

ANCIENT NEW FOREST TREES

By CHRIS READ

ABSTRACT

The New Forest is internationally important for ancient trees. It has nearly twice as many large oaks and beeches as have been recorded in earlier surveys. Some specimens of other trees, particularly holly, are also ancient. Estimating the ages of trees, especially pollards, is difficult as it depends on management history.

INTRODUCTION

The golden age for ancient trees in the New Forest was surely the early 1970s. This was when I began to explore the Forest. It seemed then that the big oaks and beeches, which had survived for hundreds of years, would long outlast me. But the droughts of 1976 and later years have finished off many old trees, while the canopies of the beech woods (possibly the most famous and well-loved feature of the Forest) have been opened up by the Great Storms of 1987 and 1990. On one of my earliest ventures away from the Forest tracks I came upon a magnificent pollard beech in a nameless holm in *Ringwood Ford Bottom* (NGR SU 262 105). Its trunk, measuring over 23 ft around, had carvings dating back to 1850, and its limbs, covering a great area, shot up to over 100 ft. In 1978, following the 1976 drought, the beech had started to break up and by 1981 had totally collapsed and was dead. The thought that such a lovely tree had probably never been accurately measured or recorded made me sad. From then on I determined to tape-measure big trees on my walks. This was before the first comprehensive list of large Forest oaks and beeches appeared (Flower 1983). It was based on a 1978 survey of the unenclosed woods, often called

the Ancient and Ornamental woods, and some inclosures (Flower & Tubbs 1982). We are fortunate to have such an important record made before the two Great Storms.

In 1996 the Hampshire Wildlife Trust asked for records of ancient trees growing in Hampshire and the Isle of Wight, apart from in the Crown lands of the New Forest. I decided to make a list of Forest trees that would complement the HWT survey of the rest of the county. But my work is *not* a complete survey, as I just set out to check previous records. Although there were quite a lot of new finds, some big trees will have been missed. The Forestry Commission probably has a fuller list than mine.

The following trees are growing in the open Forest, or the inclosures, and they have been seen since the summer of 1996, except where mentioned. My grid references sometimes do not agree with Flower's, but they are not necessarily any more accurate. The records are of girths, which at best give only a rough guide to the ages of trees. I have tried to find the smallest measurement at or below 1.5 m, 5 ft (taken from the highest point of the surrounding ground) which is the height used by the great expert on large trees, Alan Mitchell (1996). Some sizes differ from Flower's, which isn't surprising; two people (or even one person on different days!) can measure an awkward tree and come up with varying results. Many trees have low branches, or are leaning, and sometimes a sloping measurement is best. Also burrs, caused by insect attack, have to be avoided. Large burrs give a misleading impression of the age of a tree. For example, the burred oak at *Great Huntley Bank* (SU 2819 0623) has a girth of 7.8 m, 25' 6", which is bigger than any unburred oak or beech I have seen in the Forest.

Table 1 New Forest Oaks with girths of 5.8 m, 19 ft and over. Girths were measured at heights of 1.2–1.5 m, except where stated otherwise. M = maiden, i.e. a tree that has not been pollarded, P = pollard. Flower's smaller oaks are also listed

<i>Tree</i>	<i>NGR</i>	<i>Girth</i>	<i>Type</i>	<i>Flower's data</i>
Knightwood Oak ¹	2653 0650	7.4m 24'3"	P	7.2P
Adam Oak, Minstead (hedge)	2788 1088	7.3m 23'9"	M	7.3M
Moyles Court Oak ²	1628 0837	7m 22'9"	P?	6.8P
Allum Green (Bramble Hill) ³	2775 0708	6.9m 22'9"	P	6.9P
Lyndhurst Race Course	3000 0936	6.7m 22ft	P ?	6.6P
Wood Crates (part burr)	2722 0850	6.5m 21'3"	P	
Queen Bower	2892 0428	6.5m 21'3"	M	6.3M
Undersley Wood (part burr)	2278 0488	6.3m 20'6"	P	6P
Red Shoot Wood ⁴	1879 0847	6.2m 20'6" at 1.1m	P	
Beaulieu River (Fawley Ford) ⁵	3855 0497	6.2m 20'3"	P?	6.1P
Mark Ash	2476 0713	6.1m 20ft	P?	6P
Bramble Hill, Bramshaw	2590 1579	6.1m 20ft	M	6.1M
Whitley Wood	2998 0638	6m 19'9"	P?	5.8M
near Acres Down House 1995	2679 0983	6m 19'6" at 0.6m	M	
Whitley Wood	2968 0587	5.9m 19'6"	M	?5.7M
Withybed Oak [Lucas Castle]	2494 1057	5.9m 19'6"	M	5.9P
Philips Hill	2948 0666	5.9m 19'6"	M?	5.9M
Frame Wood ⁶	3483 0274	5.9m 19'6" at 1.1m	P	
near Suter's Cottage, Minstead ⁷	2842 1175	5.9m 19'3"	M	
Ocknell Sling near Highland Water Inclosure	2473 0988	5.9m 19'3" at 0.9m	M	5.8M
Bushy Bradley	2237 0822	5.8m 19ft	M	
Whitley Wood	2945 0561	5.8m 19ft	P	
Canterton Green	2778 1315	5.8m 19ft	M	
Seaman's Corner, Minstead	2780 1182	5.8m 19ft	M	
Balmer Lawn ⁸ 1995	3047 0330	5.8m 19ft	M	
Balmer Lawn	3084 0317	5.8m 19ft at 1.1m	P	
Pinnick Wood	1955 0808	5.8m 19ft at 0.9m	P	6P
Whitley Wood	2954 0572	5.7m 18'9"	P	5.8P
King's Hat (West)	3084 0542	5.7m 18'9"	P?	5.5M

