DEPTH WITH PERSPECTIVE 3D PHOTOGRAPHY

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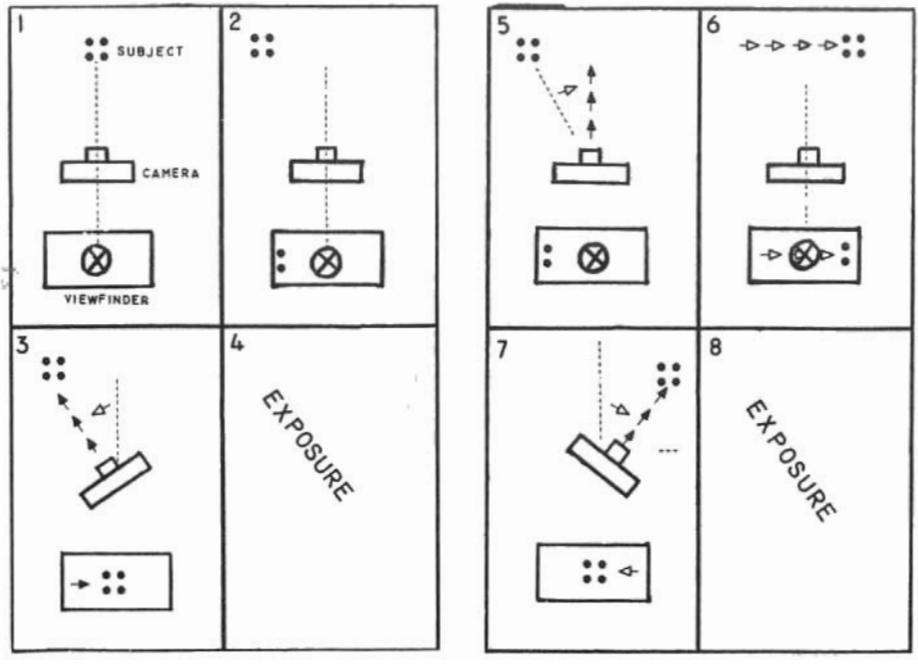
A prerequisite to three dimensional photography is depth of field extension. This process as I use it involves two 35mm slides to create a fuller representation of the subject. In each slide a different angle and plane of focus is chosen so when viewed together using two slide viewers, the two complement each other and a deeper depth of field is obtained along with three dimensional effects.

Unless one has access to lenses with better than f16 reciprocity, a subject such as pygmy Droseras can pose a great many problems. Very often, focusing on the stipulate crown of a rather tall pygmy *Drosera* results in the rosette being out of focus, and vice versa. Consequently it is advantageous to try the following technique. Make a slide focusing on the rosette of traps and another (without moving the camera) whose focus centers on the crown. When viewed together using a pair of small viewers (one for each eye), they will be superimposed so that an average of the two images is perceived by the brain. The focus of the average image is not as sharp as either of the two sister slides, but the depth of field is improved.

True 3D photography when done correctly allows you to send a true representation of your plants around the world. There is one great advantage with this technique: Views unable to be witnessed by the naked eye can be achieved with a camera! How close can you hold a match to your eyes so that it is possible to see it sharply still and in perspective? For me it is about three centimeters from my forehead; but with a camera the limit depends only on your equipment, time and patience.



In order to photograph your subject in 3D, place it in the center of your camera's viewfinder (it is best if the camera is mounted on a tripod). Move the camera right or left (see accompanying diagrams 1-8) so that the center of your original view now just eclipses one edge of your viewfinder frame by about half. Rotate the camera on the spot to bring the subject back into the viewfinder center, focus, and then make your exposure. Reverse all procedures so far taken for the second slide. The camera should once again squarely face the subject so that the image appears centrally in the viewfinder. Now move the camera in the opposite direction so that the subject eclipses the other edge of the viewfinder image by about half. Once again, rotate, focus on the subject and make an exposure. After film processing, you should have a 3D slide pair.

Each of the two slides in a pair should now be labeled "right" or "left" depending on what angle you have used as shown in figures 1-8. Be certain these are accurate (follow a set procedure or make notes while photographing), and that both slides are oriented as to backing or emulsion side. These can be viewed by placing each slide into two inexpensive slide viewers that are held up to the light for viewing (eg Afga). Manipulate the two slide viewers around until the left slide being seen by the left eye and the right slide being seen by the right eye blend into one 3D image. This takes some practice at first, but after the first set it is easily accomplished thereafter.

This process will give you realistic depth at about 10-30 cm. from the subject. For closer images, say with bellows, begin by moving halfway across the viewfinder image and experiment from there. For macrophotographs it is better to move the subject than the camera. (In some cases, pots can be more easily slid across accurately as in figures 1-8 rather than moving the camera on its tripod).

I can assure the readers that if you have not been interested in *Utricularia* bladders up until now, wait until you see them in 3D! If this is not enough and you want to go the full hog, then you can also try depth of field extension while focusing on your 3D subject.

I am sure that you, like me, will receive great joy from even your first slide pair. If, however, you feel uncertain as to the benefits of this marvelous medium, then I will gladly lend slide pairs from my modest library to those who already have two viewers or to those who wish to purchase a pair of viewers from me. I can supply a pair of viewers for $15.00 (Austral.) which covers purchase, postage and packing to anywhere in the world.

EDITORIAL NOTE—

After receiving this from Mr. Tilbrooke and seeing some of his slides, we knew we wanted to present 3D CP photography to our readers. But how? It was obviously impractical to make enough slide pairs copies for all subscribers, so we had to figure out some way to use the printed page. Joe Mazrimas finally came up with the mechanism. If you follow his instructions, you can see 3D in these photos accompanying this article!

INSTRUCTIONS

Place your nose on the page between the left and right picture and slowly pull the page away from your eyes forming a third image in the middle between the pictures. Try to ignore the right and left images and concentrate on the third image which is at first out of focus. Try to focus this third image holding the page about 15 to 18 inches away from your eyes. In about 10 to 30 seconds, a new, in focus, image will suddenly appear which will now have a 3-D look to it. Hold the page very steady when focus is achieved. People who wear contact lenses or have astigmatism may experience some difficulties in doing the above gymnastics with their eyes.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