

Making Game of Grafting

by August E. Kehr

Mark Twain once said that work consists of whatever a body is obliged to do, and play consists of whatever a body is not obliged to do. My efforts at budding magnolias would therefore come under the category of play. The catch is that like any other skill, if you want to succeed, you must work at it.

If you will pardon the pun, I should be classed as a "budding" budder. My failures in budding magnolias probably exceed the successes. Hence experts in this area need read no further, unless it's for laughs.

My first venture into budding began six years ago when Harold Hopkins gave me scions of *Magnolia stellata* 'Dawn,' a good pink form, to bud or graft onto seedlings of *M. kobus borealis*, which he had also given me. By use of the cleft graft method, the scions of 'Dawn' were grafted onto the *M. kobus* seedlings. The success rate was phenomenal. There were grafted plants of 'Dawn' to share with any takers. It seemed then that grafting and budding magnolias was a snap, something that anyone could do without half trying.

With this first flush of success, I embarked full scale into the venture by purchasing 50 seedlings of *M. acuminata* for grafting stock. These were grafted and budded with every desirable magnolia species or cultivar I could glean from all available sources. In my mind's eye, by summer's end, I would have a ready-made magnolia collection, or so I thought. And there was not a single success. Failure followed failure for season after season. A demonstration on budding by that master budder, Joe McDaniel, buoyed

hope temporarily, only to be dashed when the process was repeated at home with the usual failure. It was evident that something was being overlooked. It began to appear that budding and grafting were far more work than play.

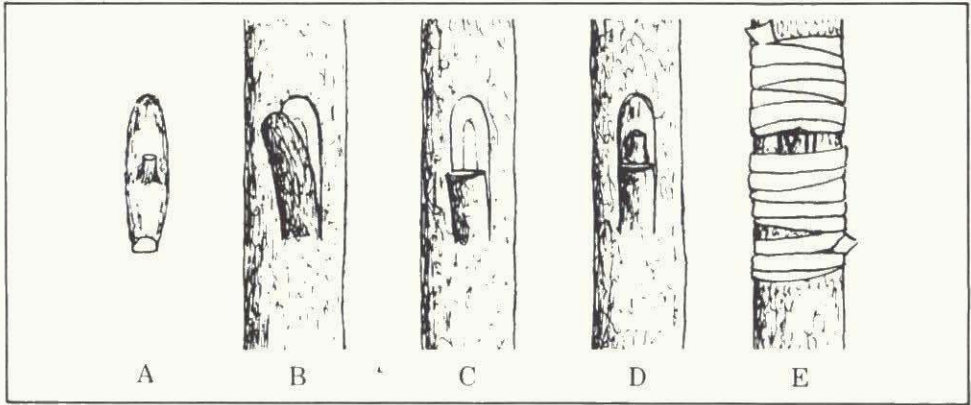
Still I persisted, trying one thing after another until, this year, somewhat to my astonishment, success once again came my way. All of a sudden I could do nothing wrong, and it once again became play. Somehow a sixth sense indicates to me that these successes were not just a repeat of the accidental successes of six years ago, but this time they were for real. With this in mind, I will share the techniques used.

General Considerations. In my opinion, there are two important conditions that *must* be met:

First, the stock plant must be in rapid growth. Usually this rapid growth occurs in midsummer from July 1 to August 15. You will be wasting your time if the growth of the stock is not rapid.

Second, strict sanitation must be practiced. Make sure all tools and materials are clean. As a protection wash them in a solution of Benlate. Also wash the stock plant at the point where the bud is to be inserted, with the same solution. Soak the scions in the Benlate solution. Benlate is a systemic fungicide and thus offers protection longer than a surface fungicide. A new systemic fungicide with an even wider spectrum of fungal control and even bacterial control is Topsin M.

Procedure. (1) Select rapidly growing stock. To my knowledge, there are no magnolia species or cultivars that are incompatible. I used *M. stellata*, *M. acuminata*, *M. salicifolia* (Arnold



Arboretum), *M. kobus*, *M. officinalis biloba*, *M. acuminata subcordata*, and *M. sprengeri* 'Diva' seedlings. All seemed to work well. If there is a preference, it would be for *M. acuminata* and *M. salicifolia* (Arnold Arboretum). The latter are seedlings that may be hybrids, for they do not closely resemble *M. salicifolia* from other sources. I have *M.* × 'Watsonii,' *M. denudata* 'Forrest's Pink,' 'Miss Honeybee,' and 'Centennial,' all growing on these seedlings.

(2) Make a thin, 1½ inch cut on the stock. As in a card game, "cut thin and win, cut deep and weep." If you cut into the pith, I believe you are inviting failure. Practice very thin cuts, using a razor blade or a very sharp knife. (See B, of McDaniel drawings.) Cut off top half of the slice, leaving a short flap as in Drawing C.

(3) Cut a bud, leaving a part of the stem and leaf attached (see A of McDaniel drawings). Select the fattest buds available. Again, make thin cuts, never into the pith. The stem makes a good handle, and will eventually drop off if the graft is successful. My best luck has come from current season's buds. However, dormant buds (that were cut and stored in the refrigerator) can be used. I believe most of my failures in using dormant buds came about because the budding was done too early in the season. I intend to try next year with dormant buds, but

delaying the process until growth of the stock is in full swing — probably early or middle May.

(4) Put the bud into the bottom flap and push it down as tightly as you can into the flap. A nurseryman friend told me once that this is a critical part of budding and grafting. His comment, "Push the bud (or scion in case of grafts) down until it squeaks."

(5) Wrap securely with rubber budding strips, but leave spaces along the cut for air to reach the wound. I believe air is needed for good healing (everyone has his own crazy ideas!). See E of McDaniel drawings. Instead of rubber budding strips there are many other wrapping materials now available, such as Parafilm M.

(6) Completely wrap the fastened bud and all cut surfaces of the stock with a 6-by-6 inch (approximate) piece of thin poly-plastic (the thinner the better, to let more air in). Poly-plastic allows air to pass through, but prevents loss of moisture from all cut surfaces of the bud and stock. Maintain sanitation throughout this process.

(7) Fasten an 8-by-8 inch (approximate) piece of white plastic over the bud, making a skirt (open at the bottom) for air and shading. It is important that direct sunlight never strike the wrapped bud, for if it does, the bud will surely be cooked. I mark the identification of the bud on the white plastic skirt, using a felt-tipped