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THE MANAGEMENT OF ANCIENT BEECH POLLARDS IN WOOD PASTURES

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Summary

Work to regenerate neglected pollards and create new pollards to perpetuate a specialised wildlife habitat has shown that regrowth occurs most readily when part of the crown is retained.

Introduction

1. Burnham Beeches is a public open space, owned and managed by the Corporation of London. Most notable among the 216 ha Site of Special Scientific Interest (SSSI) are the pollarded beech trees which originally formed the major component in wood pasture system (Rackham 1990). In addition to being picturesque, these ancient trees provide valuable habitats for lower plants and fungi and a wide range of specialist invertebrates (Harding & Rose 1978*). Recent increased awareness of this habitat has stimulated a desire to prolong the lives of the elderly pollards and to create new ones. Mitchell (1988) has reviewed the literature on pollarding but traditional practices appear to have been unrecorded.
2. A silvicultural characteristic of beech (*Fagus sylvatica*) is that in Britain it does not coppice reliably and the capacity to do so declines with age. Beech also gives a variable but generally poor response to pollarding, sometimes resulting in death. This Note reviews the results of experience gained in managing existing pollards and creating new beech pollards at Burnham Beeches.

The trees at Burnham Beeches

3. At Burnham Beeches the majority of the remaining pollards (approximately 540) are beech about 400 years old. They now have branches of substantial sizes (up to 70 cm diameter) which have developed since the last pollarding 190 to 210 years ago (determined by ring counts). The bollings (trunk) are predominately hollow.
4. Some selected trees in two separate areas were repollarded in the 1950s but the success rate was variable (90% in one area, 60% in the other) but the reason for this was not known. Repollarding was again commenced in 1984, some of the elderly pollards were cut with a 100% success rate. Also young beech maidens were pollarded. From this experience there are several factors which must be considered when pollarding trees.

Amount of canopy removed

* This publication includes a list of ancient wood pastures

5. In early trials complete removal of the crown (genuine pollarding) of young maiden trees resulted in very high morality. Retention of lower branches increased survival to 100%. In repollarding old trees similar results have been achieved by retaining some branches.
6. The practice now adopted is to “selectively thin” the crown; large heavy and structurally unsound branches are removed and smaller/younger branches and some larger branches are retained, often leaving a large proportion of the original crown. Future cuts will progressively remove the remaining branches. It is probable that this was the traditional method used in Burnham Beeches; evidence for this is the mixed ages of limbs on the old pollard trees.

Height/position of cut

7. In the 1950s a length of stub of up to 4 m was retained. More recently at least 0.5 m has been left. In beech, regrowth generally occurs from retained younger wood and not from a cut surface or from the bolling (permanent trunk), it is important, therefore, not to make flush cuts.

Age of the Tree

8. The age at which a maiden tree is pollarded appears unimportant as long as some of the original branches are retained (Plate 1). One maiden tree at Burnham Beeches, approximately 150 years old, was cut after being wind damaged and is growing well. However, the majority of trees being pollarded are much younger than this. Younger trees respond to pruning better than the old pollards, so that the intervals between cutting can be shorter.

Aspect/shading

9. Early treatment of young trees showed that, despite the shade tolerance of beech, abundant light is essential if regrowth is to occur. Clearing is now done to remove secondary woodland encroachment from around the old pollards.

Time of year to cut

10. It is believed that cutting branches for forage was originally done during early summer and the wood may have been burned in the winter. Cutting in the winter was probably done for fuel wood. Most recent cutting in Burnham Beeches has been done during the winter, and in the 1950s it was carried out primarily between November and January. However, in the 1980s cutting has been done in June, September and October, so far there is no evidence to show that the season is significant for the development of regrowth.

Method cutting

11. Cuts in the 1950s using handsaws produced good regrowth in one area but was less successful in the other (see paragraph 4). Recent cuts have been made exclusively with chainsaws and so far the results are encouraging. Chainsaws do not appear to inhibit growth and enable more trees to be worked in a day.

Note: Cutting, whether to create new pollards or to remove pollard shoots, is potentially dangerous and especially so when a chainsaw is used. The operator should be safely positioned and secured so that there is no risk from either the falling limb or the chainsaw. The requirements of FSC Guides 10 and 18 should be observed.

Conclusion

12. Pollarding young trees or repollarding old trees by removal of all the branches does not result in good regrowth. Repollarding of elderly trees has been successful where part of the crown has been retained. This is particularly true for trees which have not been cut for many years.
13. It is important to retain some branches when initiating new pollards rather than completely decapitating the tree.
14. The life expectancy of old pollards can be extended while new pollards are created alongside the old ones. This is essential if the generation gap in trees of woodland pasture is to be bridged and the valuable habitat of wood pastures perpetuated.

Further Information

A fuller account of the techniques for managing ancient beech pollards is given by Read (1991)

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* This publication includes a list of ancient wood pastures