few Europeans have ever visited this area. He does not agree at all with those botanists who consider this Magnolia a variety or form of *M. kobus*. The latter species grows elsewhere in Japan, and becomes a much taller tree and has fewer and broader tepals. Mr. Ogishi recognizes two species. He knows *M. kobus* from the Mount Fuji area.

The man who conducted us in the mountains of Gifu-ken, S. Yamaguchi, a nurseryman and seed collector, showed us in his nursery a *M. stellata* grown from seed collected in the mountains near his house.

This rather vigorous shrub had a habit similar to the clone which we grow as *M. stellata* but with many beautiful pale pink flowers. He gave us some plants and they are now growing in the trial garden at Boskoop.

To me it was not clear what Owi meant in "Flora of Japan" with his reference to: mountains, Honshu (western Tokaido distr.). But on an old map of Japan the Gifu-ken area is in the western part of the former Tokaido district. The well known Tokaido railway runs just north of the city of Nagoya.

A Witches-Broom

by J.C. McDaniel

Globe-headed or globose-growing mutant forms grafted high on normal stems have been reported in a number of tree genera as garden curiosities. Now we have one in Magnolia.

M. acuminata 'Nelson' originated before 1950 as a bud mutation on a large tree in Princeton, Illinois, owned by druggist William Nelson. The rest of the tree is normal, but proliferative growth forms a "witches-broom" on a branch about 20 feet from the ground. After looking at it on trips through Princeton since the early 1950's, I grafted scions from the 'Nelson' mutant at Urbana in summer, 1974. Two grew, but one was accidentally broken loose during examination the next July. I regrafted pieces of it, and part of my new grafts were destroyed when another man pruned one tree bearing the grafts. Three grafts on one tree have continued growth through 1980.

When I collected wood of the mutant about the first of August 1974, I noted that there were almost no visible resting buds. This characteristic is repeated in the growth from scions. Compared with other Magnolias, whether *M. acuminata* or other species, 'Nelson' seems to exhibit very little apical dominance. At nodes just a little way below a growing point, new buds are expanding into branches, which can branch again before the current growing season is over. Some of the more immature branches fail to grow the next spring, but enough do start to maintain a bushy growth.

For a while it was suspected that the original witches-broom had developed because of an infection, as the hackberry (*Celtis occidentalis*) witches-brooms do. The cause now appears clearly genetic. There is no transfer of the proliferative tendency to other buds of the original tree or to the understocks where 'Nelson' has been grafted. Yet all grafted scions of 'Nelson' continue their branching and rebranching.

After many years growth on the old tree at Princeton, and six seasons growth as grafts at Urban, Illinois, it appears that the 'Nelson' witches-broom mutant *Magnolia acuminata* will never bear flowers, nor revert to normal *M. acuminata* growth habit. It remains a natural "freak."

. . . Short Takes

• Member Carl Ferris Miller of Chollipo Arboretum in Korea reports that one of our newer British members, John Gallagher, has succeeded in getting seeds of *Magnolia zenii* and *M. amoena* from China, and we hope for a report by him someday on germination success and other details.