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The unnatural gardener

Peter Williams
unashamedly
confesses to
unnatural
gardening practices.

Fig. 1 The result of three years' natural gardening in an orchard.

Natural gardening and gardening with nature are currently very fashionable ideas. We are urged to embrace this philosophy with the assurance that, if we do, our gardening experience will be enhanced. It is suggested that if we would only adopt these principles, the plants and animals in our gardens would reach a new equilibrium and there would be fewer outbreaks of pests and diseases.

I didn't really understand these principles, or how they were supposed to work at the ecological level, so I started to think around the concept. I quickly came to the conclusion that believing that you can garden naturally is about as sensible as believing in the tooth fairy! Now I have to say, right at the outset, that I am not a natural gardener, and I confess that many of the things I get up to in my garden can only be described as unnatural practices. Natural

gardeners do exist, but they are folk who have absolutely no interest in cultivating plants or land, and simply leave their gardens to 'go wild' or revert to nature (fig. 1).

Any form of practical gardening is simply meddling with nature – and it's great fun and brings enormous satisfaction.

This meddling with nature takes many forms and includes introducing species collected by plant hunters from all over the world, or new hybrids produced accidentally or intentionally by plant breeders. Moving plants around the globe, and searching out improved cultivars to plant in our gardens, has always been a fundamental gardening activity – although it has also been responsible for

introducing some new pests and diseases that threaten many of our truly natural plant communities.

In order for our chosen plants to survive and flourish, we gardeners have to intervene on their behalf in an attempt to suspend natural processes. Such interventions include weeding, feeding, supporting, pest reduction, and changing the microclimate, sometimes to the extent of constructing glasshouses and even heating them with fossil fuels. We import/export soil and substrates; we dig and rake; we water; we spray; we lift and store tender perennials – but as long as we have nice irregular flower beds and wavy paths, we plant in drifts and we never use nasty chemicals (except of course in emergencies) we may still claim to garden naturally!

For the sake of discussion, let's look at three aspects of natural gardening.



Fig. 2 In prairie style, monardas and heleniums are densely planted for dramatic effect and weed exclusion.

Naturalistic planting

This probably means different things to different people, but my understanding is that it is an attempt to copy some features of natural areas and transplant them into our own patches. For example, over many years at Chelsea famous nurseries, like Backhouse of York and Wood of Boston Spa, created pretend Scottish Highland rock streams or mountain screes to show the landscapers' craft and mastery of the natural world. Such exhibits started to decline in the mid 50s and were virtually extinct by the late 60s, demonstrating that what's considered to be desirably naturalistic changes with fashion.

More recently we have seen the rise of prairie gardening, where ornamental grasses and various types of daisies are planted in broad sweeps at great density to create a

colourful wilderness which reaches its peak in late summer and autumn (fig. 2). These pretend prairies must be a godsend to nursery owners and they can look stunning in the first few years, but the difficulty of maintaining them probably means that they won't stay in fashion for long. A number of well known prairie gardens have had to be replanted after just a few years because they became dull, weed-infested and truly natural looking!

Meadow gardening is another form of naturalistic gardening, and some garden meadows do resemble real meadows quite closely. The only difficulty is that even ancient meadows are not really natural and require management on a large scale, by grazing at appropriate animal densities and appropriate times of year, or by annual cutting and hay

removal (fig. 3). In a garden situation, on a normal-size plot, it is extremely difficult to recreate a natural-looking meadow. In most cases the soil is too fertile, and the advice is usually to strip off the top 10cm of soil and start again. Even if soil fertility is suitably low, many newly created meadows where expensive wild-flower seed mixes have been sown look for a few weeks like an explosion in a paint factory – a riot of different colours from the predominantly annual species in the seed mix (fig. 4). Then nature intervenes and, sadly for the proud owners of these bright patchworks, the meadows never look quite 'as good' again unless they are re-sown.

Perhaps I am guilty of taking a lowbrow, practical approach, so to redress the balance I'll turn to Sarah Price, the current doyenne of naturalistic gardeners. Ms Price has created beautiful gardens at Chelsea and elsewhere, and has written eloquently about their creation. Thus she writes 'plantings must have a sense of transparency. Sunlight filters through the tallest plants, through the different heights and forms; petals and grasses appear to glow from within, while the striking forms of seed heads form strong, dark silhouettes. To be surrounded by this ethereal sort of beauty is an almost transcendental experience.'



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Fig. 3 Natural meadows (here Bird's Foot Trefoil and grasses) are managed by a single cut in late summer.

Fig. 4 A contrived meadow of a commercial wild-flower mix gives a riot of colour that needs replanting each year.

Now, while I really appreciate a beautifully designed garden or border, most of my transcendental experiences in the garden have been greatly facilitated by a glass of cold Chardonnay! However, the serious point is that talented designers like Ms Price take immense care in selecting and arranging plants so that they bear a resemblance to an idealised natural environment (fig. 5). The gardens may well be beautiful, desirable and give great pleasure, and that is absolutely fine, but they are no more natural than a garden with a pin-striped lawn, rows of dahlias, an African-style thatched breeze hut and a few eucalyptus trees.

