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OCTOBER 1984

Greenkeeper

& The International Greenkeeper

BULLETIN Nr. 44

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This issue

OCTOBER 1984

Front Cover: Much interest was shown during last month's IOG exhibition at Windsor in the Rolawn Power 5, which has now successfully celebrated its first birthday. This PTO 5 gang mower maintains cylinder rotation, independent of towing speed, allowing efficient use in the wettest conditions. Good ground clearance and narrow transportation widths enable it to be moved between sites without a transporter. Each cutting head follows the ground contours and the wheel arrangement affords easy manoeuvrability in tight turning circles. Available with either manual or hydraulic lift, the Power 5 is of British design and manufacture and is serviced by a network of national agents operating a 'next day' parts supply service. The purchase price of the Rolawn Power 5 is substantially less than comparable hydraulically powered machine and a low cost 3 gang model is also available with the facility for upgrading to a 5 gang at a future date if required. Full details are available from Rocraft Ltd, Brynhyfryd, Caerphilly, Mid-Glamorgan. Ø 0222 885778.

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BINGLEY AND JIM ARTHUR JOIN FORCES

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OUT ON THE COURSE

This month, John Campbell travels to the south coast to meet Peter Wisbey



PLANT ECOLOGY AND THE GREENKEEPER

Stirrings in the undergrowth from Eddie Park

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By Brian Pierson

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Windsor is still The Place to be

"Windsor went well, didn't it?" So said the managing director of a well-known company when departing on the Thursday evening. It certainly summed up the views of many I spoke to, as well as my own. The first two days of the Institute Of Groundsmanship Exhibition at Windsor Racecourse broke all 'box office' records, but somehow the place did not seem crowded. The IOG's timbered pavilion made an impressive centre-piece from which to co-ordinate the whole show and, while emphasis seemed to be given to the Golden Jubilee aspect, I missed the annual presentation ceremony of stand and personal awards, which has been held on the first evening of the show in the past.

By Michael Coffey, Publisher of Greenkeeper

Without doubt, Windsor must be the greatest show on turf and, yet, several companies are thinking of pulling out in view of the cost. It must have pleased most exhibitors that the annual Windsor rainfall came in one morning. Although the ground itself and the emergency arrangements stood up well. Thursday morning was a wash-out.

Buses were much in evidence—the Steetley one was as smart as ever in the company's livery, Toro Irrigation's was well supported by the English Bowling Association, while Supaturf's must have been one of the busiest and with the best gimmick, green peppermint Supaturf rock (made in Blackpool, not Peterborough!). A great deal of thought went into stand presentation, although I would like to know how the stand competition judges made some of their choices.

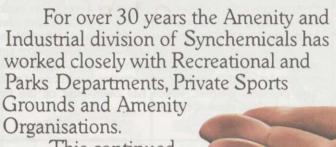
Movement round the show is certainly much easier than in previous years and with avenues clearly marked by Rigby Taylor's striking Mascot signs, any stand was easy to find. Greenkeeper had a large number of readers visit its stand and the EIGGA caravan was nearly always full. It was particularly pleasing to see so many contributors to the magazine. Peter Wisbey was there in his capacity as EIGGA chairman. And there was John Campbell, who is known to everyone in the profession, as are Jim Arthur and Dr Peter Hayes, who provided the news story of the week (see page

Eddie Park represented his son Nick, whose series of articles in Golf Monthly have done so much to interest the club member in the whys and wherefores of turf care. Nick's fee from Golf Monthly was presented by Eddie jointly to SIGGA and EIGGA representatives Joe McKean and Peter Wisbey to further greenkeeper education—a generous gesture which will be applauded by all greenkeepers.

So, a successful time for all, a meeting place for friends from far afield, for business transactions and even if you do need wellies, we are looking forward to next year!

Greenkeeper is delighted to announce another increase in circulation. After the successful first trial issue of the International Greenkeeper, published in French and German inside September's Greenkeeper, this excellent publication, edited by Mrs Babette Harradine, is to be combined with our magazine on a quarterly basis and sent to all members of the International Greenkeepers' Association throughout Europe.

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Bingley and Jim Arthur join forces

A three-year courtship between Sports Turf Research Institute old boy Jim Arthur and Dr Peter Hayes, Director of the STRI at Bingley, has resulted in the golf course advisory profession's two leading names forming a closer working liaison for the game's future good.

By the editor

Starting from the New Year, Jim will hand over a number of clubs he advises to the STRI. "I stress there's no financial gain for Jim in this move," Dr Hayes said. "We are not paying a fee or a premium for Jim's contact list. On the contrary, it is a very generous gesture on his part."

Anyone who has ever come into contact with Jim Arthur knows that he thrives on a phenomenal work-load and it's also no news that the man is fervent in his beliefs. So, what had prompted him to set up shop with Bingley?

"The main reason was, quite simply, that Bingley changed its attitude and policies. Therefore, I changed my views towards the Institute. Even before Peter was appointed Director, I had spoken to him and realised he was a kindred spirit," Jim said.

Plainly, any such partnership needs compatibility and it was refreshing to hear the two sides talking along similar lines throughout the interview. Too often, we hear the cry 'let's rally round and join forces', but so little ever seems to come of it.

The seeds of the idea were planted at a series of meetings between Jim Arthur and Dr Hayes. In the summer, Jim was invited to address the STRI board. "It was then, I feel, that he became convinced that our approach, our views on research and our testing facilities could enable us to become a strong, combined force," Dr Hayes said.

I fancy a glance at his diary for the rest of 1984 might have finally tipped the balance for Jim. Although it's physically possible, I suppose, nobody can enjoy working seven days a week constantly, getting up before Breakfast Time starts and rarely putting the pen down on report writing before The Nine O'Clock News, as well as visiting an average of eight to ten clubs a week.

In fact, Jim told me he totalled 340 visits in 1983 and by the time Windsor had come and gone this year, he was already way past the 200 mark. The STRI, on the other hand, is called in by some 400 clubs annually. Jointly, both Jim and the STRI have about 1,300 golf clubs on their books. Lately, the two have enjoyed some joint walks over such prestigious courses as Royal Birkdale (Jim's) and Ganton (the STRI's).

The Institute has 14 advisory officers, handling all sports, but now aims to form a specialist golf unit of four, including Dr Hayes. Additionally, the R&A has given a substantial sum to Bingley for research into golf, ensuring-along with Sports Council support-that the STRI will remain on a sound footing for the foreseeable

Certainly, such an injection of cash by the R&A is to be applauded and can only serve to stem the tide of worsening conditions on our golf courses.

"Overall, there are more problems than praise for our golf courses and I don't have to tell the readership of Greenkeeper that this is due largely to increased wear and tear," Dr Hayes said. "It's no good having a course in superb condition from May until September and then closed from November to April. Golfers expect it to be in perfect condition for the day they want to play their match.

"A lot of what Jim says centres around the basic principles of golf greenkeeping. His beliefs are definitely not gimmicky-they're really what he was taught at Bingley when he worked there."

Did Iim, I wondered, sense the irony of linking up again with Bingley? "No, not really," the smile widened. "One of the reasons I left in 1952 was because they wouldn't set up a specialist golf unit. It has always been one of my ambitions to see the Institute running such a division.

"Indeed, nothing would give me greater pleasure than to have Bingley established as the centre of greenkeeper training," he added.

