President’s Message

ALAN LAWRENCE

The word on the street here in the Upper Mid-west is that spring has arrived. The snow cover, usually with us until the end of April, has just about gone which in some ways puts the early growth of many Primulas at risk from the inevitable late April/early May frosts. We cross-country skiers are complaining loudly about the early closings of our favorite trails.

By now, most of us who regularly grow from seed will be checking our seed pots and worrying about those that show no sign of any activity yet. As I use my “ellipso pot” method of germination, I tend to keep these seed pots for a long time. After a year or so, I tend to put them outside to stratify over winter. I have just brought them back inside and was pleased to see one pot of P. incana, from which I had previously taken six seedlings, had produced another seedling. These seeds were planted in January 2008!

The Annual Show is just around the corner, and I encourage all of you to try to make the trip to Tower Hill, MA this year as Joe Philip and the New England Chapter have worked hard to put on a great program this year, with John Richards being the “guest of honor.” We all look forward to his presentations. Attending the show also allows you to participate in the forums and meetings which help to shape the future of the Society. And there are always great plants to see, photograph, and buy, as well as lots of interchange of valuable information.

Finally, it is with great pleasure that the APS Board announces the award of the Dorothy Dickson Award for service to the Society to Ed Buyarski. Ed has served the Society with distinction for many years, having taken on the Presidency for 10 years. He is now enjoying a simpler life as President of the Juneau Chapter!
Breeding Green- and Grey-Edged Auriculas:  
A Beginner’s Tale  
Part Two – Concerning Mealiness

DR. DAVID MELLOR

“When you have eliminated the impossible, whatever remains, however improbable, must be the truth.”

Sherlock Holmes, The Sign of the Four, Ch. 6

This is the second part of the short series on breeding green- and grey-edged auriculas. If you missed the first part, you’ll not know that I’m trying to deduce whether or not a grasp of basic genetic theory can help breed better auriculas. Oh, and that the style of writing adopted is supposed to be a bit like a detective story. Now read on........

I began my quest by reading Roland Biffen’s small book, The Auricula, first published in 1951. It is excellent reading, and copies can still be obtained on eBay from time to time. Biffen was one of the outstanding botanists and geneticists of his day, and best of all, he was an expert auricula grower and breeder. To give you some idea of the presence of meal, it remains, however improbable, must be the truth.”

Well, seemingly no one has dipped a toe into this cool, clear water in the sixty years since Biffen wrote up his findings. Certainly no one has contradicted him, so we can take it as fact.

Now, it’s about time to take a mental leap from observed plant characteristics, which are expressions of the plant’s genes, to the genes themselves. It may look like a sleight of hand, but it is actually pretty important to be explicit. Biffen never said there was a single gene M/m that controls the expression of meal. All he said was that the expression of meal (by a gene, or genes unknown) was recessive. But I’ll say it. And I’ll call that gene M/m for the sake of the argument and to see where it may lead.

This statement, that a postulated single gene M/m controls the expression of meal, is straightforward as long as the limitations of the underlying assumptions are kept in mind. The main one is that the math is kept very simple if we invoke just the one single gene to account for observed mealiness, even though there may well be other genes affecting meal expression as well. This is directly analogous to invoking just one single gene (which I’ll call B/b) to explain, for example, human eye color, as in the following example:

B – the dominant gene for non-blue eye color;

b – the recessive gene for blue eye color

Note the use of the geneticist’s convention – a letter presented in lower case is always used to indicate a recessive gene while a letter in upper case denotes the dominant gene. Odd though it may seem, the gene for non-blue eyes is best described as dominant for the absence of blue. The other, equally accurate way of describing the same gene is that it is recessive for blue. The absence of blue is, of course, any color other than blue, including brown, green and hazel.

Of course we now know, thanks to the human genome project, that there are at least four genes, not just one gene, that work in combination to determine human eye color. Nevertheless, the simple single gene model of B/b actually predicts eye color in human families with better than 90% accuracy, despite these obvious limitations. The reason is that mathematically more complex gene models can always be “compressed” back to an equivalent single gene model. Some predictive accuracy will, of course, be lost in the compression process, but a single gene model can often retain a surprisingly large amount of accuracy while being a lot easier to understand than a model using several genes.

Taking the next step, then, it is easy to see that there are always precisely only three types of gene re-combinations possible in any single gene model, whether human or auricula. I’ll show the auricula mealiness gene re-combinations next to the human eye color re-combinations. This makes it easier to visualize the consequences of having any particular combination of genes – either in you, your parents, your children or your auriculas:

M – the dominant character, expressed as a lack of meal;

m – the recessive character, expressed as presence of meal.

This seemed like a pretty startling fact to me. Green-edges and grey-edges are the same except for the way in which a gene (OK – maybe more than one) is set. I think we ought to look at this a bit more closely.

By means of ingenious experiments, Biffen was able to prove that auricula mealiness is a recessive characteristic. He even gave a geneticist’s shorthand name for this mealiness characteristic:

Biffen proved conclusively that green- and grey-edges differ only in that the green-edges are free from meal (farina), while the grey-edges produce an overall covering of meal on the petals and foliage. In both sorts, the cellular structure of the outer parts of the petals and foliage are exactly identical to normal, green (foliage) leaves. A grey- (or white-) edged show auricula is therefore simply a green-edged show with meal production genetically switched “on” instead of switched “off.”

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**TYPE 1:** BB = none-blue eye color, MM = no meal expressed Green-edge

**TYPE 2:** Bb = none-blue eye color, Mm = no meal expressed Green-edge

**TYPE 3:** bb = blue eye color, mm = meal expressed Grey-edge

The most important point to note is that, for blue eyes in humans, and for meal to be expressed on edged auriculas, recessive genes must be inherited from both parents. In the situation in which one parent donates a dominant gene (B or M), that particular parent will determine the outcome for the offspring, irrespective of whether the other parent donates a recessive gene (b or m) or a dominant gene (B or M).

