

Meconopsis Group: Digital Herbarium Progress Report

- At the last Meconopsis Group meeting you may remember that I introduced the concept of collecting together photographs to establish a Digital Herbarium as a means of studying Meconopsis. Disseminating this information at these meetings and on the website will help Meconopsis growers like yourselves to identify or confirm exactly what species and subspecies you are growing as a prerequisite of establishing the status of each Meconopsis taxon in cultivation which in turn is essential if we are to be successful in preventing any more from being lost. Exactly the same can and should be done for the various clones and hybrids, but in my opinion it should be a priority to do the species and subspecies, for reasons which I hope to demonstrate.
- I gave lists of species ± secure, ± lost and scarce in cultivation, based on the results from a questionnaire which had previously been circulated to members. I asked you all to take photographs of the Meconopsis species in your garden, particularly those on the scarce or lost list, and this information was repeated in Alice's excellent newsletter, together with the email address to which we would like you to send them.
- Since then we have had the latest Seed Distribution so I have amended the 'scarce' list accordingly. The species in white are additions. This is a great time of year to start making a photographic record of the Meconopsis you are growing both from our own Seed Exchange and other sources. We certainly don't mind where your seeds or plants came from, but please keep as detailed records as you can. Please send us your photographs of any which flower this year and keep the others to send when they flower in future years. It will be really useful to have photographs of plants at all stages of their development.
To emphasise just how lucky we are to have access to these seed from our own Seed Exchange and how precious they are, I thought I'd provide you with a bit of additional information.

- Tables 1 & 2: These show the last date when our 'scarce' species were available commercially (none are now). They also show how dependent we are on very few people putting seed into the exchange for each taxon, so a big thank you to everyone who donates. Please consider growing as big an area as you can of each species to maintain as large a genetic range of plants as possible and ensure that you can continue to be successful.

- It is much better to grow a larger area of fewer species and to avoid the ones which could potentially cross. The offspring are most likely to be sterile and in the case of the monocarpic species may mean you will lose the species. Don't waste any seed, if you cannot sow it all, put it into the exchange or give it away to somebody else. Ideally we need one or more members of the Group to champion each of these

Meconopsis species scarce in cultivation				
	Plant-finder	Meconopsis Group seed exchange		
		2015	UK donors	2006
• aculeata	2013	✓	2	1
• baileyi pratensis	2003	✓	1	0
• betonicifolia	X	X	0	0
• delavayi	2008	✓	1	1
• dhwojii	2006	✓	1	1
• gracilipes	2009	X	0	0
• grandis orientalis	X	✓	2	N/A
• henrici	2005	✓	1	0
• integrifolia integrifolia	2004	X	0	Various
• integrifolia souliei	X	✓	1	N/A
• lijianensis	X	✓	1	N/A
• napaulensis	N/A		0	N/A
• pseudovenusta aff *	X	✓	1	0
• robusta	2005		0	1
• rudis	2013	✓	2	0
• simplicifolia simplicifolia	2014	✓	1	0
• staintonii	X	✓	3	2
• sulphurea sulphurea	X	✓	2	Various
• tibetica	X		0	0
• wallichii wallichii	2016??	✓	2	0
• wilsonii australis	2012	✓	1	0
• wilsonii orientalis	2013		0	0
• wilsonii wilsonii	X	✓	2	0

species, to really make an effort to make plants available so we can be sure that several people have populations from which they are generating surplus plants and/or seeds. Finally it is worth remembering that weather conditions in most of Scotland are becoming less suited to growing *Meconopsis* species and the situation is likely to get worse with milder wetter winters and drier warmer summers.

Big blue perennial <i>Meconopsis</i> species/subspecies		
* Delete ?, ** Add ?	MG Seed Ex 2015	Status
• <i>M. baileyi</i>	ssp <i>baileyi</i>	✓ Secure
	ssp <i>pratensis</i>	✓ Scarce
	ssp <i>multidentata</i>	X Lost
• <i>M. betonicifolia</i>		X Lost ?
• <i>M. grandis</i>	ssp <i>grandis</i>	✓ Secure
	ssp <i>orientalis</i>	✓ Scarce
	ssp <i>jumlaensis</i>	X Lost
• <i>M. simplicifolia</i>	ssp <i>simplicifolia</i>	✓ Scarce
	ssp <i>grandiflora</i> *	X Lost
• <i>M. nyingchiensis</i> **		X Lost ?

6. I also suggested that the perennial species are likely to remain more popular than the monocarpic ones and I've updated this list too. Being perennial makes them useful parents for new crosses and clones and even if these are sterile, there is still the hope that they will survive and grow bigger from year to year, and then of course they can be divided. We need to know which species and subspecies are still in cultivation and perhaps by recreating some of the crosses which have been made in the past we can shed more light on the parentage of some of the

clones which the Group has named.

