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TRY A COLUMBINE
J. R. Botleman

Our garden soil is a strange mixture of top soil and shale from the eem excavation improved only slightly by manure and loam which I've hauled in and incorporated into it. It is not good garden soil as is, but I have hopes, especially if it endures long enough.

However, some plants will take a of abuse and will thrive or at it tolerate poor soil such as mine. Last year I flched a clump of column from the yard at the mother-in-law's summer home, brought it down here planted it in the shade where it lived in the sun, and bloomed for years, then moved to my new place, and brought some of my flowers along, among them the mp of Columbine. I did not expect much care in transplanting, it stuck in the ground at random; it survived and bloomed again this time it was in the sun, and head of the cool beautiful blue or, it had turned a dirty white. It year I had to move it again and it grew in the new location, but it was alive last fall and I have no son to believe that it will not live the winter. If you want lovely flower as well as a beautiful x, try the native columbine. I think it will repay you in direct proportion the care and effort you expend on but please folks, give it a better care than I did.

unless you are extra careful you be the one to start a fire that will burn through acres of acer and beautiful timberland.

S U P TO YOU TO PROTECT MR. ROBERT E. MORE

No one in Colorado has made a finer contribution to Horticulture than has Robert E. More, in introducing and ascertaining the hardness, for use in the state, of new varieties of Evergreens.

His Arboretum, Glenmore, at Buffalo Creek, Colorado, has been given nation-wide appreciation.

One of Denver's leading attorneys, student and author of many authoritative papers on horticultural subjects, Mr. More has long been a valued member, officer and director of the Colorado Forestry and Horticulture Association.

The association is greatly indebted to him for his wise guidance and for all the time so generously given by him to the furtherance of its work.

When you toss away a lighted match or cigarette, or leave a smouldering camp fire you are gambling with America's Scenery, her forests, wildlife, soil and watersheds. Do your part to keep your forests green by taking no chances with fire this summer.

Cover Picture Colorado Columbines Photo by Robert J. Neidrach.

ADVERTISING OR?

Last January we started to publish the Green Thumb monthly and to include advertising in its makeup. This was after the repeated requests by members and commercial firms. We planned to limit the space assigned advertising to 20% of the total, or 8 pages in 32.

The response was very good, and with the help of Mrs. Barbour this goal was approximately reached in the first six issues of the year. Our advertising is now at its lowest in this issue. It will not pay for even half the cost of publishing.

We realize that this is the slack time of year for dealers in plants and garden accessories, but we feel that there are many products related to horticulture which might be profitably brought to the attention of our list of prospective buyers now.

We must either have more advertising or raise the money for publishing the magazine some other way. If we must pay someone a large commission to solicit advertising there will be little profit left to finance the magazine. If any member believes in the objectives of the Green Thumb, and knows of those who should advertise, they will be doing a great service to notify us. This is your Association and your magazine.

Last year enough sawtimber-size trees to build about 86,000 homes went up in smoke . . . farm woods, range and watershed lands were heavily damaged . . . scenic areas were marred . . . all as a result of carelessly tossed matches or smokes, unattended camp fires or improper brush and field burning.

John Q. Public—Yes, people like you and your neighbor—cause 9 out of 10 disastrous forest fires!
COLORADO, astride the Continental Divide, and with a wide diversity in topography varying from wide expanse of treeless plains, low elevation deserts, to mountain leas and lofty peaks, has not one bute a remarkable variety of nates. Great differences often occur in short distances. Our local meteorologist writes that “La- and the summit of Pike’s Peak er by 35°F in mean temperature difference equal to that between thern Florida and Iceland. The rage annual snowfall at Cumbres 264 inches while at Manassa, less n 30 miles away, it is only 18 ines. One may travel from the rm valleys of the Western Slope, from the great plains, to the crest the Continental Divide and pass ough as many distinct climates as would in traveling from Virginia orctic Greenland.” This variety lue chiefly to differences in altitude, ying from 3,386 feet to 14,431 t—a range of over 11,000 feet, rough a range of latitude of 4° 7° - 41°) and topographic differ- es are partly responsible. Each of se distinct climates has native nts and crop potentialities peculiar it.

Theclimate of the plains is dis- tantly continental. Its general fea- es are low relative humidity, a e amount of sunshine, light rain- froined largely to the warmer f of the year, high day tempera- es in summer and generally in the ter a few protracted cold spells. is the weatherman’s brief sum- ry of the major features. Let us explore it a little more in detail with regard to cropping potentialities and effects.

A lack of continuous snow cover is not mentioned in a weather summary but it is generally recognized that this factor makes the temperatures more severe on plants, as heat is quickly lost by radiation and the ground is frozen to a considerable depth for varying periods. The greater wind movement on the plains as compared to the foothills causes an increased evaporation, thus making precipitation less effective. Also wind causes drifting of topsoil where natural vegetation, crop stubble, stubble mulch or rough cloddy surfaces are removed by improper cultivation.

Plains Region Shelterbelts
Precipitation increases generally from the foothills to the Kansas border — varying from 12 to about 18 inches. This amount of precipitation, together with the prevailing temperatures, is considered insufficient for growth and reproduction of native tree species that grow in the foothills and the mountains. Such trees will grow, however, when proper cultural methods are applied. On lighter textured soils, shelterbelt plantings of drought resistant Ponderosa Pine, Rocky Mt. Red Cedar or Juniper, Pinon Pine, Chinese or Siberian Elm and Hackberry have survived by planting in wide-spaced rows which are cultivated to reduce grass and weed competition. Fallowing prior to planting and planting seedlings in contour furrows appear to aid by supplying more moisture. Close spac-
us above 10,000 feet frost may be
pected every month in the year—
season in contrast to the more uniform
distribution throughout the year on
mountain valleys do not bloom as
quickly as those on south slopes and
may therefore escape the damage of
late spring frosts.