Surprisingly then, we have here our first discovery, which is that, if we want to breed green-edges and grey-edges, there are actually two genetically distinct types of green-edge! One of them carries no recessive gene for meal (this is the Type 1 green-edge) while the other sort carries the recessive gene for meal (the Type 2 green-edge). In contrast, there is only a single type of grey-edge – called Type 3.

At this point, it is probably best to not delve much deeper into the subject – we’ll do that in the next part of the series. But for now, it is well worth saying that there are some profound practical consequences for breeders. One is that it is the Type 1 green-edges that tend to make the best prize-winning show plants. This will come as no great surprise to the traditional, old-school breeders who disavow any crossing of greens with greys. If you cross a “pure” (i.e. one with no recessive meal gene) Type 1 green with a Type 3 grey, you will get (among other things) some Type 2, recessive gene carrying green-edges in the resulting progeny. It is these Type 2 greens that have the “China Edge” fault mentioned in Part One of this series. This is the reason that underpins the “taboo” against green x grey crosses. However – as we shall see in Part Four – the documented evidence tells an altogether different story. Which is that most of the great modern prize-winning Type 1 green-edges are in fact descended directly from Type 2 parents. This is really quite an astonishing discovery. As we shall see in the next part of this series, the long-standing “taboo” (tantamount to a voluntary ban) on crossing green x grey actually has the effect of reducing the numbers of Type 2 greens in the auricula world. So much so that Type 2s are, in effect, our very own endangered species. If the “taboo” was rigidly enforced, eventually all Type 2s would disappear from cultivation, leaving only Type 1 greens (with no recessive meal genes) and Type 3 greys (with only recessive meal genes). Superficially this might not seem like such a bad thing. However, as already mentioned, when we come to examine the recorded, factual data regarding parentage, it becomes crystal clear that it would not have been possible to breed such outstanding modern varieties as we enjoy today without access to Type 2 parents. Especially ‘Fleminghouse’ and ‘Roberto’, both of which are Type 2 and each of which can be traced back as parents of most of our great Type 1, prize winning green-edges.

There are also quite profound theoretical consequences for breeding new grey-edges using Type 2 greens in “mixed marriage” crosses. But, as should always happen in the best detective novels, we are approaching the end of our chapter once more. By way of a cliff-hanger I can say that, in Part Three, we perform some extremely simple math and discover which crosses work best for particular desired outcomes. Ah, but I hear you say – I’m still one step behind, wondering if anyone can tell the difference between a Type 1 green and a Type 2 green. Well, can they? I don’t want to spoil your anticipation, but the answer is yes, and in Part Four, I’ll not only show you how to do it but identify a number of Type 2 green-edges, some of which you may already grow!

This four-part series will continue in the next issue. If you simply cannot wait, you may email the editor (editor@americanprimrosesociety.org) for an email copy of the next two installments.

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New Fancies

DEREK PARSONS

This note from Derek Parsons (with his and Henry Pugh’s photos) discusses new developments in the Show Auricula Fancy Class in England.

Some of us are now trying to upgrade the Fancy Class in the Show Auriculas schedule and to discourage using the Fancy Class as a catch-all for failed Edges. I have written a show standard indicating that preference should be given to new types not specified elsewhere in the schedule, and this has been adopted by the Midland and West Section. A few years ago a chance seedling appeared, subsequently called ‘Moon Fairy’, raised by Cliff Timpson, I think: a real charmer. About the same time some of my open pollination crosses yielded roughly similar novelties and I showed them in the Fancy Class.

Viv and Henry Pugh liked the new faces and Henry started a Fancy breeding program based on the new types (and others). This is the first time, as far as I know, that someone has deliberately tried to breed Fancies; usually they are a by-product of programs aimed at Edges or Selfs. Generally speaking, I have had positive feedback with respect to the new plants, and there have been tentative soundings to see if they could be the start of a new class but I think it is far too early for such moonshine, and I shall continue to show them in the Fancies. This year I have just sown some crosses between the new types, so 2011 may be interesting.

Viv and I call the new Fancies “Cloud Auriculas” but Les Allen calls them “Storm Auriculas,” probably because he lives in the back of beyond and it’s always raining in mid-Wales!

Additionally, the Midland and West are putting up a bit of silver-ware for “The Best Fancy Seedling,” so Fancies really are the flavor of the month --plus at the 2011 AGM, Henry Pugh is going to give a slide show on his Fancy breeding program.

Some of the traditionalists are less than enthusiastic but were it ever so? I think innovation is the life-blood that ensures there is a future for auriculas. So there!

Elizabethan Primroses

Those cheerful, colorful polyanthus with the ruff of green leaves around the flowers or a flower within a flower are featured in a website called the Transatlantic Plantsman:

http://transatlanticplantsman.typepad.com/transatlantic_plantsman/annuals/

This website features a series of articles on hybridizers introducing new strains of these old flowers.

The three most popular Elizabethan plants still grown today are:

**Hose-in-Hose:** No green calyx, but with one flower set inside another identically patterned flower.

**Jack-in-the-Green:** With a much large enlarged green calyx surrounding the double or single flower.

**Jackanapes:** With an extended green calyx, mixed (usually striped) with petal tissue the same color as the petals.

The website reports that some of the anomalous primroses (as the unusual forms are called) the plant developers started with came from Barnhaven Nursery. You may have seen some of these talented hybridizers’ results in your local nursery over the last two or three years. The “You and Me” Series was developed by Dutch plant breeder Kees Sahin, British plant breeder Simon Crawford, and especially Otka Plavecova at the Silva Tarouca Institute at Pruhonice near Prague. These are polyanthus in form with a cluster of flowers held on strong stems to raise the double-weight blooms well off the ground and away from mud splash.

