IN THIS ISSUE
Horticulture in the Arkansas Valley
The Maroon-Snowmass Wilderness
Tall Evergreens for Colorado Use

The Green Thumb
MAY-JUNE, 1947
THE GREEN THUMB

It is now possible to announce some of the privileges which Horticulture House will offer to its members. Many other plans are in the making and will be announced later in the Green Thumb.

You will find the house delightful. When everything is in readiness you will be invited to come and see for yourself.

The use of the library with its excellent books and its rack of periodicals is one of the finest offerings that the society makes to its members.

The house will be open daily, Monday through Fridays, from 11:30 A.M. till 1:30 P.M., and on Tuesday and Friday evenings 7:00 to 9:00. From 1:30 till 5:30 on these days, and on the two evenings, skilled consultants will be on hand to answer questions and assist members in locating information desired.

These consultants will be:

On Monday, Tuesday, and Thursday afternoons, and Tuesday evening, Geo. W. Kelly.

On Wednesday afternoon, Mrs. E. R. Kalmbach.

On Friday afternoon and evening, Mrs. Helen K. Fowler.

In the absence of any of the above, Mrs. C. Earl Davis will occasionally substitute.

There will be a panel discussion on Seasonal Problems the second Friday evening of each month. Send in your questions.

We shall, of course, continue our custom of an annual picnic in addition to the annual meeting of the Association. As needs arise and requests are made we will attempt to arrange classes, lectures, trips and other activities related to horticulture.

Mrs. George H. Garrey,
Chairman House Activities Committee.

ACTIVITIES SCHEDULE

The outdoor activities will include conducted trips each month for the study of native and collected plant materials. Also, a botanical collection trip will be arranged (each month) for a small party of botanists and their friends, who are willing to spend some time in collecting herbarium specimens.

May 4—Botanical study and collection trip to the foothills. Arranged by Miss Alice Wood (Littleton 42W).

May 5—Friday evening at 7:30. Panel discussion.

May 18—Annual tree planting in cooperation with the Colorado Mountain Club, and under the direction of the U. S. Forest Service. The location will be the Mammoth area in the Roosevelt National Forest, about 1/2 miles S. W. of Tolland on the old state road between Tolland and Black Hawk. We will leave the Public Library at 7 A.M. Bring your car if possible, and register at least two days in advance so that transportation may be adjusted.

May 30 to June 8—Botanical collection trip to the Narraguinnep Wild area north of Dolores, Colo. George W. Kelly, leader.

June 13—Panel discussion.

June 15—Public trip to the Brainard Lake area for wildflower study. Leaders Maud Reed and Hazel Schmoll. Details can be obtained by phoning the "House."

June 28 to July 6—Botanical collection trip to the Snowmass-Maroon Wilderness area. Some will collect close to camp while a group will backpack out to the more inaccessible spots. Leader, Mrs. Anna Timm.

July 20—Public trip, joint with the Colorado Mountain Club. Location will be the Mt. Goliath Wild area above Echo Lake. Leader, Mrs. E. R. Kalmbach.
WE NEED RESEARCH IN COLORADO

Here is something for everyone interested in the Horticulture of the West to think about.

On FRIDAY, March 7th, Dr. A. C. Hildreth, Superintendent of the Horticultural Field Station at Cheyenne, Wyoming, spoke to a joint meeting of the Men's Garden Club of Denver and the Denver Forester's Association at the City and County Building. He emphasized the importance of more horticultural research in our Rocky Mountain Plains area. The facts he presented to the Club were startling. He said in part:

"The Central Great Plains and the adjacent Rocky Mountain area was the last great region of the United States to be settled. The eastern seaboard had already had 210 years to develop its horticulture before Denver was founded. But the horticultural discrepancy between our area and the Atlantic coast is greater than would seem from these figures. The eastern United States, in soil and climate, is not greatly different from western Europe, where there had been centuries of horticulture before America was discovered. Consequently, many European species and practices were adapted to conditions in our eastern states. However, our cold, dry winter, hot, dry summers, strong winds, intense sunlight, and alkaline soils make up an environment quite different from that of the Midwest or the East or western parts of the United States, but exactly the reverse is true. The Central Great Plains and the Central Rocky Mountains of Colorado, Wyoming, and eastern Utah comprise an area of over 300,000 square miles. This is greater than the combined areas of the eight eastern states: New York, Pennsylvania, Ohio, the Virginias, New Jersey, Delaware, and Maryland."

"Within our area there are six scientists doing full time work in horticulture and two additional doing full time work on potatoes which is sometimes classed as a horticultural crop. These are distributed as follows:

Cheyenne Horticultural Field Station
Colorado Agricultural Experiment Station
Nebraska Agricultural Experiment Station
Icy, Colorado, research on potatoes
the equivalent of less than three full time workers, not counting the Federal research workers at Beltsville, Maryland, nor in any other of these states. This is about a hundred times as many horticultural workers per 100,000 square miles as we have. Thus, not only is our area handicapped by a late start and by our limited ability to borrow or to use other areas, but we are getting progressively further behind the eastern states because we are devoting so little effort to horticultural research."
HORTICULTURE IN THE ARKANSAS VALLEY

IN SEPTEMBER 1946 the editor, and photographer, Edgar E. Warren, spent several days touring the Arkansas valley of Colorado from Canon City to Lamar. Trees, shrubs, vines, evergreens and flowers growing in each town and community were checked to determine those plants which grew readily there, and also to discover those which might grow if given a little encouragement. This whole valley has been highly developed in its agricultural products, but has not gone nearly as far as it might in the horticultural line. The occasional person who had a "green thumb" and had taken the time to try new and different plants demonstrated that many more plants might be generally raised. The history of any community shows that at first there is little attention given to permanent plantings, but most emphasis is given to the annual farm crops. As a community grows in age there is found more interest in trees, shrubs, vines, evergreens and those permanent plants that help to create pleasant permanent homes.