Dr Hayes confirmed that there will be three courses for greenkeeper training in the spring and three more in the autumn. In fact, Bingley first started educating greenkeepers in the art of fine turf management nearly 40 years ago. Today, the emphasis is switching to management techniques, as well as encouraging students to get to grips with the profession's technology.

Apart from the STRI enjoying the benefits of a far greater back up, both parties operate advisory visits in a similar way. The Institute plans 'tours' for its officers. That's to say if someone is going to London, they try to fit in as many courses as humanly possible in, say, a week. This is followed by report writing back at Bingley.

"Annual visits are preferred, unless a course has major problems necessitating a drastic maintenance procedure. We then like to go in more regularly. There is a place for monthly visits in really bad situations. Equally, when a course is on the right track, there's no need to call more than once every two years," Dr Hayes said.

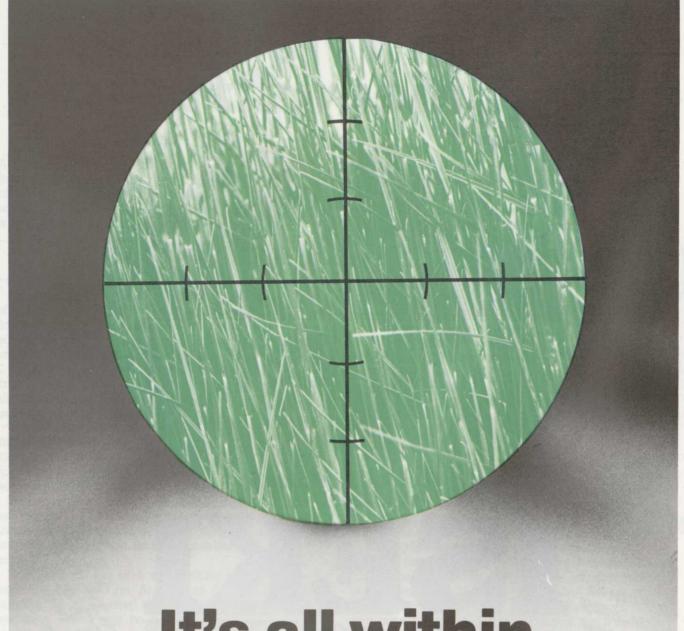
But the 64,000 dollar question remained... How would it

Continued on page 9...



Dr Peter Hayes discusses a cross-section of a green with a head greenkeeper.





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Bingley and Jim Arthur join forces Continued...

be decided who would handle which clubs? Both Jim Arthur and Dr Hayes agreed that under the new regime there could be problems with golf clubs not wanting the STRI, insisting on Jim or, equally, vice versa.

"No club will be made to feel it's been sold down the river, but what I will have to do is place a premium on my services to discourage clubs from specifying that I go in when, in fact, it's not necessary for me to go to that particular club personally," Jim said.

"All clubs will have the facility and right to come back to me with problems. It is a joint venture. There will be joint visits, free access to my past records and, in some cases,

joint consultation before reports are written.

Obviously, if I am going to shed some of the work, there has to be an incentive for me to do so. I have to group my visits around the clubs on the R&A rosta. The Royal and Ancient's Championship Committee has agreed that I will continue to do its advisory visits for the next five years at least

"But it's an interesting problem! Do you drop the clubs that deviate from the agreed policy or seek advice from second opinions without reference to me? Yes! Do you get rid of the clubs that need you, but have little money? No. Do you pass on the prestigious clubs? Probably not. Each will be viewed on its merit."

When pressed, both estimated that some 150 clubs could find themselves 'transferred', and apart from the obvious-such as Iim sticking to his R&A work-the most common determining factor will be the club's geographical location. There'd be little point in Jim hurtling up motorways to see a typical club in Lancashire or Yorkshire right on the doorstep of Bingley. Hopefully, with occasional forums leading to a common language being spoken and an increase in the number of joint visits, the need will be totally obviated in time.

I left the final words to Jim. "In no way am I retiring but, equally, I can't go on for ever. My main concern is that the moment I stop advising, all the things I've worked for over the years could be reversed. Continuity is the keysimilar to setting up a constitution, it was necessary to have an institution as a partner rather than an individual."

Hopefully, more clubs will see the sense in responding willingly to the sound advice of this new 'institution' than to the conflicting words of the plethora of individuals now doing the advisory rounds.



Not Jim about to garrotte a stray voice, but "dowsing with bent wire for irrigation pipes in Scotland."



Out · On · The · Course

Peter Wisbey

GOLF has been played at North Foreland since 1903 when it was a nine-hole course called Kingsgate Golf Club. In 1909, Lord Northcliffe owned it. He extended it to 18 holes and also constructed an 18-hole pitch and putt course. The new holes were designed by Fowler and Simpson and the construction work was done by Frank Harris & Co. The name of the club was then changed to North Foreland Golf Club.

During the last world war, part of the course was taken over for defence purposes. When the club took over again, the course was reconstructed to the design of the late J.S.F. Morrison and the work was again carried out by Frank Harris & Co.

"I was born in Surrey and moved with my family at the age of 15 to Broadstairs in Kent," Peter, 37, said. "It was really sheer chance that brought me into greenkeeping. I was interested in farming at one time and then heard of a vacancy for a tractor driver at North Foreland. I applied for the job and that was the start of my career in greenkeeping. I have remained with this club for 19 happy years."

There are still two courses at North Foreland—the 18-hole pitch and putt layout is open to the public and an excellent test for beginners. Despite a high volume of play, the quality of turf on the greens is superb and, as Peter pointed out, is ample testimony to the benefits of a regime of minimum watering and fertilising.

The main course is situated on a commanding stretch of downs sweeping towards the sea and although it could not be termed a links, every hole on the course is within easy reach of the water. It has many characteristics of a good seaside course with an invigorating and astringent tang to the air. It is exposed to the elements and the chalky nature of the downland soil ensures good drainage and the establishment of a firm, resilient turf.

I was particularly impressed by the high standard of maintenance achieved by Peter and his staff and even after the long dry summer the greens were in good shape. The rest of the course seems to have withstood all the wear and tear of unremitting



Peter Wisbey—now a confirmed man of Kent— is head greenkeeper at North Foreland.
Interview by John Campbell.

play extremely well.

Peter has been married to Linda for 13 years. With their son Matthew, nine, they live in their own house near the golf course. Peter is articulate and intelligent with many interesting opinions on the future of the profession that are well worth listening to.

He does not have a golf handicap, but says, "I enjoy playing, although infrequently and not very well. My son is having lessons and hopefully we will play together more as time goes on. Being a family man, I spend a lot of time at home. I am not interested in any other sport—my main hobbies are my job and conservation of the countryside.

"A few years ago, I was on the wrong tack with my management programme, particularly regarding fertilisers and watering. At this point, I became interested in the philosophy of Jim Arthur, which is really traditional greenkeeping methods and the application of common sense. As our course is one of the R&A venues he visits, we now work together and I am delighted with the results."

