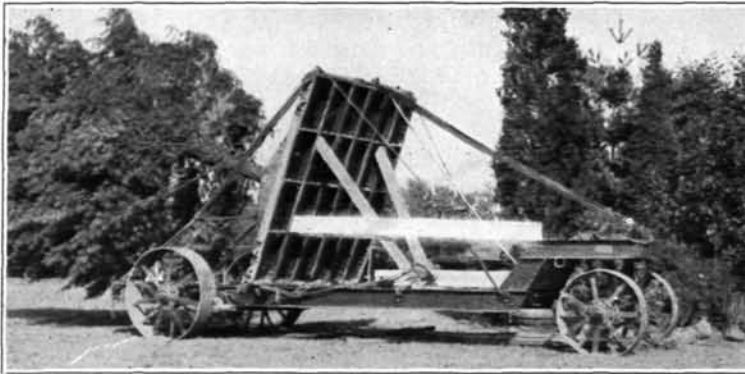


Native Trees, Shrubs, and Flowers for Golf Courses

Part I. Fall Plantings

By P. L. Ricker, President, National Wild Flower Preservation Society

Many golf clubs are well provided with larger or smaller groups of trees, and frequently with streams or ponds bordering some of the fairways and greens, furnishing shade and a landscape effect upon which it is difficult to improve. For clubs not so fortunate it is not difficult, in the late fall or early winter, after the deciduous leaves have fallen and the course requires less attention, to have the workmen move fair-sized trees, 20 or 25 feet tall, from the nearest wooded area, or perhaps from some real-estate improvement which is cutting down the bulk of the trees, to points of vantage along the fairways, greens, and tees. Maple, oak, elm, hickory, ash, tulip, poplar, walnut, beech, birch, wild crab, hawthorn, black cherry, yellow-wood, buckeye, gum, cedar, pine, spruce, or fir are usually available, and should be grouped with the trunks from 20 to 30 feet apart.



One method of moving trees. (The horizontal white strip results from eliminating the manufacturer's name.)

The usual method of moving such trees is to dig a trench about $2\frac{1}{2}$ to 3 feet deep around the tree to be moved and at a distance of 3 to 5 feet from the trunk, depending on the size of the tree and the roots. The tree is then loosened by digging under it. Part or most of the soil may be removed from the roots with picks, when planks may be placed under the roots and the tree slid onto a drag; or a heavy rear axle with a long tongue and wheels as large as possible may be backed up to the tree and, after wrapping the trunk with several thicknesses of burlap to protect the bark, the trunk may be lashed to the tongue, the tree readily lifted from its hole, hauled to its new resting place, and planted by the reverse process.

By digging a square trench and boxing the soil around the roots, trees may be moved, with care, on a drag or skids, even during the growing season; but without experience the moving of deciduous trees when in leaf had better be left to the professional tree mover.

In moving evergreens, and deciduous-leaved trees with the leaves still on, the ground around the tree should first be thoroughly saturated with water, so that it will soak down to the roots, and then, after the ground is partially dried out so that it retains just sufficient

moisture to assist in holding the soil together, the excavating process is begun as described above. With smaller trees the ball of dirt on the roots should be wrapped with burlap to keep the soil from falling away from the roots. With larger trees the earth around the roots must be boxed. It is fatal to the life of a tree to allow the soil to fall away from the roots. When replanted, the roots must again be thoroughly watered. The larger trees are usually stayed with guy ropes from three directions, to prevent their being blown over, until the roots have reestablished themselves. Ropes around the trunk 6 to 8 feet from the ground may be used for this purpose, provided the bark is protected by burlap.



The Rose Mallow, blooming in July and August, is one of the most attractive flowers for low, wet meadows and banks of streams or ponds.

Large groups of trees should be planted somewhat farther apart, and small trees and shrubs, such as dogwood, redbud, holly, wild hydrangea, fringe-tree, elder, arrow-wood, spice bush, hackberry, mountain ash, shad-bush, wafer-ash, strawberry bush, bladder-nut, and pepperbush, may be planted between, or grouped by themselves.

In a well-established woods, particularly along streams, with acid soil indicated by a thick vegetable mould, mountain laurel may be introduced to advantage. Hedges of mountain laurel planted with plenty of wood loam and mulched every fall with oak leaves, pine needles, or sawdust that has been rotting for four or five years, for the purpose of supplying the necessary soil acidity, are very attractive, particularly when in flower. They should be planted in situations where they do not need to be trimmed in case they should eventually reach a height of 6 to 10 feet, a height which, except along streams, they are hardly likely to exceed in most localities.