This website features a series of articles on Elizabethan Primroses, so for pictures of these lovely and unusual polyanthus and for more information go to the website.

Gwen Baker

It is with sadness we report that Gwen Baker, auricula grower and hybridizer, passed away January 1, 2010. She co-authored a book on auriculas with Peter Ward in 1996. Active in the auricula world in England for many years, she will be missed by all her friends.
For a very long time I have wanted to go somewhere in the world to see \textit{Primula} growing by the acre in the wild. In June 2006, I went to Yunnan in south west China, with the Alpine Garden Society for over three weeks. There was a long flight from Heathrow to Beijing, another flight to Kunming where we spent the night before flying to Lijiang to start to get accustomed to the altitude: 2400m (7874ft) …. We were accompanied by two Chinese guides and were taken to various temples and tourist sites. I would have preferred to have gone to different areas and looked at more plants, and I usually wandered off to see what was growing around the temple or monastery. When we were at the 10,000 Camelia Temple there was a beautiful woodland glade behind it, with \textit{P. poissonii} growing in profusion and butterflies everywhere….

On the way up to Tianchi Lake from Zhongdian I felt as if I were in heaven! We pulled up on a little plateau where cattle and black pigs were grazing among a sea of \textit{Primula sikkimensis} and \textit{P. secundiflora}. I wandered about in a daze, then found a beautiful white form of \textit{P. secundiflora}. There were some flowers which just had a tinge of pink in the petals. By this time we had reached 3550m (11645ft).

We saw and met some delightful people of different races. Mainly there were Tibetan nomads, but under the new regime they had stopped being nomads. We saw various ponies and mules and large mastiff dogs used for guarding. There were little groups of huts or tents, but sometimes a single tent/hut structure with mainly young men looking after herds of yaks. These are multipurpose animals, some used for milk, others as draft animals and some grazed for beef. In the mountains I used to offer people my packed lunch or sweets, then asked in a form of sign language, if I could photograph them. They were amazed when they saw themselves on the digital screen!

I was invited inside one hut, which was extremely smoky as there was a fire in the middle of the single room with no apparent chimney. They were smoking yak milk cheese on some wire netting above the fire. (The churn and milk bucket were made of wood and leather, and I had seen in a market buckets, skips and animal feeding troughs made out of recycled tyres.) There was a little shrine in one corner, two very basic platform beds, and a pot of some sort of meat stew simmering on the fire. I was invited to have some, but as I was suffering from a tummy bug at the time, I was sad to have to refuse. It would have been interesting to taste the “brew”.

We camped for three nights at Da Xue Shan in the Big Snow Mountain region and explored the area in Jeeps. Where we camped beside a small river, growing four feet up a tree, was a \textit{Primula} – probably \textit{P. polyneura}, but as it was in a wind tunnel: I never managed to take a good photograph for identification.

For me the highlight was being taken to where \textit{Primula hongshanensis} [also listed as \textit{P. boreiocalliantha}] was growing in a mossy channel under pine trees and rhododendrons…. \textit{P. dryadifolia} also grew up there, plus a minute pink \textit{Primula}. On the way up we walked through masses of the tiny \textit{P. nanobella}, growing between the small purple \textit{Rhododendron aff fastigiatum}, which grew like our heather…. There were hundreds of different plants, flowers, shrubs and trees; too many to even list the species. Beside all the \textit{Primula}, perhaps the various \textit{Corydalis} and \textit{Nomocharis} were my favourites. It was a wonderful holiday at the top of the world, where a dream came true.

This article was originally printed in the \textit{National Auricula and Primula Society Yearbook}, 2009, p.9-11. Some sections have been omitted here, but you can check the full article in the Yearbook, or contact the editor on-line for a full copy by email.
Susan’s Adventures in Ingleborough

SUSAN SCHNARE

I never really liked Reginald Farrer. He used his exquisite writing abilities too often to ridicule and demean others, and delighted in spreading contentiousness among his cohorts. Instead of a charming quirk, his need for a complete set of Jane Austen while traveling through uncharted regions indicated to me a need to have other unsung shoulders bear his burdens. Still, I felt a pang of regret when I read in Ursula Buchan’s *Anthology of Garden Writing* (1986) that there was nothing left of Farrer’s gardens.

It was inevitable that I would meet up with Farrer (1880-1920) and discover Ingleborough during my years in York. In the early 1990s, I acquired an ancient Citroën deux chevaux that at least had the steering on the left even if I would still have to drive on the right. One afternoon I set off for Clapham, which, besides being the scene of Farrer’s gardening endeavors, was at one time rightfully voted one of England’s ten prettiest villages.

Ingleborough Hall and about eight acres of garden and woods now belong to the County and are run as an outdoor education center. The sole car in the forecourt when I arrived belonged to the director, who was catching up on paperwork between terms. He delightedly offered me a tour of the hall, and told that Farrer would be seen walking through town in his carpet slippers early in the morning and then not be seen again for years. He also said that there was nothing left of Reginald Farrer’s first garden but that he would show me where it had been. At the edge of the lawn, we looked over a wall and down into the back garden of a new house. To our amazement, there was the distinct outline of garden paths, pool, and overgrown shrubs.

A knock on the door of the house got me a tour of the old garden. Instead of planning and planting a new garden, the young owner was engaged in cutting back brush, vines, and weeds to reclaim the one that Farrer had made a century before. She had uncovered the pool and paths, and found plant labels but still had a long way to go.

Across a bridge over Clapham Beck, the rushing stream that bisects the village, a row of houses had been built on the site of Farrer’s Craven Nursery, but the houses had apparently been set into the site with a minimum of destruction. Several had incorporated the old moraine into their gardens, and the ground between the houses showed traces of tufa, grit, and gravel.