Peter believes that having a keen and enthusiastic staff is half the battle,

helping to take a lot of the weight from his shoulders. "The strength of my team is six, which includes a full-time mechanic with a well-equipped workshop. They are all bright and conscientious young men who often contribute to the smooth running of the operation by coming up with good ideas on how to improve efficiency. Our mechanic Ron Farrington is invaluable and first assistant Robert Smith is an experienced and reliable man who works with the rest of the crew-David Paine, Stephen Hopper and Kevin Fuller-to maintain a high standard of upkeep."

Health and safety on the course is a subject Peter has strong views about.

"A golf course should provide its staff with all the safety clothing relevant to the job—that includes safety footwear, protective clothing, etc. In fact, anything that can save injury. I think all greenkeepers should wear protective headgear on the course as they do in the States. We provide helmets and my staff wear them if they want to. We have the understanding that, if they do get a crack on the head and they are not wearing the safety gear provided, the onus is on the individual.

"Clubs should look at all aspects of safety for staff—tractors should have either a roll cage or a safety cab fitted. I know from my dealings with safety officers that if an accident does occur due to lack of proper safety precautions, the golf club is liable, but it should not be necessary to wait until someone gets killed or badly injured.

"It is up to the head greenkeeper or course manager to put this case to the club committee and he should invite the safety officer to make an advisory visit, which is free, so that he can pinpoint areas of danger and submit a report.

"I think all head greenkeepers should do this, particularly when starting a new job. It's one of the first things they should look at because there are occasions when the head greenkeeper can be held responsible and, in fact, prosecuted for neglect."

As we toured the course on an electric golf buggy (incidentally, the only one in use), which had been offered to us by club professional Mike Lee, I realised the fine rapport

Peter has established with other club employees and his membership. He is highly respected. His whole attitude to his job and those around him is a worthy exercise in good public relations. Many contemporaries would do well to take a leaf out of Peter's book.

He is also a keen ornithologist and conservationist and has some interesting observations on how these pursuits affect his job. "I feel that conservation is very important, for the British countryside is under constant siege due to the daily depredations of man. Golf courses are where we can help preserve nature.

"Every course manager and greenkeeper should be aware of what their particular course has to offer in the way of habitat and conservation. On most courses, there are areas well out of play that should be left. I don't believe in weed spraying anywhere outside the semi-rough—I leave the ground and vegetation in its natural state.

"We look forward to seeing the different kinds of butterflies. Last year, we had over 22 species on the courses. We encourage conservation groups to work here, providing they do not interfere with play and, at the moment, we have a local group studying migratory birds.

"I think it makes the job far more interesting if you see a bird, plant or butterfly and know what it is and a little about its habitat. I feel that we are in charge of small nature reserves and have a responsibility to maintain and protect the natural heritage of the countryside."

For cutting the greens, Peter favours the Toro G.M.3. "I also like the Ransomes Mounted 5 gang units, which do a good job on the fairways. For the tees, we use the new Ransomes 180 seven-bladed mower," he said.

"Good reliable machinery is important to every greenkeeper and I think manufacturers should listen more to users. We have occasionally improvements suggested machinery by writing to the company involved and have never even had the courtesy of a reply. Some of the major manufacturers should get out into the field more and take notice of the constructive comments greenkeepers and those who actually use their equipment.

"On several occasions, we have actually had to modify things on new machines ourselves with no help from the manufacturer at all, which I do find a bit annoying".

As Peter is a one-club man who has Continued overleaf...



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Peter places great emphasis on teamwork. Ron Farrington, David Paine, Robert Smith, Kevin Fuller and Steven Hopper are his righthand men.

Out · On · The · Course Continued...

got on by hard work, I wondered what advice he had for young greenkepeers? "Those who aspire to reach the top of their profession should dedicate themselves to their work. It has to be your life—it's a career not a nine to five job and you must be there whatever the weather or the time. If it takes you longer than a normal working week to do the job properly, then you should be prepared to do that.

"The important thing is education and you should read everything about greenkeeping and acquire as much experience as possible. It is good to visit other courses, where there is always something new to be gleaned. The most valuable lesson I gained in greenkeeping was to listen and learn from others in the profession and apply the things that you think are applicable to your course and your circumstances.

"When people talk about experienced greenkeepers, in my opinion, experience really is making mistakes and learning from them. Everybody makes mistakes, but they should really only make the mistake once.

"I am also a great believer in letting the membership know about why, how and when you are doing jobs on the course by informing them through a monthly newsletter or in a report. Giving this advance information often helps to forestall complaints.

"As every greenkeeper knows, humorous incidents occur daily and I remember when we were installing our bulk petrol tank, an inquisitive club member asked one of the staff what the hell was going on. He was informed that the green committee was installing a nuclear fallout shelter for the green staff.

"With a change of attitude, the inquisitive golfer asked: 'What about the members?' 'I am sorry, it is only for the greenkeeping staff,' was the reply.

"The future of greenkeeping is in our own hands and EIGGA has set out to promote a more professional image and attitude to the job and improve the educational standards and facilities. The next few years will be the make or break of greenkeeping. A number of clubs that I like to call unenlightened are tending not to replace head greenkeepers and are putting the professional in charge as a 'course manager'. I consider this a retrograde step and think clubs that do this will probably live to regret it."



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Plant ecology and the greenkeeper

IT IS a sad fact that to master anything worth doing requires a great deal of hard work. You can't play the trumpet without practising the scales. You can't be a brain surgeon without learning anatomy. Indeed, you can't play golf without some tuition on grip, stance and swing and I would suggest that you can't be a first-class golf greenkeeper without first learning plant ecology—i.e. the study of plants as they relate to their environment and the habitat in which they grow.

I know that greenkeepers are always more interested to learn about 'how' to do their job—showing great interest in new methods, chemicals and machines. To be really in control, however, they must also know 'why.' They can then diagnose any faults, work out the conrect treatment and its timing and, most important, accurately predict the effects of what they do.

All that sounds very attractive, but isn't it all very dull and complicated? Far from it! It makes the job much more interesting to assemble facts, many of which we know anyway, in a more logical manner.

In my young days, I think more people learned botany and nature study. We were sent out to make collections of wild flowers and the subject seemed to be taught in a practical and interesting way. Nowadays, even in universities, botanists are a much rarer breed, but they still have much to teach us. Some years ago, when checking on grass identification, we called in a university ecologist. He kept saying he knew nothing about greenkeeping, yet I bet most greenkeepers would have loved to have talked to him.

When Dr Hayes came to Bingley, he came from a distinguished career in agricultural grassland ecology and management. Yet, to my certain knowledge, within days he was well able to make authoritative statements on golf greenkeeping relying on his superb grasp of first principles.

In just the same way, R. B. Dawson—fresh in 1930 from the Rothampstead Agricultural Research Institute—was able to bring immediate help to the world of golf

By Eddie Park

after a decade of liming and other unwise manurial excesses. It is interesting to note that the subject Dawson chose for his first instructional article in the Bingley journal was plant ecology.

Now, I cannot possibly hope to cover this subject in one article, but perhaps I can point you in the right direction. Anyone who becomes interested in plants soon notices that most species are restricted to a particular type of habitat and will want to know more about the reasons for their distribution. Briefly, we group these reasons into categories—climatic (temperature and rainfall), edaphic (terrain and soils) and biotic (animals and man).

But, before we go into detail, there are a few general points.

Ecologists think of all organisms as composing communities and their locality and inter-relationships as an ecosystem (in other words, how they all live together).