The plants now found growing in the valley tell the story of its advancing civilization. First there were planted a few native Cottonwood, Willow, Balsam and American Elm. Then, a couple of decades ago there was a big boom in planting the "Chinese" Elm. In between, a few home-loving persons have planted many of the things with which they were familiar in their old homes.

A comparison of this valley with the populated areas of Colorado farther north shows that this section of the state has several horticultural advantages as well as some disadvantages. In general, the seasons in Colorado and lower than in the Denver area. Over much of the valley there is a high degree of alkalinity of the soil which makes the raising of some plants difficult. A greater variety of plants is found in Pueblo than in any town for many miles east, partly because of its greater size and age. Almost any plant found growing in Pueblo might be raised anywhere in the irrigated part of the valley.

From Las Animas on east there seems to be a slightly milder climate, and many plants associated with Oklahoma and Texas are found surviving there. There also seems to be a considerably less amount of alkali in the soil and water in the lower end of the valley.

The country immediately surrounding Pueblo is rather barren, but going up the valley we suddenly come to an area of wonderful horticultural possibilities: the Florence-Canon City area. If it were not for the fact that this area is of small size it would be one of the most important communities in the state horticulturally.

The accompanying lists will give the plants of the area in two divisions, first, those which are generally found growing there now, and second, those which it has been demonstrated might be grown if a little extra care were given. It is always dangerous to make too many plantings of one kind of plant, such as has been done with the Siberian Elm. It gives ideal conditions for the attacks of insects and pests, and if some such catastrophe as the Elm disease now plaguing the east should strike, a community would have to start planting all over again. It is safer and much more...
attractive to plant a greater variety of things. Exceptions to this general list will be noted in many of the outlying towns, but it applies to most of the irrigated portion of the valley. As we go beyond this irrigated area into the dry land a very different situation shows up. The lists of plants given for the Great Plains apply there. Water is definitely the most important factor.

PUEBLO

Horticultural conditions in Pueblo are unquestionably difficult, yet we found so many examples of good plants and plantings that it is evident that the city's appearance could be much improved if there were a little greater effort made to do so. Some of the public buildings were very well landscaped. We were especially attracted to the planting on the grounds of the Y. W. C. A. An other downtown planting which was very appropriate was at the Community Chest Building at West Fifth and Grand. The Junior College had been carefully planned and planted. City Park and Mineral Palace Park were well arranged and contained many unusual trees and shrubs. Two rather attractive plantings especially caught the eye of the photographer: The home of Mr. and Mrs. Leonard Anderson at 704 West Orman Street and the home of Mr. and Mrs. Harold Florman, 421 Dittman. Some of the older estates here showed plantings of grand old trees, and many homes in the newer sections had well planned modern yards.

LOWER VALLEY

The dominating plant seen as we drove east from Pueblo was the Siberian (Chinese) Elm. While this tree is classed as a weed where it is possible to raise better trees, we could not help but think how barren the valley would look if all these Elm were not there. Through Avondale, Fowler, Manzanola, Rocky Ford, Swink and La Junta the trees and shrubs cultivated were much the same and were rather limited in variety. In all directions from Rocky Ford the brilliantly colored patches of Zinnias being raised for seed were conspicuous. The general character of the farm homes were rather prosperous looking, and some had gone to considerable effort to beautify them on the outside. We noticed one farm yard which was very well landscaped and maintained. This was the home of Mrs. H. L. Garber, three miles west of Rocky Ford. She had made very good use of evergreens and roses as a foundation planting.
Thurston spent the day in guiding us around the town and countryside. We were much surprised to run onto a beautiful large Bur Oak on the corner of Fourth and Bent Streets. The nursery of Mr. Leonard Sweetman was almost an Arboretum. Here were found growing happily many plants usually only found much farther south. Mr. Sweetman has demonstrated that the list of plants possible to grow in his town might be at least doubled. Here we found such things as Jasmine, tropical Yuccas, Pampas grass, Bamboo, Varnish tree, Arborvitae, Mimosas, Hop tree, Soapberry, Smoke tree, Chinese Schlossar tree and Redbud. There were many nicely planted homes in the town. We were impressed with the appearance of the planting at the home of Mr. J. J. Caldwell, 819 Sixth Street.