On a later visit to Ingleborough Cave, I approached the entrance by way of the Ingleborough Estate Nature Trail dedicated to Farrer. I paid the toll and walked through a wooded valley dense with the rhododendrons that he had planted. Inside Ingleborough Mountain is hidden a fantasy world shimmering with crystalline waters and magical forms, stalactites and stalagmites of fossil coral, calcite flows, and aptly named features. When you are deep within the mountain, as a special treat they turn out the lights so that you can experience absolute darkness.

Ingleborough Mountain, elevation 2373 feet, may be the epicenter for the history, folklore, and strange geological landforms of the Yorkshire Dales. Clapham Beck washes the eerie beauty, superstition, and mystique of the gills, scars, and dales into the center of the village.

The top of Ingleborough, which means “fort on the hill”, bears the remains of an Iron Age hill fort built by the people of Britannia to resist the Roman occupation that began in AD 43. Within the fort are traces of an even older Stone circle. The sides of Ingleborough offer the botanist rare plants growing in the grykes, or crevices, of limestone pavements and offer the geologist caves, potholes, and fields of erratic boulders, some perched on plinths of limestone.

The rich history and geology of the region is made richer by the ancient names of features, for example Trow Gill, a deep ravine, and Gaping Gill, the largest underground chamber in the British Isles into which Fell Beck makes its dramatic fall. This is dangerous territory inhabited by a myriad of supernatural creatures. The Devil made his home inside Ingleborough Cave in a rift called the Abyss, and a specter hound named the Bargest, with long hair and fire-bright, saucer-sized eyes, haunts the deepest ravines dragging a clanking chain.

At age fourteen, Farrer was building a
Instead of planning and planting a new garden, the young owner was engaged in cutting back brush, vines, and weeds to reclaim the one that Farrer had made a century before.

Farrer’s books on alpine plants and his explorations are still valuable and charming, making the myths that have grown up around his life unnecessary. He had very definite opinions on the various Primula about which he wrote quite a bit. Some he called “jewels” and “beloved” and others were “malicious faeries.” Although he died and was buried in Burma, Farrer’s memory is very much alive in Clapham, where a memorial in the grounds of Ingleborough Hall reads “He died for love and duty in search of rare plants.”
Top left: Historia Plantarum by Theophrastus, Greek philosopher and scientist, who died about 287 BCE, classified plants by type and is sometimes called the “Father of Botany.”

Top right: Artists in the 17th Century painted the flowers of the day, usually with the patronage of a wealthy benefactor. Holtzbecker’s Gottorfer Codex, 1649-59, shows the prized auriculas, including a striped one, grown for his patron Duke Friedrich of Prussia.

Bottom: “Mille fleur” tapestries were thought to have first been produced in the Loire district in France in the middle of the 15th century. The detail allows one to identify individual flowers of the time, if you look closely. That is likely a yellow primrose on the far left, behind the drapery of the lady’s gown.

Top right: Primula minima and P. auricula in Deutschlands Flora in Abbildungen by Johann Georg Sturm (Painter: Jacob Strun) from 1796.

Top left: Color plate of Primula veris, from Flora von Deutschland Österreich und der Schweiz (1885) by Otto Wilhelm Thomé

Left: A painting sold at Sotheby’s is a unique blend of art and botany. Young Martha Rhodes, in her very fine dress, holds an auricula, which may be the first depiction of an edged flower. Dated 1750, by C. Steele.

“Primula veris, the primrose of the hedges, which has been prized for its early spring flowers from at least Elizabethan times ...”
Up in the Clouds

“This is the first time, as far as I know, that someone has deliberately tried to breed Fancies; usually they are a by-product of programs aimed at Edges or Selfs.”
“...we camped beside a small river, growing four feet up a tree, was a *Primula* – probably *P. polyneura*...”
The beginning of the American Primrose Society is so closely entwined with Barnhaven Primroses that one can hardly be mentioned without the other. Florence Bellis (then Florence Levy) founded Barnhaven Primroses in Oregon in the late 1930s and was the founding editor of the quarterly. She immediately began contributing articles to the brand new newsletter that became the quarterly of the APS, started in 1941. Barnhaven was not only a source of plants and seeds but a center for knowledge and information, a lot of which was printed in the early quarterlies.

It is with great pleasure we again have seasonal reports from the current Barnhaven Nursery – now in France. Lynne and David Lawson run the nursery and continue to make available a wonderful selection of Primula seed and plants each year. Here we get a “behind the scenes” look at how this nursery runs.

**JANUARY – MARCH**

January – snow, hail, freezing winds. Great for the plants, in our open tunnels it keeps them hardy. Extra layers of thermals for us, as there’s still loads to do preparing for the season. Plants to split that we haven’t had time to do before and now’s the time to begin selecting plants for pollinating – an ongoing process for the next three months. Flaws aren’t always easy to spot. A perfect looking blue cowichan polyanthus with the odd acaulis stem for example. It is so easy to breed a defect into a strain, but try getting it out again!

We spend a lot of time cleaning plants manually to try and keep down disease with the minimum use of chemicals. We rope in family when we can – my 84 year old mum is specially talented, and loves to be useful.

February – we open to the public for 3 months, so afternoons can often be spent chatting to customers and work has to be fitted in around them.

Everyday now we check the new double primrose seedlings that are beginning to flower, and get very excited when we see an extra fat bud coming. We also keep a close eye on the seedlings resulting from the new crosses we did last spring and sowed in July.

On the odd warmer days the nursery begins to fill with fragrance – primroses give off a perfume not too heady to work in but gentle enough to delight.

March – Our open weekend brings crowds to see the nursery in all its glory, or perhaps for the mulled wine.
and hot chocolate! Normally we begin pollinating immediately afterwards. It rather spoils the effect as most of the flowers on the pollinating benches are removed. This will go on for three months, ending with the candelabras, alpícolas etc., by which time we’ve really had enough!

