



CONSERVATION Leigh Morris describes the important role that horticulture has in conservation, something that his recent experiences on St Helena and in the Isle of Man have reinforced.

Horticulture for conservation in the Isle of Man

For the first 20 years of my horticulture career in nurseries and education I regarded horticulture as an environmentally important vocation. It wasn't until I moved to the Royal Botanic Garden Edinburgh (RBGE) in 2004 as Head of School of Horticulture that I first encountered the important role that horticulture has in conservation, and this was subsequently reinforced during my two years on St Helena in the South Atlantic (Horticulture in the South Atlantic, *The Horticulturist*, Spring 2020).

In my current role as Chief Executive of Manx Wildlife Trust (MWT) in the Isle of Man (IOM) I am reminded almost daily of the pivotal position that horticulture can have in relation to biodiversity conservation and climate change mitigation.

The IOM is the only whole nation UNESCO Biosphere in the world, and MWT's work spanning the marine and terrestrial environments aims to deliver a Nature Recovery Network (NRN) and Nature-based Solutions (N-bs) across the Island. A key goal for MWT and all the Wildlife Trusts is to deliver '30 by 30' (30% of land



Left and above: Orchid meadow at MWT Close Sartfield Nature Reserve. Left to right: MWT Reserves Manager, Tricia Sayle; MWT Patrons, IOM Lieutenant Governor, Sir John Lorimer and Lady Lorimer, and MWT Agri-environment Officer, David Bellamy, in one of the orchid meadows at MWT Close Sartfield Nature Reserve.

Nature reserves

The core of MWT conservation work is maintaining our nature reserves, led by our Reserves Manager, Tricia Sayle, and a fantastic team of volunteers (our Midweek Muckers) who undertake a range of tasks throughout the year. Much of the maintenance they do is ‘manipulation of plants’, including pruning, hedge cutting, grass cutting and tree planting.

We have a diverse range of reserves, although our wildflower meadows in the north of the IOM, in and around the Ballaugh Curragh ASSI and RAMSAR site (an international status awarded for their conservation importance as a wetland area), are our ultimate highlight. Our orchid meadows, including at our flagship MWT Close Sartfield Nature Reserve, are some of the best in the British Isles. Close Sartfield was created from degraded farmland pasture, through hard work, good management, scrub clearance, grazing, hay cutting, and the employment of the ‘green hay technique’ to sow seeds on one of the meadows.

I had not encountered the use of green hay until I came to MWT. It involves the cutting of hay from an existing wildflower meadow after the flowers and seeds have formed, but not yet been dispersed. The green hay is then taken to a new piece of land, rolled out and allowed to dry and shed the seeds, thereby adding significantly to the seedbank. This can be regarded as horticulture and, although some consider the method imprecise, it certainly contributed to MWT’s success at Close Sartfield. In 2022 we used the green hay technique once again, at Billown Quarry – a site owned by Colas Ltd, where we are working with them to create a new nature reserve. I am looking forward to seeing what plants germinate this coming year.

Agri-environment

In April 2021 the IOM Government launched an Agri-environment Scheme (AES) and MWT were appointed as the delivery partner. Agriculture covers 75% of IOM land. Working pragmatically with Manx farmers is now our highest priority in

terms of conserving and restoring biodiversity across this huge area of the island.

Our role is to give on-farm advice and assist farmers to maximise the scheme, encouraging more nature-friendly farming, and ensuring maximum gains for wildlife. The bulk of Manx agriculture is livestock and arable, though there is some horticultural vegetable production and protected cropping, including one livestock producer at Poyll Vaaish in the south who also grows a field of vegetables for on-farm and market sales.

The vegetables at Poyll Vaaish cannot be regarded as pristine crop production. This small field has become a magnet for farmland birds (and birders!) this winter. They flock there to feed on the weed seeds and take advantage of the cover provided by the end of season vegetables. In one observation session in December 2022 our AES Officer, David Bellamy, counted a tremendous number of birds, including significant numbers of important IUCN red-listed birds: twite, linnet, meadow pipit, skylark, and crucially two tree sparrows, which are almost extinct in the IOM. Under the AES funding this less-intensively managed vegetable field habitat is being sustained, with additional AES funding providing bird feeders and millet to feed the birds here and at other sites across the island. Our vision is that the AES will help ensure the survival of the tree sparrow and other IOM farmland birds.

Tree planting

MWT aims to ensure that we plant the right tree in the right place through our projects and partnerships. We have formed a good working relationship with the IOM Woodland Trust who, with the support of a dedicated band of regular committed volunteers, are leading the way in planting the trees that the IOM needs. The AES and our IOM Woodlands Grant Scheme have stimulated more tree planting, including a flagship project at Smeale Farm where we were joined by our Department of Environment, Food and Agriculture (DEFA) Minister Clare Barber for

and sea to be managed for nature by 2030). We aim to achieve this biodiversity gain in different ways – several of which require horticulture input.

