

Rooting *Nepenthes* in Water

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Back in the eighties, I remember seeing a report in CPN from Steve Clemesha that he hurriedly placed some cuttings of *Nepenthes* in a jar of water to keep them fresh and planned to pot them up later. Well, he forgot about them and noticed about a month later that there were tiny roots emerging from the stems of these cuttings. He left them for a while longer in the water until the roots were about 1 cm (half-inch) long. Then he planted them into individual pots to grow. Well, they did! What an easy way to propagate this genus. Lately, I have experimented with this method and this is what I found out.

At first I used jars which I filled with clean low-salt water. Cuttings of *Nepenthes* were made on 45 degree angle with a new razor blade sterilized with alcohol. The cuttings were immediately placed into the water. I covered some of the jars with aluminum foil thinking that root formation would be enhanced in the dark and perhaps inhibited by light. I saw no difference. However, I did notice that algae growth affected the rooting process and so it was a good idea to use aluminum wrap to block light. I left all the upper leaves on the plant and at times half the cutting sat in the water. If the leaves remained turgid after 5 days, it meant there was a good connectivity with the water stream inside the stem. If the leaves wilted, then the stem needed to be recut and placed into fresh water. Usually, this fixed the problem and turgor pressure was restored.

Stem cuttings also conveniently could be placed into testubes (13 x 100mm) with the water level at the top of the tube. These can be placed in a rack to hold the tubes upright. A piece of aluminum foil can be wrapped around the stem and tube to slow down evaporation. No fertilizers or hormone solutions were used during the entire process.

The plant cuttings took about 3 months to show roots that were about 1/2 inch or 1 cm long. This was at average room temperatures and shading of light about 60%. During this time several leaves grew from the apical stem cutting and lateral buds emerged from lower cuttings. The cuttings were then potted up in a 50-50 perlite and chopped sphagnum mix. The cuttings were handled with some care because the roots are brittle and can break off easily. Healthy roots are stiff, black and have root tips that are pale yellow. Plants showed little change in growth patterns and continued to prosper despite the drastic change in their root environment. At this time, I then watered the plants with dilute fertilizer and a hormone-vitamin preparation called Superthrive. The species of *Nepenthes* that were used to conduct this experiment are: *N. alata*, *maxima*, *x dyeriana*, *x hookeriana*, and *x mixta*.

This simple method allows one to observe the fascinating process of rooting a plant similar to what you would do to your house plants. It takes place in a clear and directly observable system that uses common materials. The process is very efficient. I had 45 rooted plants from 50 starts. Most of the non-starts rotted before the rooting process began. This method is not universal for all species and especially so if the cutting is very difficult to root by normal means.