We also start sowing for next year during this month. Last year we tried individual seeds in plugs. The sowing took much longer; we even did tiny P. sieboldii, but it did cut out a potting-on stage, and took away much of the stress of having to prick out in a hurry.

We try to keep on top of our very tiny display garden, using mulch to keep the weeds down as much as possible. It’s nice to be able to show people at least a selection of our plants in situ. We also plant up lots of old baskets that we find at “brocante” sales, to give our customers some ideas. The double primroses always look marvellous, with a bit of moss tucked around them.

The shows also begin this month and David starts to disappear at weekends taking Barnhaven primroses all over France. It’s the mad season.

**APS Show Weekend Registration**

$45.00 - THE VERIS PACKAGE:  
3 Day Show Access, Presentations (with special guest John Richards), Saturday Lunch at Tower Hill’s Farmhouse  
$80.00 - THE AURICULA PACKAGE:  
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$120.00 - THE GOLD LACE PACKAGE:  
All of the above plus Friday’s “Garden in The Woods:”’ Bus Tour (Bus leaves at 10 AM from the hotel)  
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Show Chairman: Joe Philip  
 josephp525@charter.net

**PICTURING FLOWERS**

JOAN FRASER

Plant and flower illustration has existed for millennia, giving endless pleasure, providing invaluable botanical information, and, indirectly, documenting sweeping changes in culture, fashion and technology.

The survival of early illustrations depended on the lasting power of the media chosen for the work. In the esoteric field of historical research on flowers and plants, the decoration on bone, pottery, and temple carvings has been a prime area of research. Perhaps there were writings about the uses of plants and flowers for medicine and magic in the times of Babylonia and Egypt, but most of those records seem to have disappeared: papyrus was fragile and it crumbled, and scrolls rotted from damp or were lost through carelessness and fire. Some of the ancient lore/superstition is thought to have gone informally to Greece via trade routes, and to have been used in the first known Greek herbal, collected in the fourth century BC.1 Apparently it was one of the sources used by the Greek Theophrastus (c372BC – 287BC) who was “the first person to write down descriptions of plants in terms of their similarities and differences.”2 Yet “three thousand years before Theophrastus was even born, date palms, vines and cereals appeared in Mesopotamian frescoes. Frescoes at Knossos, made around 1900 BC, show the lily, narcissus, rose and myrtle as well as barley, olive, fig, wheat and saffron crocus.”3 The first version of a herbal may have been “published” in the fifteenth century BCE, in the form of 275 plants carved in stone relief on the walls of the temple of Karnak in Egypt, “a record of a part of the spoils which the victorious Thutmose III brought back from his campaigns in Syria.”4

Less permanent but valid as artistic illustrations are the displays of flowers and gardens shown in carpets and embroideries. The primrose lover will probably think of medieval European weavings like the *milles-fleurs* tapestries. Here are carefully worked panels depicting spring; primroses among an abundance of flowers in scenes of magical and mythical gardens that include unicorns and ladies in tall hats trailing veils. The flowers are not precise botanical specimens, but they are sufficiently identifiable that much of what is known about fenced medieval gardens was learned from study of the woven flowery mead. In drawings and in paint, artists show Renaissance gardens planted more for use than beauty. Primroses were included for their perceived medicinal qualities.

In the days of the internet it is difficult to imagine oneself in a world where few could read or write and there was no immediate access to printed information. How did apothecaries check to see if they were being cheated at the herb markets or if they were putting the right ingredients into their simples? There was a need for herbals, “botanical books containing descriptions and illustrations of herbs and plants with their properties, chiefly those “virtues” which made them useful to man as medicine or condiments.”5 After Gutenberg invented the printing press in 1454, it is not surprising that herbals were among the first books to be published.”6

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11 rue du Pont Blanc  
22310 Plestin les Grèves, France  
Tel/Fax: 1133 2 96 35 68 41  
info@barnhaven.com  
www.barnhaven.com

**25**
"At the beginning of the seventeenth century, an aesthetic revolution took place. Flowers began to be appreciated for their visual qualities, and the flower garden, as distinct from the hortus medicus, became a grandiloquent area of a private and separate enjoyment... and privilege, as almost of symbol of a social condition based on a rigid class distinction, ontologically guaranteed." (Puppi, The Italian garden, 1972.) The expansion of trade and empire resulted in the importation of exotic species which became conspicuous luxury items, resulting in such manifestations as "Tulipomania."

Painting his pictures of flowers of the day, Alexander Marshal recorded Primula and auricula of the 1660s and 1670s that allow a glimpse of what gardeners might have in their gardens at that time. One plate includes striped auriculas which went out of fashion in the 1700s, not to reappear until the 1980s recreated primarily by Alan Hawkes. "The documentation of this enlargement of the floral kingdom gave birth both to the science of plant classification in its own right, and the sumptuously produced florilegia celebrating private gardens and their treasures. These books, themselves luxurious expressions of privilege, served as “indoor gardens,” preserving for all time and season the evanescence beauties of their fragile subjects." Artists of this period are sometimes called “flower portraitists,” perhaps with reason. The height of perfection in flower painting might be said to have been achieved by Ehret working in the 1740s and 1750s when plant material was flooding into England weekly. Ehret painted not only the "new" discoveries from far off lands, but also the most prized plants of collectors of the time. One striped auricula ‘Duke of Cumberland’ was no doubt named after the member of the aristocracy that its grower thought of as the height of sophistication. "Only those who have attempted to draw flowers can appreciate what restless models these can sometimes be – how quickly petals open and stems curve. Further, the color of many flowers is so dazzling that at the best it can only be approximate in paint. Moreover, the botanical artist finds himself at once and always in a dilemma: is he the servant of Science, or of Art? There can, I think, be no doubt that he must learn to serve both masters. ...A great botanical artist must have a passion for flowers....unless he loves what he is drawing, unless he knows the flower in all its moods, in all the stages of its development, there will be something lacking in his work."

