Of brews and

Eleanor M Harris tells a gothic tale of monsters and potions – or is it really about human relations?

Say the words *Hylobius abietis* to a forester, and you are likely to meet with a similar reaction to the superstitious actors in *Blackadder* at the mention of *Macbeth*.

Sitka spruce is famously indestructible: unpalatable to herbivores, and, in Britain, with few insect or fungal pests. This is not to say it is untouchable. In March, isolated cases of Larch-nemesis *Phytophthora ramorum* were found on Sitka; and in December, the beetle *Ips typographus*, plague of European spruce, appeared in Kent.

But for now, *Hylobius abietis*, the Large pine weevil, reigns supreme as the terror of the timber trees, laying eggs in freshly cut stumps. On hatching, the hungry young feed on the bark of tender saplings which the obliging forester has planted across the site, destroying up to 100% of the crop.

Hylobius' impact is exacerbated by the structure of UK forests. We have extremely low forest cover, dominated by the large-scale first-rotation plantations of the mid-20th century. We also have far milder winters than northern continental Europe, superb for growing trees in many ways, but also Weevil playtime.

Disquiet in Dalriada

In summer 2017, following concerns about Acetamiprid use on forests in Mull, a petition was launched calling for a ban on neonicotinoids in forestry. The campaign resulted in two cabinet secretaries, senior staff from Buglife, Confor, Tilhill, Bidwells, the Forestry Commission, and members of the local community convening on Mull for a fraught meeting.

Who will make the move to change the reductionist debate about pesticide, into a constructive conversation about what all these groups want: a thriving local community on Mull which develops economically by enhancing rather than damaging its environment?

Hopefully one day the forests which supply our timber will be larger, more mature, and more resilient, as European forests are. But there is no way to create a centuries-old forest except by waiting centuries; and there is no way to create a larger forest unless governments promote woodland expansion.

Meanwhile, we are where we are, and the only effective weapon in our armoury against weevils is pesticide. Trees can be pre-treated in the nursery, and if necessary, a top-up is applied to individual trees a year later. Previously, the main pesticide was Cypermethrin, but this requires great care in application, because even in tiny quantities it is extremely toxic to freshwater life.

Forestry pesticides – putting public 'horror' into perspective

Cypermethrin's replacement, Acetamiprid, is deemed less hazardous to invertebrates, and there is no evidence of ill effects to humans from low concentration which could make its way into a water supply. Two people who suffered acute Acetamiprid poisoning in a suicide attempt made a full recovery and were discharged from hospital with no complications two days later. Acetamiprid is sprayed directly onto apples and hops destined for human consumption. If you read the ingredients on bottles in a garden centre, you will quickly find Acetamiprid to squirt on your roses.

But Acetamiprid is in the neonicotinoid group, three of which were banned last year by the EU following their notorious contribution to the catastrophic global decline of insects. Acetamiprid was not deemed so hazardous, and applied directly to a conifer is unlikely to contaminate pollinators. But the publicity surrounding neonicotinoids means that risk assessment is often less important than a much more human reaction: horror.

Last September, as a result of controversy on Mull (*see Disquiet in Dalriada, left)*, the investigative journal The Ferret reported that 'Scotland's forests are sprayed every year with hundreds of kilograms of a toxic pesticide blamed for killing bees'. Communities are demanding that foresters guarantee, not that water supplies in their forest are safe and meet regulatory standards, but that they are 100% pesticide-free – an impossible guarantee. In 2017, Buglife reported neonicotinoids in a remote burn high in the Cairngorms: the likely source was a pet dog treated against ticks. Preventing people from walking dogs >>

Pesticide use in Sotland

Number of sprays per year	Crop
4.7	Winter barley
4.4	Winter oats
5.3	Winter wheat
5.9	Winter oilseed rape
11.1	Seed potatoes
13.5	Ware potatoes
0.1	Harvested forest which could be restocked and sprayed

Scottish Government figures
https://bit.ly/2RDRhXP

beasties

Lowering the stakes: improving stakeholder engagement

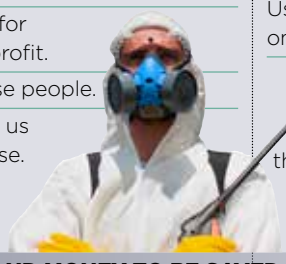
WHETHER THE ISSUE IS PESTICIDES, HARVESTING OR WOODLAND CREATION, IT'S TEMPTING TO WAIT UNTIL THE ISSUE ARISES, AND WORK IN THIS DIRECTION...

You want to talk about *your* facts...

- Drinking water is safe.
- No pesticides within 10m of watercourses.
- Operators spraying pesticide hold professional qualification.
- Acetamiprid is sprayed directly on apples and hops for human consumption.
- Trees are sprayed every 35 years at most, agricultural crops several times each year.
- Acetamiprid is far less toxic than its predecessors, and we are developing even safer alternatives.

But you need to listen to *their* genuine concerns...

- I don't understand it and don't trust any trace in my children's drinking water.
- The first sign of forest management I saw is figures in white suits.
- Neonicotinoids are killing bees.
- The forest is run for someone else's profit.
- I don't know these people.
- No-one talked to us until an issue arose.



