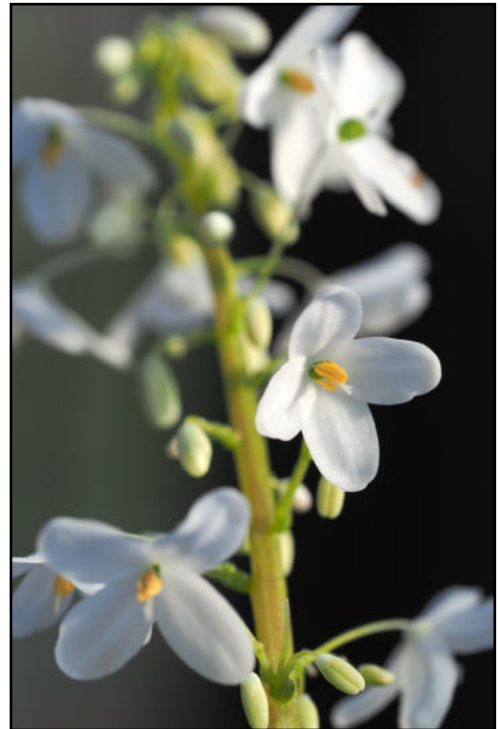


PTERIDOPHYLLUM RACEMOSUM

Peter Williams

I suspect that most woodland gardeners have been tempted to buy *Pteridophyllum racemosum* when it's been offered as a flowering specimen at a plant fair or HPS event. I first saw this beautiful Japanese woodland plant at the HPS Annual General Meeting in 2015 and just had to buy one, despite the price tag of £16.

After admiring the sheer beauty of the potted specimen for a couple of weeks, I forced myself to plant it in a woodland bed that received morning sun. It established satisfactorily but failed to survive its first, quite mild, winter. The post-mortem revealed little except a small, brown mass of dead tissue - cause of death unknown. The inquest continued online and the findings here suggested that the species was considered by many to be a true diva: beautiful, but temperamental and difficult to please. There were reports that plants frequently died without apparent cause, or were devoured by slugs and snails.



All photos © Peter Williams

Before my first plant had died, I'd already decided that I liked the species so much that I needed to have a few more. I thought that I might grow new plants from seed to reduce the cost. However, finding seed proved impossible. It did not appear in large international plant society exchange schemes, or on seed lists produced by specialist alpine/woodland seed companies. Even images of the seedlings were very difficult to find online. I rang a couple of well-known nurseries that supply this plant and both told me that their plants were produced by division, and were imported from Japan. They also said that they had either been unable to get seed, or had had no success with germination.



Emerging shoots and flowers

I decided to obtain my new plants directly from Japan, so, with some trepidation, I opened an internet payment account. I placed an order, paid in advance in yen, and waited for five plants to arrive. I need not have worried. The plants arrived beautifully packed just a week after ordering, in late January 2016. The cost was surprisingly low considering it included the price of the plants, plus the cost of root washing (because soil cannot be imported), health certification from the Ministry of Agriculture, Forestry and Fisheries of Japan, and packaging and transportation. Even with all the charges, the cost per plant was very significantly lower than the price I had paid for my first, short-lived, specimen.

On their arrival, I potted the plants into an acidic compost and kept them in a frost-free glasshouse. Within three weeks new leaves appeared, and in late March 2016 I planted three specimens into a very shady north-west facing woodland bed, which receives just a short period of afternoon sun in mid-summer. The plants thrived. They increased in size, flowered well and, despite receiving no special winter protection, have returned each year for the past three years. Indeed, in mild winters they have remained rather scruffily evergreen. Flowers are usually apparent as the new foliage emerges in late March/early April, and the first flush peaks in late April/early May.

In the spring of 2018, the bed where the *Pteridophyllum* were growing was flooded for several days in early April and then again in mid-April. This coincided with rapid growth of the plants, and I feared the worst. However, the immersion had no ill effects and the plants flowered better than ever, going on to produce mature seed. In previous years I had looked expectantly for seed, but none had been produced.



Seed capsule

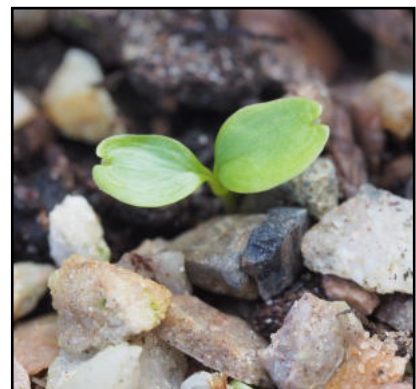


Harvested seed

I sowed the seed immediately, both into my standard compost, and into the soil near the parents in a protecting plastic ring. The potted seeds were kept in the shadiest part of a cold, open-ended glasshouse, and watered occasionally. Seedlings began to emerge in February. I became quite excited at the prospect of having a crop of young *Pteridophyllum* plants, and examined the pot at least daily with a small hand lens. I became even more excited when the first true leaves began to appear because, as I was expecting, they showed signs of being lobed. Doubt then crept in. I began to suspect that that the seedlings looked strangely familiar, and indeed they were. After a few days more, I realised that they were not *Pteridophyllum* but common birch that had blown in from nearby trees. My hopes had rather clouded my judgement, temporarily at least.

In early March, far more promising seedlings emerged. These had ovoid, distinctively notched cotyledons and, after about six weeks, the first fern-like true leaves appeared to confirm that these were indeed *Pteridophyllum* seedlings. The germination rate was 90% - 18 seeds from 20 sown - and, so far, all have survived. The young plants now (mid-June) have two or three fern-like leaves. As each leaf develops it has more lobes than its predecessors.

When weeding near the parent plants, I looked to see if there were any self-sown seedlings, and indeed there were. I initially left these to develop in situ but they became so very heavily shaded by their parents that I decided to lift and pot them, to increase their chances of survival.



Notched cotyledons



The first fern-like true leaves



Mid-June: three true leaves

I also examined the soil inside the plastic ring where I had sown a few seeds. At first, I saw nothing that looked like *Pteridophyllum* seedlings, but closer scrutiny revealed some tiny plants that were clearly the desired species. The true leaves were very small and the cotyledons were missing or damaged in all cases. The attentions of small grazing invertebrates and depletion of food reserves had led to smaller initial true leaves.

I hope to grow the seedlings for a few more weeks in 9cm square pots filled with a commercial, low nutrient, nursery stock compost that is suitable for ericaceous plants. They will then be planted into the woodland beds in situations similar to those of their parents. I do not find growing this species at all easy in pots.

Some appear to thrive, whilst others in the same compost - and growing in the same shady conditions - 'sulk' and lose their leaves in late summer. Although they usually reappear in spring, they do not grow as well as those in the garden. I have tried a range of composts from purely organic to almost totally mineral, and various mixtures of the two, yet I have not established why some do well and others do not - the diva factor perhaps!

The production of seeds last year suggests that the soil and other conditions in my garden are suitable for the growth of *P. racemosum*. This year [2019], the first flush of flowering is now almost over, and once again it appears as if fertilisation has occurred and seed capsules are swelling. The numbers of seed developing does not look as high as last year, and perhaps the very different weather conditions are responsible. Last year was very wet and then very hot and dry, and this year has been the exact opposite. Whatever happens this year, at least I now know that my plants are capable of producing viable seed that germinate freely after a cold period, and I look forward to establishing more of these beautiful plants in my garden and sharing seed with other shade-loving gardeners.



Self-sown seedlings in situ