In modern times, stunning photographs require the same care, and with the high resolution possible today, an excellent medium for effective portraits of flowers. Photography has been a boon to botany and to the specialist flower grower; excellent examples for primrose lovers have been shown in this journal. The creator of the invaluable website Primula World, Pam Eveleigh, is a modern artist with the camera. Somewhere, even on the wildest mountainside, in a far off land, she sees and captures a work of art in her photographs. Primrose pictures of every style can now be seen and taken right from the internet, and technological advances like holography and 3D printing may take flower illustration into as yet unknown areas. But always it is capturing the simple elegance of the flower that is the greatest achievement of the artist.

Primula veris, the primrose of the hedges, which has been prized for its early spring flowers from at least Elizabethan times, a British wildflower, was not probably documented until herbalists began appearing in Europe the late 1500s. A tisane of the simple cowslip is Albrecht Durer’s “A tuft of cowslips" (Puppi, 1972). In the importation of exotic species, it comes as something of a shock to turn from these to the manuscripts that it comes as something new. One striped auricula ‘Duke of Cumberland’ was no doubt named after the member of the aristocracy that its grower thought of as the height of sophistication.

The advent of the printing press gave a huge advance to written records, but to begin with, publication served book illustration poorly, especially if the often crude book illustrations were compared to existing pictures. “At the end of the fifteenth century, plants and flowers are depicted with such delicacy, sophistication and realism in paintings or in the borders of illustrated manuscripts that it comes as something of a shock to turn from these to the woodcut illustrations of the early printed herbal.” It cannot have been easy to carve pictures into blocks of wood, and not least of publication problems were the clumsiness of the presses and the difficulty of inserting illustrations into text. Bad copies were made of early herbals. Gradually improvements were made to publications and their illustrations, and to paper and the materials needed for drawings and paintings. This paved the way for a period remarkable for its beautiful flower illustrations and its botanically precise drawings. A beautiful artist’s rendering of the simple cowslip is Albrecht Durer’s “A tuft of cowslips" (National Gallery of Art, Washington, D.C.) An infusion of cowslip was used in the sixteenth century as a cure for vertigo, and cowslip wine is well documented from early times.

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1 Diocles of Carystos in Euboria wrote the book, which has now disappeared. Noted in Anna Pavord, The naming of names, the search for order in the world of plants, London, Bloomsbury, 2005, p 47.
2 Pavord, p 423. Fascinating comment on Aristotle and his pupil Theophrastus are in chapter 1. The works Historia planetarum and Causee planarum were translated in 1916 by Sir Arthur Holt as Enquiry into plants.
3 Pavord, p 44.
4 Wilfrid Blunt, The art of botanical illustration, London, Collins, 1950, p 6. Mr. Blunt notes that some of the plants appear to be" largely or wholly imaginary." In his book he says “the purely decorative treatment of plants, though it has produced much beautiful work, lies outside the scope of this book.”
5 Columbia encyclopediia, 1963.
6 Columbia encyclopediia, 1963.
8 Although it had improved, the woodcut fell out of favor in the seventeenth century when printers turned to copper plate engraving and etching. Later processes included lithography and color printing. The woodcut was revived using different methods and tools, in the eighteenth century.
9 A magnificent collection of botanical books, being the finest colour-plate books from the celebrated library formed by Robert de Belder, printed as a catalogue for Sotheby’s sale 27th April 1987, p 5.
11 Blunt, pp 3-4.
Soil Mixes

FROM A TALK BY RUTH ANDERSON (NOTES BY MAEDYTHE MARTIN)

Ruth Anderson is a member of the B.C. Primula Group and agreed to give a talk on soil mixes for the September 2009 meeting. But that meeting was cancelled, and at the November meeting her talk was preempted by a guest speaker! Finally in January 2010, Ruth brought her information and many samples of various soil amendments to show to the group. It was an interactive talk, with comments thrown in by the other members. Here is a summary of the discussion.

I have been waiting for 5 months to do this talk! The short summary I gave at the last meeting, covers it all (and is a basic truth): moist for Asiatic primroses and no wet in the winter for Primula with hard leaves. But here’s more information, since we are all here.

There is no doubt that moisture is critical for Primula. You have to look at where you grow things and how: pots versus the garden. We have all learned in the past few years that for the most part you do NOT put crocks in the bottom of pots because of the science of water viscosity (a full pot of the same component you do NOT put crocks in the bottom of pots because of the science of water viscosity (a full pot of the same...as well as the mucky stuff. Grit, particularly with sharp edges lets air into a mix.

Alpine gardeners are very fond of pumice and it is a part of most alpine mixes. The size of the crushed rock varies in any bag of pumice you buy. Be careful that it has been washed, or wash it yourself. The very fine dust tends to settle into a cement-like substance. (Rhonda says she keeps a Chinese won ton dipper to sieve her pumice.) We are fortunate here that some garden centers stock 15 liter bags of uniformly crushed pumice under the trade name Keefers Pumice.

Grit may be added to a mix to aid in drainage. (Someone adds: members of the alpine garden club know that people use it to dress the top of pots. They believe that top dressing helps the pot to retain moisture, as well as looking “finished”). Another source of grit easily obtainable from feed stores is chicken and turkey grit. Sometimes you can buy big 40 pound bags of it, or sometimes it is in bins and you can buy just one pound or two. Some of these grits contain calcium carbonate. Lime loving plants like Primula marginata and some auriculas seem to benefit from including turkey grit in the mix. Old, decaying cement also contains some lime and if you happen to have a source of it, it can also be used. Old broken marble and old tufa rocks or...
even what is called “landscape rock” that you can buy at garden centers can also be incorporated. The landscape rock is huge and needs to be broken up—use a hammer to crush big pieces, and goggles!

