

Flasking with Eric Locke

When I was eight years old a fellow gave me an orchid and said “Here give this a try”. It was a horrible little Cymbidium, I took it home and planted it in some rubbishy clay. He came up about a month later and said “That's good but...” then told me how I should be growing it. The poor fellow passed away about a year later and his wife asked me if I would be interested in the collection. Mum agreed that I could have it as I was always interested in what was happening in the garden. Mum handed over \$5 and I ended up with a heap of Cymbidiums and a few Cattleyas. So that was my start. I would pick up the occasional plant from the local hardware shop with my pocket money, a little Aussie native growing on a mount or some such, slowly increasing my collection. We then had a Cyclone go through Sunnybank that turned all my orchids to slush. Luckily the odd one or two survived and I plodded along with them picking up one here or there, and sometimes Mum would give me a plant. Basically you could say I've had orchids all my life. Even when I was 17 or 18 I still had over 2 dozen orchids. After I got married we got more involved and Alf & Mary Manganaro suggested that we should join a society. Eventually we joined EDOS and ended up on committee and as show steward for a time. Now I am growing mainly Cattleyas and slippers together with a few species. When I retire I may grow more but at present the flasking keeps me too busy to have a larger collection.

I got involved in flasking by accident. I decided that this can't be that hard, so I got a bit of media from some where and a fish tank that I put a couple of hand holes in and I was away. That was fine for a while. Then out of the blue someone offered me a cabinet. I was only a hobbyist but thought I would have a look. It was less than half its new price and looked brand new. I bought it, set it and started to do a bit. After a while I got requests to do some work here and there. Then David Littman came to me and asked if I would do some flasking for him so I said I would. Once I started doing David's work people got to know and word spread and I started getting work from the nurseries. It has grown to the extent that I have been knocking back work for the last two & half years.

I started flasking about 12 years ago and am basically self taught. I bought a few books, talked to a number of people and experimented. You find that some of the formulae that you read about don't quite work as you would like so you need to experiment, making slight changes until you get a result that suits the way you want to use it. Along the way I received some bad information and that put me further and further behind. Lately I think I've learned a lot. I'm still learning, getting better and better as I go a long. It's a continuous learning curve, there's always a better way.

The process is not really that hard. I picked up a little book by P.A.Thompson , which gave you the basic understanding of how to flask, how to sterilise, how to prepare your media and that sort of thing. You can buy your media; there are lots out there on the market and basically follow this little book, it really told me what I needed to



Laminar Flow Cabinet

know. The fish tank worked quite well but was very awkward compared to a laminar flow cabinet. I had an interesting experience recently; a fellow came and showed me some bottles he had done himself when I asked him how he had done them he said in a plastic bag. It just goes to show that you don't need a great deal of technical knowledge. He got the seed pod and the bottle put them in the plastic bag, sprayed them with Metho, put his hand in and closed it up and there was his flasking cabinet. It just shows you how simple it can be.

Most of the people I work with have a good knowledge of when their seed pods are ready but I sometimes get questions from those that have little experience or a grower that has pollinated a genus that he is not familiar with. It is not just the different genera, take the Dendrobiums for example some sections go 3 months some go 9-10 months. A lot of this information is on the internet but not all. Whenever I get something a little different I try to write it down for the next person. What happens in practice, most of the time, is that people give me a seed pod, with an identifying



*Flasking & Protocorm Room
Heated with small fan heater
and uses artificial light*

number, and when it germinates I ring them up and ask how many do you want. I can germinate most things. If the seed is good I normally get germination.

I prefer not to do dry seed but will do it if necessary. A gentleman brought me some dry seed the other day, I don't know how dry it was or how long since the pod split but when I looked at it under the microscope it was really contaminated. The trouble is decontaminating it can result in killing the seed. Green pods are great and fresh out of a green pod is good also. The sooner I get it the

more chance there is of being able to germinate it without contamination. Seed that has been around for a long time can be difficult. I use chlorine as a sterilizer, it is cheap, viable and does the job. There are lots of formulae out there and information on how to do it but what I do is very simple and quick. I don't have the time to muck around for a day or more trying to make one dry pod usable. I do up to sixty seed pods a day some times.