Obviously for most of this area,
plantings must be of native species
which are known to be adapted. That
is why it is better to choose cabin
sites that can take advantage of the
adaptation of materials to local
climatic and other site conditions is
essential. Shade tolerance is an item
that needs careful attention. Plantings
of Douglas Fir and Engelmann
Spruce are more successful under As-
pen and on north slopes or, lacking
that, planted next to boulders or old
stumps. Lodgepole Pine or Ponderosa
do better when planted in the open.
Grass cover especially competes with
seedlings for moisture. Where plant-
ings are attempted the deep hole
method, which removes some sod, is
better than the slit method of plant-
ing. A small hole on contour furrows
may be even more economical on
heavier soils.

Another Climatic Variation
Another exception to temperature
and timber type correspondence is the
effect of exposure upon insolation and
moisture on particular sites. The foot-
hill belt illustrates this point. From
the edge of Denver one can look at
the foothills and note belts of vegeta-
tion—the south-facing slope of ridges
covered with a mixture of shrubs and
greass, the north-facing slope covered
with timber. Higher up, open Pon-
derosa Pine is noted on the south
slopes and Douglas Fir on the north
slopes. The south slope receives the
full benefit of the sun's rays through-
out the day. This site is warmer and
because it is so heated the moisture is
less than on the north slopes. The
north slope being literally in the shade
of the mountain is cooler and less
evaporation takes place, leaving more
moisture available. These exposure
differences cause the north slopes to
have climates that may be the equiva-
lent of those found as much as several
thousand feet higher in altitude. This
shows up also at timberline with trees
giving way to alpine tundra at about
11,000 feet on north slopes as com-
pared to 11,500 to 12,000 on the
south slopes. There is a practical ap-
lication as well: fruit trees planted
at the base of north slopes of inter-
mountain valleys do not bloom as
quickly as those on south slopes and
may therefore escape the damage of
late spring frosts.

Obviously for most of this area,
plantings must be of native species
which are known to be adapted. That
is why it is better to choose cabin
sites that can take advantage of the
natural setting, with possibly a little
transplanting or clearing. Reforesta-
tion, which is costly at best in com-
parison with natural reproduction,
may be used in some instances for
watershed protection on old burns,
for recreational purposes occasionally,
or for restocking clear cut or bushy
areas without seed trees. In any case
the adaptation of materials to local
climatic and other site conditions is
efficient. Shade tolerance is an item
that needs careful attention. Plantings
of Douglas Fir and Engelmann
Spruce are more successful under As-
pen and on north slopes or, lacking
that, planted next to boulders or old
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ing. A small hole on contour furrows
may be even more economical on
heavier soils.

PENSTEMONS
By FRANCES BINKLEY

Penstemons have a place high on
the list of Colorado wild flowers for
the garden,—a vast race with a great
variety of qualities to offer. Colors
range through blues, lavenders and
pinks. There are tall species, as showy
as the snapdragons or the branching
larkspurs, and shrubby and alpine
species as well. It is not difficult to
recognize and gather the seeds in late
summer.

Plants of many Penstemon species
stand transplanting well. Their pre-
ferece is for sunny, well-drained
spots, with light shade available. I
have had P. angustifolius on an east
slope, at the foot of a bank. It is
small enough for the rock garden,
light shade available. I
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have had P. angustifolius on an east
slope, at the foot of a bank. It is
small enough for the rock garden,
I was a real pleasure to be asked to prepare an article for the "Green Thumb." Since this is my first appearance to you through your magazine, I feel that it might be well for me to explain briefly the position of the Denver County Agricultural Agent.

As you see above, my title is County Agricultural Agent for the City and County of Denver. I have been asked many times since taking over this position to explain the work of the Extension Service in Denver.

The Extension Service is primarily an educational organization. In the past, educational duties have been carried on mostly with rural people, particularly farmers and ranchers themselves. It seems to me that we can do more than any other in promoting such activities among our young people.

For the first part, I think it is well explained in a recent talk by L. H. Peck, Manager of the Denver Stock Yards, removal of all agricultural interests would leave us without the size of Alamosa.

Also, I want to point out the fact that Denver has more land owners—nearly all of them—than any other city. It is primarily an agricultural city, and as such it is capable of handling educational work.

In Denver, the same as in rural areas, we do have a crop of children who come to us from the city to learn more about agriculture. In that respect, we have never had a greater crop than that of today in rural areas.

These boys and girls thru 4-H club work, are one of the most important phases of the Extension Service activities. The increased productivity of those resources is highly important to us. In fact, it is safe to say that it is more important to city dwellers than to the farmers themselves because they can always produce enough for their own food supply, whereas, the city dweller cannot.

It was pointed out in a news broadcast by Alex Dryer just the other morning, the speed with which our population is outgrowing their food supply. It is serious and it is time everyone started taking it so seriously.

We have all heard about conservation but I fear that too many city people have just taken it for granted that it did not concern them. This group, probably is different than many, and no doubt realize these things, but you can help the situation greatly by spreading the gospel, so to speak.

Now as to more particular things you are familiar with—problems of gardening, both vegetable and landscaping, which confront us in Denver; problems of varieties—insects, disease, and so forth are probably more than familiar to all of you. We are also here to do all in our power to assist with such problems.

When we speak of agriculture, we think first of crops. In Denver, the same as in rural areas, we do have a crop and it is our most important crop, if you will allow me to speak of it in that way, I mean our crop of children—our boys and girls. In that respect, we have never had a greater crop than that of today in rural areas.

These boys and girls thru 4-H club work, are one of the most important phases of the Extension Service activities. Whether in rural or in urban areas, Denver is also unique in that it is one of the few urban areas in the U.S. which has an Extension Service office and where 4-H club work is carried on.