It is interesting for me, having started my career in ‘traditional’ horticulture, to now be working in the conservation sector. People (including my mum) asked how I felt about ‘moving away from horticulture?’ My response has always been that in my mind I never left horticulture. I don’t feel I changed careers, rather, I’ve simply broadened it!

It does once again prompt the question of ‘What is horticulture?’ For example, when does nature reserve maintenance become horticulture? Is creating and maintaining a wildflower meadow horticulture?

There is undoubtedly a grey area, but for me horticulture is the manipulation of plants to grow in a certain way, whatever the purpose or aim. I’m therefore in no doubt that much of the conservation work undertaken is indeed horticulture, and this article highlights a range of the techniques used.



Left: Rolling out green hay to inoculate land with wildflower seeds at the new MWT Billown Quarry Nature Reserve, a partnership project with Colas Ltd.

Below: Avian ecologist, Rob Fisher, observing birds at the vegetable field at Poyll Vaaish Farm.

Below left: The gloved hand of the author transplanting seagrass (*Zostera marina*) as part of a sub-tidal translocation trial in Port Erin Bay in 2022.



the initial planting weekend.

There's a great opportunity now due to the rise of Environmental Social Governance (ESG) and the need for corporate businesses to become Net Zero in their carbon footprint. The Wildlife Trusts (TWT) have signed a contract with Aviva who, as part of their Net Zero 2040 ambition, are donating £38m to TWT to create more temperate rainforest across the British Isles.

To our delight MWT will be one of the first Wildlife Trusts to benefit, with Aviva-funding enabling the purchase of 43ha of IOM land that will be restored as broadleaf temperate rainforest. Beyond the Aviva relationship, the most exciting aspect for the IOM is the intensified focus upon on-island solutions, making it increasingly attractive for IOM-based businesses to fund tree planting (and other biodiversity and N-bS) on the Island.

A key recent step forward is that MWT has published an agreed IOM Native Tree List. When I arrived in the IOM I found that there were different Native Tree Lists across various organisations. There wasn't much variation, and each list was justifiable, but I was keen to agree an island-wide consensus. We now have an agreed IOM list that can be viewed on the MWT website. MWT are not advocating that only native trees are planted, but fundamentally, when 'native trees' are planted we must be clear what that means.

Like the rest of the British Isles, the IOM has been negatively impacted by ash dieback disease and consequently the island's tree landscape is changing. One of MWT's Action for Wildlife projects at our MWT Ramsey Forest Hairpin Woodland Park project involves selecting and

bulking up ash (*Fraxinus excelsior*) trees showing strong resistance from a large stand of trees. One of the approaches we promote is the bench grafting of scion material from (apparently) resistant taxa onto young seedlings. We undertook the first successful grafting in 2022.

Peat

Alongside trees, there is great interest in peat conservation and restoration both for biodiversity and as a N-bS to sequester carbon and alleviate flood risk. I vividly recall going to a meeting of nursery stock growers in Worcestershire over 30 years ago when the chairman of a large local grower was bemoaning The National Trust for wanting peat-free container-grown plants and stating that 'growing peat-free would never be a commercial option'. Thankfully much has changed over the years since and although horticulture is not completely peat-free, the end is nigh. Certainly, all MWT's horticultural work is entirely peat-free, and this is becoming an accepted IOM norm.

The IOM has a significant area of peatland that used to be cut for fuel. Cutting has now ceased and the island is pursuing a restoration programme and MWT is leading the way through our Conservation Officer Sarah Hickey. Sarah and her volunteer team have undertaken most of the baseline survey of how much upland peat we have. She is working closely with the IOM Government and DEFA to commence peat restoration work. This includes trial planting in 2022 of sphagnum moss plugs into areas of peat that have been reshaped, to reduce further carbon loss, create an active peat bog, and ultimately

regenerate the carbon sequestration process.

Seagrass

The IOM also has significant seagrass (*Zostera marina*) growing along parts of our East coast. Seagrass is the only true plant found under the sea and is a crucially important habitat for biodiversity and carbon sequestration. MWT are a key partner in the DEFA Blue Carbon Project, focused on surveying and potentially restoring seagrass. In 2022 MWT undertook the IOM's first seagrass plant transplantation trial from a seagrass bed at Langness, to a site in Port Erin Bay that a historic map had shown to have previously been a seagrass location.

We have established a Manx Eelgrass Group (eelgrass is the name given to *Zostera* spp of seagrass), with funding from KPMG, with the aim of completing the seagrass survey, deciding the number of required plants, and then producing and planting them. An important next stage is to engage with more established seagrass projects around the UK to learn from them. I have been involved in the translocation and production of plants above water for many years, but this is the first time I've managed to combine horticulture with my passion for scuba diving. Delightful!