<i>Tree</i>	<i>NGR</i>	<i>Girth</i>	<i>Type</i>	<i>Flower's data</i>
Ridley Wood ⁹	2024 0618	5.7m 18'9" at 1.1m	P	
Warwickslade Cutting	2692 0635	5.7m 18'6"	M?	5.6P
King's Hat (West)	3087 0541	5.6m 18'6"	P	5.6P
Spreading Oak	2389 1075	5.6m 18'6"	P	
Bramshaw Wood	2603 1614	5.6m 18'6"	P	6.1P
Bramble Hill, Bramshaw (hedge)	2592 1576	5.5m 18ft	P	5.4P
Pinnick Wood ¹⁰	1945 0775	5.5m 18ft	P	5.4P
Eagle Oak ¹¹	2556 0613	5.4m 17'9" at 0.9m	P	5.4P
Whitley Wood	2982 0606	5.4m 17'6"	P	5.3P
Hollands Wood	3020 0460	5.3m 17'6"	M	5.4P
Pinnick Wood	1924 0779	5.3m 17'6"	M	5.3M

1. Knightwood Oak – a pollard that has lost its low branches, with the upper ones becoming fused together at their base by natural grafting. Recent tree surgery has not improved its appearance. Growth is likely to be slowed in future by the 'Monarchs Grove' of oaks, which has been planted amazingly closely around it. Incidentally, it is named the 'Queen of the Forest' on the 1871 O.S. map.
2. Moyles Court Oak – it has grown by 1.2 m, 4 ft since 1862 (about 9 mm, 1/3" per year). All the other measurements I've seen fit closely to this growth rate.
3. Allum Green (Bramble Hill) – a two-branched pollard with a strange 'shoulder'. An oak further along Cut Walk, measuring 5.4 m above a burr, is similar.
4. Red Shoot Wood – a fine two-branched pollard, possibly the only large oak escaping naval felling in this wood.
5. Beaulieu River (Fawley Ford) – a leaning highly pollarded? oak on the river bank; a striking tree, especially when the river is in flood.
6. Frame Wood – another survivor of naval felling? It grows in and completely fills an old trackway.
7. Suter's Cottage, Minstead – one of the nicest free-grown oaks.
8. Balmer Lawn – about half a dozen remarkably ancient-looking, often two-branched pollards. They seem to be remnants of former woodland, predating the 1789 map.
9. Ridley Wood – another survivor? One of my favourite oddly shaped oaks.
10. Pinnick Wood – ferns grow on its mossy, wide-spreading branches to a great height.
11. Eagle Oak – a very small crown, so it could be much older than it looks. Little or no increase in girth since 1977. A sea eagle was shot from its branches in about 1810.

THE ANCIENT OAKS (Table 1)

Oaks are highly robust and no tree is seen to suffer even in the longest, most severe droughts (Mitchell 1996, 313). Despite what people often believe, ancient oaks are seldom blown over. They gradually become hollow which reduces their weight and makes them more wind resistant. Two of Flower's oaks have fallen (at *Hollands Wood* and

Mark Ash), but neither was actually blown over – one had a V-crotch which split and the other seems to have been hit by a falling beech. However I was unable to trace six others, mostly in the *Brinken Wood* area, which did not suffer very greatly in the storms. They were probably some of the 'dangerous' trees that sadly were cut in 1981. Had they fallen in the storms some parts of their trunks should still have been visible. Flower re-

corded 35 oaks over 5.2 m (i.e. leaving out the ones at Burley Lodge) and there are 64 on my list. Although many have storm damage, surprisingly few are badly stag-headed, or are visibly hollow. So, with luck they should have many years of growth before reaching extreme old age.

