



©Bob Gibbons

Cranberry flowers

A wild anger (about the exploitation of peat resources by gardeners)

Rosemary
FitzGerald

My position in the world of plants is somewhat undefinable. Brought up in Ireland and Scotland in deep countryside with a skilled gardening grandmother and Wild Flower Society governesses, I learnt Latin names as I learnt to talk and became indelibly aware of both wild and garden plants. Most of my career was in the conservation of rare wild species in the UK and Ireland, but when I (theoretically!) retired it seemed a natural step to continue searching for plants by starting a nursery. Beggars Roost Plants was set up down a dead-end lane on the Somerset coast, with great enthusiasm but no financial resources. It was a hopeless failure as a business but a fascinating life which left me a treasured network of nursery and wholesaler friends. So my experience has been on both sides of the garden fence, and I still dabble in both – recording

and writing about wild plants and gardens, belonging to the wonderful HPS Somerset Group, and doing odd bits of consultation based on looking at gardens as ecosystems.

In the late 1980s I came across a book by the American feminist writer Adrienne Rich. The title poem – ‘A Wild Patience Has Taken Me This Far’ – expresses so perfectly the kind of energy and endurance

needed to work in the world of plant conservation that it became a kind of mantra for me. It’s a world where good news, a species or habitat saved and its future secured, is vanishingly rare. One has to learn to bear the worst again and again. It’s explicable that even as I clung to this line, for years I remembered it incorrectly, as ‘A Wild Anger...’, which is exactly how I feel now about ‘the peat question’.



©Bob Gibbons

Pristine bogland on Middlebere Heath (Hartland Moor NNR) Dorset



Waen Ddu raised bog, Craig y Cilau NNR, Brecon Beacons

Gardeners are usually considered benign people, gentle characters nurturing and caring for their plots. In this century they are associated with the conservation of hedgehogs, birds and bees. Organic principles are more widely followed, and I'm sure many readers have at the very least reduced their use of pesticides and herbicides. So it seems a horrible irony to me that we amateur gardeners not only support but actually **drive** a trade which is causing an irreversible ecological disaster, by continuing to use, and demand, peat-based composts.

I was driven to write this article when last year a representative of a prestigious nursery told the Somerset Group that it was impossible **ever** to grow ferns without using peat. At question time I was slapped down – told that peat is an 'entirely renewable' resource – and left the hall

in a state of meltdown, so it seemed my bounden duty to explain why this incident was so devastating.

I'm sure that many of us would indeed oppose the use of peat if more was understood and the facts known. I've known for years about the threats to our bogs (and resolutely made my own nursery peat-free), but looking at the figures in statements from the government, from the RHS, from Natural England's scientific wing (JNCC) in their listing of Priority Habitats, has been harrowing. Brace yourselves – the next paragraphs are my attempt to summarise the essentials of the question and explain the crisis, because crisis it is. I only wish there were a stronger word to use.

Peat is formed over centuries from dead vegetation, notably mosses and sedges, in places where the water-table keeps the habitat permanently sodden. The greatest depths of

peat were deposited in the millennia after the last ice retreated in Britain and Ireland, leaving an abundance of peat-bog habitat. The waterlogged conditions leading to peat accumulation are anaerobic, so the material contains no nutrients.

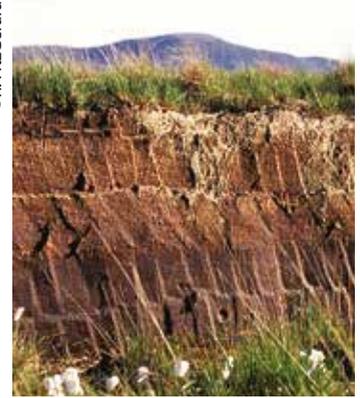
The finest peat, consisting mostly of sphagnum mosses, comes from raised bogs which form very slowly indeed over wet hollows, the decayed vegetation making a low dome. These bogs are rather wonderfully described as 'ombrotrophic', meaning they depend entirely on rainfall for water. They usually hold many small pools among heathery vegetation and moss beds, and support the highly specialised plants and creatures able to use this habitat, including insectivorous plants such as sundews (*Drosera* species) which catch and digest flies to gain their subsistence nutrients. Central Ireland once had the finest and most extensive raised bogs in the world, but lowland Britain also had important examples in areas such as the Somerset Levels.

