Would You
enjoy stopping here after some-
one had so thoughtlessly spoiled
the natural beauty?
Compare with picture on front
cover and read story on inside
front cover.

OUTDOOR EDUCATION
CONSIDERING LILIES
GARDEN ACCESSORIES
GOOD OUTDOOR HOUSEKEEPING

WHAT IT MEANS

We would not throw trash on our living room rug nor carve our names on the dining table top. We should learn to use these same good manners when we are in the out-of-doors. We should burn our barbecue trash and bury things like bottles and cans. We should respect the native growing things as we would our valued furniture at home. We should always clean up our picnic and camp sites as we would our own rooms in town. We should learn to respect private fences and livestock as we would like to have people respect our own lawns and gardens.

WHY

Because much of our pleasure from the out-of-doors comes from its fresh wilderness we should leave this wilderness with as few signs of human use as possible so that others may get this some enjoyment. Most of us live in Colorado because we like it here. We like to live where we can go to the mountains on week-ends; we enjoy the mountains, trees, rocks, and flowers as they have been for centuries. As Colorado can never compete with many of the older Eastern states in agriculture or industry we should learn to appreciate the advantages that we have, which are not enjoyed by these Eastern states—the recreational attractions of our mountain areas. Then we should preserve these for our own pleasure and for the income which is derived from the visitor who is attracted here from less beautiful states.

HOW

We can keep these beautiful wild places enjoyable if we will always remember that others will come after us. We must leave no material foreign to the country lying around, nor should we destroy or mar any of the existing natural plants, rocks or animals. We should designate a place in our car and in our outing clothing to collect stray papers until they can be burned. If we find papers, cans and other foreign material left by some careless person in our favorite spot, we should dispose of them and leave the place as we would like to find it.

WHERE

The outdoor good housekeeping should be practiced while in the National Parks and Forests, while in the Municipal Mountain Parks, while in the City Parks and along all roads and streets. Yes, there are men hired to clean our streets, but much of this material thrown down to blow around is absolutely unnecessary, costs a huge amount to pick up and it gives a seedy appearance to the community as well.

WHO

We need first to practice these good habits ourselves and then teach them to our children and our friends. We should never let someone riding in our car throw paper, cans or other waste material out the car window and never leave a picnic or camp site without being sure that everything is in as good condition (or a little better), than the way we found it.
Your Plants Are Not on Vacation

It is quite natural for even good gardeners to relax a little in their gardening at this time of year. This is the vacation time, the weather is warm and we are inclined to become a little less enthusiastic about our garden work. Plants are still growing however, and must have some care or they may die or be so seriously set back that they will lose a year's normal growth.

Plants which were set out this spring need especial attention as their roots are not well enough established to stand protracted periods of neglect. Remember to water thoroughly so that there will be moist soil around the farthest roots. Check frequently for insect pests, as these pests prefer the little struggling plants that are just getting established. A light dressing of commercial or organic fertilizer may help now. Keep the weeds down so that they do not draw all the moisture from the soil around your valuable plants. Mulch to keep in the moisture.

As you are on your trips to the mountains you will see many plants that you would like to have in your garden. The inclination is to try to transplant them at this time. This is usually the poorest time to move plants as they are in full growth and the weather is hot. Many of these nice things can be obtained from members of the Colorado Nurserymen's Association, often as nursery grown plants and sometimes as collected. They have the experience to know when and how to move these plants so that they will live and grow. Often the wild plants are growing in such difficult soil that it is almost impossible to get a sufficient proportion of roots with them.

As you visit your neighbors' gardens notice how often fruit bearing shrubs and trees can be used for their ornamental value also in garden plantings. Make a note now of the nice plants and nice arrangements of plants that you see in others' gardens and see your nurseryman now about getting some of them for your garden.

COLORADO NURSERYMEN'S ASSOCIATION

See the February issue of the Green Thumb for list of members.

Resolutions Passed by the

COLORADO-WYOMING ACADEMY OF SCIENCE

THE CONSERVATION COMMITTEE

In Business Session, May 13, 1950

RECOMMENDS that the Academy support the establishment and development of state park systems, and of botanical and scientific preserves, for the pleasure, benefit and profit of succeeding generations. Specifically: a grassland study area to be selected; the Pinon Pine area north of Fort Collins; and the White Rocks area near Boulder.

Recommends that the Academy support the endeavors of the Committee for Roadside Improvement and State Parks, operating under auspices of the Colorado Forestry and Horticulture Association, in their efforts to promote establishment and development of state parks and roadside improvements.

Recommends supporting a comprehensive study of our water resources, needs, and distribution rights, with impartial consideration given to both urban and agricultural needs, in the light of most efficient use of supplies available, and that specialists in all related fields be consulted as necessary.

Recommendation: In view of the current conflicting opinions and highly emotional atmosphere existing with respect to the proposed Echo Park Dam in the Dinosaur National Monument in Northwestern Colorado, and since, except for the agricultural and engineering features, so little attention has been directed toward the long range effects of the proposed dam on the many factors involved, the Academy urges the Secretary of the Interior to consider the entire project also on the basis of its long-range biological, economic, social, and recreational aspects, and if necessary to delay development and construction until a comprehensive scientific investigation has been made.

Recommends that the Academy request each institution of higher education in Colorado and Wyoming to emphasize in every course possible the wise and coordinated use of all natural resources on which our civilization is based, and whenever possible to establish courses in the wise use of these resources.