It is generally supposed that most of the Infertile Blue Group came about from hybridisation between *M. baileyi* ssp *baileyi* and *M. grandis* ssp *grandis* and that *M. baileyi* ssp *baileyi* and *M. grandis* ssp *orientalis* have given rise to the George Sherriff Group, but who knows what is produced by crossing *M. grandis* ssp *grandis* x *grandis* ssp *orientalis*? Perhaps these two are well on the way to speciation and some of the sterile clones have arisen because of that and it still is not clear whether or not *M. simplicifolia* in either of its subspecies is involved. So it would be very interesting to make some of these crosses again and document them carefully.

7. *M. simplicifolia* ssp *grandiflora* in Sikkim is certainly monocarpic, so that might have to come off the list, but there is another big blue perennial poppy, *M. nyingchiensis* described in 1980 which should be added. It grows in SE Tibet in an area pretty well explored by Ludlow & Sherriff, so it is possible that it has been in cultivation. It's a bit like a small *M. simplicifolia* but with white filaments and there are certainly a few L&S herbarium specimens which could be this species.
8. So please take pictures at all stages of growth, but the minimum four we initially need are: The whole plant, the leaf, the seed pod and flower details. Please email in the individual photographs as jpegs. Then, we can look at them individually, put them on one slide together as I showed them last time or do a comparison between species or subspecies.
9. *M. grandis* ssp *grandis* & *M. grandis* ssp *orientalis*: Whole plant comparison. *M. grandis* ssp *grandis* tends to have only one flower stem above false whorl, *orientalis* usually has more.
10. *M. grandis* ssp *grandis* & *M. grandis* ssp *orientalis*: Leaf comparison. Basal leaves of *M. grandis* ssp *orientalis* tend to be much broader than *M. grandis* ssp *grandis*
11. *M. grandis* ssp *grandis* & *M. grandis* ssp *orientalis*: Seed pod comparison: Quite distinct, *M. grandis* ssp *grandis* with smooth green capsules (if they develop bristles these fall off as they ripen). *M. grandis* ssp *orientalis* capsules are bristly with pale ribs and dark valves

12. *M. grandis ssp grandis* & *M. grandis ssp orientalis*: Flower comparison. *Orientalis* has a wider range of petal colour, some being a good clear red, as well as various shades of blue and purple. A good proportion have the white petal bases like the clone 'Keillour'.

Both have white filaments, but in *M. grandis ssp orientalis* they form a more compact hemisphere. If you are growing wild collected seed, the origin is a big clue as to the subspecies, as they do not overlap at all. As far as I am aware the only *M. grandis ssp orientalis* in cultivation derives from a Peter Cox collection on the NAPE expedition (= Nagaland Arunachal Pradesh Expedition 2004).

13. Although Ludlow & Sherriff made 10 collections of *M. grandis ssp orientalis*, of which 5 included seeds, as far as I know none of these exist today – though it would be great to be proved wrong. There have been many collections of *M. grandis ssp grandis* which are still in existence today.
14. Distribution map of the three subspecies of *Meconopsis grandis*: *M. grandis ssp grandis* definitely extends further north into Tibet (there are at least 3 other people in the room today who have seen it there). In many people's opinion it is not native in Sikkim. It is found only in the west in the vicinity of Zhongri where it is thought to have been introduced. I am certain it does not occur in Bhutan; there are specimens in the herbarium in Thimpu which are in fact *M. simplicifolia ssp grandiflora* and there are also other people who I believe have confused these two taxa. This means that all three subspecies are very widely separated and that Ludlow & Sherriff probably only ever saw *ssp orientalis* and not *ssp grandis*.
15. OK that's all the theory and now the bit you have been waiting for. Sharon Bradley sent me lots of good photos. First, *M. sulphurea sulphurea* for which there were only 2 donors in the Seed Exchange this year.
16. *M. integrifolia integrifolia*: I had this plant in the garden this year, only one survived the winter, so I did not get any seed.
Style broad and sessile, stilar arms decurrent on top of ovary, flowers and buds ascending to upright (not *M. pseudointegrifolia*, *sulphurea* or *lijiangensis*)
Petals incurving, style absent (not *M. integrifolia ssp souliei*)
17. Comparison of *M. sulphurea sulphurea* and *M. integrifolia integrifolia*
18. *M. wilsonii orientalis*: whole plant
19. *M. wilsonii orientalis*: leaves
20. *M. wilsonii orientalis*: Seeds and flower