LAMAR

Immediately on driving into Lamar we felt a nice homey, permanent atmosphere. The very appropriate planting in the parking in front of the Brown Lumber Company impresses every visitor to the town. Mrs. C. O. Eckles, Mr. John Y. Brown and Mrs. J. C. Knause spent the day showing us around the town. Everywhere we went there was evident the results of a great pride these people have in their community. Fairmont Cemetery and Willow Creek Park were remarkably well designed and planned. The planting of native Cottonwood trees on the sand dunes south of the park is an outstanding achievement in conservation and community beautification. We were much impressed with the landscaping of the public buildings.
and most of the private residences. It was difficult to select some of the most outstanding ones to photograph. The Clinic Building and residence of Dr. L. E. Likes was very attractive. The grounds of Mr. Ralph Eaton, 805 South Sixth Street were very attractively planted. We greatly enjoyed visiting the home of Mrs. L. S. Perdue, twelve miles north of town. Mrs. Perdue loves to work with her trees and flowers and she has developed a beautifully landscaped yard around her country home. There must be less alkali in the soil and water in this community as the characteristic chlorotic condition of Spars and Maple seen in the upper valley was missing here. All growing plants seemed more vigorous and many plants not seen on the rest of the trip were here growing well.

**CANON CITY-FLORENCE**

I do not believe that the residents in the Canon City-Florence area appreciate what their horticultural advantages are. As indicators of what the possibilities are there, we found a Persimmon tree, a Tulip tree, Norway Maples, a large Horse Chestnut tree and Hydrangea shrubs. All the ordinary trees such as American Elm, Ash, Soft Maples, Sycamores and Linden were growing unusually vigorously and appeared quite contented and happy. Apparently the growing conditions here are similar to those at Boulder, with the additional advantage of a longer season.

We could not find room in this issue to print all the pictures of beautiful spots in the Valley that we took. Several more will be used in a forthcoming article about industrial landscaping.
LIVING MEMORIALS AS LASTING TRIBUTES

By Homer K. Doerz

E
evry community will soon be faced with the question of creating a memorial to its World War II heroes. So let us look at what may be done.

A memorial that is worth the name memorial must be a sincere expression of the ideals which caused it to be raised. The mere placing of a tablet or the naming of a place as a memorial does not give it the qualities of a memorial, even though giving it the name. It would be difficult to find a better expression of what the qualities of a memorial should be than the memorial set forth by Paul Cret, one of America’s leading designers and constructors, for the American battle monuments commission of World War I. His expression is: "In a memorial the end to be achieved primarily, is the perpetuation of the memory of a great man or great event toward future generations. That end being granted, it follows that permanence and a clear, arresting expression of the commemorative idea are essentials of the program and that the most appropriate memorial is that which may stand the changes of centuries, and by the beauty and dignity of its design arouse to attention and respect the heartless mind of the wayfarer and that of the wayfarer still to come." In this quotation, Mr. Cret has certainly pointed to the objectives of a memorial, of course, numerous methods of expressing this commemorative spirit. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Our experience of the past with memorials shows that has withstood the changes of time better than parks, woods or recreation areas. This type of memorial seems to have possibilities of fulfilling all of the requirements of a really worthwhile memorial.

The design can certainly express the beauty and dignity of its design and be a clear, arresting expression of the commemorative idea. Many of these methods can fulfill this purpose if done well, and can almost destroy it if done poorly. Obviously a great deal of thought and discussion must go into the planning of a memorial or it will fail to express the deep feeling that we want to preserve or will fail to reach those succeeding generations which we wish to remind of the events or of the men to whose memory we have created it.

Food for Delphiniums

1 part Wood Ashes
1 part Scotch Soot
2 parts Bonemeal

Apply one large trowelfull to each plant.

Note: Feeding roots of delphiniums are very close to surface, so make cultivation light.

Helen K. Fowler.

FOOD FOR DELPHINIUMS

Apply one large trowelfull to each plant.

Note: Feeding roots of delphiniums are very close to surface, so make cultivation light.

Helen K. Fowler.

American Forestry, By the American Forestry Association, 919 17th St. N. W., Washington 6, D. C. Monthly, $4.00 per year. Indispensable to those interested in Forestry in the United States.

American Home, 55 Fifth Ave., New York 3, N. Y. Monthly, $1.50 per year. All-round home magazine, including a little gardening.

Arnoldia, By Arnold Arboretum, Jamaica Plain, Mass. $1.00 per year. Monthly bulletin of interesting things in the Arnold Arboretum. Mainly applicable to the East, but many good suggestions.

Better Homes and Gardens, Des Moines 2, Iowa. $1.50 per year (3 years, $3.00). Once popular gardening magazine. Now chiefly home making.


Canadian Nature, 177 Jarvis St., Toronto, Ontario, Canada. 5 times a year, $1.25. Verse, illustrations. Much of interest to our region.


Friends of the Native Landscape, 3749 N. Siddle Ave., Chicago 41, Ill. Quarterly. $1.00 per year. Full of interesting facts and stories for those who would preserve our native landscape.


The Home Garden, 444 Madison Ave., New York 22, N. Y. Monthly, $1.00. A pocket-sized magazine written by leading garden experts of the East, who have not as yet discovered that there is such a thing as horticulture in the Rocky Mountain Plans country. If you can weed out the information which does not apply to our country, you will enjoy the fine way that it is edited and illustrated.

House Beautiful, 572 Madison Ave., New York 22, N. Y. Monthly, $4.00. High-class all-around home magazine, with heavy emphasis on gardening. Exceptionally well edited, and the one such magazine which check all its garden articles for their application to varying climatic conditions over the United States. They indicate those plants and practices which apply to our region.

House and Garden, Greenwich, Conn. $4.00. Another large, Eastern highclass magazine which includes some good garden articles.


The Land, Friends of the Land, 1368 N. High, Columbus 1, Ohio. $1.00, quarterly. Thought-provoking articles related to the problem of conserving our valuable topsoil.