Recommends that the Academy go on record as favoring the promotion of the greater integration of the various uses of our natural resources by acquainting the public with the multiple-use principle. To this end, for example, each institution of higher learning in the two States, could from time to time send a lecturer to other cooperating schools, to speak on the scientific basis of conservation, and on the importance of the wise use of natural resources to human welfare.
The late Aldo Leopold considered that three cultural values flow to man from contact with nature. First, the opportunity to recreate for himself pioneer experience, described as "split-rail" value. Second, consciousness of human dependency in the soil-plant-animal-man food chain, however obscured by the middleman influence of modern industry and science. Third, the development of ethical restraints, expressed as sportsmanship in its best sense.

If we add to this credo the emotional value of esthetic enjoyment of nature's artistry and symbolism; and the physical-intellectual pursuit of nature-centered avocational or research interests we have encompassed what nature has to contribute to culture.

Roberts Mann well expressed the first of these values, especially as related to city folks, as the "need for roots in the land". This involves physical contact with the land, appreciation and understanding of nature's creations and laws, and the opportunity to attain personal skills in the outdoors.

The character and significance of the water-soil-plant-animal-man relationship has impressed man only superficially and vaguely thus far. Were this not so, we would not possess unnecessarily depleted soil, water, forest, wildlife, and wilderness resources. True, we have become increasingly conscious of our needs and the sins from which they flow. But we grope feebly in half-light, because even the experts understand imperfectly the complex interrelationships involved.

Sportsmanship is knowing the rules, perhaps even the reason for them, and in good spirit "playing the game" accordingly. Vandalism is negative sportsmanship. Where it stems from ignorance of the rules, information is a simple and adequate antidote. If it arises from carelessness, the practice of good habits is the solution. Destructive acts motivated by selfishness might be curbed by imparting to potential offenders better perspective of their relationship to the whole of nature and to society. All of these curative measures are classifiable as functions of education.

**OUTDOOR EDUCATION IN RESIDENT AND DAY CAMPING PROGRAMS**

By REYNOLD E. CARLSON

By Permission of the American Institute of Park Executives.

Camping is as old as the human race. To primitive man it was his way of life. He lived in close association with the natural world; his food, shelter and clothing came from the woods, fields, and streams; his art, religion, and social life were colored by his relation to that world. Our early American pioneers likewise lived an intimate relationship with the outdoors. With the development of modern industrial and urban life, however, children and adults have been cut off from the heritage of outdoor living that has existed since the origin of Man. The less contact Man has had with the natural world, the less it has been possible for him to understand the basic problems of existence, food production, the need for conservation, and the functioning of natural laws upon which all life depends; and the more difficult it has become for him to appreciate the simple pleasures of outdoor life.

The various movements to provide outdoor education are concerned with re-establishing man's connection with the natural world and with giving him direct experiences in the outdoors. "The primary function of camping is to facilitate the social, mental, and physical growth of the individual through participation in cooperative living in the out-of-doors." The following are a few of the specific outcomes that might be expected from a good camp experience:

1. An increased understanding and appreciation of the various phases of natural history; a friendly familiarity with the common aspects of the camp environment.
2. An increased appreciation of the beauty, complexity, and interrelatedness of the natural world.
3. An increased understanding of the human heritage of pioneer, explorer, and Indian.
4. Increased skill in using the resources of the out-of-doors and in caring for oneself there.
5. A knowledge of man's dependence upon natural resources and a keener sense of responsibility for their conservation.

Last summer probably about two and a half million American children attended organized camps in the United States. Most of these participated in resident camps or day camps operated by one of the youth agencies. Others attended private camps, which generally are of longer duration than agency camps, or attended camps operated by churches or by various pub-
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whether in public, agency, or private camps.

Some of the reasons for failure to do a better job have been lack of trained leadership, lack of adequate outdoor settings, and in some cases a preoccupation with “entertaining” the camper rather than making the camp period a meaningful experience.

The Batata and the Papa

The true potato is a member of the morning-glory family, was called “batata” by the Indians when the white man first arrived on this continent, and is the sweet potato of today. Not until 1538 did the Spaniards, pushing into what is now Colombia, discover the white-meated tuber the Incas called “papas” and which we miscall the potato or, even worse, the “Irish” potato. It is a member of the nightshade family. It early developed a false reputation as poisonous or a soil poisoner, and its use spread slowly.

But the Irish took hold of it early as nutriment and, in 1719, Irish immigrants brought the first potatoes to North America, planting them in Rockingham County, N. H.—hence the name “Irish” potato. Frederick the Great had trouble making his peasants grow these potatoes, Marie Antoinette helped popularize them in France, devout Scottish folk scorned them because the Bible did not mention them.

CONSIDERING LILIES

II—Varieties

Mildred Steele

The following list of lilies with their approximate blooming dates and successes, is comprised from notes and memos of 3 growing seasons in my own garden. Up to that time, my experience was very small, and the "whys of failure, vague. At least, one becomes more philosophical with more experience, but the "fever" is incurable. When gardening is incidental with many other activities, I find it more practical to add only a few new lilies to my collection each season, the better to give them the individual care so many require to become happy residents in the garden.