In an urban area, however, we are somewhat limited as to the projects we can offer our boys and girls. We do offer gardening projects, including both vegetable and flower, and home beautification projects. In fact, these projects are the ones which we are attempting to emphasize the most among those that we offer, for we feel that they are of the most importance, not only to our children but also the city.

The readers of this magazine, whose interest in Horticulture is shown by their subscription to it, are much more aware of the value of such activities for boys and girls than our average urban citizens and it is with this realization that I feel that your group can do more than any other in promoting such activities among our young people.

I need not explain to you the personal value which our children can receive by working on such projects as gardening and landscaping, you are already aware of this value from your own experience. I need not review the greater understanding of life, the greater appreciation of growing things, the greater appreciation of natural beauty which our children can obtain, you already know about them.

I would like to, however, say a little about the value to our city which increased interests in such projects can bring about. I was interested, at the first session of a landscaping class, which was conducted at the Horticulture House, in a statement made by the instructor as to the lack of flowers around the homes and in the yards of Denverites. This dearth of flowers is due to the lack of knowledge and interest of our Denver residents. What better place could there be to increase this knowledge and interest so that in the future such statements could not be made about our city, than by starting now to develop the interest and knowledge of our boys and girls in flower growing?

Almost the same statement was made regarding the lack of any planned landscaping around most of our Denver homes. The same reasons no doubt were responsible for this lack. What
You folks who have the knowledge of these things have excellent qualifications to be among our leaders. We in the Extension Service, appreciate the value of this organization and also appreciate deeply the excellent association we have had with your group in the past and hope to enjoy your increased support in the future.

EDWARD WILSON: NATURE-LOVER

By George Seaver, New York
E. P. Dutton and Co.

And Nature, the old nurse, took
The child upon her knee.

Saying, 'Here is a story-book
Thy Father hath written for thee.

Come wander with me (she said)
Into regions yet untrod
And read what is still unread
In the manuscripts of God.'

So he wandered away and away
With Nature the dear old nurse,
Who sang to him night and day
The rhymes of the universe.

And whenever the way seemed long,
Or his heart began to fail,
She would sing a more wonderful song,
Or tell a more wonderful tale.

Lonefellow.

The above verses are the key to this delightful book. It is largely made up of the diaries and letters of Edward Wilson and tells of his earlier life as well as of the South Polar expedition with Capt. Robert F. Scott with whom he reached the Pole and with whom he died in the heroic struggle back.

The beautiful color plates and nature drawings add to the charm of the book. As an inspiration to young people "Edward Wilson: Nature-Lover" should be placed high on the list of required reading. "We see distinctly only what we know thoroughly" and Edward Wilson was that rare combination of artist and man of science.

ALICE WOOD.
are planted out of doors on the campus of Kunming University.

Fortress-like walls surround what gardens there are, so here again one gets only glimpses of the far-eastern horticulture, from the roadside. They have many of our species, and since Marco Polo’s time the rest of the world has been getting theirs.

“East is east and west is west”—the twain have come together, but have they really met?

ROSE SNOUT BEETLE

MRS. G. R. MARRIAGE

Isn’t this the one rose enemy hardest to kill? Haven’t we refused attractive dinner invitations just because we had to be ready to catch or shake off the nasty little pest when he appeared at sundown? His needle snout is so slender that we couldn’t plaster enough poison onto the exterior of our rose buds to give him a lethal dose.

Now we have got him. He succumbs to DDT. We find that he can be knocked cold by dusting with a mixture of equal parts 50% DDT powder and arsenate of lead. This is most effective when he meets his friends at those conventions on the fattest rose buds early morning and late evening though the residual effect of DDT may carry on the job indefinitely. Arsenate of lead may not be necessary, we added it to reduce the possibility of too strong DDT.

We find that a DDT of less than 50% isn’t much good—even against house flies.

THE WEEK-END GARDENER

I WONDER what the matter is with my garden. It was so bright and full of color last spring, but now it is dull and uninteresting. The Oldtimer tells me that I should have planted more annual plants like zinnias and petunias. He says that I should also plan on using more of the late blooming shrubs like Frobel’s spirea, Sorbaria, Leadplant and Elderberry. I know that there are more late perennials like Phlox and fall asters that should help to fill this July-August gap. I’ll make a list of the things I need now, and order them next spring.

This seems to be a difficult time to water properly. The sun is so hot that it dries things out in a hurry. I see now why the Oldtimer told me last spring to water things more thoroughly and not so often, so that they would develop deep roots. Things sure need deep roots now when the weather is so hot.

I appreciate now the careful planning for shade in the front of the house. That tall-headed tree at the southwest corner of the house keeps the house several degrees cooler and helps to frame the house. I wish that we had planned as thoughtfully for proper shade in the rear. When we really want to use the platform to sit on out in the open the sun shines on it and it gets unbearably hot. If I planted a tree to give us shade there it would hide our best view. Hey, Mom, how about planting a low spreading tree there like a Cockspur Hawthorne? That would give us the shade and not hide the mountains.

The roses are not doing as they once did. I’ll bet that they are getting too much shade. I’ll cut out that honeysuckle bush and the Box elder tree that came from seed. That should make a lot of difference in my rose and perennial bed.
THE GREEN THUMB

A LATH HOUSE FOR COLORADO

By Myrtle Ross Davis

BELIEVE that everyone who lives in Colorado and takes gardening seriously should have a lath house. Dry air and very hot sun are very hard on many plants which grow very well in a more moist climate. I have found that a lath house is the answer for growing these partial-shade moisture-loving plants in Colorado. Also, during our hail storms, I rest assured that my Begonias and other plants that are in the lath house will not be damaged.