Leaflets of Western Botany, John Thomas Howell, Calif. Academy of Sciences, Golden Gate Park, San Francisco, Calif. $1.00. Much of interest to botanists.

The Living Wilderness, The Wilderness Society, 1840 Mintwood Place N. W., Washington 9, D. C. For those who are interested in preserving a few of the unspoiled spots of natural wilderness for posterity.


National Horticultural Magazine, By American Horticultural Society, 821 Washington Loan and Trust Bldg., Washington, D. C. Always attractive and authoritative. Some material over the heads of all but professional botanists. They welcome contributions, from our region, or any part of the U. S.


Wildflower, 3740 Oliver St. N. W. Washington 13, D. C. $1.50. The organ of the Wildflower Preservation Society.

If any of our readers know of other publications which might be of interest to our readers we would appreciate their name, address, price and purpose.

Winter Damage to Low Junipers

A great deal of damage was done to low junipers last winter. Many have a substantial number of dead twigs and branches, while plants that were set out last fall are often found wholly dead. Lack of any evidence of insect damage, or of disease, or of mistreatment in these plants would indicate that the unusual snows of last November and this spring were responsible for these losses. Some of the damage to established plants was breakage from the weight of snow, but the fall planted evergreens which died evidently smothered by snow in the November blizzard. Do not blame your nurseryman entirely for these "Acts of God."

G. W. K.

Pictures on next two pages are of Pyramid Peak. Photo from D. & R. G. W. R. R.
WE NEED WILDERNESS

By SIBLEY OSWALD

ACCORDING to Webster, wilderness is a tractless waste uninhabited by man. To the people of America it is far more than that. It is something so closely tied up with their traditions, so tightly woven into their cultural backgrounds, their emotions and personal visions of life, that it cannot be ignored or neglected. Wilderness to the people of America is a spiritual necessity, an antidote to the high pressure of modern life, a means of regaining serenity and equilibrium. I have found that people go to the wilderness for many things, but the most important of these is perspective. They may think they go for the fishing or the scenery or companionship, but in reality it is something far deeper. They go to the wilderness for the good of their souls. I sometimes feel as though they had actually gone to another planet from which they can watch with cool detachment the fierce and sometimes meaningless scurrying of their kind. Then when the old philosophy of earthiness begins to return to them, they realize that once again they are in tune with sun and stars and all natural things, and with that knowledge comes happiness and contentment.

I believe that this feeling of wilderness is inherent in most of us, even those seemingly farthest removed from it by civilization. The cities may smother it up, make us forget temporarily; but deep underneath is an inherent urge for naturalness and simplicity and a way of life different from the one we know. I have found that a school that considers wilderness solely as an opportunity for nature study and scientific recreation sees no spiritual value in it. They go to it in order to study it, and see no spiritual value in the effect of wild country on those who come in contact with it. These people lack vision, for if they understood the primary purpose of the accumulation of knowledge they would generally find that unless such effort results in furthering man's sense of companionship and understanding of the earth, and thereby contributes to his spiritual contentment and happiness, it has not achieved its purpose.

There is another group made up of people who have gone off the deep end in their enthusiasm for the out-of-doors. They look at the last remaining bits of primitive America as a final opportunity to "get rich quick" in the last pioneer tradition. They are the ones who would dam Yellowstone Lake, cut the last sequoias, and convert the noble country of the Quetico-Superior into a huge storage reservoir. They look upon the wilderness as an idea, as a concept, separate from its being. They cannot see that the presence of wilderness in itself is a balance wheel and an aid to equilibrium. They must know hunger and thirst and cold and fear; then when they reach a place where there is no other value than beauty, they are the ones who head themselves. They are the ones who head themselves. They are the ones who head themselves. They are the ones who head themselves. They are the ones who head themselves. They are the ones who head themselves. They are the ones who head themselves.

I sometimes feel as though they had actually gone to another planet from which they can watch with cool detachment the fierce and sometimes meaningless scurrying of their kind. Then when the old philosophy of earthiness begins to return to them, they realize that once again they are in tune with sun and stars and all natural things, and with that knowledge comes happiness and contentment. We have discovered that the presence of wilderness in itself is a balance wheel and an aid to equilibrium. The wilderness not an opportunity for recreation-minded Americans who see in the wilderness no other value than beauty, but their need is blinded by greed. These people know that unless it can break away and know the meaning of communion with nature, it will lose its purpose. To them wilderness is a necessity if they are to head themselves. They are the ones who head themselves.

There is a school of thought that considers wilderness solely as an opportunity for exploitation or for furtherance of knowledge rather than as an opportunity to satisfy a vital spiritual deficiency within themselves. They are the ones who lead the wilderness regions because they must. Wilderness to them is a tonic, a panacea for nervousness and depression. They go to it one month or once a year as a sick man might go to his physician. These people know that wilderness is a spiritual necessity leads to a sense of unreality and whiteness often results. That is the price a people pays for high technological success, and that is the price we must pay if we are to have a healthy society.

This is the price. We must pay it now in a new light and realize that in addition to being museum pieces, they are vital to our happiness, and they are investments in national character. To give the people of this country an opportunity to renew their old associations as a race, to find themselves and their real qualities, to rejuvenate their spirites through simple living in the out-of-doors, is the real purpose of the preservation of wilderness.

