

Green Autumnal Foliage.

DID it ever occur to any one that it would be well to brighten the lawn in fall with more trees that remain green during that season? If it ever has, the evidence scarcely appears. Yet the dull and fading hues of autumn, in spite of the increasing beauty of dying leaves, need some green color to refresh the eye. Perhaps, in improving lawns, we do not sufficiently consider all the valuable qualities of different plants, failing to recognize the lessons afforded by woodland scenery. It may not, therefore, be uninteresting to touch briefly the fall characteristics of certain trees and shrubs noteworthy in this respect. We might naturally turn to evergreens as specially fitted for our purpose; but, with few exceptions, their hues have been dimmed since June. The green does not seem as warm and fresh as it did then, and an evergreen has never that cheerful, enlivening aspect presented by the green of deciduous trees. The wind does not stir as readily, nor the sun touch as variedly, the somewhat heavy foliage of evergreens, and, consequently, they have not the continually changing moods of deciduous trees.

We propose to include no plants the foliage of which suffers from mere white frost, and even to include some the leaves of which will endure a severe freezing without injury to their beauty. There is, doubtless, a season in late August and early September, during which the lawn should be carefully supplied with such foliage and flowers as will yet flourish; but we have chosen a later period, which is sometimes deferred until the middle of October, and which is more neglected and needy. One would think the maples valuable for their green in fall. They are healthy, thrifty, and vigorous; but scarcely a satisfactory variety in this particular exists among them, without it be the little colchicum maple (*Acer colchicum rubrum*). The foliage of this tree is very pleasing, and of curious outline. Delicate red stems support the leaves, and their general appearance is bright and cheerful. It is a choice, uncommon maple, and should be more employed as a single specimen on the lawn. The common catalpa (*Catalpa syriaca*), much spoken of nowadays for its enduring wood, and most valuable to the lawn-planter for broad, shadowy foliage, retains its green color well in fall. There is also a dwarf form (*Catalpa Kämpferii*), rounded like a hemisphere, with very delicate autumnal greens. *Chionanthus Virginica*, the white fringe, old, well-known and choice, is not usually spoken of for its autumnal beauty. The exquisite, lace-like flowers have doubtless eclipsed the glory of the foliage. It is large for a shrub, lustrous and oval; the leaves have a dark, rich green in fall, the general appearance of which is improved, though less than most shrubs, by pruning in winter. This operation should consist in thinning out, restraining, and renewing, not shearing, in the manner that falls to the lot of many unfortunate shrubs. We should like to see a few lawns, the trees and shrubs of which had all been pruned with discernment through a long period of years. The resultant improvement of the appearance of a whole neighborhood would be aston-

ishing. Inquiring minds may ask where such places exist. We do not know. Most things have been attempted and done, so likewise such work is doubtless accomplished; but we imagine it would be hard to find where in this country. The American persimmon is a noteworthy tree for its green in fall; but the Japanese persimmon, or *kaki*, shows a richer, glossier foliage, like orange-leaves in color. If it proves hardy, which is not yet sufficiently demonstrated in the North, its green color in fall will afford another valuable quality besides that of its fruit and general beauty at other seasons. Few shrubs are prettier in the fall than the evergreen thorn (*Cratægus pyracantha alba*). The small, glossy, dark-green leaves and orange-colored berries, all protected by masses of thorns, characterize the finest *Cratægus*, which is thoroughly healthy in America, as it is also attractive in very late fall and even winter. *Cercis Japonica*, the Japan Judas-tree, has heart-shaped leaves, glossy, tough, and retained late in fall. It is rare and choice, and decidedly attractive, both for its flowers and leaves, during at least five months of the year. In spring, early pink flowers wreath the stem, before the leaves put forth. The best spiræa in fall is perhaps *S. prunifolia*, which assumes still richer colors as a late autumnal garb. *Spiræa crispifolia*, very rare, and recently introduced from Japan, is thought to be a variety of *S. callosa*. A dwarf mass of rounded, curling foliage, it is well preserved in fall. *Salix laurifolia*, or (as good authorities claim) *S. pentandra*, the laurel-leaved willow, preserves a shining green late in the season. The ornamental value of this tree is not sufficiently considered. It endures all exposures and soils, even close to the sea-shore, and is always clean and thrifty. The elms are remarkably deficient in attraction during the fall, with one or two curious exceptions. The one specially notable is the weeping slippery-elm, which grows with great rapidity, and has fine, vigorous foliage. So rapid is this growth that grafts made in the spring will attain six or eight feet during the following summer. We see a specimen before us while we are writing, where a large American elm has been stripped of its branches and grafted at numerous points with cions of the weeping slippery-elm. The effect produced after three years is most extraordinary. Long, pendant branches, clothed with luxuriant foliage, swing and wreath themselves about against the sky like gigantic snakes. The most valuable quality of this choice tree, however, lies in the fact that its foliage is not unfrequently green until October, and always thus green weeks later than other elms. There is one other elm which is rare—*Ulmus Siberica*—that holds its green late—so late that it might be classed with oaks and beeches for this peculiarity. It is of moderate growth, and has rough, slightly curled foliage, grouped closely along the branches. So far as we know, only the lindens can boast of one variety that remains really green in fall,—*Tilia dasystyla*,—a golden-barked tree with bright green foliage. All other lindens fade soon, and become almost unsightly in early autumn, so that the green foliage of this variety seems very curious to behold in autumn. The effect of the

unusual season for such coloring is increased by the strong contrast afforded by a bright yellow bark and a singularly lustrous foliage.