In the 19th century there seem to have been, perhaps, only three oaks in the open Forest with girths of 5.2 m, 17 ft or more (Wise 1863, 16; Nisbet & Lascelles 1903, 464). Today they are quite common, I have noted over 80 and there must be more to be found. Some oaks have grown by nearly a foot since I first measured them. So, in one way at least, the Forest has been improving since Victorian times. This is because most of the mature oaks were felled for naval shipbuilding etc. in the 17th and 18th centuries. The ones that escaped were mainly in isolated spots (e.g. *Withybed Oak*) and also possibly in areas where transport to the coast was inconvenient. There are a few ancient pollards to be found in woods otherwise cleared of big oaks. Examples are at *Redshoot*, *Ridley*, and *Frame* – oddly these were not mentioned by Flower. The survival of several old oaks near the roads from Lyndhurst to Brockenhurst and to Queen Bower; and also from Balmer Lawn to Ivy Wood is interesting. It is tempting to believe they were left uncut for scenic reasons. Perhaps we have to thank an 18th century Forest official (from New Park?) for this early example of conservation? David Staggs has kindly given me a copy of a document from the Public Record Office (F24/77). This is possibly the earliest record of individual trees that survive today in the open Forest. It was made between 1834 and 1850 and lists oaks that were not to be felled. Apart from the 12 Apostles at Burley Lodge there were 7 oaks, including the *Eagle*, *Knightwood*, and *Spreading* ('Soldiers') Oaks, and also possibly the one at *Alum Green* ('Buck Hill').

It must be realised that New Forest oaks are *not* large by British standards. Girths of over 10 m occur (e.g. Major Oak in Sherwood Forest) and the largest pollards may be 800 years old (Mitchell 1996, 313). The biggest oak in Hampshire is the Oakley Oak, at Mottisfont, with a girth of over 10.6 m, 35 ft. Were there oaks as big as this growing in the Forest in the 17th century? They would have been survivors from Saxon times –

before the area became a royal forest. It is perhaps surprising that some very old pollards have not survived. Such oaks are useless for anything but firewood and often escape when other trees are felled. Possibly very large oaks have always been uncommon. Colin Tubbs (1986, 151) believed they do not grow any bigger on Forest soils.

You cannot tell the ages of Forest trees just from their girth; the size of the crown is also important. Oaks in parks can grow at twice the rate of ones in woods, which have to compete for sunlight. The Forest has trees of both types and often the largest beeches in a wood are at the edges (e.g. *Soarley Beeches*). The most measured tree is the *Knightwood Oak* which has grown about 16 mm, 0.6" in circumference a year since 1862 when it was 17'4", 5.3 m around. Assuming this growth rate, the Knightwood Oak would date back to about 1500, but it is unlikely to be so old, as trees generally grow faster when young. I believe an estimate of about 1600 was made, by looking at the tree-rings in a bored sample. As the Knightwood Oak is the biggest oak in the Forest, it is unlikely that many others are much over 400 years old.

But the largest trees are not necessarily the oldest – they might just have grown faster (e.g. probably *Adam Oak*). The *Moyleys Court Oak* is growing much slower than the Knightwood Oak, so it is likely to be older. Flower (1980) made a growth-graph for oaks in the Forest of known ages, up to 300 years (3.3–4.2 m girth). They have an annual increase of about 12 mm, ½" and he extrapolates to 4.3–5.3 m (14'–17'3") for 400-year-old trees. This means that all the oaks in my list should be at least 400 years old and the largest would be 550 to over 700 years. My records are too recent to get much idea of how fast the oaks are growing, but so far most seem to have an annual increase of under 12 mm, ½". Mitchell (1996, 313) says that 'no normal, healthy oak grows so slowly that if it attains 400 years it could only be 17 ft round' – this directly contradicts Flower. Mitchell's growth rates would give the age of the Knightwood Oak as about 380 years (growing in open woodland) or about 500 years (in a dense wood). This is roughly what I would expect, as many of the big oaks clearly grew up in more open areas than modern inclosures and would have had a period of faster growth. But pollarding is an added complication –

after each lopping, growth would have been slowed until the crown of the tree reached full size again. Oliver Rackham (1990, 14) has found oak pollards in Epping Forest of only 1.3 m, 50 inches girth which are at least 350 years old! Flower's graph is difficult to explain away and more research is needed. If it is correct, some New Forest oaks are much older than is generally thought.

THE ANCIENT BEECHES (Table 2)

Mitchell (1996, 228) has some interesting things to say about beeches. They are generally not very long lived – normally lasting about 250 years. They are very thirsty trees and suffer from drought in many areas, but can't stand waterlogged soils. They tend to die suddenly, apparently when fungus infestation reaches a critical level. Also beeches on thin sands in the New Forest are vulnerable to being blown over, as they have wide-spreading roots that do not enter the clay beneath. This means that lists of big trees quickly get out of date. Flower's 1983 list is no exception, especially as the two storms have felled many beeches that would otherwise have survived into the next century. He records 10 beeches over 6 m girth, of which four have since fallen and two others have partly collapsed. This is very depressing and worse than I had expected. However, my list has 16 beeches over 6 m.