My first lily to bloom is Lilium pumilum, formerly called tenuifolium and commonly, the coral lily. It starts about June 5, and lasts throughout the month. It is very generous of bloom, and delightfully fragrant, but the bulb is short-lived. It propagates readily and easily from seed, as well as by a few off-shoots from the parent bulb. Any good soil with proper drainage is suitable, in full sun or partial shade. For identification, this lily is a small, very brilliant red turkscap, a native of N.E. Asia. It is excellent for the rock garden.

At this same time, Lilium evansii, an old favorite, came into flower. This is bell-shaped, with slightly curled-up petals, a delicate straw color with dark speckles inside. It is native in the Caucasian highlands, and good for a partly shady spot.

Now, also, the many kinds of umbellatum lilies begin a long season of bloom. Of this type, the lovely Lilium dauricum is the earliest. The color is a soft apricot flecked with brown; its growth is dwarf and its culture easy, the same as that of the well known "Russian Lily". It has been used occasionally as a parent for hybridizing with the Russian lily as well as with Lilium belbiferum. Many lovely shades in coloring of lilies of various heights and blooming times have resulted. These lilies are good for cutting and give brilliance to the border or other plantings over an extended season.

Early in June, our native Lilium philadelphicum montanum blooms in my garden, probably 2 to 3 weeks earlier than it does in the hills. It is extremely scarce in the wild, probably due to grazing, being slow to propagate and becoming established. Mother Nature gave me a bulb in a load of mountain soil we bought several years ago. It was a considerable mystery when it first flowered, but after observing the 2 or 3 bulbils that came at the base of the flower after blooming, the solution was obvious, and we have felt more than a little proud to have this wildling living with us.

Lilium candidum or the Madonna lily, extremely scarce in the wild, probably due to grazing, being slow to propagate and becoming established. Mother Nature sent me a bulb in a load of mountain soil we bought several years ago. It was a considerable mystery when it first flowered, but after observing the 2 or 3 bulbils that came at the base of the flower after blooming, the solution was obvious, and we have felt more than a little proud to have this wildling living with us.

Lilium concolor, a dwarf lily from central China, appears now too. It is good in the rock garden, being very brilliant red. The flower is upright, and star-shaped, often being known as the "star lily".

Lilium hansonii blooms the latter part of June. It is a native of N. E. Asia, and exceptionally hardy. The flower is a recurved type, small, and of a soft yellow-orange color, flecked with crimson spots. The buds are practically round, the petals very thick and heavy. It is an intriguing lily and should find its way into more gardens. It does well in partial shade and open ground if the surface is lightly mulched.

A new lily to me this Spring for a shady spot, is Lilium amabile luteum, a most dainty pale yellow with recurved blossoms.

Blooming but a little later is Lilium parryi, one of the loveliest of the native lilies originating in California. The culture is not too difficult if one can give it partial shade with a ground cover of small plants. The soil must have a high humus content, yet be well drained. The flower is a clear yellow, recurved, speckled on the inside, and has rich orange anthers. It is not too different from amabile luteum, but perhaps easier to become established.

Beginning about the end of June, is Lilium candidum or the Madonna lily. It comes in various selected forms now, varying only slightly from one another except in blooming time. They thrive in open ground in full sun, and the soil should be heavy. They tolerate our alkaline soil very well. The autumn growth of leaves makes the necessary winter mulch for the bulbs which are very shallowly planted. In my own garden, the soil is too sandy and light for raising good Madonnas unless it is made to order. Before learning the secret, it has been rather puzzling to get a stalk laden with bulblets instead of flowers. Another strange thing happens—the bulbs have a tendency to go down into the soil as much as 2 inches below the original planting, resulting in the deterioration of the bulb.

Lilium pardalinum, another native lily from California, blooms in early July. There are several forms of this lily, and if one is fortunate to have clones of several the season is long, and since they can be cut without apparent injury to the bulb, there will be much pleasure in having plenty for flower arrangements. This is a turkscap lily, a rich golden orange with red tips on the petals; very hardy and easily propagated. It isn't particular as to soil, but does better in fairly light humusy soil with full sun.

Beginning in July, one may have a continuous procession of white trumpet lilies. Lilium browni is first, and is still very new on the market in this country. It is reputed to be one of the hardy sorts, and my first trial was a joy. There are several forms, all blooming at different times. The Regal is probably the greatest delight of all, so generous of bloom, so absolutely perfect in its exquisiteness—no fussiness—no temperament. If the Regal lily is for the border, it will be well
to have a stock supply where they get good sun and the watering can be spared after blooming. This will keep up the bulb supply, and give one some flowers for cutting. Keep the surface mulched with some humus.

Lilium formosanum, early variety, is dwarf, blooming just after the Regal. This is frequently confused with philippinense, of which there are none on the market in this country. It has a longer, narrower trumpet than the Regal, either tinged purple on the outside, or pale green. It comes readily from seed, but needs careful selection of form. The intermediate form of this lily blooms late July, and is somewhat taller than the early variety. The late form seldom blooms before frost.

Coming between the early and intermediate forms of the Formosa lily, is the Lilium longiflorum. These are sold on the market as Croft or Estate lilies. It is generally thought that the Estate lilies are more hardy in this part of the country. They are quite dwarf, but of exquisite form and fragrance, and nearly completely white. They require full sun and a well-mulched surface with fairly heavy soil.