But the noblest trees of fall, for bright green and all other good qualities, are the beeches and oaks. Rich in color and picturesque in form, always affording grateful shade, other trees may possibly be as fine in a certain way, but none can be more generally satisfactory. Not specially early in putting forth leaves, they are most beautiful in June, and indeed throughout the summer. In autumnal landscapes, however, their late foliage, almost evergreen during mild winters, performs a valuable part, for the very reason that there is now so much less beauty among trees than earlier in the season. All kinds of beeches are fine in the fall. The cut-leaved, the purple, and the common American and European beeches are all most effective and green until nearly winter; but the noblest of all is the celebrated weeping beech. Its great, gleaming masses of foliage assume all kinds of fantastic shapes and reveal bowers and recesses until the leaves of almost every other tree have taken their departure. The only other rival the beech really has late in fall is the oak. Strong, sturdy and picturesque, enduring and grand, it is admired by every one and planted by few. It transplants with difficulty and grows slowly; but when once established it is well worth the patience it has demanded. All oaks are fine in fall, and in many cases preserve their leaves fresh and green into November and later. Indeed, although we have no really evergreen oaks in the North, there are seasons when some oaks, notably the pyramidal, retain their leaves all winter. The willow-leaved oak, as well as the pin-oak and the rare, large-leaved Daimio from Japan, among others, are very beautiful in fall, sometimes even in November.

Did space permit, we should like to dwell on the beauty in autumn of various privets, *Daphne cneorum*, of tiny, evergreen foliage, and certain of the *Eleagnus* species, as well as the beautiful fall climbers, evergreen honeysuckles, Akebias, Virginia silk, etc. All these should be planted with taste here and there throughout the lawn, supported by occasional masses of rhododendrons, laurels, mahonias, and other evergreen shrubs. Thus adorned, the lawn, in the fine

air and lights of autumn and during bright days, may well tempt us to linger amid its yet beautiful foliage, where crimson and gold is mingled plentifully with green.

SAMUEL PARSONS.

A "College of Domestic Economy."

It is proper to note in this department of the Magazine, that Sir Henry Cole, with his customary energy, has been urging, for some considerable time, on the British Government and its Education Department, more careful and more systematic practical instruction, in the public elementary schools, of the needs and duties of "Household Life." In his paper, on the "Establishment of a National College of Domestic Economy," which he read at the Domestic Economy Congress, at Manchester, he advocated that trained teachers, having earned certificates at a Central State Institution for knowledge of "food and its preparation," "health," "the dwelling," "household management and thrift," should be employed in large centers of population, going from school to school, once or twice in the week, as teachers of drawing did at first. Further on he proposed that Her Majesty's Commissioners might, out of the surplus money of the Exhibition of 1851, in their charge, endow the College or central institution, as the first of the institutions for aiding technical knowledge which they have proposed to aid, and Sir Henry specially named their fellow-commissioner, Dr. Lyon Playfair, as pre-eminently qualified to direct such a scheme. The Commissioners possess the funds and the ground; a moderate sum only would be requisite for a building which should include laboratories as well as a hostel for housing female students from the country for short periods, and to pay the cost of a staff of competent examiners for granting certificates of competency, whose services would be only occasional. The students might contribute to the expenses, and there might be free scholarships. The College would supply instruction and practice that would be of a much more advanced kind than could be given in the several existing training-schools for teachers of elementary instruction, and the state might properly assist in paying on results, as in the training-schools for elementary education.

CULTURE AND PROGRESS.

Charles Francis Adams, Jr., on Railroads.

MR. CHARLES FRANCIS ADAMS, JR., whose annual reports as chairman of the Massachusetts Railroad Commission have given him the foremost position in this country as a student of the philosophy of railway transportation, has produced a valuable and at the same time entertaining work entitled "Railroads: their Origin and Problems" (New York: G. P. Putnam's Sons). Eighty pages are given to historical and descriptive matter of exceed-

ing interest, concerning the first railways operated by locomotive engines in England and the United States. The Manchester and Liverpool Railroad was opened September 15, 1830, under the direction of George Stephenson, the inventor and builder of the locomotive, under whose hand the excursion train, with the Duke of Wellington and the chief dignitaries of the government, sped from Liverpool to Manchester and back again. The particular and indispensable part of Stephenson's invention was the