Community wildlife gardening

MWT are working to inspire and enable more community gardening in the IOM. In 2021 we launched our Certificate in Wildlife Gardening course, based on a similar format to the certificate courses we created at RBGE. The course equips people with the key knowledge they need, inspires them to do more, and creates nature-friendly



Left: MWT Conservation Officer, Sarah Hickey, planting sphagnum on the uplands in the IOM as part of the IOM's peat restoration programme.

Right: Pollination plantings at Manx National Heritage (MNH) Rushen Abbey Garden, which was created by CIH member and MNH Head Gardener Phillip Payne (in the centre of the three, flanked by Graham Newsome, Douglas Council, and Hannah Phillips, MWT's Community Ranger). The work by Phillip has led to the creation of the Manx Polli-nature Seed Mix.

Right: Gail Jeffcoate (third from left) delivering training in butterfly recording to MWT citizen science volunteers in the wildlife garden at St Johns Mill.

Below: The Manx Wildlife Trust and UNESCO Biosphere logos.



gardening champions within the Island community. The course is proving to be a success, with visits to already established wildlife gardens and plenty of opportunity for students to get their hands dirty. There is now interest in rolling this course out to other Wildlife Trusts.

Increasing wildlife-friendly planting is another aim and our MWT Northern Volunteers organise a popular annual IOM Gardeners Fair, where people purchase locally raised plants, grown in a wildlife-friendly way. Sowing seeds to create patches of flowers that attract lots of insects as well as looking great is a popular approach. Unfortunately, you can't source large quantities of IOM provenance wildflower seeds, therefore every year people in the IOM buy and sow a great many packets of UK sourced wildflower seeds across the island.

We are keen to reduce this and MWT is now working pragmatically with partners to develop a Manx Polli-nature Seed Mix. Our aim is for people to use the Polli-nature Mix in their gardens and that local authorities (including Douglas Council) will use it in the urban amenity areas. Key partners include Douglas Borough Council, Milntown Gardens (the IOM's only RHS Partner Garden) and Manx National Heritage (MNH), whose Head Gardener and CIH member, Phillip Payne, has led the development of pollinator seed mixes at Rushen Abbey. The partners have worked together to produce a mixture of annuals and perennials to provide an evolving seed mix over a few years. We are going to test the mix in locations across the IOM in 2023, including at Milntown through our joint wildlife gardening initiative. Once tested, we aim to make this Manx Polli-

nature Mix available more widely, including to schools and community groups. The aim is to encourage more public engagement around conservation and to increase the benefits to insects and other wildlife.

We are keen to include the combined area of private gardens and the amenity urban environment managed for wildlife into the total area in our IOM NRN. The IOM Government has an excellent online Island Environment map with several layers including MWT nature reserves, ASSIs, and Wildlife Sites. Working with them we have created an app that will allow individuals and community groups to add their own small areas of wildlife gardening into a new layer on the map. Ultimately, we hope this will inspire far more people to help the IOM achieve 30 by 30.

An important MWT target is to engage with more people who live and work in Douglas – and who comprise the largest proportion of the IOM population. Douglas Borough Council have been implementing annual pollinator patches to replace the current seed mix they use in areas of amenity turf. MWT are now developing a project with their housing team to enable community gardening close to areas of social housing in Douglas.

IOM-based horticulturists

There's a great movement towards conservation and the environment in the IOM, and I hope I've shown that horticulture is contributing in many ways, but with potential for far more. We're keen to build the culture of horticulture for conservation and build a network of horticulturists who are keen to drive this. I have identified two other

Chartered Institute of Horticulture (CIH) members in the IOM, and we now meet regularly alongside other professional horticulturists to discuss and plan horticultural action. This group is already stimulating excellent knowledge-sharing and new joint initiatives (such as the Manx Polli-nature Seed Mix). IOM may be a relatively small island in the Irish Sea, however, the ambition is to raise the profile of horticulture in the IOM, showcase the collective contribution to the Island Biosphere, and hopefully be a model for others, particularly other small islands, to follow. ●

More info

IOM Native Tree List:
mwt.im/news/manx-native-tree-list
 IOM Island Environment map:
gov.im/maps

Leigh Morris MSc CHort FCIHort

Leigh began his career in nurseries, then moved into horticulture education. He gained an MSc in International Horticulture, before joining RBGE, leading their School of Horticulture and later their wider engagement and learning portfolio. His career then developed a wider conservation focus, as a Trustee of the Marine Conservation Society and Director of Community Conservation at the Royal Zoological Society of Scotland. Leigh spent two years on St Helena in the South Atlantic (2018-19), delivering environmental consultancy for government and NGO partners, and in January 2020 he commenced his current role as the Chief Executive of Manx Wildlife Trust in the Isle of Man.