Lilium sargentii, a white trumpet lily, as beautiful and illusive as a song, will bloom also late July. The backs of the petals are suffused with pink and delicate green, the anthers are a rich shade of umber, and the fragrance is heavenly. Nature provides numerous bulbils in the axils of the leaves to perpetrate its beauty. Any injury to the flowering stem, or cutting it for the house is certain death to the bulb. They must be given only the "leastest" water at the time of ripening, and the surface should be well mulched, preferably with pine needles, partial shade too, is a requisite. Good drainage is very important as the bulbs are deeply planted.

Lilium japonicum, one of the very few pink trumpet lilies is a small, elfin gem. It is for an individual planting in a shady place where one can nurse it carefully.

Lilium grayi and kelloggi are both very small exquisite lilies to be tucked away where they can safely bloom and mature without injury to the stalks. Both are natives of California and are quite delicate. They bloom in early July, require some sun, but need ground shade. Grayi is bell-shaped, of soft golden orange. Kelloggi is a violet pink turkscap, flecked with purple.

The Tiger lily blooms along the latter part of July or early August. It is the best known and the longest cultivated of all lilies in American gardens. It is native in Asia and exceptionally hardy in nearly all soil. It likes sun or partial shade, and needs good drainage.

Lilium henryi blooms this same time. It is a recurved lily and is frequently called the Golden Speciosum because of the fleshy papillae on the inside of the petals. The flower cells in part shade, is a profuse bloomer, but the stems are weak and generally need staking. This lily is hardy, resistant to disease, good for cutting. It is a native of China and a very desirable garden favorite requiring plenty of humus.

Lilium davidii, next in succession, is very like a tiger lily, but infinitely more dainty. It is a Chinese lily, and reasonably hardy, but takes a long time to become established. The Speciosum lilies begin to bloom the middle of August, and since there are many forms on the market, their season is long. Lilium speciosum pictum is the earliest. It is vigorous, and well colored, if not so brilliant as the later ones. Next are the speciosum rubrum which vary considerably in height and perfection of the flower. The latest to bloom is the speciosum alba. All of these lilies are superbly beautiful. Although they are native in Japan and Formosa, they are reasonably hardy here. They need a deep friable soil, well drained, and a light ground shade. Watering must be sparse after the blooming period, but a good thick mulch will help to keep the ground around the bulb the right dampness. These lilies must not be cut or damaged unless one has a considerable supply.

Lilium auratum is of Japanese origin. The large, open flowers are white, generally flecked with crimson on the inside, and a golden band running down the center of each petal, thus giving it the common name, "Gold Banded Lily". There are many forms of this lily, produced from selected seedlings, giving it a long season for blooming, and one thinks each succeeding flower the greater masterpiece.

They are considered to be quite hardy, but for some reason are of delicate behavior here. More experimenting with soil mulching and ground cover may solve the problem, or it could well be a matter of mosaic disease, to which they are highly susceptible. In any case, do have this lily. If it blooms but once, it costs no more than a florist's bouquet, and lasts longer.

Liliums canadense, cernuum, and testaceum are known to be hardy here, but my own experience with them is too new to give any details of culture. I feel sure many other lilies than those mentioned will eventually prove good garden subjects for Boulder. Denver horticulturists find the list considerably smaller, except in a few favored, protected places.

NATIONAL SHADE TREE CONFERENCE

All those interested in trees, especially the commercial arborists, will profit by attendance at the National Shade Tree Conference to be held this year at Syracuse, New York, from August 21 to 25.

The educational programs will consist of papers from many of the leading scientists and practical tree men of the United States. There will be plant clinics, complete exhibits of tree tools and insecticides, and outdoor demonstrations. Anyone interested may get more information from the secretary, Dr. L. C. Chadwick, Ohio State University, Columbus, Ohio or from the several local members.

AIR-BORNE INSECTS
from The Shade Tree Digest

Some species of insects, aided by warm-air currents and winds, can travel distances that seem unbelievable when compared to their normal flights. For example, aphids usually fly only short distances. Yet Professor A. C. Hardy, of the University of Oxford, England, reports that aphids have been taken from the air 100 miles at sea. Computing their rate of travel and probable take-off point, it has been estimated that these insects can stay in the air at least fifteen hours and travel about 246 miles in that length of time.

LYLE F. WATTS, Forest Service, Washington, D. C., recently received the Honor Award for distinguished and effective leadership in advancing the conservation of forest resources in the United States and internationally.

At the risk of remarking the obvious, or appearing ponderous, one may point out that gardens, from their ancient past to present, are simply the meeting, according to various philosophies, of nature and art. The Colorado garden, planned in an unruly, if magnificent climate, is subject to late snows, lashing hail and early frost. While long hours of sunlight make garden space enjoyable for a large part of the year, the garden that depends entirely on plant material for its interest is regularly wrecked by the violence of Rocky Mountain weather. The use of permanent material in a garden design can, to some degree, diminish the blasts of nature, by protecting the plant material, by offering a lasting and pleasant contrast of the textures of stone, wood and metal to plants, as well as substituting its hardy forms for perishable plantings. N.B. From a garden notebook, 1950. "Painting is not pierced by hail; sculpture will not wither after a killing frost; a wall is beautiful and strong beneath a crest of snow as well as summer vines."

Since future articles will continue to discuss the design and use of larger architectural elements, such as pools, walls, etc., this note will confine itself to a few observations on the use of ornamental detail in gardens. Certainly they do not pretend to offer any formula of decoration, but to suggest possible guides to the imaginative judgement.