To give the people of this country an opportunity to renew their old associations as a race, to find themselves and their real qualities, to rejuvenate their spirites through simple living in the out-of-doors, is the real purpose of the preservation of wilderness. We have discovered that the presence of wilderness in itself is a balance wheel and an aid to equilibrium. The wilderness not an opportunity for recreation-minded Americans who see in the wilderness no other value than beauty, but their need is blinded by greed. These people know that unless it can break away and know the meaning of communion with nature, it will lose its purpose. To them wilderness is a necessity if they are to end themselves. They are the ones who head themselves.

They are the ones who head themselves. They are the ones who head themselves. They are the ones who head themselves. They are the ones who head themselves. They are the ones who head themselves. They are the ones who head themselves.

I believe this need of wilderness is fundamental, the very essence of being human. Every human being has a need to go to the wilderness, to get close to its vitality; to put off all of our urban civilization, all the self-consciousness. We need that wilderness. Wilderness is a necessity if we are to head ourselves. They are the ones who head themselves. They are the ones who head themselves. They are the ones who head themselves. They are the ones who head themselves.
NATIONAL FOREST WILDERNESS AREAS

By L. C. Shoemaker

The following article is the first of several in which we plan to tell you something about the more remote areas of the State, which the U. S. Forest Service has set up for special purposes under the general name of "Wilderness Areas." These areas are not as well known as our widely advertised National Parks, but comparable to them in natural beauty and charm, and more adapted to the use and enjoyment of us who like Nature in as nearly a natural state as it can be found.

In this article, Len Shoemaker, our efficient treasurer and administrative trouble-shooter, leads off with a brief resume of National Forest establishment, a list of the designated areas, and a brief description of the Maroon-Snowmass Primitive Area, where he worked for almost 20 years as a U. S. forest ranger. Other descriptions will follow as space is available.

George Kelly, Editor

NATIONAL FORESTS

In the United States there are 152 National Forests with a net total of about 179.5 million acres of federally owned land. Twelve of these Forests are in Colorado, namely: Arapaho, Grand Mesa, Gunnison, Montezuma, Pike, Rio Grande, Roosevelt, Routt, San Isabel, San Juan, Uncompahgre, and White River. They comprise 13,697,217 acres.

Under the Act of March 3, 1891, which empowered Presidents to establish timber land reservations, in order that the Nation might possess, protect, and perpetuate their many resources for the good of its citizens for all time, the National Forests were at first withdrawn from the public domain in western states. Subsequently the name was changed to forest reserves and in 1907 to national forests.

Later, the government secured title to other suitable forested lands by purchase and exchange, and Forests were established in eastern states.

A Congressional Act of June 4, 1897 gave the General Land Office the authority...
ity to man and administer the then forest reserves, and a Forest Reserve Service was organized. Its principal function was to protect the timber on the reserves from fire and trespass.

Col. W. T. S. May, a Denver attorney, was appointed forestry superintendent for Colorado and Utah, and opened an office at No. 8 Union Block, on Sixteenth street, on August 8, 1898. On that day he appointed William R. Kreutzer (now a resident of Port Col-

The administering of the stock, of grazing, then development of water-storage projects, and improvements necessary for fire protection may be permitted, but no commercial enterprises or timber cutting and no roads will be allowed.

These areas in Colorado are:

1. Big Creek Lakes Scenic Routt N F.
4. Rabbit Ears Scenic.
5. Fish Creek Falls Scenic.
6. Walhalla Falls Scenic.
7. Pitch Top Primitive.
8. Gore Range-Eagle Nest Primitive.
10. Gothic Natural Gunnison N F.
11. West Elk Primitive.
18. Lo Garu Wild.
19. Hurricane Canyon Natural.
20. Grays Scenic.
22. Mt. Goliath Natural.
23. Rawah Primitive.

THE MAROON-SNOWMASS AREA

The Maroon-Snowmass Primitive Area lies along the north side of the Elk Mountain Range in Pitkin county and the White River National Forest. Its natural state is still well preserved despite the inroads of a horde of prospectors and miners who secured the area for gold and silver in the 80's, and the subsequent use of its resources by ranchers who settled the adjacent valleys.

The Elk Mountains form one of the most interesting areas in the State. Mr. F. V. Hayden, U. S. geologist, who surveyed the area in 1873-4, described it as the most complete geological formation to be found anywhere. In the early disturbance of the earth's surface, parts of it shot into the air and fell backwards, thus turning the strata upside down.

The area is a mecca for mountain
climbers, for six of Colorado's 14,000-ft. peaks and a score almost as high are there. The 14's are: Castle, North Maroon, South Maroon, Pyramid, Snowmass, and Capitol. Some of the 13's are Cathedral, Daly, Keefe, Hunter, Ritchie, and Travelers. The most widely known is Hagerman.

Many beautiful lakes afford fair to excellent fishing. Exceptionally good campsites are available at each, easily accessible by trail. Snowmass, the better known and more highly used of the group, has been improved to take care of the large number of visitors. Other lakes are: Cathedral, American, Willow, Maroon, Crater, Geneva, Pierre, Capitol, and Avalanche.

The Colorado Mountain Club of Denver has pitched outing camps at Snowmass Lake and elsewhere in the region several times. The American Forestry Association of Washington, D. C., has conducted several Trail Riders of the Wilderness expeditions through it. Members of these groups and thousands of other visitors testify enthusiastically to its wonderful recreational possibilities.