Preparing bottles for flasking is simple enough. The bottles are washed clean, media made up, put it into the bottles, lids put on and then into the pressure cooker for about 25 minutes or more depending on the bottle size and the quantity of medium in the bottles. When they come out of there and the inside of the bottles are sterile the lids get tightened and the job is done. The system I use is very robust. The bottles could sit out on the patio and the plants would grow. A lot of people have air-conditioned rooms and they use tape on their lid or they have some other fancy thing. It won't work on my conditions because my bottles must breath. The temperature can range from 10°C to



*Mother flask & replate growing
area.
Shade house with 70% shade cloth
over Solarweave. Natural light.*

near 40°C so you need filter that will stand up to that. My customer can take my bottles home and

sit them in his orchid house for a week and they will not contaminate or on the window sill for 3 months and they won't contaminate. As we saw at the conference there were a lot of contaminated bottles for sale. They were not produced to withstand the temperature variation they experienced out side of a controlled environment. When customers bring me a contaminated bottle and ask if I can save it I say yes but only by removing the plants from the bottle and growing them on.

I start off with the first bottle that we call a protocorm bottle and that's the seed bottle. Once the seed has germinated I ring the customer and ask how many bottles he wants. For every 5 that is required I will do one first replante. This is the so called mother flask. Usually when they are about ½ inch high in the mother flask I do the final replante. The final replante usually holds about 30 plants so the customer is assured of about 20 good strong seedlings. The number varies from genus to genus, with Epidendrum I can put 35 or so in a bottle because they are slim. With a Phalaenopsis I'm struggling to get 25 in because of the leaf size, they must have room to grow. I don't do any tissue culture at all because it is extremely labour intensive. You have to continually work at it, you have to move the plants every couple of weeks. Because you are frequently working with them the risk of contamination is increased. To be honest I am not mad on tissue culture. My observation is that a large part of the time the cloned plant is not of the same standard as the parent. Divisions are a better proposition if it is possible to get a piece of the original.

I make my own media because I have never had a great success with bought media and I really don't know why. Also over the years when I was buying media there seemed to be variations. You buy one lot and it works well, then the following year



you could buy the identical product and it would behave differently. Why? It may be that one of the components was not available and it was sourced elsewhere, you don't know. When you produce your own you are aware when elements need to be substituted. Some people think you can be as rough as bags but you can't, it has to be prepared very accurately. I don't vary my media between genera, one medium does the lot but I would not

do slippers with my medium. They do grow but not terribly well so I don't do slippers. To make separate mediums is really a nuisance because the week you want Cattleya medium all you will have made up is Dendrobium medium. I could go down that track and get bigger and better but I can grow nearly everything on the one media and get it out the door so that's good enough for me.

The best way to deflask is what Ross Maidment preaches and most of the nurseries are doing the same now. Take the plants out of the bottle, wash the agar off, spread them out on wet newspaper in a tray and let them sit there for a week What it does is lets any damage that you have done by pulling the plants out of bottle heal. Any broken roots etc. provides and entry for infection. Lay them on the paper and they dry out and all those little wounds heal over. Some growers leave them sit there for weeks and even months as long as that paper is moist. You will see the new roots and new growths start to form and then pot them. There is no need to use fungicide; it seems to be the problems come from getting them out of a flask and putting them straight into a pot. This way tends to harden the plants up before they go into the pot.

People are using a variety of potting media for their seedlings and mature plants. Since we lost the American Douglas Fir bark we have had nothing that is anywhere near it and we have all been looking for a replacement. It is an ongoing saga at the moment because we can't get as good a quality bark here in Australia. While we have that problem growers are going to keep looking for alternatives. I think the idea is to use as little bark as possible and polystyrene. The main problem with the bark here is that it needs to be treated before we use it to correct the ph. Most growers are now soaking bark in lime before using. Also the barks here are very soft and they need to be washed to get all the rubbish out.

In a lot of magazines and books they recommend the use of plastic bag or Coca-Cola bottle over the newly potted seedling to provide a miniature green house effect. In my view this is one of the worst things you can do because you create massive humidity in there and promote very high fungal growth. I know growers that have wiped out hundreds of plants by doing this. Once my orchids go into a pot they go up on the bench with all the others, perhaps in a shadier spot but not on the floor. Get them up where the breezes are. Don't set them down in the pot put them up high in the pot so they get the air movement across them. That way you don't get the losses and reduce fungal problems. Never modi-coddle them is what I tell growers, get them out and get them growing.

People are frightened of flasks and they do not have to be, it is not hard. Buy a decent flask, with good solid roots and strong looking plants, and half the job is done for you.