
Growing on Sphagnum

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It is some years now since we first read A. Duguid's article, "Propagation by Sphagnum". Encouraged by this article, we set about experimenting with this technique to try to raise plants such as shortias and various ericaceous subjects with which we had had little previous success. A. D. writes of sphagnum that "its great advantage over other mediums lies in its ability to retain moisture, thus avoiding drying out, which is so disastrous for germinating seeds." Even though sphagnum may appear to be a magic medium, success rates will not be high if the seed sown is not fertile and in good condition. Seed sown fresh is by far the best, but provided any stored seed has been kept cool and dry, success is still possible. We sowed seed of *Kalmiopsis leachiana* which we got from the surplus seed distribution in April 1991 and germination was excellent. If seed has been allowed to get damp in storage, which has triggered the germination process, then dried out again, this will prove ruinous. A. D. prefers the pink or deep crimson form of sphagnum moss which grows on high moors but all forms will suffice provided they are free of the slimy growth often associated with ditches. The high moor forms do tend to have even better water retentive capacity due to their dense growth pattern. A. D.'s method of preparing the moss is as follows; "Spread the moss in the sun, turning it until thoroughly dry; then rub it through a quarter-inch sieve with the hands (or a stiff brush can be used with advantage). When this is completed you have a medium not unlike rubbed leaf mould, fine and springy. I dry this out again, either in a heated greenhouse over pipes, or in a slow oven until it is very dry and crumbly. This is to ensure that the sphagnum is dead, as, if it starts into growth in the pots, it will kill the plants."

Our method differs in that we dry out the sphagnum by placing quantities of squeezed out moss in an old pillowcase and giving it a whirl in a spindryer to start the process before drying in the sun and then pass it through a garden shredder (every home should have one, but that's another story).

Seed pots, in our case 7cm plastic, are filled to within 2cm of the top with a 50/50 peat and gritty sand mix, with a small amount of Vitax Q4 or similar. A 1 – 2cm layer of sphagnum is placed on top of this before the pots are thoroughly soaked from the top. The seed is then sown on the surface of the sphagnum and the seed pots kept under cover in a cold

frame. If the frame lights are left off in warm weather we always cover the frame with a mesh as blackbirds love to scatter the moss around, seedlings and all!

If the seed is going to germinate, it is usually up by late May but we always keep these seed pans as we have had odd germination as late as July. However, getting seeds to germinate is usually the easy part; with ericaceae, shortias and the like, the real problem lies in growing on. It is not really difficult to raise these plants but it does require patience, constant attention and an understanding of the plants' habits. As the moss in our method has not been killed (though the spin-dryer and the shredder must have frightened it a good deal!) it does start to regrow; we think this provides favourable conditions for the young plants but regular trimming with a pair of scissors is necessary to save the tiny seedlings from the 'forest'. The growth of the moss keeps a buoyant atmosphere around the plants which is essential to their health. They have a very small and shallow root system so any drying out at this stage is fatal. The peat/sand compost below the moss mostly serves only to support the layer of moss, though there may be some capillary raising of nutrients in the mix up to the seedlings. Their roots do not penetrate beyond the moss for some time. At first, we tried filling the pots entirely with sphagnum but we got spindly seedlings since the seed tended to drop through the moss and we have been happier with the results from using the peat/sand layer below.

The seedlings should be given dilute liquid feed at regular intervals and should not be pricked out until at least their second spring; we sometimes leave them until the third spring, if we think they are not large enough. Great care should be taken not to damage their still small root system when pricking out and the medium used should be rich in humus and very well drained. We use, by volume, 50% leaf mould and 50% grit. The pots should be kept constantly moist and shaded, with the regular feeding continued. We have had first flowers on shortias in their third year by this method. Recently we have been using sphagnum to replace the peat in the 50/50 peat/grit mix in the seed pots and results seem good. We have also had good germination of seeds such as *Eritrichium nanum* and *Diapensia lapponica* sown directly onto this 50/50 sphagnum/grit mix then covered with a thin layer of grit. It should be of no surprise to us that the more difficult seeds do so well in this medium as it is mimicking the conditions that many of them encounter in their natural habitat; we're back to observation and an understanding of the plants you are trying to grow.

A. D. also describes how he germinates lilies in a pot of sphagnum, transferring the entire contents into a larger pot filled with a suitable compost so the seedlings can root right through the sphagnum into the compost with minimum disturbance. We have not tried this method but

do know of someone who has great success this way.

We are very grateful to Mr Duguid for describing his method which set us on the path to successfully raising many of these more difficult plants. We hope that we may encourage you to try growing on sphagnum and wish you the same success and enjoyment that we are getting from a garden full of these wonderful plants.

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In response to Alec Duguid's article of SRGC Journal Number 72 June 1983.