My lath house is 8 by 16 feet, and sits in what was formally a useless corner. It is made on a two-by-four frame, with lath covering running up and down on the sides and north and south on the top. The laths are spaced a width of one lath to give half shade. I cover my lath house with cheesecloth because I have found that tuberous-rooted Begonias and other plants need the extra shade, and the cloth also helps to hold in the moisture on hot dry days.

Most of the space in the lath house is given over to the Tuberous Begonias during the summer. They are started in-doors and set out in the lath house after all danger of frost is past (about May 15.) There they thrive in the cool, shady, moist location.

When fall comes, I allow the Begonias to frost down, and then I dig and clean the tubers before a heavy freeze comes. They are then stored in dry peat moss in a cool place in the basement. This way they get their needed rest, and are out of the way all winter. In the early spring, they are ready to start growing again.

After the Begonias are moved out of the lath house in the fall, I move in the tender perennials such as Dianthus, Chrysanthemums, and some daisies, which have a difficult time surviving our very dry winters. Foxgloves and Cantaberry-bells and other bi-annuals like to spend their only winter in a lath house also.

I try to keep the soil of one corner of my house a little on the acid side so that I can raise some of the eastern woods flowers, which are so rarely seen in Colorado. I grow Hepatica, Blood-root, Trillium, Dog-tooth Violet, Wintergreen, Jack-in-the-Pulpit, and Helleborus successfully in the lath house.

The lath house is an ideal place for house plants during the summer. They all perk up and put on new growth as soon as I put them out there for the summer. I either bury the pots or place them on shelves along the side, according to the amount of water they require.

The month of August is the best time to start perennials from seed. In the open they dry out, or if they are covered with glass or burlap, they have a tendency to damp-off and the loss is great. If they are planted in flats, and the flats are placed in the lath house, they are protected from the hot-drying sun and they come along fine without extra covering. They are also protected from the damping-off. After the weather cools off, they may either be set in their permanent location in the garden, or allowed to remain all winter in the protection of the lath house.

I am sure that as long as I garden, I shall never be without a lath house. It has become a very essential part of my garden, and I couldn’t get along without it.

Mr. A. J. Teese, instructor in the only strictly horticultural college in Australia, would like to correspond on horticultural matters with someone particularly interested in ornamental plants. He is also interested in getting articles dealing with plant breeding and modern methods and chemicals used in plant propagation, and would like to know about magazines printed in this country which deal with horticultural matters. He is especially interested in the lilies and currently experimenting with the multipleblossomed polyanthas (primroses) and is anxious to get the blue varieties started. Anyone any suggestions on these? His school, which covers 32 acres of land, is only about three miles from the heart of Melbourne. His address is:

12 Pembroke Street, 
Surrey Hills, 
Melbourne, Australia.
THE RECREATION STATE WITHOUT A STATE PARK!

By Harold W. Lathrop
Special Representative, National Recreation Association

COLORADO is nationally recognized as an ideal tourist vacation state. True, it has its magnificent mountains with snow-fed streams, national Parks, National Forests, municipally-owned mountain parks, and few roadside areas. The State Government of Colorado, however, has practically nothing to provide facilities, which are normally expected to be furnished in state parks.

The first state parks of the nation were established in New York and Michigan, sixty-three years ago. Why Colorado with all its natural beauty has the only state in which no areas have been established, other for their own citizens or the multitude of tourists is a $64 question.

A study of a recent tabulation prepared by the National Park Service, covering expenditure data for state park agencies in 43 states is quite revealing. Arizona, Delaware, Nevada and New Mexico do have some state parks, but did not report. The population of the 43 states covered in this survey is estimated at 127 million persons. During 1947, their state governments expended for state park purposes, $26,618,830, for an average of 29c per capita. Such amount was actually equally divided between maintenance and operation, and new works and improvements. The total available funds from legislative appropriations, revenues, gifts, endowments, etc., were $36,812,516, representing 31.8c for every man, woman and child living in the 43 states. Thus, every state except Colorado has recognized that state park recreation is an important function of state government. They have set aside numerous areas, outstanding for their scenic, scientific or natural values, for the perpetual use of their citizens and tourist visitors. Texas is planning to expand their elaborate pattern of roadside parks from 600 to 800, to supplement their fine system of state parks. Kansas has developed recreational areas adjacent to many of the man-made lakes and reservoirs. Oklahoma has done likewise, in addition to setting aside several fine naturalistic areas.

As an indication of the recognition given to the importance of state parks in a few of the states, which are promoting tourist vacations within their boundaries, the following tabulation, based on the 1940 census, but using the 1947 expenditures, shows the outlay in cents per capita.

<table>
<thead>
<tr>
<th>State</th>
<th>Maintenance</th>
<th>Improvements</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>12.0</td>
<td>41.0</td>
<td>$3.0</td>
</tr>
<tr>
<td>Indiana</td>
<td>11.5</td>
<td>10.8</td>
<td>22.3</td>
</tr>
<tr>
<td>Michigan</td>
<td>11.09</td>
<td>23.6</td>
<td>37.7</td>
</tr>
<tr>
<td>Minnesota</td>
<td>9.4</td>
<td>.2</td>
<td>9.6</td>
</tr>
</tbody>
</table>

Snowmass Lake and Mountain from Buckskin Pass

Photo by Bernard Frank
Oklahoma .......... 7.7 2.9 10.6
Oregon ............14.7 13.3 28.0
South Dakota ...36.0 101.0 137.0
Washington .......10.5 29.0 39.5
Wisconsin ......... 6.3 5.0 11.5

The legislature of 1937 provided
for a State Park Commission, to be
composed of members of the Board of
Commissioners, and a small ap-
propriation was granted therefor. A
survey was started. However, eleven
ears later, no state park system exists.

