M. sherriffii and a few others
by Alan Furness

(Written up by P. Anderson)

Alan has grown many *Meconopsis* in particular monocarpics. He talked about his experiences growing them.

M. sherriffii has been seen recently in north and north west of Bhutan where Ludlow and Sheriff made their original collections. The story of *M. sherriffii* is contained in Harold Fletcher's book, "A Quest of Flowers".
Seed of this species seems only to have been collected twice by them; firstly in 1936 in NW Bhutan and then in 1949 by Ludlow himself when he collected five pounds (weight) of seeds. The plants that Alan obtained from Jack Drake's nursery probably came from that collection of 1949. There has probably been no new seed introduction since. Tim Lever saw seeds capsules last year in Bhutan. He broke some seed capsules and scattered the seed on the ground. Bhutanese are very reluctant to let seed of any kind out of the country. However, unless seed is collected or the RBGE herbarium specimens yield productive seed, we may never see *M. sherriffii* in British gardens again as it is unique to Bhutan.

Alan showed a watercolour of *M. sherriffii* by Lawrence Greenwood. The plant in the picture was taken from a slide of one of Alan's *M. sherriffii*.

Alan gardens at the southern end of Northumberland, south of the Tyne near Hexham and Corbridge The garden is at about 550 ft above sea level, on the south side of the Tyne valley and has both north and south facing slopes. Alan grew *M. sherriffii* both in a north-facing, well-lit area in the shade of a willow tree and in special beds. *M. integrifolia* and *M. pseudointegrifolia* also grew there in garden soil with little humus added. The soil is a well-drained, gritty loam and Alan feels that we often grow monocarpic species in too much humus. Many pictures shown today confirmed that plants such as the *M. horridula* aggregate grow on screes. Also Julia Corden and Tim Lever's pictures of *M. sherriffii* growing in Bhutan show it growing on boulder screes. So that unlike big blue poppies, there is a basic difference between these plants in what they need in terms of fertility. At the end of the day, many of them do not grow for very long.

In his garden on a moraine scree he grows *M. horridula* aggregate and *M. punicea.* Before a shelter belt of trees was planted, the petals were blown horizontal by howling west winds. Maybe that is how we should grow these plants, but the trouble is that too much wind causes damage to the foliage. Maybe that is not important for monocarpics as they die after flowering.

Specialist beds These were raised beds with a few feet of soil and wooden sides. The beds were surrounded by shelter netting. With increasingly warm summers Alan has found it more and more difficult to grow many *Meconopsis* in the open garden. Four years ago, when the Joint Rock Garden Plant committee visited, there were 24 young *M. sherriffii* growing there. But, within three weeks all the plants were dead.

In 'A Quest for Flowers' by Fletcher, p 226, there is a picture of *M. sherriffii*, but it doesn't look like any *M. sherriffii* that Alan has seen.

Alan grew *M. sherriffii* for 17 years from 1988-2005. The plants were good for 15 years, but for the last 2 years the flowers looked different in shape and finally he had no plants at all.

The problem may have been dormancy. Whereas *M. integrifolia* went completely dormant, looking like a tightly-shut Brussel sprouts, *M. sherriffii* probably never went truly dormant. In January the plant had a green centre to the rosette with brown leaves round about. In the wild in January the plant is probably under snow. In the garden it was an early starter in terms of growth when the temperature rose. So it was very prone to frost damage. A simple glass cloche helped for a short time, but not with severe temperatures (at -18^{o}C) with no snow cover, *M. sherriffii* is not frost hardy.

Alan showed a planting of *M. sherriffii* in its second year. There were multi-crowned plants and single-crowned plants. With the latter, the plants invariably flowered and died. They could not be described as perennial. About 40% of his *M. sherriffii* plants were perennial and 60% monocarpic - almost biennial. With this 'strain' of *M. sherriffii* the stems tended to be lanky and always single-stemmed. If plants were multiflowered, each flower was on its own stem.

Alan got copious amounts of seed from his *M. sherriffii* and sent it to Tromso where it failed and to Royal Botanic Gardens Edinburgh. He does not know how it fared (nor did anyone at the meeting), but perhaps it is in the bank of frozen seed.

One plant perennated forming a large plant that lasted for 8 years. It was the one painted by
L. Greenwood. It actually had five stems, but only three were painted because it cost less to paint three. The plant is not like the original Sherriff plant growing at Ascreavie. Why not?

The flowers on Alan's plant looked more raggedy. They looked very like *M. pseudointegrifolia* ACE collected in Yunnan. John Richards and Alan looked at leaves and leaf veination, which is supposed to distinguish *M. sherriffii* and *M. integrifolia* according to Kit Grey-Wilson, but it doesn't. Everything is the same except that *M. sherriffii* has a pink flower and *M. pseudointegrifolia* has a yellow flower. However, flower colour is not a character that is used distinguish one species from another. An explanation may be that the Himalayas and Chinese mountain chains are like New Zealand in being very young in geological terms. Speciation is still an active process. With respect to M *horridula* and the presence or absence of spots and leaf spine variations, probably all that is happening is that speciation is going towards new species. Like Celmisia in New Zealand, speciation is currently active. When Alan sows seed of *M. horridula* and wild collected seed of Celmisias the seedlings vary.

