New England Carnivorous Plant Society

Propagating Nepenthes By Cuttings

Propagating Nepenthes by taking cuttings and rooting them is one of the easiest ways to enlarge a collection and acquire “extra” plants to use for sale or swap, or just to have more plants for display. With some basic ideas and tools, it is moderately easy to take and root cuttings of many, if not most Nepenthes. The following guidelines will work for many species and varieties, and with a little work can be adjusted and fine tuned for some of the more finicky types.

Cuttings (or slips) can be taken from any nepenthes that have reached a stage where the internodes have lengthened into climbing or vine growth. Cuttings do not work well with plants that are still in the rosette stage as the internodal length, or the length between leaves, is too short to allow for the cuttings. Taking cuttings of plants in the climbing stage will also result in a bushier plant with more shoots forming from the basal area. These basal shoots can result in a plant that is fuller, and more shoots means more cuttings can be taken at a later date.

If the nepenthes you have is a named variety, then the plant should not be reproduced by seed, since it will not breed true. The only way to propagate a named variety is by asexual means, such as cuttings or tissue culture. Cuttings are by far the easier way of the two for the home grower.

One other useful reason for cuttings is to save a diseased plant. If a Nepenthes has developed rot on the lower stem it is possible to take a cutting from the clean uninfected part of the plant and root it, thereby saving the plant in your collection. Some growers with the room like to take cutting for this very reason, in case a particularly nice plant die for no apparent reason, they still have the plant in their collection.

Cuttings can be taken at any time of year when the plant is actively growing, but can be more difficult to maintain and root in hot dry weather. I prefer if possible to take cuttings in the spring after the plants start growing faster in response to the better natural growing conditions. Cuttings taken at this time will have a full warm season of spring, summer and fall to root and grow. Plants grown continually under lights in terrariums can give good cuttings at any time of year if they are growing well.

The taking and care of cuttings of Nepenthes is similar to the method used for taking cuttings of most other vine type houseplants. It is good to have all the materials ready before you start. You will need the following:

1. Rooting media
2. CLEAN pots
3. Rooting hormone
4. Fungicide
5. Labels
6. Knife or Razor
7. A place to keep the cuttings while they root

Rooting Media

The medium for rooting cuttings needs to be able to do a few things. It has to hold the cutting firmly, keep the rooting area of the cutting moist but not wet, hold water and air, and give the roots an easy area to grow into. Rooting media that can be used are water, perlite, vermiculite, sand, charcoal, spun rockwool, shredded sphagnum moss, long fiber sphagnum moss, and various mixtures of these. Of the different media and mixtures I have used, I find that long fibered sphagnum moss works the best with my conditions. Rooting is a response to looking for water, and the long fibered sphagnum moss {LFS} does the best job of keeping the cutting moist and allowing for easy root growth, while holding the cutting firmly.

Rooting Hormone

There are different rooting hormones available from catalogs, on line stores and garden centers. I have used one of the most widely available ones, Rootone, for years with good results. It is easy to find, and works with a wide variety of plants. It is easily applied as a powder. There are other products available, both in powdered and liquid forms, but I have had good luck with the Rootone.

Fungicide

Some plants will root with easily without any worry of a fungal attack, while others will rot quickly. Sometimes, it seems to be a race between rotting and rooting. I have found that any cut surface seems to do better when treated with a fungicide. Since Rootone has a fungicide in it, the remaining surfaces need to be treated with something else. Fungicides are some of the most toxic chemicals that we work with on a regular basis in the garden and greenhouse. I have found that Ortho Rose and floral dust, or Ortho Tomato Dust, work well. They contain both an insecticide and a fungicide mixed with a dispersing agent. I dust or dip all the cut surfaces that do not go into the rooting media with the rose and floral dust, and I find that it eliminates or greatly reduces the fungal attacks. This gives the plant more time to develop good roots and grow on it's own.

Taking cuttings of Nepenthes

The method of taking Nepenthes cuttings is fairly straight forward, and a few little tricks make it even easier. The easiest cuttings to take are two-node cuttings. The nodes are where the leaves grow from the plant, so these two-node cuttings may have one or two leaves, and one or no bare nodes. With more experience, single node cuttings can also be taken, but these can be harder to work with. From any given plant however, you can take more single node cuttings that two-node cuttings. The growing tip of a nepenthes can be tender, and often it is discarded, or used as a two- or three-node cutting.