Natural succession is a subject I can best illustrate from experience. About nine years ago, a firm testing a bulldozer cleared some spare land of all vegetation for a spare car park, down to bare limestone rock. I thought it would stay that way, but the next year it was covered with lichens and with the humus formed from these, breakdown of the rock surface and ample rainfall within two years, we had progressed to grasses, herbs and wild flowers.

The following year, there was gorse and so on and then hawthorn and birch scrub—all in nine years. If we leave it alone, it will eventually carry on with taller and more permanent trees to forest.

In other words, any community reaches a relatively stable state—in this case, forest—with average conditions. This is the climax phase—the assembly of plants and trees best adapted to the prevailing conditions.

Nature is cruel. Darwin showed us

long ago that nature selects the best adapted organisms—plant animal-to dominate any ecosystem. We call that natural selection. Poorly adapted organisms face extinction. We can easily see what is meant by adaptation. Willow trees head straight for a wet place. They are adapted to pump up and transpire enormous quantities of water, but put some other less well-adapted tree in the same place and it dies. Some living thing will occupy almost every space in a community, taking advantage of its own particular adaptations to gain sustenance. We say that all 'ecological niches' become filled.

If you think I have strayed far from golf greenkeeping, think again. The best adapted grasses will invade and dominate the conditions that exist. We cannot win by seeding or turfing with something we would like, but is not adapted to the conditions we are ourselves providing by our form of management. So, the fittest will survive and natural succession is difficult to resist.

Left to nature, our greens would become dominated by the grasses and weeds best fitted for the conditions. They would be succeeded by taller plants, then by bushes and eventually by forest. All quite orderly and quite inevitable. We see it happening on many courses where nice gorse and broom 'rough' becomes blotted out by everencroaching scrub — probably hawthorn. Conservation does not mean doing nothing.

The penalty for disturbing our ecosystem is an increased expenditure of energy to maintain the alteration and, of course, we are not going to allow our precious greens and fairways to go on to forest. We have to keep this ecosystem in juvenile 'sub-climax' state-in a successional stage, hence mowingand we begin to see the sheer stupidity of fertiliser and extra water. As I have shown, we change the grass type, but we also increase the productivity of the plant community. We can deal with the excess vegetation on top

Continued on page 17...

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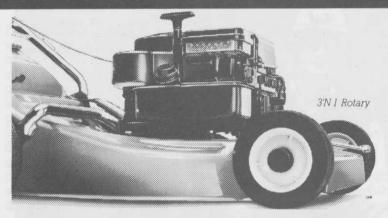
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Plant ecology and the greenkeeper Continued...

with today's mowers, but the gross photosynthetic production is also reflected in an increase in roots. We have no means of accelerating their decay-even earthworms are unacceptable because of casting. The result is accumulation and thatch and if we water it and spray it with fungicide even the bacteria, which are our main hope, cannot operate.

Let us return, as Dawson did in 1930, to the environmental factors that influence plants and grasses in particular. Climatic factors are mainly temperature and rainfall. In this country, we lie in the cool temperate zone, which would climax in deciduous summer forest if we gave it a chance. There are variations between north-west and south-east, but in broad terms we have cool winters (not cold) and cool summers with rain well-spread through the year.

The fine fescues and bents are welladapted to these conditions and are especially well-adapted to deal with the inevitable relatively short droughts. They will survive. We have been misled by watching golf events from America or Spain, where a much more difficult climate means that even moderate grasses can only survive with artificial watering and other aids.

Indeed, we should compliment these countries on their success in growing any sort of grass at all in many areas. But we should not try to copy them. We already have a much better article and we can damage it by adapting their methods. wretched poa annua is adapted to most environments and, indeed, is a world-wide pest, but it does especially well in compacted wet and fertile soil. Just look at your rose borders!

Edaphic Factors

These comprise the effect of the types of soil, sub-soils and underlying rocks. We can see these if we dig a pit and examine the different layers or horizons. The size of the soil particles determines the texture of soils ranging from the coarse gravels and sands to the fine clays and silts.

Different characteristics give differences in water movement, fertiliser usage, root growth, etc, and just as important is soil structure. Good structure gives soils with particles held together in crumbs with adequate spaces between.

Humus is an important constituent. All too frequently, a soil with poor structure is simply, but wrongly, labelled clay. Maps in my possession showing British and Continental golf clubs in the early years of this century are labelled with types of soil. There are some golfers and perhaps some grenkeepers who would be surprised to find their 'clay' course perhaps just had its structure damaged or drains broken. Edaphic factors are varied and interesting, but we should be careful not to over emphasise them.

Biotic Factors

These are the effects of living organisms on each other. At one time, grazing by animals (including rabbits) had a major effect on our grassland. In the main, though, man has replaced this with mechanical methods. Indeed, you could argue that man is now the chief influence on the environment or he thinks he is. Certainly over the last two thousand years, we have removed almost all the climax forest in Britain and replaced it with grassland, arable crops and even golf courses. It should be obvious that if man always bears in mind the full range of environmental factors, he can use some of them to his advantage.

Go back to Gilbert White who wrote his Natural History Of Selborne in 1789: 'The botanist that could improve the sward of the district where he lived would be a useful member of society. To raise a thick turf on a naked soil would be worth volumes of systematic knowledge and he would be the best Commonwealth's man that could occasion the growth of two blades of grass where one alone was seen before."

In fact, over the following two centuries, man did increase his knowledge and his ability to influence the environment. The question now to be asked, in all forms of husbandry especially, is 'have we got it right?'

Roger Grounds, writing in one of his gardening books, put it rather well. The attitude is that man is master of the world, lord of all he surveys and much that is too tiny for him to see with the naked eye. He sees nature as provided by some beneficent God to serve his every whim, to obey him and, like some servant wench, to be

drubbed into submission to his every wish when she displeases him. It is a mediaeval anthropocentric view of the world.'

We might add that most men are too lazy or too arrogant to even realise that nature has certain laws and principles which, for all their modern technology, they cannot overcome.

The best place to see plant ecology in action is Kew Gardens. The environment, which knowledge has demonstrated is required by each plant, is given to it. Temperature, moisture, day length or whatever special conditions are required will be provided and so plants from equatorial forests to frozen tundra are successfully cultivated and propagated. Kew also has a fine grass garden and it is no surprise to find that the author of the 'bible' on grasses Charles Hubbard spent much of his career there.

When it comes to managing either permanent pasture or sports turf, we find the same basic situation. First, we must decide which of the grasses we want and then set out to manage the environment to provide the exact conditions in which 'our' grasses will thrive and other grasses will perish. 'Our' grasses in Britain will be species of agrostis and fescue which were usually present on the original site and are probably still present in the rough.

In scientific language, we are providing the ecological niche that through its combination of factors. specifies, as the lock specifies the key, the plants that will best fit. Some people call it simply ecological management. If we manage our greens to suit annual meadow grass (fertile, wet and compacted), that is what we will get. If we want agrostis and fescue, we must manage our greens to suit these grasses (infertile, aerated to give good structure and with minimum water-even some totally dry periods).

If you find these topics interesting, then delve into plant ecology. Some specialist books are far too complicated for practical use, so go to a good library and study anything readable on botany and soil science. There will probably be an advanced book on botany with a general introduction to plant ecology. That will get you started.