Another kind of grit is very coarse sand. I get this by putting regular sand from a building supply store through window screening. This is a good medium as it has sharp edges rather than the round edges you get with river sand. Auriculas like grit included in the mix.

Some of the small hardy *primulas* with small leaves, like *Primula allionii*, apparently like growing in a wall. If grown in a pot, the roots will grow down and out through the bottom into the sand in the plunge bed below (Rhondda says her *Primula allionii* do this all the time and she just prunes the roots off! Rhondda says the plants seem to prefer being grown on the dry side, too.) If growing these plants in pots, try to use clay pots and plunge them into a sand bed.

Another commercial product that opens up a mix is Turface. It was developed for use on golf courses and has a rust red color like broken clay pots. Some growers swear by it.

Now that we have talked about the various elements of a mix, let’s look at some plants that have been in the commercial mix they came in after two years of growth. The medium is spent. Some of the examples I have brought are looking very sad. If you knock them out of the pot, you can see that there are pieces of bark and the roots have rotted. Whatever you buy, in my opinion, you probably have to re-pot if you want the plant to flourish. Think about where the plants grow in nature and that will give you some idea of what they need.

Summing up, I encourage you to use what you have in making up your own mixes. “Feel” the mix to gauge whether you have the right consistency. Too much organic material “plugs” up a pot so you must add grit.

**SPEAKING OF SLUGS...**

Bob G. of Vancouver, Canada writes:

“Cut a grapefruit in half. Eat the contents. Put the peels in the garden open side down. Check for slugs and snails—remove and deal with as you think appropriate.

The best grapefruit is available around this time of year, just when the slugs are emerging.”

Thanks Bob!

**APS ELECTIONS LATEST**

Following a lengthy nominations process, four candidates offered to stand for four directors’ positions, and one candidate was found for the Vice-President’s position. Since there are no other candidates, the following APS members are appointed by acclamation: Vice-President: Marianne Kuchel. Directors: Rodney Barker, Julia Haldorson, Amy Olmsted, Susan Schnare.

In future there will be a better system for members’ input into the nominations process by means of submissions to the new website.

**MARIANNE KUCHEL** has been an active participant in the American Primrose Society since moving to Vermont some ten years ago and starting an ever-expanding garden. She is an avid grower of *Primulas* from seed and loves to try different varieties. Marianne has a broad interest in horticulture and also grows many varieties of Alpines. She has a Certificate in Landscape Design from George Washington University in Washington D.C. and a Master Gardener Certificate in Vermont. She has served as President of the Hanover (NH) Garden Club and lectures on *Primulas* in the NH-VT area. She has developed gardens wherever she has lived, including tropical and semi-tropical gardens in Nigeria and Zambia. Marianne hopes to work closely with the entire Board to support the APS as a strong and helpful national organization that encourages knowledge and love of *Primulas*.

**JULIA HALDORSON** is a member of the Juneau Chapter of the American Primrose Society, and plans purchased at their shows helped to shape her garden. Luckily many species of *Primula* thrive in the thin, acidic soil and cloudy, rainy conditions of Southeast Alaska, located in the Tongass National Forest, the nation’s largest rainforest. As the former treasurer of the American Primrose Society, and current Membership Secretary, her understanding of the Society’s finances and operations coupled with a keen interest in Primroses should be an excellent combination for a board member of the American Primrose Society.

**RODNEY BARKER** has grown *Primulas* in Massachusetts for over 40 years. Most of his plants are from seeds, germinated in his small greenhouse. He has written for the Primrose magazine “Growing Primulas in Massachusetts”. He is co-President of the New England Primula Society and has been active in obtaining speakers for the National Show, which has been held in Town Hill, MA for the last 3 years.

**AMY OLMSTED** has been involved in the horticultural field for over 30 years. She is currently staff horticulturist at Rockydale Gardens, a nursery in the foothills of Vermont’s Green Mountains. Prior to this, Amy spent 20 years at Ward’s Nursery, a large garden center in the Berkshires of western Massachusetts, where she was nursery manager. Amy is a Massachusetts Certified Horticulturist, and past president of the New England Chapter of the American Primrose Society. She is an active member of the Vermont Hardy Plant Club and the North American Rock Garden Society. Amy collects as many species as her gardens will hold. She found in the N. E. chapter a welcoming group of like-minded people who were eager to share their love of the genus *Primula*. It is that enthusiasm to share this beautiful family of plants with all other gardeners, from novice to expert, which moves her to want to become more involved with the inner workings of The American Primrose Society.

**SUSAN SCHNARE** began growing *Primula* in 1985 and, since 1995, has operated a small primrose nursery on her family farmstead in central New Hampshire (zone 4b). For the past five years, Susan has been concentrating on growing show auriculas, primarily the green and grey-edges in an unheated greenhouse, while maintaining a good selection of garden and heirloom primroses. Her website is http://www.mtnbrook.com/mpb/mpb.html
American Primrose Society
Minutes of the Board Meeting held on January 31st, 2010

The meeting was held online and by telephone. It opened at 6:10 pm, Eastern Time.

Board members present: Linda Bailey (Director), Rodney Barker (Director), Mark Dyen (President, New England Chapter), Cheri Fluck (Director), Julia Haldorson (Director, Membership Secretary), Jon Kawaguchi (APS Treasurer), Marianne Kuchel (Director), Alan Lawrence (APS Vice-president), Michael Plumb (APS Secretary)

Regrets: Maedythe Martin (Editor, President of BC Group)

1. The Minutes of November 1st, 2009 – Accepted (Linda/Julia).

2. Treasurer’s Report. (Emailed before the meeting)
   - Income less expenses October 1st to December 31st, 2009: $3,490.40
   - Income less expenses January 1st, 2009 to December 31st, 2009: $1,550.47
   - Total liabilities and equity as of December 31st, 2009: $26,501.74
   - MOTION (Michael/Cheri) to accept the report - carried unanimously, with many thanks to Jon for his work.