What would happen in Colorado, if
brought curtailment of national ex-
penditures, funds were no longer pro-
vided to maintain the excellent recre-
tional grounds in the National For-
est? What assurance do Coloradans
have that the recreational opportuni-
ties afforded in conjunction with some
\( f \) the huge reclamation projects plan-
ed or under way will be developed?

What hopes have the people of East-
ern Colorado for some state-provided
recreation grounds closer to them than
non-state recreational areas in the
mountains? Would it not seem logi-
cal that the State Legislature consider
seriously, ways by which such condi-
tions might be overcome? This could
be accomplished by initiating a long-
rangle plan for developing a system of
state parks in Colorado. By appro-
priating not less than 10c per capita
per year for the next decade, some of
the outstanding areas of scenic or
recreational value could be acquired
and developed for the people of Col-
orado.

Colorado has been blessed with an
abundance of natural beauty. Thus,
\( t \) holds a focal position in the mind
of the nation's outdoor recreationists.
To hold such prominence as a vaca-
tion-destination state, it needs an out-
standing state park system.

THE WEEK-END GARDENER

Mom, we had just as well give up these Bolleana Poplars. I don't believe
they are worth trying to save any longer. Of course, the garden
will grow better without them, but they were so pretty. I wish that that
arboretum and experimental grounds were going on now so that they might
\( n d \) something to take the place of the Poplars. We will have to plant some
all junipers or some shrub like the Nannyberry Viburnum to screen out the
Iley. Had you noticed that the barberries and some of the roses had almost
\( h i t e \) leaves? The Oldtimer tells me that that is a deficiency disease called
hlorosis, and that it is sometimes cured by applications of Iron sulphate or
Aluminum sulphate. Will you stop by the seed store and get me a few
ounches when you go to town the next time? All my trees and shrubs seem
\( \gamma \) have stopped growing. I wonder if I should fertilize them. No, the
Oldtimer says that it is natural for things to slow up and ripen their wood
\( \gamma \) the fall, and that over-fertilization now might induce them to put out
soft growth which might not stand the winter cold.

When did you spray last? Here are aphids on the Goldenglow and the

telpinium. I saw ants running up the Juniper tree. I'll bet the aphids are
ack on it again. Get out the sprayer and load it up with some good contact
cray. We will give them another shot. Next week we will start on our
cation. Let's look everything over carefully and be sure that it is clean of
sects and well watered. Some of those shrubs that bloomed in the spring
are now lopping all over the walks and perennials. I'll have to give them a
cod trimming.

THE CULINARY HERBS OF COLORADO

Leslie Paul

Mrs. Davis' excellent article in
The Green Thumb (March-April,
1946) attests to her skill both as a
gardener and as a cook. I am growing
or have grown most of the herbs she
mentions and a lot more that are not
listed. I learned much from it about
their uses that as a mere man I had
overlooked.

It does not in any way detract from
the value of her article that she stuck
to the time-honored group that has
come down to us from our European
ancestry. For many years I have,
along with these, been much interested
in a comparable list of herbs found
wild in Colorado. Many are native,
but there are also a lot of immigrants
that have established themselves per-
manently. Only two of the latter are
included in Mrs. Davis' list, and no
natives.

Most of the culinary herbs, no
matter what the source of their origin
belong to a few natural families. I
am using this arrangement from the
lower to the higher botanical families
in the following list.

I. Arum Family—Araceae.
Acorus calamus. FLAGROOT,
SWEET FLAG. Introduced and
found occasionally in swampy places
in the northern part of the state. I
have grown it for a long time but
obtained it from the East. Use —
candied root.

II. Lily Family—Liliaceae.
Allium sibiricum. SIBERIAN
CHIVES. Widely introduced in sev-
eral western states. Reported chiefly
from wet places along the Colo-Wyo.
border. Has the same bunched habit
with no real bulbs, same color of
flowers and same flavor as common
chives, but grows twice or more as
large in every particular.

Allium nuttallii. PRAIRIE
ONION. Native. Sandy places.
Many found growing close together
but not matted like chives. We have
quite a number of native onion spe-
cies, all with the characteristic flavor,
but lacking in mass production. Flavor
stronger than in chives.

III. Buckwheat Family—
Polygonaceae.
Rumex acetosella. FIELD SOR-
REL. Introduced. Weedy. I have
most often found it about old gardens,
and about the foundations of old
houses. It is likely that it has been
brought in as an adulterant of seeds.
Rumex crispus. CURLED DOCK.
Immigrant pot-herb. Widely distrib-
uted in waste places. Excellent to
modify flavor of strong or bitter
"greens."

IV. Goosefoot Family—
Chenopodiaceae.
Atriplex Hortensis. ORACH. Es-
caped from gardens into streets and
alleys. Have found it in several
towns, and in both the green and the
red varieties.
Chenopodium album. LAMB'S
QUARTERS. Introduced and widely
distributed over the state in waste
places. Weedy. Pot-herb, chiefly val-
uable for modification of strong or
bitter "greens."

V. Mustard Family—Cruciferae.
Barbara americana. WINTER
CRESS. May be indigenous. Found
in wet places above 8,000 feet. Of
value as a salad plant, probably, as
its relative is thus used.
Brassica alba, arvensis, juncea and
nigra, (MUSTARDS), are weedy
European immigrants. Among them
are scattered all over the state.
The seeds of all have been used in the manufacture of commercial mustard. The leaves make “strong” pot- ers with the flavor of mustard. The young leaves are more delicately fla- red and may be used as salad.

Roripa armoracia. HORSE-RAD- SH. Introduced. Escaped from gar- dens to ditch laterals and other wet faces. Use well known.