During the writer's tenancy of the Aspen district of the once Sopris, then Holy Cross, now White River National Forest, a good trail system was developed. Two of these trails are now widely known: the Panorama, from Ashcroft to Conundrum Hot Springs; and the Maroon-Snowmass, from Maroon and Crater lakes to Snowmass lake. The former crosses Electric Pass at 13,400 feet, and the latter crosses Buckskin Pass at 11,500 feet. Both afford outstanding views of the beautiful area they cross.

Good forest development roads lead to the area from Aspen, the now famous ski resort. One ends at the Lindvig ranch on Snowmass Creek, one near Ashcroft on Castle creek, and the other at Maroon lake. The last named is sometimes referred to as Shoemaker's Folly, because some thought he was foolish to fight so long and persistently for its construction. But visitors to the area soon learn why. Beyond the end of that road lies Paradise now— as old Omar would say it—for all lovers of the wilderness.

The beauty of the Maroon-Snowmass area is largely due to its geologic construction, but it would probably not be known as the most beautiful spot in the State if it were not for its botanical attractions. In the summer the columbines are in their glory, many slopes being covered with them. Here they seem to be at their best in size, richness of color and number. In the alpine and subalpine meadows there are masses of brilliantly colored paintbrush, asters, gentians and potentillas. Along the icy streams are knee-deep masses of pink and blue merrious and white cardamine with occasional clumps of the brilliant Parry's primrose, Kings crown and little pink elephants.

Lodgepole pine, Engelmann spruce and Alpine fir are the predominating trees with Douglas fir found occasionally on the lower northern slopes and Limber pine occasionally at higher altitudes. Along the streams everywhere are willows and in favorable locations many mountain ash with their orange-red fruits in season. Chokecherry, mountain maple and serviceberry are numerous. The red-berried elder with its brilliant fruit, the shrubby cinquefoil with its small yellow flowers and the bearberry honeysuckle with its twin black berries in their purple involucres decorate the slopes.

And everywhere, intermingled with the other plant life, are the aspens with their twinkling leaves which turn to red and gold as autumn approaches. These with the other trees, flowers and shrub add the finishing, softening touch to this land of rugged mountains and brilliant colors.

Maroon Peaks and Crater Lake.

Photo by Jay Higgins of U. S. F. S.
THE TREES of this group are from 20 to 35 feet in height and these are, perhaps, more interesting than any others. Numerically, the number of splendid varieties available far out-number those in any other group. The uses of these trees are varied: Foundation plantings, screens, accent, transition, groups, boundaries—and other uses that will be discussed later.

Most important in this group of "tall trees" are the erect Junipers, often popularly called "Cedars." Actually, none of the true Cedars are hardy in Colorado, but Juniperus virginiana has been called "Eastern Redcedar" so long that this popular name has not only become current in all parts of the country, but has been officially adopted by Standards Plant Name, (S.P.N.). Our own Juniperus scopulorum is called "Rocky Mountain Cedar," almost as frequently as it is "Rocky Mountain Juniper"—the name selected by S.P.N. Four species of Juniper furnish the greatest majority of the trees in this group: Juniperus chinensis or Chinese Juniper, Juniperus virginiana or Eastern Redcedar, Juniperus scopulorum or Rocky Mountain Juniper, and Juniperus monosperma or Chihuahuan Juniper. Three of these four species are very variable when grown from seed, and many of the outstanding new varieties in color and form have been preserved through grafting. By cutting of a tip of the preceding year's growth and grafting it upon a seedling stock, any Juniper can be exactly reproduced. This makes it possible to perpetuate hardy and beautiful strains and these grafts or clones furnish most of the more choice Junipers now offered by the modern nurseries.

Grafting has two additional advantages: Junipers, unlike most plants, usually have the male and female organs on separate trees. The male, or staminate, tree bears pollen; the pistillate, or female tree, has berries. To many people, the blue berries of the Juniper constitute one of its greatest attractions. A graft from a berry tree itself has berries. Thus grafting makes it possible to have certain of berry trees. And finally, since most grafts of a given variety are practically identical in form and color, perfect matching of pairs or larger multiples is thus made possible.

All of the Junipers that we shall describe are completely hardy in Denver. They all have two severe insect enemies, however—red spiders and aphids. These pests can be easily controlled by regular spraying or dusting, and the beauty of these trees more than justifies this small annual expense. Unfortunately, many people have been led to believe that washing a Juniper with the garden hose will control red spiders. In Colorado, at least, it will not, in any save the mildest infestations. Because of this misconception many beautiful trees in Denver have been practically ruined. Use your garden hose, but have a Hays Junior Sprayer on the end of it, with a proper solution in it. Better still, employ a professional, who sprays with 400 lbs. of pressure. A spraying or dusting with lime-sulphur in April before any growth has started, followed by a nicotine-soap spray or a nicotine dust in mid-June and July will keep 99% of your Junipers in the condition of the trees shown in the illustrations. Failure to do this will result in the type of Juniper often seen in our public parks.

The only disease to attack Junipers in Colorado is the Cedar Apple Rust, a fungus requiring two different host plants, the Juniper and the apple family (including Hawthorns.) The pest can always be controlled; therefore, by removing all members of the apple family in the vicinity. Kunitz's "The Friendly Evergreens" (which should be in every horticultural library) says that spraying with colloidal sulphur at the rate of 3 lbs to 50 gallons of water every 10 days in July and August often helps.