3. Committee Reports
   - Seed Exchange
     - The exchange is proceeding well. Regular updates are being given on the website of which seed is still available.
   - National Show
     - Rodney announced that the Show will be held at the Tower Hill Botanical Garden in Worcester MA, on May 1st and 2nd. John Richards, the author of Primula, will be a plenary speaker and will also hold a workshop on Primula cultivation with a question-and-answer period. Joe Phillip is Show Chair. The Show is advertised on the back of the winter Quarterly which is about to be mailed to the membership.
     - ACTION: Information will be sent to Anne for posting on the website.
   - Editorial Committee
     - In her written report, Maedythe apologized for the slight delay in sending out the winter issue of the Primroses Quarterly, but the spring issue is well in hand. The Editorial Report was accepted with many thanks to Maedythe and Jane for their sterling work (Rodney/Michael).
     - MOTION (Michael/Linda) to increase Jane Guild’s honorarium for technical editing of the Primroses Quarterly from $400 to $450 per issue. Carried
   - Membership
     - As of January 25th 2010 there were 295 APS members in good standing (280 in January 2009).
     - Twenty people have joined since October.
     - Two lifetime members have passed away.
     - This is the renewal period. Usually about 60 members will renew late each year, so the membership is actually higher, though the final total is forecast to be lower than in last October owing in part to the recession.
   - It was agreed that a good website would help people temporarily unable to renew their membership to keep in touch with the APS.
   - The report was accepted (Michael/Cheri)

4. Business Arising and Old Business
   - Dorothy Dickson Award
     - Michael reported that Candy Strickland, Co-President of the Tacoma Chapter, had sent the plaque to Joe Phillip for safekeeping. She had informed Michael that the plaque showed the names of all the winners up to 2002, when she had won it. There is therefore a record of previous winners. Furthermore, Candy had informed him that there was no restriction on the number of times the same person could receive the award.
     - ACTION: The board agreed to wait for Rodney/Mark to obtain information from Joe so that the board can discuss the matter by email before the National Show. Criteria for the award will be discussed before any person is chosen.
   - New Business
     - Elections
       - Michael will have the ballot mailed as an insert in the spring Quarterly as the board is still waiting for nominations for directors’ posts.
     - Advertising
       - Jon, our Treasurer, is unable to continue looking for new advertising accounts in addition to his other duties. He would like another board member to take on this responsibility. He will maintain the current portfolio. ACTION: Marianne and Linda both kindly expressed interest in helping Jon. He will tell them what is involved before they finally agree.
   - Website
     - As the Website Committee Report was late, and contained many recommendations for website improvement, the board could not consider it at the meeting given the brief notice. ACTION: The board asked the Committee to continue working on improvements and to come back with more specific recommendations, as the board needed more time to study the issues. Michael agreed to set up a Website Committee meeting.

5. Technical Committee
   - Rodney and Mark have been working on ways to improve communications at board meetings, which are currently held by internet chat. They reported that Skype allows audio conferencing with the extra purchase of just a $25 microphone. ACTION: They will make a detailed proposal in the near future. They will also investigate whether some board members can use Skype while others type in the chat at the same meeting.

6. Adjournment (Julia/Linda) at 8:00 Eastern.

Next meeting: AGM at the National Show, May 1st, 2010 (provisional)

Respectfully submitted,
Michael Plumb, Secretary
Join the National Auricula & Primula Society
Midland & West Section

www.auriculaandprimula.org.uk

£10.00 Overseas Membership.

to: The Honorary Treasurer, Roger Woods,
44 Tansey Crescent, Stoney Stanton,
Leicestershire, LE9 4BT United Kingdom.

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New Members this Quarter

2010  Ann Floyd Barrett  P. O. Box 1670  Edgartown, Massachusetts  02539 U.S.A.
2012  Gioia Browne  79 Peckham Road  Little Compton, Rhode Island  02837 U.S.A.
2010  Joyce Glaze  12680 Schooner Drive  Anchorage, Alaska  99515 U.S.A.
2010  Greg Graves  Old Goat Farm Garden and Nursery  20021 Orting – Kapowsin Hwy
E  Graham, Washington  98338 U.S.A.
2010  Sandra Holtz  2188 Tacoma Road  Puyallup, Washington  98371 U.S.A
2012  Jensen – Olson Arboretum c/o Merrill Jensen  2305 Glacier Highway Juneau,
Alaska  99801 U.S.A.
2010  James Jones  45 Middle Street  Lexington, Massachusetts  02421 U.S.A.
2012  Bob McQueen  P. O. Box 1726  Wrangell, Alaska  99929 U.S.A.
2012  Smith Williams, Jr. Society of Congress Management  P. O. Box 316 Sykesville,
Maryland  21784 U.S.A.

NATIONAL AURICULA AND PRIMULA SOCIETY
SOUTHERN SECTION

The National Auricula & Primula Society - Southern Section was founded in 1876 by and for enthusiasts who raised and exhibited Auriculas, Gold-Laced polyanthuses and other Primulas.
The Annual subscription is £7.00 (UK) for single or family membership, Overseas £8.00
Members receive an illustrated Year Book and a Newsletter - Offers, containing interesting articles on growing and raising Primulas together with their history and cultivation.
Applications for membership of the N.A.P.S. Southern Section should be made to:
The Honorary Secretary, Lawrence Wigley,
67 Warnham Court Road, Carshalton Beeches,
Surrey, SM5 3ND.

North American Rock Garden Society

Yes, I am interested in a seed exchange, discount book service, slide library, field trips, fact-filled Quarterly, garden visits, and plant sales.
Sign me up!

Membership:
USA, Canada: US$30
Overseas: US$35

Please contact:
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PO Box 18604
Raleigh, NC 27619-8604

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https://www.nargs.org/info/smembship.