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Research information note

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The ecological impact of sweet chestnut coppice silviculture on former ancient, broadleaved woodland sites in south-east England

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Introduction

Sweet chestnut *Castanea sativa* is not native to the UK, but is widely distributed in southern England, where it can form the bulk of the woods still worked as coppice. It has been planted extensively on ancient woodland sites formerly occupied by oak, hazel, ash and birch. This report explores the history, ecology and silviculture of these sweet chestnut stands. The work was sponsored by Kent County Council and Gallagher Aggregates Limited.

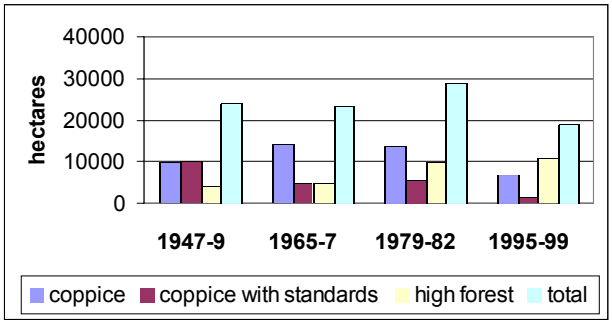
What was done

An extensive literature review was carried out and a workshop of interested parties was held. This material is brought together in the report.

Results and conclusions

The forestry census data suggests that the total area of chestnut has fluctuated between about 19 and 30 thousant hectares over the pasty 50 years. Chestnut is well adapted to a wide range of site and soil conditions. Few if any species appear to depend directly on chestnut and the number and variety of species associated with chestnut stands (particularly where they occur as monocultures) appears to be lower than in the equivalent communities of native trees and shrubs.

Sweet chestnut acreage in Britain, 1947-99, based on Forestry Commission census data



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On the other hand the maintenance of the coppice cycle in commercial chestnut crops can be beneficial to species that depend on young growth stages, such as fritillary butterflies and migrant birds. Where coppice cannot be continued alternative silvicultural techniques can be used to convert the stands to high forest.

Chestnut blight *Cryphonectria parasitica* is spreading in northern Europe and may extend its range in the UK, leading to reduced chestnut dominance. On the other hand climate warming may favour chestnut such that it becomes a more invasive component of ancient woodland.

English Nature's viewpoint

Sweet chestnut is an early (Roman) introduction to England and in a few sites is in effect treated as an 'honorary native'. On other sites it has been accepted because its value as a crop helped to keep woods within an active coppice cycle. Currently attitudes towards a number of introduced tree species (and of native species beyond their historic range) are being reviewed in the light of climate change predictions. This report provides valuable background information to enable us to judge how we should treat sweet chestnut in important woodland sites in future.

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