The Cedar Apple forms a brown gall which affects itself to the larger branches and is very disfiguring. (See illustrations.) Both the virginiane and scopulorum species are susceptible to it. The chinensis species seems to be immune, however, as does the monosperma.

Since a member of the chinensis species constitutes the writer's favorite Juniper, it will be first discussed.

KETELEER CHINESE JUNIPER (Juniperus chinensis Keteleeri). This is a pistillate tree with the largest berries of any Juniper in common cultivation. It keeps its rich green color splendidly in winter, preserves its central leader well (thus making it less susceptible to snow injury) and forms a handsome, broad pyramid which requires very little trimming.

Other tall evergreen varieties are offered by eastern nurseries, but few have proved entirely satisfactory in Colorado.

The Cedar Apple rust is a disease so widespread that the Keteleer is recommended. When it is found on the Fother Apple Hose many nurseries claim it is a disease.
THE GREEN THUMB

31

upward trend, foliage is greenish-silver, tiny, light blue berries that contrast for its best development, as it in more silver on the exposed tips of branches.

furnishes some of the most beautiful evergreens that grow.

CANAERT EASTERN REDCEDAR (Juniperus virginiana canaert). Even the beautiful colored illustration, generously made available to us by the D. Hill Nursery Company, even inside of front cover) does not flatter this magnificent tree. It has the darkest and richest green foliage of any evergreen and is frequently loaded with

Glenmore Queen, Rocky Mountain Juniper.

One final caution may prevent disappointment as to the small Canaert brought you by your nurseryman: This tree is sometimes a little thin of foliage until it reaches six feet in height. Staking and regular shearing are both necessary for the proper development of the small Canaert.

HILL DUNDEE EASTERN REDCEDAR (Juniperus virginiana hilli). This tree, first offered by the D. Hill Nursery, is another of the most outstanding trees ever developed. More slender and compact than most virginiana trees, it is ideal at the corner of a building. Its foliage is rather heavy, as is common with the virginiana species, and of a nice grayish green color during the summer. During the winter, however, it becomes a spectacular purple plum, contrasting vividly with all other evergreens.

Space does not permit a detailed review of the other fine virginiana trees. Each of the following is outstanding:

HILLSPIRE or CYPRESS EASTERN REDCEDAR (Juniperus virginiana cupressifolia). This has heavy dark green whipcord foliage and a fine berry crop.

SILVER EASTERN REDCEDAR (Juniperus virginiana glauca). This tree is silvery blue in color and has berries; it is one of the oldest horticultural varieties. Give it careful shearing and staking for its best development, as it inclines to a irregular growth.

BURK EASTERN REDCEDAR (Juniperus virginiana burk). This is a newer form with steel blue foliage, it has better form and more dense foliage than the Silver Redcedar.

NAME of the virginiana species do as well in the higher elevations as do the scopulorum species. Do not use Junipers virginiana trees for landscaping the mountain home, therefore. As was previously stated, they are completely hardy in Denver and similar locations. They have proved hardy in Boulder, also.

Even more variable than the virginiana species is our own Juniperus scopulorum, the Rocky Mountain Juniper. The clones are almost as numerous as the propagators, each feeling, with justifiable pride, that his own creation is better than any other. We have en- deavored, therefore, to get a consensus as to the six or seven best "Scop" clones, and shall give a brief discussion of each of these universally acclaimed trees. As with the other groups, the writer will describe these trees in the order of his own preferences.

GRAY GLEAM ROCKY MOUNTAIN JUNIPER (Juniperus scopulorum gray gleam). This tree is almost a true silver shade. Most Junipers assume a drab, dull winter color. Gray Gleam, however, becomes even more brilliant during the winter months. Slow of growth, it stays in scale long, and its vertical branching with thick, whipcord foliage form a natural pyramid, which requires almost no shearing. Like the famous PATHFINDER, however, it is a gynoecium or male graft and thus never has berries.

SILVER BEAUTY. This variety is a lovely, slender berry tree, introduced by Lloyd Moffet of the Plumfield Nurseries, Fremont, Nebraska, and conservatively described by him as follows:

"A native of the San Isabel forest region (Colorado), and truly a beautiful tree. It is upright, full at base, branches have upward trend, foliage is greenish-silver, berries in the exposed tip of branches. Grows about one foot a year."

HILL SILVER. This famous offering of the D. Hill Nursery of Dundee, Illinois, is pictured in color herewith (Again we thank the D. Hill Nursery for lending these beautiful color plates to The Green Thumb). Mr. Kumlien says of this tree in The Friendly Evergreen: "It is of unusual, bluish color and of an attractive, compact growth, probably never reaching more than twenty feet but it can be trimmed and maintained at a smaller size."

SUTHERLAND. This tree was developed by the Sutherland Nursery of Boulder, Colorado, and is a universal favorite.
western favorite. Refer back to the splendid picture of this graft which was used to illustrate Mr. Scott Wilmore's article on Juniperus scopulorum in The Green Thumb for May, 1945. The Sutherland is pistillate, but has smaller berries than most "Scops." Its dark, moss-green color remains remarkably constant throughout the year. Its ascending branches need little trimming.