M. integrifolia ACE is in many ways different from *M. pseudointegrifolia*. *M. integrifolia* has many flowers per stem. For one show where the Joint Rock committee were to be meeting, Alan took along a plant grown from seed collected by the AGS at Wolong 1980. The plant had many flowers along one stem. The Joint Rock committee decided that it had to have a clonal name. This was ridiculous as the plant was monocarpic and would soon die. The plant was different from both *M. pseudointegrifolia* and *M. integrifolia*. Alan is suggesting that there is a gradation between species as there seems to be between M. *horridula* and *M. racemosa*.

Alan showed a slide of an *M. integrifolia* he had grown from SRGC 1980 seed list. It was short and a beauty, but was it really *M. pseudointegrifolia*? It had the wrong petal shape for *M. pseudointegrifolia*; it was more rounded, but looked close to *M sherriffii*. Alan kept it growing in his previous garden in Hexham for 10 years and it even survived when he moved gardens. However, during two hot summers running, he lost hundreds of seedlings and lost the plant.
There is a plant being sold by Vojtech Holubec and Joseph Jurasek called *M. integrifolia* var. *uniflora*. Alan has not seen it in flower, but he has young plants and suspects that it is just a high altitude form. There are probably lots of plants from other areas that we haven't seen yet. Mountains are huge and treks tend to visit the same places. What is in the places that no one visits?

Alan had a *M. x beamishii (M. integrifolia* x *M. grandis*) It was fertile and was from *M. x beamishii* so it was probably F2 and strictly speaking shouldn't be called *M.* x *beamishii*. It didn't last.

M. horridula
Alan grew *M. horridula* for years from SRGC seed that was collected at a time when people were actually collecting seed - which doesn't happen very much now. He is not sure if what he grew was really *M. horridula*. At the meeting today, there was no mention of *M. horridula* from China. But Alan thought that *M. horridula* did grow at the Chinese end of the Himalayas. Certainly this year Holubec and Jurasek give *M. horridula* in their list. It is possible that what they are listing is one of the forms talked about at this meeting. Possibly *M. horridula* is from the western end of the Himalayas and these other forms are from the eastern end. But all these (Alan's)

wishy washy flowers were on their own scapes. Alan grew another odd semi-double *M .horridula* that had each flower on its own scape.

The ACE trip of 1992 brought back a seed collection of what they called *M. horridula*. This was before China opened up. But what is this plant on the slide? ACE collected what they called *M. rudis*. What is it? Maybe people should grow lots of them and try and evolve good colour forms. We should keep growing and keep taking seed from good plants. Alan grew two species and they self-seeded on garden soil.

M. punicea

Alan has grown it for a long time. It doesn't flower every year. He hasn't got to the stage of having *M. punicea* flowering every year. He finds it often doesn't set seed even when you try hand pollination. It appears that the pollen is ripe and ready for transfer after the petals fall off. It may be an advantage to pollinate after the petals fall. Maybe the pollinating agent can't reach the pollen with a flower of the shape of *M. punicea's*. When the petals fall off, the capsule has lavender blue pollen ready to take off. To get good seed, you have to help the plant along in this sort of way..

Last year Alan sowed 10 pots of *M. punicea*, but finds it difficult to grow them on to the kind of plant he thought was needed to plant out. Now having seen plants in the wild he has changed his mind. When he plants them out and they flower he gets 3-4 flowers per plant not 20, but the plants in the wild often had only 1-2 flowers per plant. So maybe we are being deluded into thinking that we must produce great big plants in the garden. Well we probably can by adding fertiliser.

M. quintuplinervia

Alan grows two different forms. One creeps around and one is said to be a 'clumper'. *M. punicea* was growing nearby & Alan collected seed from *M. quintuplinervia* and Alan will sow it to see what comes up.

He has already produced *M.* x *cookei (M. punicea x M. quintuplinervia)*. The hybrid was very like Leslie Drummond's *M.* x *cookei* 'Old rose' except that Alan's flowers had white streaks on top of the petals which are often a sign of hybrid instability. This was his best hybrid, but was not a 'clumper', so it did not last long. The best clumper was miserable. We want to breed the "blueness" out of the hybrid.

M. delavayi

Alan finds it very variable. He grew it in rich scree; the plant shown was tiny but 'nice'. He grew it in a crevice bed, but got a different, much fuller, cup-shaped flower. It is obviously a variable species in the wild. It flowers in May, is dormant in July, flowers again in September and then the plant dies. This happens over and over again. It is not known if this is in part caused by the compost or soil, but *M. delavayi* seems to like gritty soil.

Alan's two best plants are in pots in the greenhouse growing amongst European primulas with a bit of shade and a cool temperature. He finds that the resting buds of even plants like *M. integrifolia* are much more prone to rotting in the winter months. This may be because of climate change. Maybe our problem in growing *Meconopsis* is that we are not getting dormancy.

Questions and answers and comments

Q. What killed the *M. sherriffii*?

A. After 15 years Alan was down to two plants that didn't flower regularly and they never flowered at the same time. The last fertile seed he got were from the plant 'selfing'. This happened twice and the plants probably ran out of genetic diversity. Plants grew and formed flower buds, but one after another they died. He tried shifting them to other locations, but this was not successful either.

Comment • Plants probably succumbed to fungal infection.

• James Cobb finds it difficult to grow *Meconopsis* in Fife whereas his daughter in the north of Scotland in Caithness has no difficulty where the climate is much cooler. James suggested that as summers become warmer and drier growing *Meconopsis* of any kind will become increasingly difficult.