

Vegetation Propagation of Phalaenopsis

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A new, simple and practical method of vegetative propagation of *Phalaenopsis* from flower stalks has been worked out at Cornell. After the flowers have been picked, the stalk is washed in tap water and rinsed in distilled water. The bracts at the nodes are then removed. These bracts cover the buds. In washing the stalk and in removing the bracts care must be taken not to injure the buds. A piece of stem three-fourths of an inch above and below each bud is removed with it. Usually, one or two nodes at the basal portion of the stalk have no bud. These are discarded. The upper portion which bore the flowers was also found to be useless. About five or six buds are usable.

The pieces are then freed of microorganisms by immersing them in a solution of calcium hypochlorite. The solution is prepared as for the disinfection of orchid seed (Knudson, 1922). The pieces of stem are immersed for two to five minutes and are then "planted" in flasks, test tubes, or bottles containing Knudson's Solution C as used for germination of orchid seed (Knudson, 1946). In "planting," the pieces are simply laid on the surface of the agar. The cultures may be kept in any room that is suitable for germinating orchid seeds.

The author has obtained active growth (swelling of the bud and the appearance of the first leaf) after two weeks. Sometimes growth may not occur until after two months. In general, conspicuous, well-developed buds grow out earlier than small ones and the larger the diameter of the flower stalk, the more vigorous the plants produced. Out of 65 buds that have been cultured, only seven have failed to develop into plants. Roots appear after two or three leaves have been produced. These plants may then be transplanted to pots. It is probable that such plants may flower in a year or two.

LITERATURE CITED

1. Knudson, L. Non-symbiotic germination of orchid seeds. *Bot. Gaz.* 73:1-25. 1922.
2. _____ A new nutrient solution for orchid seed. *Am. Orchid Soc. Bul.* 15: 214-217. 1946.

Fig. 1. Sketch of a flower stalk of *Phalaenopsis*. Cross lines indicate where the cuts should be made.

Fig. 2. Stages in the development of plants from pieces of flower stalks of *Phalaenopsis amabilis*. Plants in test tubes are 1/2 natural size. (1) two weeks old; (2) two months old; (3) five months old. Note the root growing from the base of the plant.

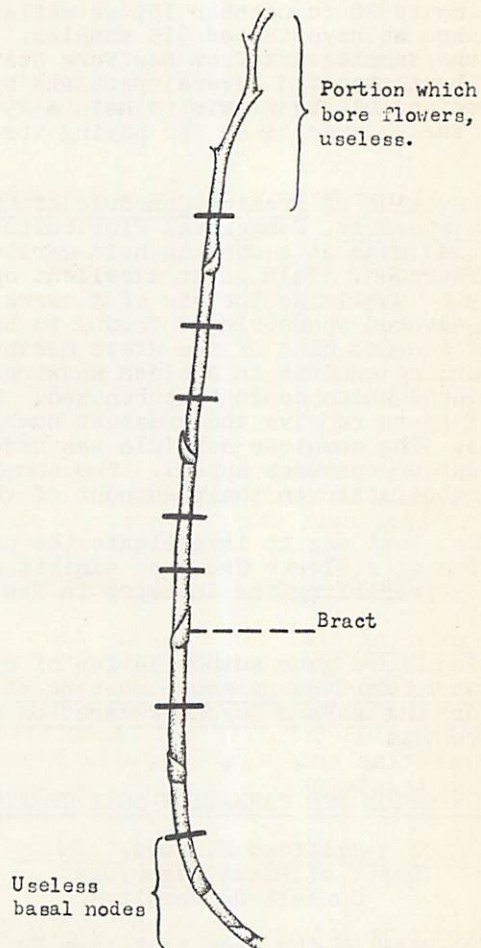


Fig. 1

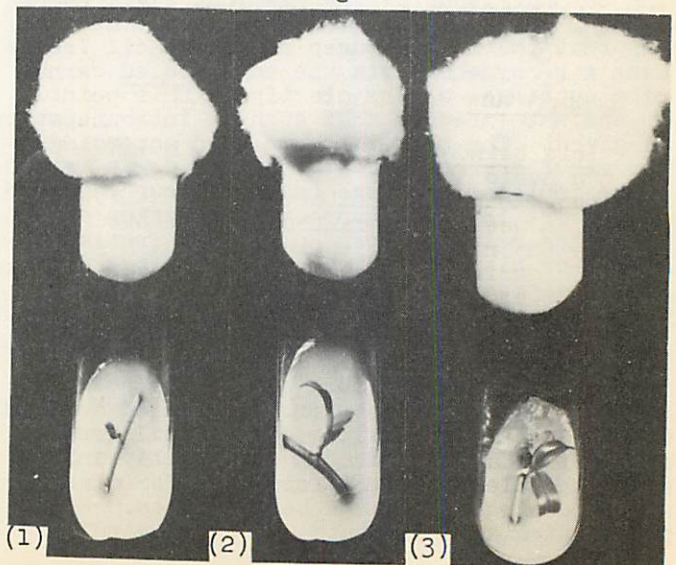


Fig. 2