SOME SELECTIONS OF CELTIS LAEVIGATA AND MAGNOLIA ACUMINATA

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Celtis laevigata. When I lived at Nashville, Tennessee I decided that the commonest deciduous tree there, at least in the older parts of town, was probably the Sugarberry or Mississippi Hackberry, *Celtis laevigata*. Though the common eastern hackberry, *C. occidentalis*, also occurred there, the southern species probably outnumbered it 100 to 1. It is also common, I see, on streets and woods borders here in eastern Virginia and many other parts of the South, as far as southern Florida and southwestward at least to Monterrey, Mexico. In the Mississippi and Missouri Valleys, it grows wild as far north as Hannibal, Missouri and Quincy, Illinois. Botanical manuals, such as Rydberg's "Flora of the Prairies and Plains of Central North America" list it for southeast Kansas.

C. laevigata is prevalent in the southern third of Illinois, though not native around Urbana. There at the upper edge of Zone 6a, *C. laevigata* trees from at least two sources have proved hardy over a period of 15 years, and with us show enough advantages over most of the *C. occidentalis* to suggest their wider use there and in comparable climates at least a half zone north of where *C. laevigata* occurs wild. The biggest local planting was made by Wandell's Nursery of Urbana, around the parking lots adjacent to Lincoln Square. Mr. Wandell tells me that his liners came originally from Hess' Nurseries, formerly located at Wayne, N. J., which is well north of the Virginia distribution given in "Gray's Botany" (1950) for this species in the eastern states. Whatever their original seed source, these Lincoln Square seedling trees looked good enough to me that I had selected some for clonal propagation. I learn now that Wandell's has independently selected some for increase and that they should be available in another year or two.

General advantages of *C. laevigata* over the native *C. occidentalis* at Urbana include freedom from the hackberry witches'-broom disease, a more refined or distinguished growth habit, a smoother gray bark which is more attractive, and less insect damage to its foliage, which remains green until frost. With us, there seems to be no nipple-gall infestation, with subsequent fall migration of the midges, which can get into houses and be a brief but sharply felt nuisance. At Cairo, Illinois, and here in Virginia there are some smaller leaf galls on *C. laevigata*, but apparently not the nipple galls of *C. occidentalis*. At Urbana, *C. laevigata* has fruited only sparingly, in contrast to the condition at Nashville, where it supports large flocks of migrating robins for several weeks each year.

The hybrids that occur naturally between sugarberry and common hackberry sometimes, as at Forest Park in St. Louis, include F_1 or F_2 individuals which are witches'-broom susceptible. One grafted cultivar already in the trade (William Flemer's 'Magnifica') was patented as a hybrid of these two, but is not witches'-broom susceptible, so far as I know. We have not yet tried it at Urbana.

Not diseased, but genetic mutations are two instances of what might be called broomy, dense branches on *C. laevigata* trees. Don Shadow has one at Winchester, Tennessee, and I photographed another at Vincennes, Indiana recently. These might be worth grafting on standards for novelty trees of slow growth.

I'd agree with Hartmann and Kester, who say that clonal propagation is probably best for hackberries, to obtain uniform growth. I've budded *C. laevigata* successfully on *C. occidentalis*, and the Chinese *C. sinensis* on both *C. occidentalis* and *C. laevigata*.

Magnolia acuminata. Catesby, the colonial naturalist, painted a white flower for the cucumber tree, and was followed in his error by the younger Michaux in the early 1800's. We know now that its flowers are never white, but can be a good yellow in one form. A less well known fact is that other trees of it have good yellow color in the fall.

Bright fall color is not one of the several attributes usually mentioned for our hardiest American Magnolia, the cucumber tree, *M. acuminata*. One writer in 1913 found the newly fallen leaves to be about the same color as "owl's feathers" (species unspecified). Donald Wyman ("Trees for American Gardens") is among authors who do not credit it with autumn color interest, and for most specimens he is right. Dull brownish color does prevail at leaf senescence on most *M. acuminata* seedlings, but not all of them. For several years I have been watching some old trees of this species planted about 75 to 100 years ago in Champaign County, Illinois, and at least four of them do regularly turn yellow before frost brings the leaves down. Scion wood is available to propagators who would like to upgrade their *M. acuminata* in this respect.

M. acuminata 'Philo' was previously registered primarily because it is exceptionally self-fruitful, but it also turns conspicuously yellow, so it has two things going for it beyond the species average. The original tree, on the John F. Keeler farm near Philo, Illinois, is a large one, estimated at about 100 years old. It has annual crops of seeds, though standing some five miles from any other pollen source.

The Allison clone, another of about equal age, at the old Allison mansion in Tolono, Illinois, also may be self-fruitful, but grackles damage most of its fruits before maturity, and it does have a younger tree within ½ mile that could cross pollinate it.

Two others, at Savoy and Urbana, are fully fruitless unless cross pollinated. The Dunlap clone at the former Senator Dunlap nursery

near Savoy is particularly late vegetating in spring, and matures its seeds (if crossed) as early as the second week in August. The Busey clone, an old tree in Urbana, has the very wide spreading branches sometimes seen on old specimens of this species. In 1971, it colored ahead of a large ginkgo that is one of its tree companions at the old Busey mansion between Elm and Green streets. All four clones are comparatively early maturing, and should be adapted where other less colorful cucumber trees are now grown, north through Zone 5, at least.

Some American nurseries, and Treseders' Nurseries (Truro) Ltd., at Truro, Cornwall, England, have previously grafted from *M. acuminata* 'Philo' and the Dunlap clone. Scions of these and the other two fall coloring clones will be available in season. It should be mentioned that all four clones have the greenish, inconspicuous flowers typical of *M. acuminata*. For yellow flowers, we can still graft or bud from *M. acuminata* forma *aurea,* or selected clones of the smaller *M. a.* var. *cordata*. I have not yet seen yellow magnolia flowers and yellow autumn foliage on the same tree, but by cross-breeding, we may ultimately achieve that combination.

MODERATOR FORDHAM: Harry Hopperton has a couple of plants he'd like to tell us about.

HARRY HOPPERTON: Here is a picture of *Corylus duplex.* This plant has a very nice dense growth habit and I think it has possibilities. Another plant, *Corylus calurna* is one I think we are overlooking too often; perhaps we should be using it instead of some of the honeylocusts. It has a very interesting branching habit.

MODERATOR FORDHAM: That concludes the new plants portion of the program, and I turn the meeting over to Bill Flemer.

BILL FLEMER: Thank you, Al, for your usual fine job. This completes the program portion of today's meetings.

FRIDAY EVENING SESSION

December 3, 1971

PLANT PROPAGATORS' QUESTION BOX

The question box session convened at 8:00 p.m. in the West Ballroom. Dr. Bill Snyder served as moderator.

MODERATOR SNYDER: We have several questions here, and though we seem to be few in number this evening what we lack in quantity we will make up for in quality. Many of these questions are directed to specific individuals and if they are not present, we will set