However, we have destroyed almost all peat-bog habitats in the UK. Paul Alexander, the RHS frontman on this question (who liaises between the horticultural world, government, and the compost industry), wrote as long ago as 2008 that of the estimated 70,000 ha of lowland raised bogs in the UK in 1996, fewer than



© R. FitzGerald

Old-fashioned family turf cutting in Co Kerry



© R. FitzGerald

The distinctive marks of turf spades (clanes)

4,000 ha remained in a 'near natural' state, with a further 5,000 ha described as 'degraded'. Degraded bogs are sometimes presented as capable of being restored, but the results of such 'restoration' give little to be hopeful about, with much less biodiversity. (Also, peat-bog archaeology is phenomenally valuable because it preserves artefacts so well – think of the famous 'Bog Men' – so destroying bogs often destroys our human history.) In Ireland, in spite of the noble efforts of organisations such as the Irish Peatland Conservation Council (IPCC), the situation is as bad. Little can be done beyond owning and caring for a number of surviving bogs and raising consciousness – a small charity in a small country can achieve only so much.

You must be wondering about the reasons for this ravaging of a unique habitat, and we need to look at history. Originally peat ('turf

in Ireland) was used as a subsistence fuel, and this has usually been presented as harmless. Families, even those too poor to own land, could have a plot known as a 'turbary allotment' with inherited rights to cut peat for their own use. Children's books such as Patricia Lynch's *The Turf-cutter's Donkey* are typical of this tolerant way of looking at the past, and visitors to the west of Ireland and the Hebrides will have observed this kind of small-scale use. But of course, mechanisation in the 20th century turned a relatively sustainable activity into rapid, destructive exploitation. There was little awareness of the magnitude of the threat to bog conservation until the 1990s, but already the juggernaut of commercial interest had begun to roll. Ireland, a country almost without coal, once fuelled its power stations with turf, obliterating/devastating the great expanses of raised bog

in the central counties. At the same time, expanding populations made greater demands so the traditional small 'allotments' began to be bought up by businesses which then vastly increased extraction using mechanical methods rather than the old hand-cutting with distinctive narrow turf spades (sometimes called 'clanes').

Machinery now in use on raised bogs is of nightmare proportions, and it's sobering to think that while these monsters harvest more



© R. FitzGerald

Hand-cut turf stacked to dry



A machine like this removes peat 220 times faster than it is formed

than **22 centimetres** a year ('hoovering' in successive passes), peat regenerates at only **1 millimetre** a year (and only if conditions are right). Even government policy statements, **not** noted for their ethical purity, now declare that peat is not a renewable resource. In spite of many remaining bogs having 'in care' designations (such as SSSI), many of these titles fail to protect because planning permissions were granted before the current legislation, so peat is still being extracted at frightening speed. Of all peat harvested now, 99% goes into growing media – yes, into **our** bagged composts – and of that more than three quarters is used by amateur gardeners. Of the peat we use, about 60% comes from Ireland, 38% from the UK, and 2% from countries such as Estonia in northern Europe, where raised bogs are still extensive – but they are becoming the last in the world.

Blanket bog used to be relatively safe because it often covers rocky ground and could only be cut by hand, but a new threat is 'sausage machines' which creep on caterpillar tracks over the thinner deposits, collecting low-grade peat which is made into compressed briquettes for fuel or processed for growing media.

Of course, bogs are threatened by other activities – gardeners are not the only ogres. Drainage for farming and building development has destroyed many. A bog is a functional ecosystem only if its hydrology is undamaged. Even if a bog looks untouched, nearby drainage can let the plug out, destroying it invisibly. Forestry has been responsible for huge losses (most famously perhaps in the Flow Country in Caithness) as the land has to be drained and then the trees draw even more water out of their surroundings.



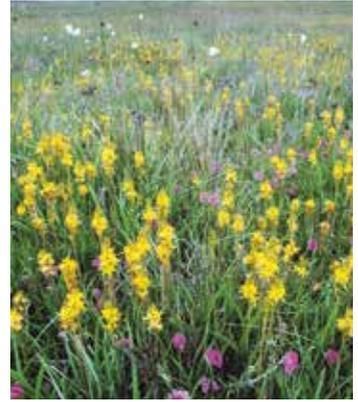
The produce of the 'sausage machine'

This article is written out of the despair I feel that we are losing a truly unique habitat which supports a wondrous biodiversity with plants and creatures which can survive nowhere else. But this is a truly global concern too. Andy Byfield (galanthophiles will know his name!), in an article written for *Plantlife* in 2010, called it 'the elephant in the room': it is the question of carbon sequestration. Peat bogs, while they are wet and undamaged, store a huge amount of carbon dioxide, the greenhouse gas we so fear, but once drained, ploughed, or extracted for use in gardens, the process of oxidation gathers speed rapidly, releasing carbon into the atmosphere and accelerating climate change. This aspect deserves serious consideration.