Roripa nasturtium. WATER CRESS. Introduced and widely natu- ralized in ponds and streams. Con- siderable quantities appear on our markets every year, chiefly collected rom these sources.

VI. Rose Family—Rosaceae.
Agrimonia brittoniana. Native. Is close relative of the one sometimes dversified in herb lists, A. eupatoria. It is of doubtful value as a culinary erb, but seems to have some medicinal qualities.

VII. Pea Family—Leguminosae.
Glycyrrhiza lepidota. LICORICE. Native. It is widely distributed over he state. It is a most ungodly shrub with large prickly burs too reminiscent of cockleburs to make it attractive. Although the commercial product is obtained from G. glabra, there is no evidence that the roots of ours are similar in character and flavor. Needs investigating.

VIII. Wood Sorrel Family—Oxalidaceae.
Oxalis stricta, its variety atropur- surea, with brown leaves, and O. volacea are introduced, widely dis- tributed and somewhat weedy. Have very sour leaves of similar use to t Munx acetosella, SHEEP SORREL.

X. Parsnip Family—Umbelliferae.
Carum carvi. CARAWAY. Spar- ngly escaped from gardens. I haverown it but have not found it wild.

Carum gaerdneri. Native. Found in Routt County. The roots are re- ported to be edible. This would make it a food product.

LIGUSTICUM. There are a number of native species found at altitudes of 8,000 to 12,000 feet. They are: L. affine, L. porteri, L. tenuifolium and L. east- woodii (the last sometimes assigned to genus, Ligusticella). They are allied to Levisticum (Lovage) and like that have aromatic roots. All need investi- gating.

Washingtonia (Osmorrhiza) longi- stylis. SWEET CICELY. Native, along with two other species, W. ob- tusa and W. occidentalis. The two latter are found on the Western Slope at 6,000 to 12,000 feet. They are closely related to Myrrhis, from which even the common name has been borrowed. Their qualities seem to lie, unlike Myrrhis, in their aro- matic roots.

X. Mint Family—Labiatae.
Agastache anehioidora. ANISE- SCENTED HYSSOP. Long ago I collected this in the near-by foothills and grew it a long time as a very satisfactory perennial. It is a most excellent substitute for Anise also. It is excellent if you like Anise.

Hedema hispida. ANNUAL PENNYROYAL. Is a native an- nual closely allied to Hedema pule- giodes. It is very common on virgin, sandy soils. There is another, a na- tive perennial, H. drummondii, found chiefly on the Western Slope.

Nepeta cataria. CATNIP. Widely introduced and decidedly weedy. I have never been able to appreciate the ecstacy it produces in cats, nor its persistence in herb seed-lists.

Mentha. We have two introduced species, widely distributed along streams and irrigation ditches.

Mentha spicata. SPEARMINT; ENGLISH MINT. This is more com- mon on the banks of ditches. The best known mint of gardens.

Mentha cina. CANADIAN MINT; AMERICAN WILD MINT. More common along streams. Requires a more constant water supply than most Menthas.

Monarda. WILD BERGAMOT. Of three native species I am familiar with two. M. menthaefolia. Rather widely distributed in the foothills.

M. pectinata. Rather common in sandy soil on the plains. I have grown both of these species, but find them more desirable as ornamentals than as herbs. The true Bergamot (Men- tha citrata) has an added flavor of lemon, making it much superior to the Monardas. The third species M. roemayli is rather rare in the foothills from Boulder to the Wyoming line.

XI. Composite Family— Compositae.
Artemisia SAGE BRUSH. This very large genus has furnished a number of culinary herbs, some of them listed in Mrs. Davis’ article. In Colorado there are probably 25 or more native species. Some of them are so aromatic that the characteristic fragrance fills the air where they are abundant. However, for the most part, any attempt to translate this into a flavorful herb meets with bitter disappointment—and I do mean “bit- ter.”

Artemisia aromatica. This is found in high, mountain valleys, at 8,000 to 9,000 feet. It is said to have much the same properties and flavor as Tarr- ragon (A. cracanulus) which I have grown for many years.

Tanacetum vulgare. TANSY. I have found this in the alleys of sev- eral towns, probably escaped from gardens. In former times it was used in puddings and omelets.

Taraxicum officinale. DANDELION. State-wide distribution in cultivated areas. Used as a pot-herb, and bleached by growing in the dark as a salad plant. The fermented heads make excellent wine.

I probably have nowhere covered the possibilities, but now I call on the lady enthusiasts, who seem to appear in ever-increasing numbers in this field, to seek out and try out the culinary values of some of the above suggestions and others with which we may now be entirely unfamiliar. During the War the English tea- drinkers were entirely cut off from tea supplies for many months, until they discovered that its active principle, theine, was strongly concentrated in strawberry hulls. So it still is possible to find something new in something old, or even some new better herbs.

PRAYER

Lord of Life, we praise Thee for the glory of earth’s sunshine and for the fair face of another day.

We praise Thee for that in us which responds to the voice of crowded marts and also to the company of quiet places.

We praise Thee for the boundless space of little gardens; the good smell of the soil after rain, and the gay chatter of the birds of dawn.

We praise Thee for the peaceful spirit which haunts certain scenes because hearts once were happy there, and may be again.

We praise Thee for the beauty which is so common that it cannot be bought, or sold or cheated by extravagant claims.

We praise Thee for the jewels which lie hidden in work done with a cheerful will, and for the magic gold which is discovered in play when it is untouched by greed.

We praise Thee for the dear affiniti- ties with persons who make us feel safe, and for the passing of those whose smile brings out the sun in our clouded hearts.