Havens for wildlife

When I read gardening magazines I sometimes feel I must be failing because the

main thrust of my activities is not to provide a safe haven for local wildlife. While I'm passionate about conservation and actively involved in the Wildlife Trust movement, I don't believe that it's the principal role of gardeners to create mini nature reserves. Gardens do provide very local habitats for wildlife, but often they're not of real importance because they're too small, too isolated and too transient. Sustainable nature management requires 'more, bigger, better and joined up' regions, as suggested by the Lawton Report, *Making Space for Nature: A review of England's Wildlife Sites and Ecological Network* (2010)¹.

In fact I spend a disproportionate amount of time attempting to keep much of the local wildlife out of my garden. I spent the first

few months of retirement attempting to rabbit- and badger-proof my garden. I had a real sense of achievement when I completed the fencing and naively thought that the problem was solved. I could not understand how the occasional rabbit still got in – until the first snowfall that winter when distinctive footprints indicated a nocturnal rabbit super-highway under my front gate. I fixed this by attaching plastic clematis netting to the bottom of the gate that dragged on the gravel. At dusk a week later I spotted a tawny owl on the post near the front gate and excitedly called to my wife to come and look. When asked if she could see it, she replied, "Yes, and two rabbits on the drive". A short period of observation revealed that rabbits could charge the

¹ <http://archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf>

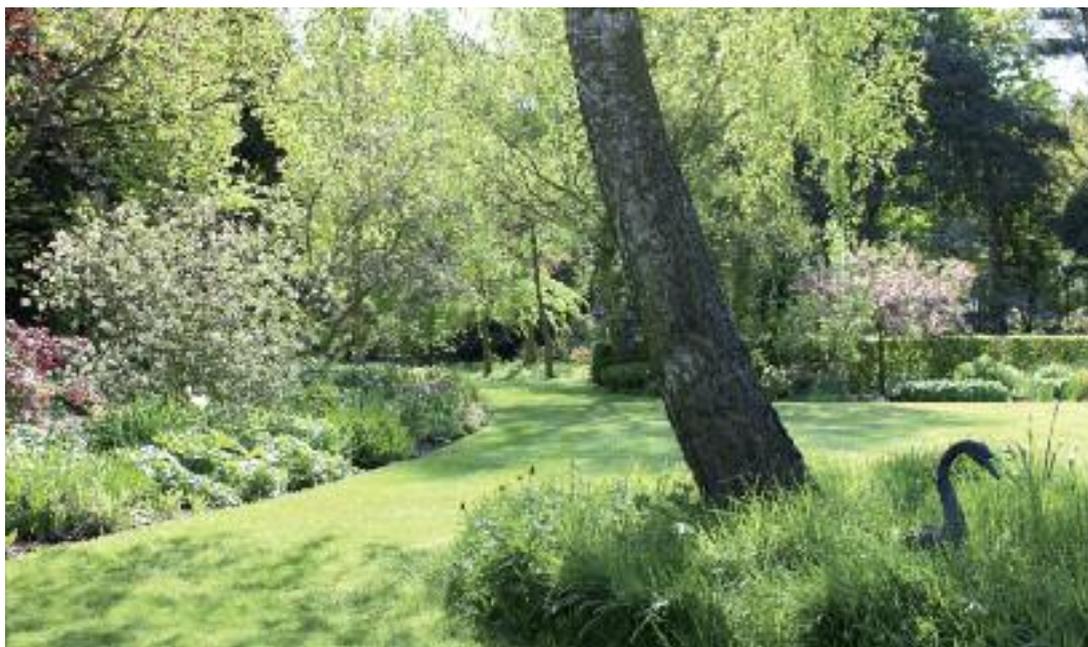


Fig. 5 An idealised 'natural' scene in the author's Yorkshire garden.

plastic netting and get through! These invasion routes now closed, all I have to do is find a way to prevent squirrels and mice from eating the hardy cyclamen, crocuses and tulips that I try to naturalise in my grassed areas, and to stop deer jumping the rabbit fence to graze everything woody. I was dumbfounded to read an article in one of our leading gardening magazines which gave natural gardeners tips for attracting animals, including muntjac deer, into their gardens. John McEnroe's famous words came to mind – "You can not be serious!"

Of course the animals that we should help are the birds, bees and other insects; or, more precisely, *some* of the birds and bees. Bees of all sorts are welcome, as are many

bugs – lacewings and ladybirds (except of course the new foreign invader, the harlequin), and butterflies, so long as their caterpillars eat someone else's plants or stay on the small wild patch that we have set aside. Lily beetles, vine weevils, and slugs and snails give some of us nightmares, so obviously they are not included in our invitation to cohabit in our gardens (figs 6 & 7).

Birds are welcome of course, except certainly pigeons, probably magpies, and possibly sparrow hawks. On a recent garden visit I was talking to the owner of a lovely garden when a sparrow hawk flew through. I was delighted to see such a magnificent creature, but the owner got very angry and explained that she only

wanted little birds in her garden, and she resented spending a lot of money buying bird food only for some of the small birds to be eaten by a hawk (figs 8, 9 & 10). I tried to suggest that the sparrow hawk was only doing what sparrow hawks naturally do, and that its presence indicated a healthy ecosystem, but the owner was unconvinced. She was equally unconvinced when I suggested that gardeners' cats eat far more birds than sparrow hawks.