It seems to me that, at present, golf greenkeeping is too often an exercise in blind courage. There will always be a need for conviction, resolution, awareness and courage, but we can make it a bit easier to see the way ahead. I would be the last person to denigrate experience, but I think basic science added to experience is even better.

The diary of a golf course constructor

MAY started full of expectations for what could turn out to be a deep involvement in European golf by our company. Three major projects were well under way. The new 18-hole golf course at Redditch, Worcestershire required final dressings and overseeding to repair the ravages of winter; at Radley College, Berkshire. a new nine-hole course had settled down and survived the winter and the extension to Alresford Golf Club. Hampshire caused by a proposed new by-pass necessitating the construction of five new greens and 12 tees, was under control although stones seemed to be multiplying by the day!

I have already made two trips to Tenerife, where negotiations are advanced for the construction of the first new course on the island in 60 years. This is a very exciting project, situated in the southern part of the island, for many years considered too barren for development. However, with the advent of deep wells (water mines), vast quantities of fresh water have become available and the area is now being developed extensively.

Tuesday May 8

After a flight to Lisbon with Cameron Sinclair of Cotton, Pennink, Steel and Partners, who has designed two courses with a villa development in a project managed by Miller Buckley Golf Services, there are two days of By Brian D.Pierson

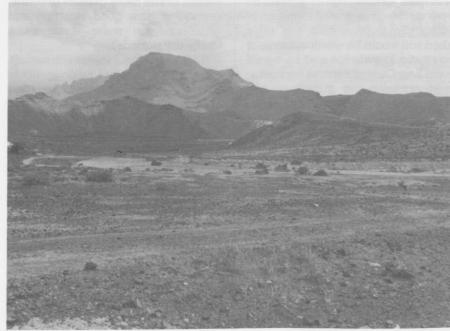


On-site in Portugal, Cameron Sinclair, Keith Barker, Chris Powlez and Brian Pierson.

walking and talking with a view to preparing cost parameters for a possible construction contract.

Sunday May 13

A long day spent in London with Spanish land-owners is used to discuss the finer points of the Tenerife development.



This Tenerife terrain is soon to give way to a new golf course.

Tuesday May 15

Arrived in Tenerife with Vic Davies, financial controller of the Wessex Syndicate with whom we are involved in the financial structuring of the 200 villas that will accompany the golf course. A week of intense activity and discussion with the landowners and builders, includes some site exploration—constructing a golf course within the crater of an extinct volcano is a little different to the rolling hills of England! The area can best be described as a 500-acre Wembley Stadium with wall-to-wall lava. A fairly awesome task, but one our local contractor informs us is 'no problem.' In fact, that seems to be the answer to all questions!

Wednesday May 23

Everything is running smoothly—what a joy to have an efficient back-up in the office. There are discussions regarding the Lisbon contract. The other courses are progressing well and, following confirmation from the client, it's off to Letham Grange in Forfar on June 4 with one of our construction foremen to commence work on the new 18-hole golf course in the grounds of the magnificent Letham Grange.

Tuesday June 5

On to Porthleven Cornwall, where we are involved in negotiations for the construction of a new 18-hole golf course with a possible industrial or housing development.

Friday June 8

On to Dawlish in Devon with some golfing colleagues for two days' break from it all playing (or, in my case, hacking round) Dawlish Warren, which is a most enjoyable course.

Tuesday June 12

Site meetings at Alresford and Radley—all progressing, but we need rain!

Friday June 15

Off again, this time to Malaga. It is interesting to speculate how many more courses will be required around the Costa del Sol. In spite of

Continued on page 24...

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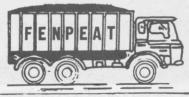
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News & Views



Some Great Golf At Gleneagles!

The 1984 National Golf Championship for SIGGA members took place over the Glendevon Course at Gleneagles recently. The weather was excellent, catering superb and the golf course in top condition due to the efforts of Jimmy Kidd and his hard-working staff.

Thanks go to Gleneagles Hotel Golf Courses for granting us courtesy of the course and I would like to especially thank Ian Ferrier of the Gleneagles' management for all his great help in making sure we had a super day. The scores, generally, were commendable and the winners are to be congratulated on some very fine golf.

Joe McKean.

SIGGA's Role At The Open Championship

I wish to thank all the executive committee and members who assisted at St Andrews and in the SIGGA tent—the Open was a great success for the association and its image. Everyone did what immediate past president Chris Kennedy has been advocating for some time and I was proud to be able to carry out his idea. He must have been delighted to see his project develop and become such a success. Thank you, Chris, for all the work you did.

I was proud to be involved in the scheme along with Joe McKean, who is a marvellous public relations officer for the association and he did an outstanding job at the Open. To all SIGGA members who organised the bunker raking, it was a great exercise carried out by professionals and thanks to all greenkeepers who did the work.

It must have been an experience for the younger members to see what is involved in organising an Open Championship and to Walter Woods, who sweated blood and tears, and his staff, I cannot give enough praise for their work and dedication to the association. Considering it is the greatest golf show in the world, words are hardly

Continued overleaf...

Results				
SIGGA Trophy	Scratch Prize	George Hampton (N)	_	71
Ransomes' Trophy	First Class	Walter Woods (C)	75-5	70
	Runner-up	Alistair Connell (W)	77-4	73 (best inward half)
Pattisson Trophy	Second Class	Bill Lyon (C)	82-12	70
	Runner-up	Ian Hamilton (N)	88-16	72
STRI Trophy	Third Class	John Granger (W)	101-23	78
	Runner-Up	Sandy Brown (C)	100-18	82
SAI Trophy	Head Greenkeepers	Alisdair McLaren (N)	72-6	66
Souter of Stirling Trophy	Registered Apprentices	John Urquhart (N)	79-6	73
Friendship Trophy	Best Nett Score	Lindsay Anderson (A)	73-8	65
St Mungo Trophy	Section Winners	North		
Veterans' Prize		George Cranna (N)	89-16	73
Life Members	CHRONIE TO FEET	Hugh Laurie	82-9	73
Assistants' Prize	_	Stewart Crawford (E)	78-9	69
Trade Golf		Robert Bruce (Stewarts)	84-14	70
Trade Putting	vernove no centrolia	Duncan McNab (Sports Turf Services)		36

Qualifiers For Kubota Competition

l Lindsay Anderson (Powfoot GC) 2 Alisdair McLaren (Nethybridge GC)





sufficient to express what Walter did for the association's image. I'll just say thank you Walter and staff.

Last, but not least, our appreciation must be recorded and given to the R&A for providing us with the facilities. I have never known so much hospitality and generosity shown to greenkeepers. I met with greenkeepers, superintendents and course managers from all over the world and the visitors' book will be treasured by SIGGA. We had over 1,000 people call into the tent throughout the week and I was delighted to meet so many greenkeepers with their wives and families, as well as club captains, greens convenors, company directors, trade representatives and golfers.

I thank you all for making the 113th Open Championship a week in which the association gained more recognition from the world of golf and the membership were proud to be associated with the Scottish and International Golf Greenkeepers' Association.

I. Neilson—Chairman.

The obituary to Bill Beveridge attributed to Jimmy Kidd in the August issue was, in fact, contributed by Cecil George, course manager at Lenzie Golf Club, Strathclyde.