I. Character

The character, or "feeling" of a garden, whether it be formal, informal, of a certain architectural type, or stressing a particular activity or interest of its owner, will suggest the character of its ornament. Ornamental detail should "fit" into the idea of...
A row of common clay pots planted with dwarf marigold or lobelia will decorate the edge of a child's play space, while an imposing urn-on-pedestal in the same location will suggest calla lilies is arranged atop the fountain jets; every Michalmas they are removed and washed, to store for the following spring. The same quality of perfect suitability is seen in a small, enclosed garden in Denver, where a troop of lead geese parade around the platform of a simple round brick well head, changing formation at the will and to the delight of a number of children.

II. Scale

The scale, or relative size of an ornament to its surrounding, determines the fine balance of a design. Generally, the larger the ornament the more important it becomes to the entire design, and must control a corresponding area of the design. In example: The high-flung, sculptured form of a baroque fountain rises from a terrace which is marked by stone balustrades, a monumental accent in an immense vista of distant mountain range.

A small wall fountain of intimate, close-worked design, is seen in an intimate, small-scaled surrounding. Delightful to see on a secluded, tiny terrace, it would be lost at the end of any vista or beneath large planting.
Above: Terra cotta basket atop a small brick post at the entrance to a paved terrace.

At left: Lead goslings at a brick well.

All pictures on this page from garden of Mr. and Mrs. Lawrence C. Phipps, Denver.

Above: A sculptured shell for birds lies beneath trees beside a myrtle-bordered walk.

Below: Classical fountain of marble with lead decoration, placed between sculptured lead urns.
Above: A bird bath sheltered by rose foliage. In garden of Mrs. Beulah Son, Golden.

Below: Wrought iron gate from entrance court to garden. Garden of Mr. and Mrs. John Evans. Photo by Earl Davis.

Pots decorate the levels of a stairway in the fashion of the Spanish Garden.

The dimension and design of a wall area will determine the size of any form which casts its silhouette against it. It is well to remember that forms seen outdoors, or in landscape scale, will appear smaller than when viewed indoors, or at room scale. The figure that seems too massive in a studio will often appear in scale when placed outside, and the charming little figure of the studio may seem pinched and dwarfish in the air.

III. Situation

The situation, or placing of an ornament depends in part on these earlier considerations of character and scale, and also on its function in the garden. Whether a form is placed centrally, symmetrically or asymmetrically, high or low, among heavy or light planting, will depend on its character and scale. Its function as an ornament, whether it be a work of art, placed to be carefully seen, a simple decoration, or a necessity in the garden, such as a gate or water source, should be considered in its placing. In example: A garden exit from a simple flower walk into a meadow seems to call for a gateway of great simplicity, while the entrance to a formal, walled garden will allow a more elaborate pattern.

The carved shell of a bird bath can be half-hidden under trees and shrubbery, where birds will easily reach it.

In the Cloisters of the Metropolitan Museum is an sixteenth century alabaster figure of the patron saint of gardeners, St. Fiacre. The figure is about 28 inches in height, unpretentious and unassuming amid the great works that crowd cloister and court. Commanding no particular position in either size or art, the little figure is moved about, from the window sill in an arcade to the cloister floor, from simple room to a position above the cold frames, sending his blessing at the proper season on all the living plants that are grown in profusion in the museum. Whatever his efficacy, his situation seems to be perfect.
thousands of these went for replacement of trees on a cut-over area on the Devil’s Head district; the rest, along Buffalo Creek, for erosion control. About 550 acres, altogether, were reforested by regular Service planting crews. This was the largest project undertaken this spring.

The project on the Pike, almost annually, represents the largest single reforestation job of the region. Last year, 670,000 young seedlings for watershed protection were planted on the Spring Creek drainage of the South Platte river, with the planting camp also located at Buffalo Creek. This area is one which has suffered much from erosion, because of the loose, granitic character of the soil and the damage to ground cover done in past years by over-heavy use. The purpose of these plantings is to re-establish a tree-covering which will eventually grow dense enough to protect the bare hillside from further loss of soil.

The first plantings in the Rocky Mountain region, in fact, were made on the slopes of Pikes Peak early in 1906. Since the creation of the Monument Nursery, in that same year, the Pikes Peak area and later the South Platte river drainage within the Pike forest were the centers of intensive planting activities. To date, almost 27,000 acres have been artificially reforested on this single forest.

Second heaviest planting this spring was on the San Juan National Forest in southwestern Colorado. Here, on the broad tops of Hay Camp and 8-Mile Mesas, is the best timber-growing region in the state, producing the biggest trees, bringing the best prices. On 160 acres of this land were planted 66,500 lodgepole and 35,000 ponderosa pine seedlings, to add to the forest resources.

On the San Juan, also, on the site of the old Lime Creek burn, another 20 acres were planted to aid in recovery of this forest-fired site. This planting, although accomplished by Forest Service crews, was this year’s contribution to the cause of conservation by the Colorado Federation of Women’s Clubs, sponsored by and partially financed by this organization. In Colorado, alone, now since this program was begun in 1937, over 340 acres have been so reforested.

Another mesa top—the Clinetop, on the White River National Forest—was the site for a spring planting project. Totals of 6,500 lodgepole pine, 22,400 Douglas-fir, and 15,700 Engelmann spruce seedlings were planted on about 65 acres, to produce timber.