From “THE OPEN DOOR”
A few years ago Mr. and Mrs. L. W. Deffenbaugh built a nice house on the hill west of Golden, Colorado. The slope was steep and there was a little spring of water eping out of the hill in the rear of the house. These at first looked like difficulties, but the accompanying pictures will show how they turned these conditions to good advantage and have developed a very attractive home grounds. A naturalistic sloping lawn was left in front of the house bordered with a stone wall of the rocks from the adjoining hills. An area in the rear was levelled off and a higher wall built to retain the vegetable garden area at a higher level. A few trees and shrubs were planted in this rear area and a flagstone platform constructed to add to its livability and tie it to the house. The little stream from the spring was piped to the side of the house and gave the idea for developing an artificial naturalistic streamway. The native rock from the adjoining hills was largely used. Suitable groups and ledges were transplanted just as they grew, which gave a natural effect. A streamway was constructed which widened in three places to create pools. Some flat weathered flagstones was brought in to border the pool. This was a little nature-faking, but was so skillfully done so that it looked quite proper.

The basic planting of the stream-side and slopes adjoining was made of native shrubs and evergreens. Some appropriate rock garden plants were brought in to complete the planting. The pictures were taken about a year after the pools were made. A few more years growth of these plants will give a very good screen, and create an effect of a natural streamway.

The landscape development of this place is a very good example of what can be done when we work with Nature and have a feeling for what is appropriate.
THE DISTANT VIEW

Stanley White

I LIVE IN ILLINOIS

WHEN my neighbors see me watering my lawn they laugh because they know I am merely playing with the hose. We don’t have to water.

The visitor to Denver is amazed to find so much grass, and so well kept. But perhaps, he thinks in so dry a country part of it should be returned to a self-sustaining cover made of native plants. Such a thought is one of the foundations on which landscape design is based: economy, both original construction and future upkeep. The other foundation of design, just as important, has to do with the effective planning of land areas or many uses and with the pictorial qualities of both town and mountain scenes. What the landscape designer accomplishes is the very significant work of appraising conditions and solving land problems not as horticulture, traffic management, flood control or any single phase of activity but as a complex expression of needs, of beauty and amenity. It is not an easy job; but then well done it pays in economies and satisfaction.

Landscape design engages no new startling principles of art or mechanics; its procedures only are original. The unique contribution is the grading plan which is architectonic, sculptural, geologic—not simply an engineering device. The other is the planting plan which is primarily a form study of useful plant arrangements made to be beautiful and content with good gardening and ecological demands. Whatever pictorial effects are envisioned must be set into perspective with moving viewpoints—a challenge requiring most special understanding of maps and projection drawings. Success as a practitioner requires most exacting training and long experience in a very broad field of knowledge.

Denver University is developing such a course of study to be given under the supervision of Carl Feiss. In the East and on the Coast Landscape Architecture is well-established and growing. Here in the Mountains it needs more public understanding. On the civic side the subject grades naturally through parks and recreation into city planning which is a quite distinct phase of land design with no particular line of separation but more emphasis on public relations, the law, and municipal engineering.

Devotees of the Green Thumb can be most helpful in the support of a rational point of view toward good civic and private design. They go together and they require the best talent the universities can produce. The great natural scenic areas are a sacred heritage. On the plains and mountainsides you will find the innumerable unique contribution is the graduated plan which is architectonic, sculptural, geologic—not simply an engineering device. The other is the planting plan which is primarily a form study of useful plant arrangements made to be beautiful and content with good gardening and ecological demands. Whatever pictorial

mountains present the opportunity for wonderful gardens both small and large, theatrically supported by the mountain view. Dramatically it sets the scale: nothing small about Colorado. A tree, a bench, a hedge and a square of pavement—with the glimpse of a mountain—and lo, a garden! If I were to build one I would start with a load of cracked granite and see what it would produce. It would at least signify Colorado.

Back in the valleys are some amazing clumps of old timers built of mine timbers set into rocky faces, Colorado style. Adapted to present uses they would look surprisingly modern.

For the present I must be content to live in Illinois, thinking of mountains. But I visualize for Colorado a future for landscape design such as few places can possibly look forward to. The only requirement is appreciation of the scene, some skill and a sensitive touch.

J. R. Botleman

THE WEEK-END GARDENER

AS soon as you get those vacation things put away, Mom, come out here in the garden and look at all the weeds that have grown while we were away. I thought that we had the garden and lawn clean before we left. The dandelions are starting to bloom again, and a few of them forgotten now will provide plenty of new plants next spring.

The lawn now shows up as full of crabgrass. I would swear that it was clean all summer. I have heard that there are actually sprays that will kill the crabgrass and its seed without killing the blue grass. I must try some. I hope that the after-effects of its use are not as bad as 2, 4-D. We got a lot of damage to various plants when we used the sprayer for other sprays after applying 2, 4-D to the lawn. It seems that there are few things that do a lot of good without some bad points.

Bring a hoe out and help me clean up all the weeds that came up in the perennial and shrubbery while we were gone. Didn’t we have a clump of Oriental poppies here at the end of the border? Oh, here they are—all died down. I remember now that the Oldtimer said that August was the time to transplant Oriental poppies. Bring me my shovel.

Bring the hedge shears too. I don’t believe that our hedge will grow much more this season, so I will give it a good haircut to last over winter. There, that’s better. Now I’ll go in and read the article in the garden magazine that tells all about making pools. We should have a little pool where we can raise a few fish.
SAFETY IN VEGETABLE GARDEN INSECTICIDES

By Armin Barteldes

KILLING destructive insects in vegetable gardens calls for a certain degree of caution. When spraying or dusting flowers or shrubs you need only be careful in not injuring the plant or discoloring it. It is a different matter in your vegetable garden where the use of caustic poisons can cause serious trouble.

Vegetables most commonly attacked by insects are: cabbage, cauliflower, tomatoes, sweet corn, peas, cucumbers, melons, squash, and tomatoes. These vegetables have certain insects that attack them and nothing else. For instance the bean beetle only works on beans, the corn ear worm on corn, etc.