Maiden Beeches

Nationally there are very few beech woods with a full range of ages, as almost all of them have been managed in some way. The oldest dated British maiden (i.e. not pollarded) beeches were planted in 1680 and have grown to 17–22 ft (5.2–6.7 m). The biggest maiden currently known in this country is 22 ft (6.7 m) and there are only 28 recorded larger than 19 ft (5.8 m). (Mitchell 1996, 230). My list has 31 beeches with a girth of at least 19 ft, but there is only one definite maiden – in *Burley Old Inclosure*. It almost certainly dates from around 1700, the time of inclosure, and is as big as any maiden in Britain, with a fine long bole of 6.7 m, 22 ft girth. (Flower records a 7 m maiden close by, but this is presumably my tree, which I first saw in

1980.) It might well have been the biggest beech in Burley Old in about 1915, which was then 18 ft, 5.5 m (Morris 1916). There is a rather similar tree in *Woodfidley Inclosure* (also planted in 1700) which is 4.9 m, 16'3", but rapidly thickens below 1.5 m, and also one of 6 m, 19'6", which however divides into two at 1.2 m. In 1875 the three biggest trees in the whole Forest were said to be at Burley Old, Woodfidley, and Studley Wood (Select Committee, question 1079). Presumably this meant the largest timber trees i.e. maiden beeches, because pollards were certainly bigger. The Queen Beech at *Studley* grew to about 5.5 m, 18 ft – if it was the dead tree I saw, still standing, in 1982. There do seem to be very few of the 1700 plantings left. Of course most will have been felled, but it looks as if 300 years is about the normal age limit for maiden beeches in the Forest.

You would expect to find very old maidens in the Ancient and Ornamental woods, as well as the still-common ancient pollards. Unfortunately, I did not realise the importance of recording maidens. The only definite one seen over 18 ft is at *Mark Ash* (5.6 m, 18'3" at SU 2496 0717). It looks as if there is not quite a complete age range of maidens, and there are several reasons for this. Many of the beech woods grew from seedlings following the felling of oak woods in the 18th century, and are not yet fully mature. An Act of 1698 banned pollarding, but some beeches were pollarded throughout the 18th century (Peterken *et al.* 1996, 37). Before 1698 pollards were lopped for fuel and it must have been unusual for any healthy trees to be felled, except for timber. Afterwards firewood for commoners etc. seems to have been supplied by felling maiden beeches and decayed pollards. This was an unfortunate effect of the Act. The older beeches continued to be cut until the 1877 Act and even afterwards. In 1791 care was taken to mark nothing for fuel but 'beeches scrubbed, defective or obstructing oaks.' (Nichols 1791). About 250 beeches, mostly dead or decaying, were cut annually in the early 1870s for fuel and charcoal (Select Committee 1875, question 273). 2091 trees were cut in the old woods from 1884–90 (Nisbet & Lascelles 1903, 464). Felling for commoners' firewood stopped about 1920, but 'dangerous' trees were sold until 1970 (Tubbs 1986, 175). It is fortunate that any

Table 2 New Forest Beeches with girths of 5.8 m, 19 ft and over. Girths were measured at heights of 1.2–1.5 m, except where stated otherwise. C = partly collapsed, M = maiden, i.e. a tree that has not been pollarded, P = pollard

<i>Tree</i>	<i>NGR</i>	<i>Girth</i>	<i>Type</i>	<i>Flower's data</i>
The Knowles ¹	2660 0860	7.5m 24'6"	P	7.2P
Queen Bower ²	2887 0436	7.3m 24'	CP	7.4P
Barrow Moor, Mark Ash	2523 0720	7.1m 23'3"	P	7.1P
Burley Old Inclosure	2475 0439	6.7m 22'	M	?7M
'Parkhill Wood' ³	3157 0667	6.6m 21'9" at 0.9m	P	7.3P
Dames Slough Inclosure	2448 0532	6.6m 21'6"	CP	?6.6P
Bratley Wood	2271 0834	6.6m 21'6" at 1.1m	P	
Bratley Wood ⁴	2302 0843	6.4m 21'3'	P?	
Mark Ash	2502 0752	6.3m 20'9'	P	
Dames Slough Hill	2537 0522	6.3m 20'9" at 0.9m	CP	
Undersley Wood ⁵	2270 0480	6.2m 20'3"	P?	
Mallard Wood	3187 0889	6.2m 20'3"	P?	
Ridley Wood	2013 0569	6.2m 20'3"	P	
Bratley Wood	2281 0832	6.1m 20'	P	
Mallard Wood (Hoe Beech)	3225 0931	6.1m 20'	P	
near Bratley Wood ⁶	2239 0852	6.1m 20' at 1.1m	CP	
Barrow Moor, Mark Ash	2529 0703	6m 19'9"	P	
Woodfidley	3461 0461	6m 19'6"	P?	
Undersley Wood	2304 0500	6m 19'6"	P	
'White Shoot Wood'	2737 0725	6m 19'6"	P	
Queen Bower (Poundhill Heath)	2858 0460	6m 19'6"	C P	
Dames Slough Inclosure	2458 0544	6m 19'6" at 0.9m	P	
Soarley Beeches ⁷	2200 0672	5.9m 19'6"	P?	
Wick Wood	2659 0950	5.9m 19'6"	P?	
The Knowles 1994	2667 0841	5.8m 19'3"	P	
Brinken Wood	2757 0601	5.8m 19'3" at 0.9m	C P	
near Puckpits 1990	2510 0993	5.8m 19'	P	
Anses Wood ⁸	2288 1260	5.8m 19'	P	
Ridley Wood	2024 0621	5.8m 19'	C P?	
Berry Wood	2164 0558	5.8m 19' at 1.1m	P	
Brinken Wood 1995	2755 0610	5.8m 19' at 0.9m	C P	