Five other national forests in the state this spring, besides the White River, were the beneficiaries of Boy Scout cooperator plantings. For the Scouts, such projects are an annual activity in connection with their conservation work and the earning of merit badges. Forest Service personnel cooperate in these and similar programs.
jects as advisors and instructors, and in choice of planting area.
On the White River, the site was seven acres near Minturn and Carbon-dale. Explorer and Boy Scouts planted in 6 acres on the San Carlos District of the San Isabel Forest. With their leaders and Forest Service help, 20 Boy Scouts planted about 2,500 Douglas-firs on Myers Creek, near Monte Vista on the Rio Grande forest, to establish a Christmas-tree plantation. On the Arapaho, eight acres were planted in the Cold Springs Campground area, near Black Hawk; and 1,000 ponderosa pines and 1,200 Douglas-firs were planted by Scouts on Soap Creek, on the Gunnison. Largest of these projects was a 22-acre cooperative planting by the Colorado Mountain club, and 4-H Clubs and Boy Scouts of Ft. Collins, in the Mammoth Basin area on the Roosevelt National Forest.

In addition to these plantings, from both the Monument and Bessey Nurser, there were shipped out another 1,251,850 seedling trees of 12 species, conifers and hardwoods. Grown from seeds collected on forested areas all over the Rocky Mountain region, the conifer species include the lodgepole, black, pinus banksii, ponderosa and pinon pines; Douglas-är; Engelmann, Black Hills, and Colorado blue spruces; and juniper; and the hardwoods include wild plum; American and Chinese Elm; Russian olive; honey locust; green ash; and Buffalo berry.

These trees will eventually go in on a further 1,843 acres—in the Dakotas, Nebraska, Montana, Utah, Iowa, Pennsylvania. All these are distributed under the provisions of the Clarke-McNary law which permits such distribution through cooperators to farms and ranches for shelter and windbreak plantings, Christmas-tree plantations, experimental forestry, reforestation around lakes and dams, and for general State Farm Forestry Programs use—to keep the future green.

**BOARD OF REVIEW REPORTS ON GRAZING SITUATION IN ROOSEVELT FOREST**

SECRETARY of Agriculture Charles F. Brannan made public April 7th the conclusions of a study made by the National Forest Board of Review on the grazing situation on the Roosevelt National Forest in Colorado.

The Board’s study was made at the request of Secretary Brannan because of the broad scope of the problem and the policy questions involved in reducing numbers of livestock permitted to graze in the Roosevelt National Forest in order to protect watersheds and other values from further deterioration.

The National Forest Board of Review was established in 1948 by the Secretary of Agriculture to advise him on questions of general policy and the solution of major problems arising in connection with administration of the National Forests. Its members are Dr. Jonathan P. Forman, of Columbus, Ohio; Prof. Gilmour B. MacDonald, formerly head of the department of forestry, Iowa State College, Ames, Iowa; and Dr. Roland Roger Renne, president of Montana State College, Bozeman, Mont.

An evaluation of the various uses on the Roosevelt National Forest, the Board of Review said, indicates that watershed values should be given first priority consideration. Recreation, including camping, picnicking, tourist travel, hunting and fishing, was given second priority; grazing, third; and timber uses, fourth.

Range lands or important watersheds visited on the Roosevelt National Forest showed excessive deterioration, the Board said. It was stated that closure of limited areas to grazing seems to be justified where steep topography, erosive soil, and lack of vegetative cover make such action imperative in safeguarding the water and soil resources. The report added, however, that “there should be a clear and general understanding that it is not a major policy of the Forest Service to exclude grazing on any except such particularly unsuitable, limited areas.”

The technical procedures for range management on the Roosevelt National Forest appear to be sound, the Board reported. Need for an intensified range research program was emphasized, involving especially (a) Reseeding experiments including both perennial and annual plant species; (b) Study of sub-climax types of vegetation in the economy of the range; (c) Replacement of cheat grass on depleted ranges with better species; (d) Establishment of additional demonstration range plots to show, in weight of forage or pounds of meat produced, the good economy in moderate range use as against over-use.

In the administration of timber sales, the Board advised limitation of cutting practices to the extent necessary to protect the watershed values. According to the report, this might involve elimination of all timber cutting on critical areas requiring selective cutting and protection of soil cover by careful logging practices on all timber sales.

The Board of Review prepared its report and recommendations following a field survey on the Forest and numerous conferences with stockmen, sportsmen, water users, recreationists, officials of associations, editors, and the public, as well as with administrators and scientific staff members of the Forest Service and other governmental agencies. The survey also included a review of publications, documents, and letters made available by stockmen, the Forest Service, and others.

The Board’s findings, Secretary Brannan said, “are of particular interest, coming as they do from a group selected on the basis of personal competence and not as representatives of any individual organization directly concerned with the use of national-forest lands.”

*U. S. Forest Service crews planting small evergreen seedlings on burned over mountain slope. Photo by U. S. Forest Service.*
BOOK REVIEWS

"How to Know the Wild Flowers", by Alfred Stefferd. A Mentor Book published by the New American Library, 1950. Available at News Stands for $0.35. Here is a handy pocket-size book for the amateur wild flower enthusiast. While not written for our region, one may find many of our commoner flowers in its pages. The line drawings and descriptions are accurate and the author has included much good general information.

The first pages give a pleasant introduction to the study of flower identification and from there on the flowers are grouped according to their family characteristics, which after all, is the most satisfactory method of learning the subject.