Organic practices

Natural gardeners refrain from using unnatural 'chemicals' in the garden and would certainly not use pesticides or herbicides. I can totally understand their sentiments – few people

would want to use toxic chemicals on their plants, especially their food plants, without thinking about it very carefully. The problem is that sometimes it's not possible to control pests or weeds by natural or accepted organic methods. There are no effective organic controls for lily beetle or bindweed, Japanese knotweed or couch grass and, except perhaps in the smallest garden, it's impossible to squash all the pests or pull out all the weeds.

Biological controls are excellent in some situations, for example, curbing glasshouse whitefly with parasitic wasps; but it can be very difficult as an amateur gardener to obtain or use biological systems, for instance to control the larvae of vine weevil, while the insecticide thiocloprid (Provado) works very well. Similarly, glyphosate (Roundup) is very effective in controlling even dense areas of couch and, used carefully, is an invaluable tool.

Now from a biological point of view, poisoning your neighbour and/or protecting yourself with toxic chemicals is a very natural thing to do. Allelopathy is the ability of a plant species to excrete chemicals into the environment that inhibit the growth of competing plants. Couch grass (*Elymus repens*) is a classic example: its root exudates reduce the ability of competing plants to take up nutrients. Highly invasive



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Figs 6 & 7 Are vine weevils and lily beetles included in 'wildlife'?

plants like Golden Rod (*Solidago canadensis*) (fig. 11) and a hybrid Japanese knotweed (*Fallopia x bohemica*) have been shown to be allelopathic.

It may come as a surprise to some natural gardeners that very many plants protect themselves chemically against grazing animals. Indeed, many of the world's most poisonous substances are natural plant products. The alkaloid strychnine is present in the bark and seeds of the poison-nut tree *Strychnos nux-vomica*, native to India and adjoining regions. It is very toxic to rodents and probably plays a role in protecting the tree against rodent attack. Similarly, eucalyptus species contain powerful alkaloid toxins that protect against herbivorous marsupials. Some common insecticides are based on chemicals extracted from wild plants: thus nicotine

and pyrethrin (and their slightly modified derivatives) are widely used to kill insects. Defence against insects is precisely the role these chemicals played in the wild plant. The Victorians knew that the damaged leaves of green laurel (*Prunus laurocerasus*) release hydrogen cyanide, so butterfly collectors placed crushed leaves in the bottom of a Kilner-type jar to kill the specimens they'd caught. The ability to produce cyanide when damaged is known as cyanogenesis and is widespread in the plant world. It occurs in white clover (*Trifolium repens*) and Bird's Foot Trefoil (*Lotus corniculatus*), and many of the world's most common food plants including maize, wheat and sugar cane. The amounts of hydrogen cyanide produced are not usually great, but they're enough to deter grazing animals.



Figs. 8, 9 & 10 Robins and long-tailed tits are always welcome, but is a sparrow hawk undesirable or an indicator of a healthy ecosystem?



Sinigrin, the natural chemical that gives brassicas their distinctive 'cabbagey' smell and taste, is also a substance that is very toxic to most insects. This might come as a surprise to allotment holders who frequently see their cabbages shredded by Cabbage White caterpillars, but it shows that plants do not have it all their own way. Animals co-evolve with plants, and those that can overcome plant toxicity may have an exclusive food source. A small number of insects have become resistant to sinigrin and now use it as an attractant; for example, the Cabbage White butterfly specifically seeks out leaves containing this chemical on which to lay its eggs. (The whole field of plant/animal interactions is fascinating, and relevant to gardeners: think of peonies paying ants protection

money (nectar) to keep them free of aphids.)

I'm not trying to persuade you to change your gardening practices radically, but to think about the relationships between gardening and natural ecosystems. Gardening is one of the few areas of life where you can do more or less as you please, and I am encouraging you to do just that. Even

experienced Hardy Planters may not be immune from the pervasive influence of television and magazine gardeners who have programmes and pages to fill. It is their remit to be 'trendy', no matter how impractical, and their gardens have to last only a year or two before the next fashionable planting scheme.



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Fig. 11 Golden Rod escaping into the Derbyshire countryside.

Don't get stressed because your activities may not, in the current climate, be seen as 'ecologically sound'. Do it because you enjoy it. Finally, just remember this – leave your garden unattended for three weeks and it will become untidy, leave it for three months and it is a wilderness, leave it for three years and it is a nature reserve (fig. 12). Now that's really natural gardening and is exactly what I intend to do when I am too old to keep up my unnatural practices. 🌿



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Fig. 12 It takes no time at all for a garden to return to nature.

Peter Williams retired from teaching aspects of plant science to mildly enthusiastic undergraduates to 'spend more time with his plants' and occasionally talk about them to groups of totally enthusiastic Hardy Planters.

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