Apart from moral and political questions, you may wonder why I care so much about habitats which many people find dull or unattractive.



Bog-rosemary in flower



Bog Asphodel and Cross-leaved Heath in the Flow Country

Obsessive botanists of course love squelching into bogs, but most country walkers prefer to stay on a path, or on downland turf, or in pretty woodland, and even I admit that blanket bog in Scotland on a wet day can be featureless and depressing. But the plants, and wonderful invertebrates like the giant raft spider, are rare specialists surviving in very unusual conditions, and some have great beauty. Our native cranberry (*Vaccinium oxycoccos*) creeps gracefully, showing its red berries so prettily on gold or greenish sphagnum moss; Bog-rosemary (*Andromeda polifolia*) is another lovely ericaceous plant, even listed in the Plant Finder ('Compacta' and 'Macrophylla' cultivars both have AGMs); and it's worth finding a local botanist to show you the rare Marsh Gentian (*Gentiana pneumonanthe*) in locations in Dorset or Anglesey. Some of the 'landscape plants' of bogland – Bog Asphodel (*Narthecium ossifragum*), and the cottongrasses (*Eriophorum*

species) can make wonderful displays across a view, while Bog-myrtle (*Myrica gale*) gives the haunting scent which defines the sweet air in much of the Highlands and western Ireland. Insectivorous plants in general have a keen following, but some who know the spectacular *Sarracenia* or *Nepenthes* species of the show bench may not realise that we have small but wonderful representatives much nearer home. There are several sundews, sometimes growing like an army of red spiders over bare black peat, surface-damp gleaming in sunlight to match the dewdrop sparkle of the sticky drops waiting to trap prey in the leaves. Butterworts (*Pinguicula* species) are intriguing too, as they roll their whole leaf round creatures stuck on the gluey surface. To me, nothing can beat finding these fascinating little plants and observing their extraordinary survival strategies.

So what can we do? I believe that unawareness is

a big part of the problem. Most of us recycle; we worry about cod, elephants, bumble bees (which all surely need our concern); we don't rev diesel engines at traffic lights; we use cotton shopping bags: – in general, we do our little bit towards keeping the world as healthy as we can. I'm sure that if gardeners were fully aware of the headlong destruction they were **leading** (not just supporting), they would do more to demand alternative growing media. I know that in spite of the brave example of the National Trust and the demands of a minority, good quality alternatives are not easy to come by, and they cost more than peat-based composts. The compost industry is, of course, entrenched in their resistance to change in spite of government 'intentions' to stop peat use by 2030 (the coalition's goal of 2020 is long lost).



Marsh Gentian in Dorset

Peat is readily available through established trade vectors, it's light and easy to handle, and the gardening public has been indoctrinated to believe that it's **the** essential ingredient. Adverts for 'Pure Sphagnum Peat' claim 'It's the best soil conditioner for your whole garden'.



A barren landscape – the death of a raised bog



Sundews in a Dorset bog pool

But peat is **not** a magic substance. It's a nutrient-free medium which holds moisture nicely and happens to be cheap and readily available to an industry which makes millions out of it – while the world still has it.

We need to put pressure on that industry. Time is running out for the remaining British and Irish bogs, and it would be a dreadful thing for the future of this planet if the extraction trade was just pushed into northern Europe because 'there's plenty there'. A few responsible, ethical firms are working hard to find decent and affordable alternatives. Some of the earlier 'peat-free' products were not satisfactory, rather unbalanced mixes with rough coir and too much unaged wood-chip,

but I hear good reports of Melcourt's Sylvagrow range, and Bulrush in Northern Ireland are making interesting experiments.

If this article has touched a chord with you, please start thinking about it, start asking questions at your garden centre, act to be a saviour not an exploiter. Refusing to buy a peat product would make a perfectly good start! Meanwhile, investigate composted bracken and miscanthus products and think leaf mould throughout the year!

I can't imagine a more sterling body of good gardeners than the Hardy Plant Society – please start your own personal campaigns for an urgently needed trade revolution. It just might save this precious habitat. 🌿

Rosemary FitzGerald continues, after a career in professional field botany, to work on national and local survey schemes, to garden, and to write and speak about these never-ending interests.