The chapter entitled, "The First Families", (page 127) is most valuable. Following this are hints on cultivation of wildlings. Then follow descriptions of ecological groups, such as meadows and field flowers, roadside flowers, flowers of woods and forests, and those of lakeside, pondside and seaside, and of the marsh and swamp. Altogether this little book is a big thirty-five cents worth. (Also available in a $2.00 edition, published by Henry Holt & Co., N. Y.)

"Rhododendrons", by Kingdon-Ward. Published by Pellegrini and Cudahy, N. Y., $2.50.

When the writer saw this book by Kingdon-Ward at Horticulture House, she gladly offered to review it as other books by this author have been much enjoyed. His "Plant Hunter's Paradise" and "Plant Hunting in the Wilds" have given her many happy hours.

The little book, "Rhododendrons", is also pleasant reading but here emphasis is not so much on the joys and sorrows of discovery as upon the selection, classification and characteristics of the various species and hybrids and upon their cultivation and propagation. For this reason, perhaps this little book may not attract a large audience in Colorado where growing rhododendrons is certainly a distinct gamble at present. But we do not want to give up the idea of growing broad-leaved evergreens here too easily. When we read of Mr. Kingdon-Ward's discovery of some of these beautiful plants in high Tibet and other parts of the world where rigors of climate present seemingly insurmountable difficulties, may we not hope to learn to meet their requirements and to build up a strain suited to our peculiar climatic conditions?

How many know that the botanists have discovered a native rhododendron in northern Colorado?—(Rhododendron albiflorum, Hook). Is it not reasonable to suppose that we may be able to produce some hybrids of our own by using our own natives in the process?

Mr. Kingdon-Ward's book should be a challenge to many ardent horticulturists in our state. Those greenhouse enthusiasts may be much interested in the chapter on greenhouse Rhododendrons and the chapter on hybrids points out that there are now close to two thousand named hybrids. It closes with the statement: "What the future holds in the way of hybrids no man knoweth, but we may expect some startling varieties in the near future."

We will hope some ambitious hybridist in Colorado will read Mr. Kingdon-Ward's book and make history for himself and our State by producing a rhododendron which will be really satisfactory in the Rocky Mountains.

KATHRYN KALMBACH.

Principles of Color and Color Mixing—by Bustanoby. Useful for those concerned with the application of color. A simple system for the identification of today's tints, hues, tones and shades, including 250 formulas for mixing them, and the influence of color on our daily living. Authoritative definitions of color terms are included.

Check the house plants that you set outdoors. Some need to be kept dormant while others should be growing vigorously. Look for insect pests.
Questions and Answers

Question—I am new at planting perennials and I seem to lose my plants. Where do I err?

Answer—In planting, it often helps an amateur to take a few stakes and place one at each point he desires to set a plant. If you set six or more stakes, plant six or more plants, pulling up the stakes as you proceed to plant more. Make the holes in the bed wide enough to allow the roots to go in without crowding, and after filling in the soil, press it down firmly around the neck of the plant and over the roots and water well when all the bed is planted. During dry, hot weather soak the bed well and then let it alone for a day or two or three, although in the evening, after a hot sunny day, accompanied by a strong, drying wind, if the foliage looks wilted, a showering overhead is sometimes beneficial. In a day or two, after a good soaking, it is well to go lightly over the bed with a mulcher and stir up the soil, breaking up the crust produced by watering. This makes a mulch which will conserve the moisture and protect the roots from the hot sun. Frequent slight watering is wrong for it keeps the moisture at the top and the roots are then inclined to grow upward to meet it. If you then neglect to water, the soil soon becomes dry and the roots suffer. H. F.

Question—What is Sweet Rocket?

Lucile Waters, Fox Street, Denver.

Answer—The technical name of this plant is Hesperus matronalis. An admirable plant for places where some other plants fail. It does well in semi-shady places at the base of shrubs or in between them in open spots. Plants grow three or four feet tall and are of bushy form when treated well and bear pinkish-lavender flowers in June and July. There is also a white form.

What are the names of those plants I see in some gardens that look like fall Asters? Lucille S. Smith, Golden.

Answer—I think the plant you refer to is the Boltonia. It comes in white, B. asterioides, and B. latissima, pink. The Boltonia is a native, tall and stout, enjoys the open sunlight and should be planted near the rear of the border or bed. Its profuse bloom in late summer and early fall makes it an attractive garden plant and a nice substitute for the fall asters (Michaelmas Daisy). As a substitute for the white fall aster I often use Pyrethrum uliginosum.

KINDLY explain the following terms: Collar, Corolla, Rogue, pubescent, raffia, argenteus. K. B., Denver.

Answer—Collar—That part of the plant from which the roots and stem emerge. Corolla—The combined petals of a flower. Rogue—A gardener’s name for a plant which does not come true from seed. Pubescent—Clothed with soft, downy hair. Raffia—The well-known material used for tying. Prepared from the fibres of raffia pedunculata. Argenteus—Silverly.

Members of a class who made a special study of nomenclature all know these names but I am sure there are many others that do not. May we ask that a few horticultural terms be explained each month in the Green Thumb?

Question—Please tell me the difference between the flax flowers, Linum perenne and Linum narbonense? G. R. Student at Boulder.

Answer—Linum narbonense comes from Southern Europe; the flowers are slightly larger and bluer in spite of a delicate line of other color down each petal. It lasts longer too. Here is what Clarence Elliott says about it: “If picked just before it opens, it lasts well in water.”