And start conversations and build trust *before* the issue strikes...

- Tell positive stories about the forest: a photo of you at work today, the local mills it supplies, the products its timber will become, its history, how its management has improved.
- Use the community facebook group and on-site signboards.
- Meet key stakeholders through small, face-to-face meetings rather than big public debates. Invite them to the forest for a visit.

... BUT THERE'S A LOT OF TIME AND MONEY TO BE SAVED BY STARTING TODAY, AND WORKING IN THIS DIRECTION

>> in forests would hardly be progress.

Toxic chemicals slosh around food, pets, gardens, houses and fields, are boom-sprayed out of sight on our food, or displayed beside tills with jaunty colours and dynamic names. But in forestry, it is the very rareness and regulation of their use that causes that horror reaction: what people see is a forest that stood in peace for decades suddenly felled, and then swarming with white suits and respirators. Going back to *Macbeth*, it all looks uncannily like the witches brewing mysterious potions on the blasted heath.

We know it is not like this. Chemical use in forestry is very low compared with other land uses, and what is used is carefully regulated. Timber production removes atmospheric carbon, replaces polluting and non-renewable materials, and provides an alternative to exploiting global natural forests. The by-products of timber production are jobs, habitats, landscapes, buildings: good places to live. Forestry offers such strong answers to such big questions, that society should not be hindering, but helping to promote it at every opportunity.

Getting stakeholder engagement right

But asking for help means starting conversations, whether with the local community or with the Cabinet Secretary. And that gets us into a process Confor has talked about before, and will talk about again: stakeholder engagement. The infographic (*see previous page*) provides another way of thinking about the issue at local level. At national level, *Hylobius* is one of a range of technical issues on which Confor is working with other stakeholders to develop solutions (*see Working with Weevils, right*).

We began with weevils, but the example could have been timber harvesting or haulage, grey squirrel or deer control, woodland creation, tree-breeding, sawmill investment, the use of timber in construction, or the protection of native woodland from invasive invertebrate species (*see Poisoning the procession, above*). Wherever we are in the industry, our new year resolution should be to reach outside it: to listen, to understand, to teach, to learn, to make friends, and to ask for help.

Working with Weevils

For the past ten years, a coalition including the Forestry Commission, NRW, Forest Research, Confor, and representatives of the private sector, have explored and tested a wide range of methods of *Hylobius* control. These include physical barriers like wax or plastic, biological controls like nematodes or wasps, and management techniques like leaving land fallow before restocking or monitoring weevil activity to predict better when and where they will attack. However, none have yet been effective enough to make more than a small dent in the need for pesticide, many are prohibitively expensive, and many also have environmental risks which are arguably greater than those posed by pesticides.

Nevertheless, the industry is still optimistic that a solution is waiting to be found, and in August, Scottish Rural Economy secretary Fergus Ewing announced a fund of £550,000 for innovative research into *Hylobius*.

Poisoning the procession

An invasive invertebrate pest, the Oak Processionary Moth, has become established in London and the neighbouring counties. It is not only a serious threat to England's national tree, it is also a major public health risk due to a chemical irritant found in the caterpillars' thousands of fragile hairs. It is likely that a reluctance to use pesticides contributed to a failure to exterminate this non-native pest when it first arrived on imported plants.

Lord Duncan sees forestry at work in Lothians

On 14 December 2018 Confor arranged a day of visits to the sector for Conservative politician and Parliamentary Under Secretary of State for Scotland, Lord Duncan of Springbank. Accompanied by Jamie Farquhar, Confor's National Manager for Scotland, he visited East Lothian forest nursery Alba Trees, Glennon Brothers' sawmill at Windymains, and the Spurway family's Christmas tree business on their Harburn Estate near West Calder.

At Alba the party was welcomed by General Manager Chris Allan, Nursery Manager Derek Stewart and Sales Executive Margaret Allan. Lord Duncan was given an introduction to the business, before taking a nursery tour and meeting staff. Amongst the topics discussed were the future of Scottish forestry, the continued expansion of Alba Trees and Brexit and its potential impact upon the company and wider sector.

At Windymains, Glennon Brother's Chief Executive Scott Shiells gave Lord Duncan an overview of Glennon's business in Scotland and Ireland, followed by a tour round the mill. Lord Duncan was much impressed by the slick operation, commenting that things have come a long way since his grandfather operated a mill in Angus.

Reaching the Harburn Estate, owner Charlie Spurway welcomed Lord Duncan to the family's Country Business. The Christmas tree yard was almost empty following the last major dispatch of trees the day before. Charlie drove the party round their extensive plots of trees (over one million of Nordman Fir, Norway Spruce, Fraser Fir and Lodgepole Pine), explaining the intensive management required at different stages of growth to produce top quality trees for the wholesale and retail markets.

As night fell, Jamie Farquhar thanked the PU Secretary of State for spending the day with our sector, and is following up Lord Duncan's kind offer to help on issues like continued availability of migrant labour.

Lord Duncan at Alba Trees