The cutting is simply made by taking a sharp clean knife or razor and slicing through the stem with a flat cut. One trick that professionals do at this point is to make an *angle* cut on the *bottom* of the cutting, the part that will be stuck in the rooting media. If you are taking multiple cuttings, at one time, it is easier to do the cuttings, then do the dipping in the hormone, then the sticking of the cuttings all together. If you have a bunch of cuttings, it can be hard sometimes to tell which is the top and bottom, especially with vines like Nepenthes. By immediately making a 45-degree angle cut or more on the

bottom of the cutting, you will always know what part will be inserted into the media. The angle cut should be close to the bottom node. The node will send out roots, and the angle exposes more of the growing tissue to the rooting media and the rooting hormones. This hastens the rooting process. If you are taking multiple cuttings at once, put the cuttings in a plastic bag or tray of water so they do not dry out.

Once the cuttings are made, it is time to strip and cut the leaves. The leaves are the main source of transpiration, where water is released into the air. Because the plant has no roots till they develop, you need to remove some of the leaf area or the plant will dry out. Usually, the bottom leaf is removed completely in a two-node cutting, and the top leaf is reduced to ½ or 1/3 it's normal size. On a one-node cutting, usually ½ of the leaf is removed. Make the cut clean with a sharp clean razor. The cleaner the cut, the less chance of fungal infections.

Once the leaves are removed or cut, I treat all cut surfaces with the fungicide. I either dip the cuts into a jar containing the fungicide, or brush it on the surfaces with a q-tip. You want only a light dusting, not a lot of the material. After you dip or dust, tap the plant against the inside of the container to remove the excess powder.

The cuttings are now ready to stick into the media. Fill a small deep pot with *damp* media. It should not be soaked, but damp. This is one reason I prefer LFS, as it can be soaked and then wrung out to the desires dampness. Firm the media into the pot, so that it is full but not over packed. Some people simply push the cutting into the media, but I prefer to make a hole first, then stick the cutting into the hole. This way, the rooting compound doesn't get brushed off.
Push the cutting down so the bottom node is completely covered in a two-node cutting. With a one-node cutting, you want the node just barely covered. It is best to label the plant immediately, so I usually like to have the labels made up ahead of time. On one side of the label put the name of the plant, and on the other side put the date and the source of the plant.

Care of cuttings

Once the cuttings are stuck, they need to be kept in a humid place with bright but not direct light. A terrarium works well at home, or you can make one from a clear plastic bag with a few holes cut into it. You want the humidity high, but you also want some air movement to prevent stagnation and fungal growth. If you use a terrarium, leave the lid off slightly to allow some air movement. The plants should be left unwatered for a few days, then check them occasionally to make sure the media is damp. Watering can be done with a spray or a watering can. It can also be beneficial to spray the plants with water if they appear to be wilting. Wilting often occurs with the growing tip of the plant. If you can supply it, bottom heat from a heating pad can help and hasten rooting.

After a month or so, take a cutting and *gently* tug it in the pot. If you feel resistance, it is rooting. If not, check again in a few weeks or a month. Some cuttings will take two or more months, while some will root in a few weeks. I like to wait till the plant shows signs of top growth before transplanting it into a regular media and larger pot, often three or more months after sticking the cutting. When removing the cuttings after repotting, acclimate them to the regular growing area slowly, as they may be tender and wilt after having been in a humid place while they rooted.

A few additional tips

- Some Nepenthes can be rooted in water. Use clean or distilled water, and insert two or more nodes into the water. A cup covered with aluminum foil, with a hole cut in the top works well, as does a wine bottle for larger cuttings. This works best for some very soft tender cuttings that may dry out too fast with other methods. It works well for *N gracilis* and *N. tobaica*.
- If you are taking cuttings and need to transport them, a plastic bag with a tablespoon of water in it will work well to protect the plant and keep it damp. I have even had a few nepenthes root is a bag like this when I forgot about them and left them in a well-lit area of the light cart for a few weeks!
- One way to get additional material for cuttings can be by progressively taking cuttings down a stem. Take a tip cutting and then wait to see if you get growth from the dormant buds located in the nodes of the remaining stem. If you get growth from the nodes remaining on the plant, wait for them to get large enough, and then take cuttings from them also. This can be a great way to rapidly get material for cuttings!