We still have a good assortment of Roses in pots that can be set out in your garden and go right ahead blooming with no set-back.

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A BOOK ON ROCK GARDENS

In a letter received this week, a doctor writes, "I am afraid that I do not understand how to make a rock garden. I should like to create a beautiful scene and at the same time make a safe and comfortable home for the rare plants".

So far as the right construction and setting of a rock garden go there is a rather recently published book that shows us just how to go about it. It is, "Natural Rock Gardening" by B. H. B. Symons-Jeune. It is a true counsel of perfection and when you have gone through its many fine and helpful illustrations and have absorbed its incontrovertible precepts, you may not have much respect for some of the "heaps" you see in many gardens. I will say this however, that these "rock piles" are often enjoyed by many who receive respite for those six days of adding never-ending rows of figures or from many other dull jobs and who wait for that wonderful Sunday. Then they may "visit" Corsica, the slopes of the Andes or the Himalayas, the native homes of these "Alpine" plants and they often get their greatest pleasure from working especially with them. But, to the landscape architect, all gardens are, or should be, a work of art created by an artist. A rock garden too often appears to him the work of a person devoid of any knowledge or feeling for art.

After carefully studying Symons-Jeune's excellent book, I doubt if I can agree with the writer of that other book on rock gardening who says, "Enjoy your garden whether or no. Let it be for you what it will and do not worry if it falls short of what you know to be ideal. There is as much happiness to be found in a lower atmospheric stratum as that which swims to a particular star to which you have hitched your horticultural chariot". But to me, truth and beauty always seem to matter tremendously and I doubt if there is any good or ample excuse for these imperfect rock gardens.

In reading Symons-Jeune's magnificent work, it is possible that you may catch some of his taste, his vision and ingenuity to help create that coveted beautiful scene and in almost any situation. HELEN FOWLER.
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AN OPPORTUNITY
We are sorry to announce that Mr. and Mrs. Richard Osborne will be leaving us in August. They have had charge of the inside and outside of Horticulture House, have kept the financial records and the records of membership. They have lived in the apartment at Horticulture House.

If any member knows of some one, or couple, who would be interested in taking over any part or all of these duties we would be glad to hear of them. Of course, if such a person also had a knowledge and interest in horticulture and gardening or could conduct a year-round membership campaign it would help.

How does a biennial differ from an annual? Gloria Adams, Greeley.

A biennial is a plant which, being produced from seed in one year, flowers, matures its seed and dies during the following year; while an annual is a plant that is raised from seed, grows, flowers, produces seed and dies within one year from the sowing of the seed.

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AUGUST GARDENING
AUCUS is usually hot and dry. Plants which have been properly trained
by careful and thorough watering will survive this critical period, but
those which have been pampered with daily, shallow watering are sure to
suffer. Toward the last of the month it would be proper to begin to hold off
the water a little on the woody plants so that they might begin to ripen up
their wood ready for the frosts next month.

Weeding should not be such a problem this month. Most of the weeds
should have been cleaned out weeks ago. We should be able to let down a
little on our continual round of “weed and water, weed and water.” The
greatest danger now is that we will let a few weeds go to seed and spread seeds
for next spring. Later in the month some gardeners advocate letting a few low
weeds creep in to help dry up the soil and ripen the plants around them.

More and more, gardeners are learning the value of mulching. They may
use peatmoss, leafmold, sawdust, leaves or manure. There are even mulching
blankets of paper or glass fiber that will help to keep the surface of the soil
from baking and of a more uniform temperature. They keep down the weeds
also and with their decay give valuable fertilizer to the soil.

If you have kept at the war on insects as they appeared you should have
the ordinary ones pretty well under control by now, but there are always new
ones appearing which work especially at this time of year. Inspect all your
plants every few days and start spraying before insects can do much damage.
Take time to learn a little more about the habits of the common insects so
that you can easily recognize their damage and know what kind of control
to give them.

This is the time that your garden looks empty and colorless unless you have
planned in advance for the heat-loving things to fill in the gap between
the early and late flowers. Even the best planned perennial border needs a
few of the summer annuals to fill in at this difficult time. Petunias, Zinnias,
Calendulas, Marigolds and Four-O’Clocks are all common flowers, but they
enjoy this heat and require little care.

A garden may be beautiful because of its good plan, its good plants, its
good maintenance, or better yet because of all of these things. Neatness
is the one thing that costs little and makes a great deal of difference. Take
off the old bloom stalks and the plants that are entirely through for the year.
Trim back the rampant things that are lopping over the walks, but do not
cut off green, growing stems unless you are willing to forgo bloom the next
year. Many plants, especially the bulbs like tulips, must store up energy for
the next season’s bloom by their growth after this year’s bloom.

With the routine garden work letting up a little, now is the time to do
those things that were neglected earlier—level up the flagstone walk, nail back
that loose panel on the fence, patch the crack in the pool, paint the trellia,
trim the dead out of that old lilac or edge the borders.

Try saving a few seeds of your really nice flowers. You can start them
in boxes in the house next April. Sit down now and make a record of the
successes and failures of your plants up to date. This will be invaluable to
you next January when you are planning your new garden.
Would You

enjoy stopping here after someone had so thoughtlessly spoiled the natural beauty?

Compare with picture on front cover and read story on inside front cover.