MOFFET. Mr. Frank Richard of Fort Collins has made available to us the picture on page 28 of this tree. He has aptly described this graft as follows:

"Remarkably symmetrical habit; branches grow close together making a very dense tree with a minimum of shearing. Dominant color is light greenish silver but in season the new growing tips are heavily silvery, giving the appearance of light hoarfrost. Heavy annual crops of berries, add much to winter interest."

EMERALD. This handsome green clone of the Marshall Nurseries (Deaver and Nebraska) furnished a needed variation from the blue and silver trees usually offered by the trade. The Emerald is a compact and tidy berry tree.

PATHFINDER. This is possibly the best known Scopulorum clone. It too was originated by Lloyd Moffet, and it is, perhaps, the bluest blue of all—at least in the younger trees. The writer has had to give more attention to the maintenance of a leader on this tree than with the grafts previously mentioned, and for that reason alone does not rank this tree as highly as the preceding.

The following clones of J. scopulorum are also all exceptionally fine trees; STOVE PIPE, forming a slender column; MARSHALL, a silver berry tree; MADORRA, spectacular, with two types of foliage commingled; GLENMORE QUEEN, a rounded, blue pyramid carrying a heavy crop of berries, the parent tree of which is illustrated on page 30; DEWDROP, a very fat, multiple stemmed tree with very heavy foliage—and susceptible to snow injury.

The proper shearing practices for the erect Junipers were described in the May, 1946 issue. Their adaption to hedge use has likewise been developed (The Green Thumb, January, 1946). They lend themselves to foundation planting, contrast and accent groups (cover of The Green Thumb, May, 1946)—both formal and informal—and they are frequently used for delineating the corners of formal garden units. The alley of Junipers at the entrance to Crown Hill Cemetery is of breath-taking beauty. These superb specimens, thirty feet high and ten feet in diameter, give warning that they can get out of scale at the small home in twenty years. Because of its ultimate size an erect Juniper should always be planted at least four feet from the house.

While Juniperus scopulorum is sometimes afflicted with blight in the moister eastern climates, this is almost never
found in the dry western states. Like its eastern cousin J. virginiana, the “Scop” is susceptible to Cedar Apple Rust, if diseased members of the apple family are near by. But the only substantial problems are red spiders and aphids, and regular spraying or dusting will always control these pests, and thus make available to us another outstanding species for Colorado landscaping.

Before leaving the Junipers, reference should be made to our Colorado native, the ONESEED JUNIPER (Juniperus monosperma). This hardy citizen of the southwest comes as far north as Colorado Springs, and is being used more and more for group plantings, boundaries and hedges. (See page 4 of The Green Thumb for May, 1946). Being slower growing than the Rocky Mountain Juniper, and bushier in growth habit, it is excellent for an informal hedge, as well as a formal one. It seems to be without insect enemies. Thus far, no grafted stock (making uniform color and form possible) has been developed. It would seem this offers an attractive field for the nurseryman.

COLORADO PINYON PINE (Pinus cembroides edulis). Although the Pinyon will exceed 20 to 35 feet in its native state, it is so slow growing—particularly if the “candles” are docked now and then, as described in the May, 1946 issue—that it may be employed horticulturally in much the same fashion that the Rocky Mountain Juniper is. Usually the Colorado Pinyon is squat and irregular, when growing naturally. The nurseries select slender, single stemmed specimens, however, which form nice pyramids on the home grounds. (See illustration.) The Pinyon is being used more and more in boundary plantings on large properties.

SWISS MOUNTAIN PINE (Pinus mugo). This tree, like its dwarf cousin Pinus mugo mughus, naturally forms a bush with several stems. (The dwarf variety will be discussed in a later issue.) Nice specimens are to be seen in the 17th and 7th Avenue Parkways, and on the south drive to the Colorado Museum of Natural History in City Park. Groups, boundaries and back grounds constitute the most frequent use of this pine. A mature tree in cultivation will reach a height of 20 feet and a diameter of 12 or 15 feet. Mr. Roach’s photograph is of a tree on the 7th Avenue Parkway. The Swiss Mountain Pine does not stand up well under heavy snow.

EASTERN ARBOR VITAE (Thuja occidentalis). The Arbor Vitae is often an unsatisfactory winter evergreen, even in moister climates than Colorado, frequently adopting an ugly brown color in cold weather. In Colorado there are few specimens indeed that are desirable plants. However, there are three clons of the Eastern Arbor Vitae which occasionally do quite well in Denver if planted on the north or east side of a residence, namely, the PYRAMIDAL, the WARE and the WOODWARD. The WOODWARD is a natural globe, of dwarf proportions. The WARE forms a broad pyramid 12 to 15 feet high, while the PYRAMIDAL forms a slender column, 15 to 25 feet high and but 4 or 5 feet in diameter. Two nice specimens of this tree are shown in the accompanying cut. Some of the Colorado nurseries are making grafts from the more successful Arbor Vitae trees, in the hope of building up a thoroughly hardy Colorado strain. The same is true of the Oriental Arbor Vitae (Thuja orientalis).

FALSECYPRESS (Chamaecyparis). This evergreen has somewhat the same general appearance as the Arbor Vitae but does not change materially in color in winter, and for that reason is preferable to the Arbor Vitae—when hardy. However, very few specimens of this tree are to be found in Denver. Sawara Falsecypress (Chamaecyparis pisifera) is worth a trial for those who like to gamble. Of course it should be placed where not exposed to south and west sun and winds.