old beeches are left at all! Today maidens of about 17 ft, 5.2 m may be not all that uncommon – I did not bother measuring them. It will be interesting to see whether the maximum size of maidens increases in the Ancient and Ornamental woods. Sticking my neck out, I predict it will.

Pollard Beeches

There are probably more ancient beech pollards in the New Forest than any similar-sized area in the whole world. Almost all the big beeches have been pollarded; they are much like the oldest ones found in Britain e.g. at Burnham Beeches, which are said to be up to 450 years old. The *Knowles* beech must be one of the largest in the country. The biggest one in a recent list was 24'6", 7.5 m in 1982 at Milton Abbas, Dorset (Bean 1988, 239) and the greatest girth ever recorded seems to have been about 26 ft, 7.9 m. Pollards are longer lived than maidens; each time they were cropped, their growth was slowed while a new crown formed. As Rackham says, ageing begins from the date of the last cutting. The oldest beeches have not been pollarded for about 300 years, and their crowns are as old as the oldest maidens. So it is not surprising that they are frequently decaying. Often they collapse – this happens when the bole can no longer support the weight of the limbs. Little can be done to save them, as they are too old to be repollarded safely. Anyway this would look ghastly to modern eyes, and attempting to lighten the branches by cutting the ends off would be

almost as bad. I agree with Mitchell that old trees should die in their own way and time, with some dignity. Also it is important, to me, that the Ancient and Ornamental woods should, as far as possible, give the *impression* that they are unmanaged wildwood. In some cases inconspicuous waterproofing or drainage of crotches, to stop rotting, might be tried, but it would be unlikely to add many years of life.

New Forest beeches are generally reputed to be relatively short-lived. Most old pollards have rotten centres and it is not possible to date them precisely from tree-ring counts. In 1963 twenty New Forest pollards which had sound trunks were found to date from 1616–60 (Tubbs 1986, 152). So the biggest beeches should be over 400 years old – roughly the same age as the oldest oaks. This is slightly surprising as young beeches generally grow faster than oaks. Some people believe that a few pollards are of very great antiquity. Certainly more ring counts are needed and I have an open mind on the age of the oldest beeches.

POLLARDING

In pasture-woodland young oaks and beeches (under 50 years) were pollarded by cutting their tops off at about 2.4 m, 8 ft. This was rather like coppicing, but the regrowth was well above ground level – out of the reach of grazing animals. Harvesting had to be done at the right time of year (not late winter/spring?) and Norden writing in

Notes to Table 2

1. The Knowles – now the best large beech; well buttressed, healthy.
2. Queen Bower – it was once 7.4 m, 24'3", but the branches have half collapsed since 1991. Heavily carved.
3. 'Parkhill Wood' – certainly one of the best beeches left in the Forest. It is on the edge of the old wood, so rather more widespreading than normal, with a superb crown. Amazingly it escaped the storm devastation of the rest of the wood. Many branches, some are fused; difficult to measure, healthy.
4. Bradley Wood – very tall, at the edge of the wood and visible from Mogshade Hill. Corrugated trunk with 6 main limbs intertwining; a fused highly pollarded? tree.
5. Undersley Wood – unforgettable when seen against the sky at sunset. Very highly pollarded? with a much carved, corrugated trunk and a graceful rounded crown.
6. near Bradley Wood – it was probably once at least 6.7 m.
7. Soarley Beeches – it has great character with low branches reaching the ground at the edge of the wood, in a beautiful setting.
8. Anses Wood – a well shaped tree with some curious ingrowth and a delightful location. I was pleased to find it little altered since my previous visit in 1975. Possibly 17'6" at 4 ft in 1923 (Sumner 1924, 24).

