it is necessary to know a bit about the forest history of the Netherlands: with the retreat of the ice, people came to the area now known as the Netherlands. They were hunters and collectors who did not put much pressure on the forests which developed here since the last ice age. From the Iron Age on, the population grew fast and the people, who had started agricultural activities, could no longer perform only slash and burn activities. Celtic fields came into place and were later, when the Romans brought better machinery, replaced by larger scale agriculture. Forests were cleared to make way for fields and especially for pastures. Sheep grazed on these pastures during the day and were brought home in time, so the sheep dung could be collected and used to keep the productivity of the fields at the required level. In the forests which were not cleared domestic

animals grazed and with the growing of the animal stock, the forest could no longer restore itself. As a result heath lands and even worse drifting sands came into being. From that time on Holland was losing its forest at high speed, and by 1800 the Netherlands had only about 100, 000 ha left, mainly coppice woodlands. As a consequence it is important to realise that the majority of historic elements now in the forests, came into being outside the forest.

Due to overgrazing drift sands occurred and threatened villages and fields in the Netherlands

With the invention of artificial fertilizers, which made the sheep dung redundant, and the rise of the coal mining industry, afforestation began around 1850. It lasted until about 1935 and very labour intensive techniques were used. These techniques caused a lot of damage to archaeological elements which were conserved fairly well in the heath lands. But the afforestation techniques also brought al lot of new elements which we call historical nowadays.

Because afforestation mainly took place on poor soils, sometimes caused by centuries of overcropping the soils were exhausted and pine (Pinus sylvestris) was one of the few species which was able to grow under these circumstances. Pine also creaks before it breaks, which comes in handy in the mining industry. Up to today, second or third generation of, pine is still the most common species in the Dutch forest.

Turning the soil before afforestation with pine

Next an overview of the different elements to be found in the Dutch forests is presented. As said before, in the book this is completed with: how to recognise them, their current ecological and (social) cultural meaning and suggestions for management. Celtic fields, barrows and (pre-) historical roads are among the oldest elements in the Dutch forests. Barrows are well known in the Netherlands and receive a lot of attention, also in the forest management. The book mainly focuses on relatively unknown elements. Therefore burrows are only briefly described in it.

For centuries coppice woodlands were very popular and only a limited area of high forests existed. These were either communal forests or forests belonging to an estate. Later from at least the 15th century, it became fashionable to introduce exotic plants, which flower abundantly before the trees have their leaves. There are still forests with a high proportion of these so-called 'stinzen'plants. A good example of bio-cultural heritage in the forest.

In general, mounds date from the time when the Netherlands hardly had any forests left. If you desire something to catch the eye in the Dutch flat landscape, you have to establish a hill. Mounds

were erected for all kinds of purposes, e.g. to put gallows on, to mark property boundaries and for recreational purposes.

For over centuries, some dating back before the Christian era, mining activities left their traces in the Dutch landscape and are currently mainly visible in the forest and heath lands. Pits were dug for the extraction of loam, sand and gravel. In the early Medieval Age from the seventh until the ninth century, the Netherlands was one of the most important producers of iron in North-Western Europe. The iron industry left its traces, not only in the shape of pits, but also furnaces can be found. The rise of this industry also led to a clear-cut of the forest and an increase of the coppice woodlands area, since the iron industry needed a huge amount of firewood. Other examples of pits are sawpits, border pits and pits dug for not having to bend whilst e.g. debarking oak twigs for the tanning industry.

Embankments are a very common historic element in the Dutch forests. They have been erected for several purposes, like: for defence, to prevent game from entering the fields, to prevent cattle damaging crops and forests, to mark borders, to stop drifting sands, to protect beehives from the wind, to prevent wagons from leaving the road, etc. Many hundreds of miles can still be found in Dutch forests today.

As said before the afforestation activities which started around 1850 damaged a lot of our cultural heritage, but they also gave us new elements, like fire corridors and relics of special afforestation techniques. Because large scale monocultures were established, there was also a need for extra nutrients for the game animals, since hunting was very important. So called 'leaf fields', mainly coppices of oak, were established and can still be found.

Sometimes you walk in the forest and come across a 'striking tree', a tree which differs through species, size or form. There were hundreds of reasons for planting trees, especially outside the forest. Since the majority of our forests are new, there can be many reasons which can explain why that specimen differs from its neighbours. For striking trees in the Dutch forest, the most common reasons are: former habitation place (often lime trees (Tillia spec.); boundary mark and trees planted in the memory of e.g. an important forester or a person from the Royal family.

This sheep pen no longer exists,
but the beech trees still mark its place in the forest

Of course throughout time different types of roads came and went and of which traces can still be found. Other elements described in the book are Celtic fields, pools, avenues with trees within forested areas, unnatural springs (to produce energy for different industries by watermills) and so called 'pest woodlands' which arose on sites where cattle which died of infectious diseases were buried.

Most Dutch forests are managed in a way that all forest functions and services are integrated. This forest management system is called 'Integrated forest management'. The Probos foundation will keep working on focusing attention to the necessity to protect important historical elements in our

forests. The policy of the Dutch government is at the moment in favour of the protection of our cultural heritage, but unfortunately this attention mainly focuses on the integration of historical elements into landscape development and not so much on the management of present elements. The management of historical elements in our forests have not received any attention so far.

It is the aim of this new book to see the cultural heritage grow as an integral part of our forests and our forest management. Let us finally also not forget that today's activities are tomorrow's cultural heritage.