New Members

Peter Miller, Schwenke Strasse 14A, 4500

Osnabrueck, West Germany

A.R. Walker, 11 Newbigging Drive, Stonehaven,

Kincardineshire

Change Of Address

J. Taylor from 4 Coolgardie Green, Westwood, East Kilbride to 1 Burnock Place, Gardenhall, East Kilbride

T. McKenna from Sennelaga, West Germany to Head Greenkeeper, c/o Grim's Dyke GC, Oxhey Lane, Pinner, Middlesex

Determining Your Destiny

Two topics of increasing interest to our profession but, as yet, neglected by the Press and educational authorities are fiscal management practices and staff management techniques, although I believe these subjects are taught in one-week, supervisory-type courses to senior members of golf club greens staff.

I feel that the head greenkeeper's role is evolving into a purely managerial one and more emphasis has to be placed on educating our embryo managers in these subjects from their early years at college. How can we put forward a professional image and argue hard financial facts with golf club management committees when we do not have the benefit of a formal education in these matters?

We should consider the formidable calibre of the

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professional people who generally comprise golf club committees. Quite a number of clubs have chartered accountants in charge of their books; golf professionals are given a basic training in accountancy, as doubtless are club stewards, but not head greenkeepers. Could this be why we have had to strive in order to proclaim our professional image? Is it that we are at a disadvantage to our colleagues? The effort and pressure most headmen sustain is ten fold, yet we seem to be held in somewhat less esteem.

Impressions, generally, are that convenors are responsible for courses and, in some cases, they are. Some greenkeepers say their ideal would be a permanent greens convenor. I disagree. Such an appointment is, in fact, that of course manager. I feel what is required of us as course managers in dealing with committees, which can sometimes have all the hallmarks of a high court hearing, is the courage of our convictions. We should always speak with dignity and a knowledgeable air. This is very important and what makes us members of a profession as opposed to a trade.

We are answerable at all times to a committee. On a committee, not everyone will agree with you. They are not meant to—people have their own opinions and are entitled to them. Committees are the best way to run clubs, but they must delegate members' wishes as opposed to individual hobbyhorses. At my club, the desire and achievement (I hope) is first-class playing conditions throughout the year with particular emphasis on competitions. Conditions are to generally reflect weather conditions with no great emphasis on holding greens. This is my brief.

To comply, I organise for the greens to be cut before every competition. Fresh holes are cut and all bunkers raked regardless of day, weather, time etc. This undertaken, surely no higher standard of presentation is possible? The object of the exercise is to serve the membership.

A good greenkeeper may learn a lot by listening to members' opinions, but he must differentiate between constructive and uninformed criticism. An example of the former was when complaints about weeds on pathways resulted in the purchase of a knapsack sprayer and the spraying of herbicides, which meant the end of the problem and a reduction of workload as the job was previously done by hand.

I feel, although it may be unfair, that a lot of colleagues tend to approach the public relations part of our job with an attitude towards golfers of 'what do they know?' and 'just a lot of moaners.' This is certainly prevalent among apprentices. This is very unprofessional.

At most clubs, golfers will certainly tell you when the course is in good condition, so it is to be expected they will inform you when the reverse applies. Members know when conditions are good, they score better. Dealing with members is a great opportunity to display professional ability and knowledge and junior staff should be encouraged to answer members' queries as this reflects well on the club and organisation.

On the subject of staff management, with a younger generation of course managers emerging, someone in their mid-twenties can be in charge of, say, a staff of five, comprising an assistant head, a journeyman, two apprentices and one youth training scheme boy. In many cases, the assistant is an older man resistant to change. It is easy to understand how this can become a volatile situation, particularly as no training is provided to deal with such matters.

Although there will always be natural leaders, if we are to be called course managers, we must first be trained in managerial practices.

Sandy Blacklaw, Course Manager, Crow Wood GC.

Do you see a familiar face?



This photo—from the collection of *Greenkeeper* contributor John Campbell, who is standing on the far right—shows members of SIGGA's north section. It was taken after an annual tournament at Monifieth some 15 years ago.

News & Views



Chairman's Report

After EIGGA's successful participation in *Golf Course '84*, the board of management has decided to hold EIGGA's own conference in 1985.

The venue will be the University of Warwick and the dates March 22-24 inclusive. We hope that this venue will encourage members from all over the country to attend. For further details, please contact the general administrator.

The board has also been working on ways to improve standards of education throughout greenkeeping and a meeting has been arranged with the principals of several major colleges to discuss ways in which we can liaise towards this end.

The North West branch has been involved in extensive talks on education and credit must go to the branch committee for achieving this.

Still on the subject of education, details of colleges offering both day and block release courses can be obtained from the general administrator.

Head greenkeepers should make sure youngsters in their charge attend these courses and make the case to their committees, for only by education can we achieve the professional image we seek.

In conclusion, I should like to

extend congratulations on behalf of EIGGA to Walter Woods and his staff for the superb condition and presentation of St Andrews for this year's Open. Proof to all that traditional methods in the hands of a true professional like Walter produce results second to none.

Any member living in an area without a branch and wishing to participate in the formation of one can, by contacting us, be put in touch with other members in his area. August saw the reformation of the Berks, Bucks and Oxon branch—enquiries to Derek Smith on Reading (0734) 470815.

Peter Wisbey.

Surrey

The McMillan Tankard was played for recently, courtesy of Sunningdale over the club's famous Old Course—a privilege that was much appreciated by a not surprisingly large turn out.

After an excellent day's golf over a truly magnificent course, the McMillan Tankard was presented to David Jones of Leatherhead GC by lack McMillan.

Our thanks go to the Sunningdale secretary Mr Almond for his help in arranging this fixture and to the artisan section for the use of its clubhouse and bar facilities.

A series of winter lectures is being drawn up and members will be notified of dates and venues as soon as possible.

Kenny MacNiven.

Not Forgetting The Falklands

One of the latest recruits to EIGGA is Sir Rex Hunt, civil commissioner of the Falkland Islands. A letter from Government House, Stanley to EIGGA general administrator Danielle Jones was accompanied by a £15 cheque for a subscription.

Sir Rex wrote: 'Many thanks for the copy of *Greenkeeper*. I should point out that I scarcely qualify for membership as our golf course here is as the Scots first planned it. We have no proper tees, no proper fairways and no proper greens. My greenkeepers are the sheep, the bunkers are 105mm shell holes and other hazards include barbed wire and old Argentine dug-outs.

'Nevertheless, we live in hope. We have recently acquired a Portakabin for use as a clubhouse, the Salisbury and South Wiltshire Golf Club (with whom we are twinned) has kindly donated some handsome flags and flag poles and, with the help of a roller borrowed from the Royal Engineers and a couple of lawnmowers from Government House, I hope that we shall gradually improve our greens.

'We have plenty of peat mould to put on them and stacks of manure from the sheep. We even have a friendly golf consultant, who is interested in coming here from England and advising us on how to plan the course.'

The diary of a golf course constructor—Continued...

certain bad Press in recent months, it would appear that the courses are getting their act together and nothing seems to inhibit the plans for further projects.

Friday June 22

Return to Bournemouth Airport, which is only a 20 minute drive to the office. This year certainly appears to be one of great change and possible expansion for the company and general interest in leisure activities can only be good for the industry as a whole.