1609 (Sumner 1926) mentions 'the mean lops of low old oaks, the stems much decayed and withered, seeming to have been formerly felled at unseasonable times.' Could 'stubs' (Stagg 1983, nos. 314, 464, 1460) have been the local name for dead branchless pollards? Sometimes, to lessen the shock to the tree, lopping might have been done in stages over several years. The frequency of cutting cannot have been so critical, but presumably, this was much longer than with hazel, so that good-sized wood was produced. Norden mentions 'lops of old low oaks that can't be felled above once in 21 years.' Pollards in Epping Forest were lopped about every 13 years. I suspect New Forest pollards were left rather longer, as they were so numerous. Tree-rings from a Suffolk parkland oak clearly showed that it was pollarded at intervals of 11–24 years in the 17th century (Rackham 1990, 17). A lot could be learnt about past management if there were such records from the Forest. Pollards are an important element of the unenclosed woods. I have become convinced that trial pollarding of a few young trees should begin in areas where old pollards are getting rare, e.g. the former regeneration enclosures.

There seem to be three main questions about pollarding: Why was it done? How much of it was done? and Who did it? I am not entirely sure of any of the answers. Keepers often cut the tops of hollies in winter to allow the deer to browse the leaves. This does not seem to have been the main reason for pollarding oaks and beeches. The 1567–73 *Instructions for the Regarders of the New Forest* (Public Record Office LR/2/266) said that deer-browse should never be cut from oak if other browse was available. One of the most convincing explanations is that pollarding was for charcoal burning and firewood. It produced wood of a more manageable size that was easier to harvest. The branches were less likely to be damaged when they were felled and of course the process could be repeated, if the tree was not left too long. Charcoal is much lighter than firewood and therefore easier to transport. It was a valuable fuel and an ingredient of gunpowder. Judging by the number of old pits so far discovered, charcoal making was an important industry. It was probably a very useful source of income from the Forest. While making the tree list I found several more charcoal pits

including three, spaced 100–200 m apart, along an old track to another pit in *Great Wood*. It does seem as if this woodland was systematically harvested, probably when the oaks were cleared for the navy. These pits should date from before 1698, when the making of charcoal within 1000 paces of any inclosure was banned, but the restriction was largely ignored (Pasmore 1964). Pollarding was also banned in 1698 and it is interesting that two of the pits have pollard beeches growing *inside* them.

It would be interesting to know what proportion of oaks and beeches was pollarded before 1698. Parts of the woods were enclosed from time to time as copses. These contained timber trees and coppiced underwood, and so should not have had pollards. In fact there were some pollards, which were used to produce underwood (Tubbs 1964), presumably in areas where there was little hazel, etc. Coppicing was dying out by 1600 and perhaps there was a boom in pollarding and charcoal making in the old copses around then. Lascelles (1915, 150) said that in the old woods 'almost every beech – and some oaks – are pollards'. This is just what you would expect if pollarding had been almost universal; oak was the main timber tree, so some maidens would have been left to grow to maturity. According to Colin Tubbs (1964) pollarding was the accepted practice outside copses, but Nicholas Flower (1980) disagrees. He gives little evidence for this belief and states that the frequent records of lopping in old documents (Stagg 1983, 201) are references to shrouding i.e. removing the side branches from timber trees. It is surely more likely that lopping generally meant the making or harvesting of pollards. There are believed to be no surviving ancient fully shrouded trees in Britain (Rackham 1990). I think that shrouding was normally the (illegal) practice of cutting the wide-spreading branches of timber trees in copses, to let more light in and get a better crop of underwood. There must have been some lopping of timber trees outside copses, but it would have been very difficult and dangerous to tackle anything but very low branches.

Before the naval felling there seem to have been nearly 25 timber trees to the hectare (10 per acre), based on 124,000+ timber trees in 1608, 5,500 ha woods in 1789 (Tubbs 1986, 167, 177). Even

when pollards were cropped regularly and had restricted crowns, could there have been room for more than (say) 40 of them to the hectare (15 per acre)? This would give an amazing total of nearly a quarter of a million pollards in the Forest. I wonder how many are left today. The Forest might have produced at least 5000 tonnes of firewood annually, not including timber (say half a tonne per pollard every 20 years). This compares with the present day 20,000 tonnes of timber from the inclosures (40,000 cubic m sent to the sawmills in 1995/6).

