

Wyre Forest Study Group

BATTLE OF THE BALSAM!

Phil Rudlin

Himalayan Balsam *Impatiens glandulifera*, kindly introduced by the Victorians has, like many alien species, adapted well to the British climate.

The Wyre Forest area has been no exception to the plants relentless march up our river systems and canals. For a number of years it has been major problem in one of our most precious woodlands – Shrawley. Well known for its Small-leaved Lime and ground flora including a fine display of Bluebells, Shrawley has become a sea of pink in August! Very attractive, some might say, but this plant is not welcome in Britain's largest Small-leaved Lime woodland, which is designated as a Site of Special Scientific Interest. Not only does it fail English Natures' condition assessment for SSSIs as an alien species but also it seems to be having an effect on our more sensitive native plants.

In one particular open area of the woodland, bluebells had been flowering freely for some time. However over the years Bracken gradually took over, out competing the Bluebells. The Bracken was therefore controlled using a herbicide. Unfortunately, by reducing the competition it allowed the Balsam to take over and the Bluebells were still suffering! As an experiment the area was mown in August, before the plant set seed, to find out whether it was controllable. It appears that the seed is only viable for three years, so would four years cutting without seeds eradicate the plant??

Although it was effective at reducing the plant considerably, there were two main problems:

1. The large tractor and swipe used could only cut the open areas and not in amongst the trees around the edges. With the plants amazing seed dispersal method – it would soon counterattack.
2. With the mowing taking place in the summer and the cuttings not being removed the area soon became grass dominant, defeating the main object of the exercise – reducing the competition for the Bluebells!

Lessons were learned though – don't fight with nature. It is probably impossible to maintain open space to benefit Bluebells – it is, after all a species that prefers canopy cover and there are always more dominant and invasive species, even native ones!

Controlling this resilient plant has always been difficult. There is no specific herbicide on the market that is effective and as most of it is found along the waters edge it would not be viable to use any kind of chemical. Whipping it with a stick looks encouraging at the time but, unfortunately

creates a coppice stool. Rather than having one flowering stem you end up with many! (Plate 1)

There are however two weaknesses.

1. Balsams are annuals and their roots are shallow and therefore the plant is easy to pull.
2. If the stem is crushed the plant cannot recover and will not survive.



Plate 1

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Pulling the plant by hand can be very effective. It is, however very time consuming and if it is pulled and left on the ground it will re-root either from the base or produce new roots from the nodes up the stem. It has to be either crushed or draped over a branch above ground!

The mowing experiment showed us one thing. That it can be controlled mechanically. Unfortunately no machine has yet been designed for such work. The reason that the mower was so effective was that not only did it cut the stem very close to the ground, but also it munched all parts of the plant.

This gave us an idea. The Forestry Commission had recently purchased a roller to control Bracken within the Wyre Forest area. Its design is simple; a heavy cylinder with fins along its length is towed behind an All Terrain Vehicle (ATV). This rolls the Bracken flat and the fins crush the stem three or four times up its length. It causes the plant to "bleed" expending energy, which reduces its vigour



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the following year. Over a number of years it significantly reduces the density and height of Bracken. Could this crushing action be effective on Himalayan Balsam?

Shrawley wood was surveyed in June to map the spread of the plant. Although it can be found throughout the woodland, it is most abundant along Dick Brook, ride edges and open areas. It was decided to concentrate on the open areas and the central part of the forest – in effect trying to control the middle and push it back whence it came!

In late June two ATVs and rollers were used for three days, crushing the plant in all the areas that were accessible to these vehicles. (Plate 2). It appeared to work well, crushing the stems effectively. However even these small, versatile machines could not manoeuvre between all of the trees. In most cases about 90% crushing was achieved but as long as some plants seeded we were wasting our time! (Plates 3 and 4).

The following weekend our intrepid volunteers from the Watch Group hand pulled the core areas to remove the remaining plants. 18 of us worked for 5hrs (90 man hrs). Because most of the plants had been crushed the job did not seem so daunting and two large areas were completely cleared.

A contingent from Bewdley High School also cleared another area as part of their end of year activities (40 man hrs).

After this initial effort regular visits were made to monitor the site. Two of the areas were very encouraging with almost 100% kill, but the other was disappointing with many more plants having to be pulled up on follow up visits.

The difference?

The best areas were both under the canopy of Lime with no other plant species visible (i.e. bare ground). The poor area was the open space where grass was more dominant. This seemed to have a cushioning effect, thus diminishing the crushing power of the roller.

This is an encouraging start as virtually no plants managed to set seed in the two areas and the amount of seed heads significantly reduced in the other.

We will have to wait until next year to find out whether the work has had any short-term effect and at least three years before we can claim any long-term success. So watch this space!



Plate 2

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Balsam in Wyre Forest?

Oh yes, it has arrived!

In the summer of 2001 the first known plants were found along Dowles Brook (below experimental pool). On closer inspection it was found along the whole length of the brook on Forest Enterprise ground. Most of the plants were, fortunately only vegetative, as the light levels were too poor to allow flowering, but on three areas it was flowering profusely. All plants were pulled by hand in July and again in August.

The same stretch of Brook was surveyed this year and, although there seemed fewer plants overall, some still flowered. The key, I think, to Dowles Brook is to maintain shade along its length, monitor it closely and keep pulling the plant wherever its found, not letting it get a foothold as it has done in so many other places.

Hawkbatch and Ribbesford have also been invaded, along the River Severn, Gladder Brook, Switchback road and even in Hawkbatch carpark! Most of these areas are, unfortunately inaccessible by any machinery so whatever the outcome of our experiments with the “crusher” in most cases the only form of effective control seems to be pulling by hand. In small areas this is achievable. However, on the scale that we and many other landowners are faced with, we may have to accept this invader in some places and try to stop its relentless march through our landscape by controlling it in the early stages of colonisation, before it gets out of control!



Plate 3 Before

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Plate 4 After

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