Fellow members of the British Association of Golf Course Constructors report a marginal upturn in activities nationally, although it must be regretted that many contracts are still being let to 'muck shifters' and other less-experienced contractors.

You can only hope that the clients do not inherit too many problems, although past experience favours the use of companies with both a good reputation and the expertise to carry out work to the highest standard.

The weather, although a little too dry for the establishment of seed, is

proving ideal on most construction sites but, no doubt, we will receive our fair share of wet weather as the year progresses!

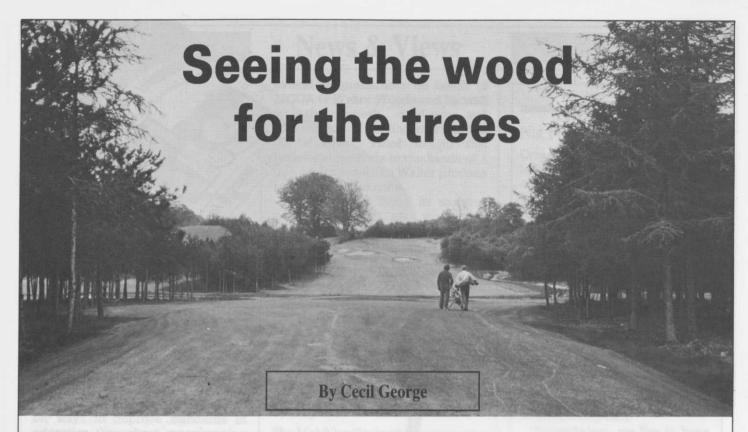
The company has diversified even further over the past two years and is now fully involved in the maintenance of bowling greens, cricket squares and fine turf areas.

We have recently purchased a Verti-Drain, the first machine with the capability to achieve the penetration and compaction easement we have all known has been required, but which has, until now, been almost impossible to achieve. We are offering this out on hire to golf courses and have been very pleased with the response.



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THE vast majority of golf courses in the UK have a tree or bush of some description somewhere or other. This has always been the case and where we get natural growth of trees they tend to beautify the landscape.

It is well known that birds, animals and wind carry and drop the seeds haphazardly, but although this form of transportation of seeds is most prolific, only a few survive and often in the most unused, untouched, unkempt pieces of ground imaginable.

For all species of trees to germinate, they must have the right pH. The majority of common conifers grow best on acid soil with a pH value between 4.5 and 5.5. If the pH is outside this range and, in particular, if the soil is neutral or alkaline (pH 6.5—7.5) many species will grow badly. Broadleaf trees tolerate soils with much higher lime content than

conifers do and will grow well in soil values up to 7.0. For poplars, a soil with a pH over 5.5 is essential.

This all sounds technical, but the truth is that so many people (especially those associated with golf courses and I don't mean greenkeepers) plant young trees of every description without troubling to consult the basic rules on how to establish wooded plantations and shelter belts on a golf course. They just stick them in and hope for the best and when results are not forthcoming, the committee wonders how the course down the road can grow trees and yet they can't.

For simple information about trees, any local branch of the Forestry Commission is only too willing to help. In some cases, they will come and plant the trees. There is a charge for this service.

From experience, I know the pleasure that can be had by walking over your course, admiring trees of great beauty you have planted, tended and coaxed through snow, drought and fire, the last of which can be a plague to any golf club trying to establish a wooded area.

There are always problems establishing wooded areas, not always from vandals or wildlife, but mostly from club members. We all know that no matter how hard any committee strives to enhance or improve the course, each member in turn will find that refinements are detrimental and then we are accused of planting obstacles and making the course more difficult for the high-handicap player!

This is why wooded areas have to

Continued on page 28...



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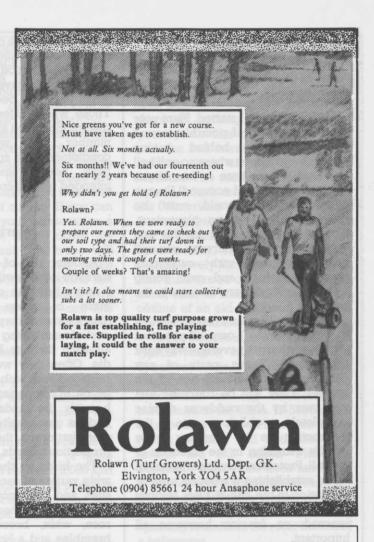
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That's why we've been using Alginure Root Dip on our plants and shrubs at Worcester Nurseries. They always struggle to survive dry conditions and from what could have been hell on earth this summer, our transplants are coming along very nicely, according to our customers.

Alginure tell me that Root Dip provides a vehicle which not only maintains health during transplant but encourages rapid growth within weeks."

Alginure Root Dip is derived from seaweed, one of our richest natural sources of manure. This vital additive helps condition plant roots, preventing dehydration and reducing transplant shock. More and more major nurseries are following Tony Blake's example.

And Root Dip now comes in two sizes: 10 kilos and 20 kilos. (Larger bucket specially suitable for mixing).

"Thank goodness I made the right move in using Alginure Root Dip"



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Seeing the wood for the trees—Continued...

be planted with careful thought and I go back to where I started. Plant your trees out of play, if possible around perimeter, behind teeing grounds—in places where no golf ball will land! For as sure as fate, if you don't, you will stand accused! Fences should (no, not should, must) be erected around young plantations. The rules of golf allow for this and must be applied. Otherwise, you will with caddycars have members traipsing through and over young trees inflicting severe damage in the process.

Even after 20 years of establishment in wooded areas, I can still point out the spots where the average wayward shot lands. These parts of any plantation will not even get off the ground. They will be trampled and run over by the caddycar maniac oblivious completely to destruction he is wreaking while blindly marching in the direction of his ball. Protective fencing is essential when establishing a wooded area or plantation in the line of play. Notices can be put up, but they're invariably ignored, so fencing becomes all important.

The Victorians and Edwardians were great garden lovers and most of the public parks, landscapes and open spaces of today were created by them and although they did not plant trees on the scale of the Forestry Commission today, they planted them in profusion. The problem was, and still is, if you look at some of the woods planted around 150 years ago, you find a great mixture of broadleaf and conifers that don't seem to

complement each other.

A Forestry Commission spokesman told me that a good percentage of the wood should have been cut down when the trees became established. Those who planted the trees either died or moved on and so we find a fair number of woods with a conglomerate of species that should have been removed once the intended trees were established.

Heritage

Another part of our disappearing heritage is the hawthorn hedge. When I was a boy, the countryside was a maze of these hedges. Their disappearance may be due to the high cost of maintaining them and farmers allowing them to be neglected and die. Often they were removed and replaced with stob and wire fencing which, in comparison, does nothing to beautify the landscape. These old hedges gave shelter to animals and, more important, they housed a large proportion of birds and other wildlife.

The birds, in their turn, carried a wide variety of seeds to their nesting sites and then not only was there hawthorn in the hedgerows, but dogrose, whin, broom, honey-suckle, brambles and a host of wild flowers and, of course, the odd sycamore, ash, oak, beech, rowan, scattered along the row to make up a beautiful landscape.