Most of the cutting of wood from pollards seems to have been done by the keepers and their workers. Richard Reeves tells me that charcoal burners were not allowed to lop trees and had to buy their wood at sales. Also it was only after the 1635 claims of Forest Rights that commoners cut their fuelwood from trees that were assigned to them. Before then it was only legal to gather small branches 'by hook or by crook'. Of course there was plenty of unauthorised lopping – keepers, or other officers, often felled wood for their own use, or sold it on. An example is the cutting of branches, presumably from pollards, for firewood under the pretence of providing browse for the deer (Stagg 1983, 201). Illegal cutting by commoners etc. was sometimes aided by the keepers. The Act of 1698 did not entirely stop pollarding. In 1791 cottagers lopped, cropped (i.e. pollarded), and stole trees near all villages – Cadnam and Lyndhurst were 'very shameful' areas (Nichols 1791).

Oaks were mostly pollarded at 1.8–3.1 m, 6–10 ft, with some at 3.7 m, 12 ft and possibly even higher up. There are only three on my list below 1.8 m and they must be doubtful. I find it difficult sometimes to know whether a tree has been pollarded or not. For example, natural damage to the leading shoots of young trees can produce a pollard effect. Of 47 reasonably certain large pollards, only just over half look 'typical' i.e. with more than three branches coming out at all angles. Four have only three limbs and no less than 17 have two. So, was it often the custom, when pollards were harvested, to leave two branches opposite each other uncut? Possibly they were left to grow on to maturity because regeneration tended to be poor (when trees had been left too long?). Or were

young shoots thinned out after pollarding to get large branches quicker? It is tempting to think that this was a deliberate policy to produce timber for the navy. The resulting Y-shaped tree could give a stern-post, or two of the large 'knees' that were so valuable for ship building (Cobb 1974). So perhaps these oaks in particular were left uncut because they were being kept for future naval use.

Beeches were also cut at 1.8–3.1 m, with only a handful of doubtful pollards at lower levels. They generally have many limbs, as would be expected if all the regrowth was lopped (like willows) leaving a bare bole. I wonder how many of the pollards were ever cut more than once. The 1698 Act banned the lopping as well as topping of timber trees (oak and beech). So in theory only pollards more than about 350 years old should have been harvested, but, as we have seen, illegal lopping and cropping went on for at least 100 years.

OTHER TREES

There are so few large trees of other species, apart from holly, that I tend to believe they were weeded out until relatively recently. My recording has been very sketchy and more fieldwork is needed.

Alder: Some copse stools are sizeable and are worth studying.

Ash: *Alderhill Inclosure* (SU 2040 1357) In 1990 this stool in an alder copse was 4.7 m, 15'6". There are remarkably few large trees.

Birch: *Row Hill* rifle butts, Lyndhurst (SU 3198 0839) girth 3.1 m, 10 ft at 0.9 m – it divides into two at 1.2 m. So far this is the only girth recorded over 2.7 m, 8'9". Birches seem to be rather short-lived in the Forest. The Row Hill tree is likely to be under 100 years old, as the rifle range did not close until 1898.

Crab Apple: *Backley Holms* (SU 2170 0757) girth 3 m, 9'9" at 0.5 m. The British record is about 3.2 m, 10'6". There are far more old apples than thorns.

Hawthorn: Surprisingly I have not found any trunks bigger than 1.5 m, 5 ft so far, although thorns are common and Colin Tubbs mentions very old ones.

Holly: Very old bushes are common. Some stems are over 3 m, 10 ft around – as big as any in the country – but they are difficult to measure. A large holly, measuring 3.6 m, 11'9" at 0.6 m, grows at SU 2340 0295 in *Shoot Wood*. This is one of the most spectacular holms (holly woods), with many big old gnarled 'trees'. Colin Tubbs believed some holly bushes might date from the 16th century or earlier. Often they have lots of shoots and resemble giant copse stools. These could be the oldest 'trees' in the Forest if they were formed by repeated cutting at ground level, rather than by natural layering or suckering. In 1963, over 250 rings were counted in one trunk (Tubbs 1986, 152) which shows how slowly holly grows. There has been too much pollarding recently for my taste – especially as most of it has taken place in holms that have never been pollarded, far away from old lodges. However, there is a case for *coppicing* holly that is shading the trunks of lichen-rich oaks and beeches. Areas where holly is thick enough to make walking unpleasant could be tackled first!

Hornbeam: *Redshoot Wood* (SU 1821 0820) girth 1.2 m, 4 ft. I have seen trees in six woods, apart from those recorded by Colin Tubbs (1986, 145). Most do not appear to have been planted, but seed might possibly have spread long distances from garden trees.

Maple: *Hollands Wood* (SU 3088 0448) girth 1.9 m, 6'3".

Rowan: *'Kitt's Hill'*, Lyndhurst (SU 2808 0820) girth 1.5 m, 5 ft. The British record is about 2 m, 6'6".