When a wooded area has become established, a great variety of shade-loving wild flowers may be planted either from seed collected during the period from late spring to late fall or by moving the plants

with a good ball of earth from near-by woodlands or areas being cleared. Except in California and Oregon, wild flower seeds do not appear to be on the market, although many dealers throughout the country do offer rooted plants for sale. These are, however, often taken in considerable quantity from areas where they can not be spared, and there is danger of many localities being stripped of some of the rarer wild flowers by dealers. Few dealers attempt to propagate their own wild stock. In collecting seeds locally, care should be taken to leave plenty of the seed pods to maintain the usual supply of plants in their natural locations; this is particularly advisable in the case of annual plants. As nature's method is to drop the seed to the ground as soon as ripe or to have this done by birds, it is evident



The Rose Pink will make an attractive display in August on low meadows.

that all seed collected should be planted at once and not over one-half to 1 inch deep. In fact, scattering the seed is ordinarily effective, and this should always be done in as nearly the same soil, moisture, and shade conditions as those in which the parent plants were found growing. Some wild seed, such as that of wild rice and gentians, which normally grow in from wet to only damp conditions, will not grow at all if allowed to become thoroughly dry before planting. Many other seeds require to be frozen or to lay on or in the ground over winter before they will grow. This is to burst the outer, usually hard seed coat. Some seeds, like holly and dogwood, have such a hard seed coat and probably require so long a time for the seed to ripen that they have to remain in the ground over two winters before they will grow.

Wild herbaceous annuals and perennials suitable for situations which are not too densely shaded include golden ragwort, hepatica, bloodroot, anemone, phlox, trillium, bluebell, wild geranium, phacelia, larkspur, May apple, twin-leaf, spiderwort, stonecrop, toothwort,



The wild Aster makes one of the best subjects for dry, open ground, and blooms throughout August and September



The Hairy Beard-tongue in this field covered several acres as dense as this during July and August

Dutchman's breeches, Virginia creeper, blue-eyed Mary, most ferns, and blue, white, and yellow violets. Some plants, such as lady's-slipper, trailing arbutus, violet wood-oxalis, partridge berry, bunch-

berry, wild ginger, and maidenhair fern, need acid soil, or leaf mould.

Along the edges of streams or ponds, sufficiently out of the fairway not to interfere with the play, may be planted blue flag, arrow leaf, pickerel weed, white and yellow water lilies, marsh marigold, lotus, and bulbous cress.

In slightly moist or low meadows adjoining water courses may be planted dog-toothed violet, cardinal flower, gentian, and rose pink. If the meadows are of acid reaction, or underlaid with peat, many orchids, such as pogonia, ladies'-tresses, and some of the fringed orchids, may be grown.



The climbing Hempweed makes a solid mass of pale pink to white flowers during July and August.

In dry, open fields violets, bluet, foxglove, milkwort, St. John's wort, steeple bush, lily, fritillary, California poppy, Mariposa lily, loosestrife, beard-tongue, farewell-to-spring, asters, evening primrose, butter-and-eggs, and lupine will grow in great profusion. Pokeberry, bayberry, hackleberry, buffaloberry, crowberry, huckleberry, blueberry, snowberry, blackberry, raspberry, juniper, madrone, manzanita, kinnikinnick, salal, and currant, added to the background, will attract many birds.

To rocky situations the moss pink, saxifrage, rockcress, and red columbine are adapted.

The beautifying of roadside approaches should not be overlooked. A judicious scattering of dogwood and redbud add much to the spring attractiveness of such situations. Arbor vitae and red cedar can be added, with an occasional tree from those first listed above, and in a more or less distant and not too formal arrangement. Either wild or rambler roses add a touch of color in season, and the latter have the advantage that they soon make a dense shaded thicket which helps to keep down some of the usual roadside weeds. Unsightly cuts, or banks subject to erosion, may best be covered in eastern United States with Japanese honeysuckle. This roots readily, spreads rapidly, and has attractive fragrant flowers, and is common as an introduced weed in many localities, where it may be obtained without other expense than that involved in collecting plants which are already rooted. Climbing hempweed will cover fences and in summer becomes a solid mass of white to pinkish blooms.

Many other plants may be added to the list, depending on one's knowledge of the local flora. With the advance of civilization and consequent destruction of woodlands and fields due to agricultural and building operations, few wild beauty spots will remain in another generation or two except such as are set aside for that purpose in the form of parks, town forest, and plant preserves. An opportunity is here presented for making the unoccupied parts of country-club grounds places of beauty and at the same time furnishing refuge for many of our disappearing birds and flowers.

Bird Houses

Birds appeal strongly to the interest and affection of mankind. Their natural attractiveness is enhanced by their great economic value, especially in the control of insect pests. For economic as well as for esthetic reasons, therefore, an effort should be made to attract and protect birds and to increase their numbers. The United States Department of Agriculture has a series of bulletins on harboring birds. These bulletins will be sent to anyone requesting them upon application to the Office of Publications, United States Department of Agriculture, Washington, D. C. The series consists of the following publications: Farmers' Bulletin 1456, "Homes for Birds"; Farmers' Bulletin 621, "Attracting Birds; Northeastern States"; Farmers' Bulletin 760, "Attracting Birds; Northwestern States"; Farmers' Bulletin 844, "Attracting Birds; Middle Atlantic States"; Farmers' Bulletin 912, "Attracting Birds; East Central States"; Farmers' Bulletin 1239, "Community Bird Refuges" (of general application).

New Member Clubs of Green Section.—Elmira Golf and Country Club, Elmira, N. Y.; New Zealand Golf Association, Wellington, New Zealand; Coldstream Country Club, Hempstead, N. Y.; Canadian National Railway's Course, Minaki, Ontario; Canadian National Railway's Course, Jasper, Alberta; St. Marys Country Club, St. Marys, Pa.; Lake Shore Country Club, Glencoe, Ill.; Prouts Neck Country Club, Prouts Neck, Me.; Antlers Country Club, Amsterdam, N. Y.