Once you get to the stage where you have the protective fencing erected and the areas in tree, then regular maintenance is most important. The young plants, more especially the conifers, must be tramped in, for they are surface-rooted trees and if not properly in the

soil, the roots come to the surface and the tree, as it gets older, can suffer or die during periods of drought. Great care must also be taken to prevent

Fertilisation of the sapling is essential. There are many specially prepared fertilisers for trees and shrubs and one I particularly like is Enmag, which has always given me good results. It has the right balance of NPK and magnesium for my particular course.

Drainage on any course is all important and no tree will grow standing with wet feet. I have actually seen people digging holes, letting them fill with water and then planting trees in the boggy mess. There are certain trees that like water, such as willows, but not too much. So, once you have your plantations in, be kind to your trees and they will thrive.

Golfers must always be taken into consideration for, as much as they admire beauty, they do not want plantations interfering with their game. As I stated earlier, try to plant away from the line of play. I know this is not always possible, as in the case of tree-lined fairways. Unless the trees have established themselves and kill off the undergrowth, you will have to spend a lot of hours just keeping the grass down.

Today, with such aids as growth retarders and regulators, maintenance can be much easier, but I still feel, rightly or wrongly, that inhibitors can also stunt the growth of trees, so great care has to be taken with growth regulators.

Let us not delude ourselves that there is no work entailed in keeping wooded areas. Some committees consider that trees fill in unsightly spots and request that we plant such

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areas, but never consider the employment of extra staff to look after them.

Every greenkeeper with trees on his golf course knows that a certain amount of time and labour is required to look after them properly and that does not take into account leaf sweeping and wind and storm damage, which is always a regular occurrence in the autumn.

But even with all their faults, trees are beautiful and now that we have established our wood, and in spite of everything, we must maintain it.

Conifers, with their beautiful pine aroma, are not as difficult to maintain as broadleaves. Keep them well-trimmed at the bottom. When they reach around eight to ten feet high, remove some of the bottom growth and this will save you a lot of hard work, sore hands and scratched faces. Up to ten feet high, the branches are easily brashed and only a handful of waste has to be burned, but if you wait 20 or so years, as I have just done, it becomes a monumental task and a good deal of burning.

I know that all foresters thin out their woods at about five, six or seven years, but this is not recommended on a golf course. If you plant your trees at intervals of around nine feet you will get good ground cover and if you keep the bottoms clear, there will be no need for thinning.

I always ask myself the question of trees that are in play—are they a benefit or a hindrance to the golfer? If a golf shot does go off line and lands among the trees, then the golfer should be penalised.

I keep the branches of my plantations about six feet high. This makes a full swing impossible, but the chap who is nearer the green can still get a chip and run, or a half wedge shot, provided, of course, there is not a tree between him and the green.

After all, when an off-line ball strikes a tree and lands back on the fairway, you don't get an infuriated golfer telling you what you can do with your trees. The poor old greenkeeper seems to get blamed for everything.

I should have mentioned earlier that the dreaded protective fencing has to come down eventually, but not before you are satisfied that the trees are strong enough to stand the wear and tear of a busy golf course. If you can hold out against your adversaries a little longer about taking down the fence, then do so! The trees will benefit for every year the fence remains. An elaborate fence is not required, just stobs with a single wire or maybe even two wires—one low and one high.

Fact

Conifers live for a long time. As a matter of fact, the widest, tallest and oldest trees in the world are conifers—Sequoiadendron Giganteum. The trunk can reach a height of 310ft and the age of many of these trees may be up to between 2,000 and 3,500 years, although it is not possible to be certain since no species has ever died of old age, only as a result of some accident.

The Sequoia Dendron and the other giant Sequoia Semperverens, the Coast Red Wood, are both native of California and Oregan. Sequoia commemorates the Cherokee chief and scholar Sequoyah (1770-1843) who devised an alphabet for the Cherokee language.

I don't imagine that we will ever get trees to that height, nor will we put our name to a tree, but we could plant the odd *Sequoia* and, who knows, maybe in 1,000 years someone will wonder who put it there. I am sure that Sequoia transplants are available, perhaps through local nurserymen.

Although conifers are large, old and beautiful, don't forget broadleaves. After all, think of the age of some of our oaks, the lovely candlelike blossoms of the chestnut and there is nothing that adorns the countryside like the horse-chestnut and the red horse-chestnut with its delicate tinge of pink through the blossom. The red horse-chestnut is a hybrid, which arose by crossing with the American Red Buckeye. The flower-spikes of both these chestnuts are a magnificent sight when they open in May. Then there is the Ash with its lovely hanging bunch of keys. Ash fruits are so called because each seed, with its attached wing, has the outline of an old-fashioned key used for opening doors or chests.

The Sycamore is, in every respect, a typical Maple, but it was called a Sycamore when it was first brought to England for it was thought to be Sycomorus or Fig Mulberry as mentioned in the Bible. In Scotland, it was thought to be a Plane tree of the genes *Platanus* and both tree and timber are still called 'Plane' in Scotland. What child does not know the seed, or samarra of the Sycamore? We used to call them 'whirrlygigs' due to the way they fall from the tree, spinning round like the rotor blades of a helicopter.

Where can you go in Scotland without seeing the lovely Silver Birch, a delicate tree with its characteristic drooping habit? It is said the Romans brought the Common Lime over and most of the places where 'lime' comes into a name is where they planted them. In July, the fragrance of the lime is really beautiful and it has a great attraction for bees during the summer.

We have inherited the magnificence of trees planted by our forefathers. Remember, you plant trees now for future generations to enjoy.

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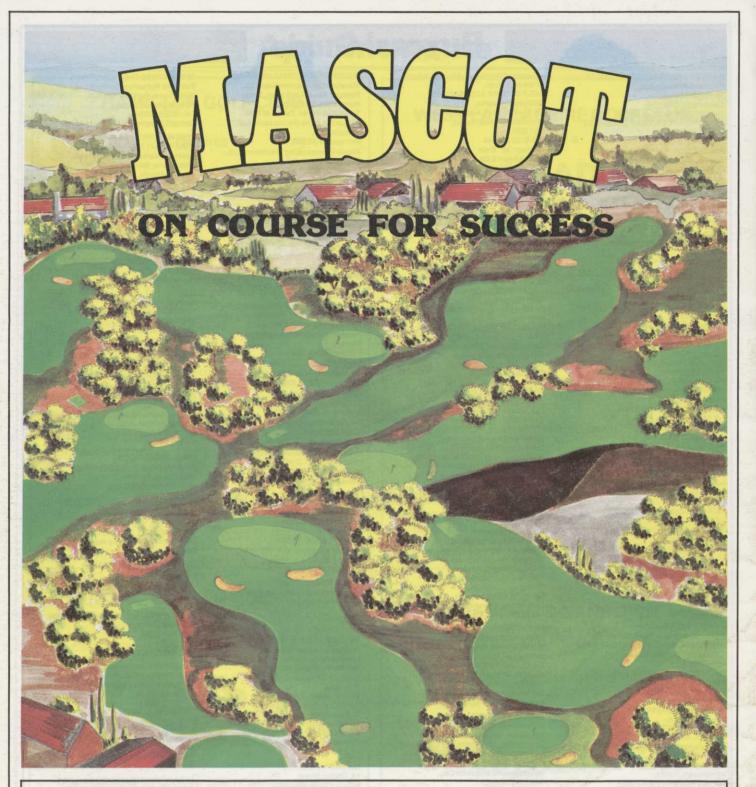
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