Small-leaved Lime: This native species has declined in the Forest because the leaves are very palatable to grazing animals. It was once common and several places have 'lime/linden' names, including *Lyndhurst Hill* (287 082). A few years ago I found a couple of trees growing there which Colin Tubbs agreed were small-leaved limes. Neither appeared to have been planted recently and one of them looked like a copse stool. He thought this was an exciting discovery, as he did not know of any other small-leaved limes growing in the Open Forest. Clive Chatters and Richard Reeves tell me that one or two small-leaved limes, believed to be of native origin, have now been recorded in the Bramshaw woods.

Whitebeam: *Great Wood* (SU 2543 1557) girth 1.9 m, 6'3".

Yew: It seems that many big yews were felled, probably before 1800. William Gilpin (1791) said that the yew in the New Forest 'formerly abounded: but it is now much scarcer ... some noble specimens are left'. At the moment there seem to be too many grazing animals to allow any new seedlings to survive. A yew in the grounds of the former lodge at *Bolderwood* (SU 2462 0805) measured 5.3 m, 17'3" at 0.9 m in 1995 and 1977. It is hollow and partly overshadowed by a beech (some of the crown has died since 1977) while young conifers will also soon interfere with it. The biggest yews in the Ancient and Ornamental woods are only 3.7–4 m, 12–13 ft. They are roughly the same size as the largest ones in *Old Sloden Inclosure*, which were sown in 1771 (Tubbs 1986, 182). Published estimates of the age of such yews range from 200–450 years. The lowest figure fits the Sloden trees well, but some of the ones in the unenclosed woods may be over 300 years old. An example is the hollow yew in *Lin Wood* (SU 1900 0925) with a girth of 4 m, 13'3" in 1980. The Bolderwood tree is probably at least as old as the big oaks and beeches (400–800 years estimate).

Scots Pine: Although there were earlier plantings on neighbouring estates, the first introductions to the Forest seem to have been in about 1770 at Ocknell, Bolderwood, and Fir Pound, near Linwood (Pasmore & Lavender 1974). No original pines survive at these plantations, but there are two remarkable trees in *Woodford Bottom* (SU 1978 1140 & 1962 1129), which seem to have previously escaped notice. Both measure 4.4 m, 14'3" at about 1.2 m from the ground. They clearly grew up without competition from other pines and are unlike 'normal' ones, being heavily branched with short trunks and wide-spreading crowns – in fact more like some native Scottish trees. The pines planted at Brockenhurst Manor in 1760 (Mitchell 1996, 118) are not any larger. It seems significant that George Bush, the planter of Fir Pound, lived very close-by at Woodford. I believe these two trees probably date from the same time as the Fir Pound and could therefore be the oldest pines in the open Forest. (They are some of the very few Scots Pines that I would not like to be cut.) The

first large-scale plantings in the inclosures are said to have been in 1776, using seeds or plants from the Darnaway Estate, Morayshire (Mitchell 1996, 118). Naturally most of these were cut long ago, but there are still occasional big pines to be found. One of 3.4 m, 11'3" in *Coppice of Linwood Inclosure* (SU 2490 1502) is similar in form to the Woodford ones. It probably dates from the time of inclosure in c. 1776.

CONCLUSIONS

The New Forest is one of the best places in Europe for ancient trees. It is outstanding, in Britain, for the numbers of very old beeches and hollies. Incidentally, the reason that the numbers and sizes of big oaks and beeches are almost the same is a historical accident. In Victorian times there were more large beeches, but today's oldest oaks seem to be a century or more away from reaching full size and should soon overtake the beeches. I am still unsure how old the ancient trees are. Some of the oaks and beeches date back to the 1500s, but possibly very few are over 500 years old.

Local people often do not realise how remarkable and important the New Forest woods are. They are far and away the largest remnant of pasture woodland in Britain, with no lowland counterpart in Europe. They are a unique, if modified, survivor of the vast forests of 5000 years ago (Tubbs 1986, 21). The oldest trees give something of the atmosphere of that lost wildwood, and each one has its own character – see the notes on a few of my favourites. Unfortunately one in six of the largest-known oaks in the Forest may have

been felled in the early 1980s. I would urge readers to keep watchful eyes on any ancient trees in their own areas.

This has been the most rewarding thing I have ever done in the Forest. A nice bonus has been the number of new (to me) archaeological sites discovered while searching for the trees. It has been fascinating to explore so much of the area in such a short time and see the changes that have occurred. I have come to understand that the woods before 1700 must have had a far more managed look – maybe sometimes even ugly to our eyes. In the next century the biggest danger, apart from bad management, is likely to be pollution. With luck, the woods of the future, although probably inevitably less varied, could still be as beautiful as they are today. Heywood Sumner's conclusion in 'Trees, and Anno Domini' (1931, 226) is perhaps the best attitude to have – and it does not only apply to trees: 'the pleasure of seeing growth increases as years multiply, outweighing (to me) the regret of seeing loss'.

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