**Deflasking Seedlings from Bottles**

*Keep flasks in indirect light until you are ready to remove them from the bottle.  Bright light or warm temperatures will cause damage to the young seedlings.  One sign of problems would be excessive amounts of condensation building up inside the glass.*

**Materials Needed to Make De-Flasking your Seedlings Easier**

\* Sheets of Newspaper to cover your workspace

\* Latex or Nitrile gloves, if preferred

                *The charcoal ager can stain your hands temporarily*

\* Small plastic tub filled with tepid (not warm) water plus extra water for final rinsing

                *A small Rubbermaid shoe box or dishpan is the perfect size*

\* Long metal skewer with slightly bent or hooked tip

                *A metal BBQ kebob skewer that can be bent with pliers works great.*

\* Sharp scissors or very fine tip clippers that can be sterilized.

 \* Small trays or shallow plastic pots to plant in.  Either new or thoroughly cleaned used pots.

                *For compots or ‘community pots’ we recommended 5” to 6” plastic bulb pans.  At this stage plants are not usually ready for individual containers and shallow containers work best for the small root systems.*

\*Fine grade potting media, moistened.

*Fine grade fir bark media or our cypress media are recommended.  Large grade or coarse media will not hold the plants or water properly.  Some growers prefer sphagnum but this can stay too wet if you are not careful.*

\*Plastic Dome Cover or Clear Plastic Bag *– Used to cover seedlings after planting.  Helps keep humidity higher around the plants as they adjust outside the bottle.*

**The following are recommended based on our current greenhouse procedure.**

Physan 20- *Can be added to the first rinse water.  Helps to stop any fungus or bacteria that may have started in the flask.  ½ tsp per gallon of water is sufficient.*

Captan Wettable Powder Fungicide- *Made into a spray of 1 tbsp per qt of water.  We spray this over seedlings after they are planted and watered to prevent damping off or soft rot.  A couple drops of Physan or Dawn dish soap can be added to the solution as a sticking agent.*

SuperThrive- *When you water the potting media for the first time, this can be added to the water. ¼ tsp per gallon*

**Prep your media and pots first. *(this can be done the day before planting)***

                Add enough water to your potting media that a handful will hold together when squeezed.  Press media into your pots or trays until it reaches ½” from top of pot.  It should be packed firmly but not super tight.  Water thoroughly from the top to flush out debris and sediment.  The water should run clear from the bottom.  Set aside to finish dripping

**Get your workspace ready.**

Cover your area with newspaper to protect your table or bench.  Place all your tools and materials within easy reach.

                Open the flask and use the skewer with the hooked tip to gently ease the seedlings from the bottle.  If possible pull through the opening rootball first to prevent leaf cracking or bruising.  Put the entire plant mass into the basin of water.  This helps to soften the ager as you untangle the plants.  Work each plant free, one at a time.

As you clean plants inspect for broken leaves, brown or black leaves or other problems.  Use your sterilized scissors to trim off any suspect tissue or broken leaf tips.  After all the plants are separated, rinse them in fresh water and lay them on the newspaper.

***Recommended:*** *We also trim any exceptionally long roots before planting.  Usually anything longer than two inches will be trimmed.  This can be a matter of preference.*

 **Ready to Plant.**

With your plants ready, get your prepped pots of media.  Depending on the size of the pots and the size of the seedlings you can fit anywhere between 6 to 12 plants per pot.  Any more than that and they will be crowded.  *Remember, plants will be in these pots for some time, until they are large enough for individual containers.*

Our method is to take the pointed end of a wooden skewer or chopstick and make a hole large enough to ease the roots into.  Place the seedlings just deep enough to stand up but do not bury any leaves.  Slightly firm the media around each plant with your fingers or the skewer. Plants should stand on their own and you should barely see the crown where the roots start.  *If they are planted too deep, damp-off can occur very quickly and if they are too high they will fall over and will not root properly.*

After you are finished planting make sure the label the pot with a marker or plastic label.  (We add the date as well).

*This would be the time to spray the seedlings with Captan, if you are doing so*

**After planting care.**

Humidity and light will play a big role in getting your baby orchids established.  If you have access to a clear plastic dome cover for seedlings this will very useful.  Simply cover the plants and place in indirect light (as before) checking once or twice per week for moisture.  You want the air to stay humid but the media should not be kept boggy after the original watering.  As the media dries out, remove the cover and mist plants with room temperature water on clear sunny days.  Just like their larger counterparts, this will encourage new roots to start growing in search of water.  If you have condensation dripping inside the cover, shake it off away from the plants and lower the light levels.  After a couple weeks of being under cover, you will need to start hardening them off.  Our method is to lift the cover slightly away from the plants to lower the humidity gradually.  If you are using the bag method open the bag for a few hours per day over a week’s time.

Once they are out of the cover or baggie, place compots in medium to bright indirect light with gentle air movement.  Airflow should not be enough to dry the pots out as this will also dehydrate the tender foliage.

 Continue to mist plants on clear sunny days as new roots emerge.  Do not fertilize seedlings for *at least* a month after planting.  Wait until you see new roots beginning to crawl on the media.  At this point you can mist them with half strength fertilizer such as Growmore 30-10-10 or Dyna-Gro 7-8-6

 After plants have been in pots for a few months you can start to gradually increase light levels.  Most seedlings at this stage can take medium light levels (bright Phalaenopsis light) with some taking even brighter light.  Plants will not need the same light as mature plants for quite some time.  Continue to mist or water lightly until roots are reaching into the media.  Fertilizer can be applied at 3-4 weeks intervals, again at half the normal dilution.

In our greenhouses, plants stay in community trays for 1 to 2 years before being moved into individual pots.  Always remember orchids like tight containers and should not be repotted too frequently.