The other vegetables, carrots, beets, radishes, lettuce, etc., are usually only bothered by an insect that eats anything that is green like the grasshopper, slugs, etc.

Most caustic poisons have become obsolete as far as their use is concerned in fighting insects in a small family garden plot. These include Paris Green, Arsenate of lead and the arsenites.

Non-poisonous (to humans) killing agents, which have been used for several years, are rotenone, pyrethrum and sabadilla. DDT and chlordane are recent additions to the insecticide line but both should be used with a little caution. Nicotine should be used with a degree of caution.

Taking the vegetables separately cabbage and cauliflower are destroyed by Aphids and cabbage worms. Rotenone, Pyrethrum, DDT and Chlordane will kill the worms. Pyrethrum or Nicotine will kill the Aphids.

For the bean beetles, Sabadilla and Rotenone are safe and effective.

Peas are only bothered by aphids and Nicotine or Pyrethrum will do the job.

The corn ear worm can be controlled by a drop or two of certain oils, made for this purpose, applied to the end of the ear when the silk is beginning to form or by dusting the end of the ear with DDT. Since the corn ears are protected by the husk DDT is safe to use.

Sabaladilla dust which is most effective against squash bugs, cucumber beetles, etc.

Tomatoes are attacked by psyllids and tomato worms. Tomato worms are large and can either be picked off and destroyed or sprayed with most anything. Psyllids are small flat sucking insects that not only injure the plant by sucking the juice from the leaves but also by poisoning it. Sulphur is the best preventative and cure if not used too late.

Chlordane can be used as a liquid or in a dry form in killing grasshoppers. It replaces the old fashioned not effective baits.

If Chlordane or DDT are used on the edible parts of vegetables they should be applied at least a month before the vegetables are eaten.

Reasonable caution will keep you from harm. Whenever in doubt consult your supplier of insecticides.

President Truman on Conservation

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At the dedication of the Everglades National Park in Florida on December 7, 1937, President Truman made a significant statement of interest to all advocates of conservation. We quote his remarks on the national park system:

OUR national park system is a clear expression of the idealism of the American people. Without regard for sectional rivalries or for party politics, the Nation has advanced constantly in the last seventy-five years in the protection of its natural beauties and wonders.

The success of our efforts to conserve the scenery and wildlife of the country can be measured in popular use. The national park system covers but a fraction of 1 per cent of the area of the United States, but over 25,000,000 of our fellow countrymen have visited our national parks within the last year. Each citizen returned to his home with a refreshed spirit and a greater appreciation of the majesty and beauty of our country.

These are the people’s parks, owned by young and old, by those in the cities and those on the farms. Most of them are ours today because there were Americans many years ago who exercised vision, patience and unselfish devotion in the battle for conservation.

The battle for conservation cannot be limited to the winning of new conquests. Like liberty itself, conservation must be fought for unceasingly to protect earlier victories. There are always plenty of hogs who are trying to get our natural resources for their own personal benefit.
S THE LINDEN
A NATURAL LIGHTNING-ROD?
LESLIE F. PAULL

Apropos of Miss Johnson's article on Lindens in the April number of The Green Thumb, I am reminded of an almost forgotten piece of research that ought to be of interest.

At or shortly after the turn of the century it was my good fortune to be associated for a brief time with one of the keenest minds in research that I have ever met. This was Dr. George E. Stone, Botanist at Massachusetts State College. He never confined himself to one line but kept "iron in the fire" all the time. He was not, however, equally keen about publishing results. For this reason it may be that I am here reporting upon one of his many projects for the first time.

He had an electrical firm especially constructed for him the most delicate meter within their power. Starting with the known fact that electrical potential for any fixed object, such as building or pole or tree is zero at ground level, he tabulated readings in silk-amperees of the potential at ten feet above ground on hundreds of individual trees, covering almost 200 species. My recollection is that both native and introduced forms were included. As between individuals of the same species there was but little variation, but enough as between species to make it a definite characteristic.

He readings were relatively high among Evergreens, Poplars and Oaks and lowest among Beeches and Lindens.

Doctor Stone had discovered a real variety of casual, botanical data by his extensive reading of local histories, letters etc. concerning Colonial times in New England. Among the ems thus gathered, he discovered that it was the habit of the native Indians always to seek, if possible, the shelter of Beech or Linden during a severe thunder-shower.

I believe he was not very successful in his endeavor to collect data on what kinds of trees were struck by lightning. The stroke was apt to be an item of news in old papers, but the kind of tree would not be mentioned. Some eye-witness data was available, and all seemed to indicate that the ones most often struck were the "high potential" ones of his list, with no available record against Beech and Linden.

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"WILD FLOWER GARDENING"

By MRS. THERON R. FIELD

Reprinted by permission from "Trail and Timberline", of October 1927.

NO out-of-door interest brings to old and young richer returns in entertainment and instruction than is found in making the acquaintance of flowers, both in wild and cultivated gardens.

Difference in age even, vanishes before this enthusiasm (although the very young do not, as a rule, fall under the spell). It's a game for the idealistic thirties, the practical forties, the mellow fifties, and the ardent sixties, seventies and eighties! Age is as nothing when good gardeners get together!

Love of things that grow in the earth and people it, is a kindly and enduring interest. It has many followers who are never lonely, who always have something in common to talk about, and something fine and inspiring to think about.

When we speak of Wild Flower Gardening in Colorado, starting a mile high to begin with, including the Alpine plants that grow as high as timberline, and the desert plants of the South; having some 2,000 more or less to choose from and ranking with California and Florida highest in number of wild flowers—becomes a most interesting experience.

This country has had such quantities of wild flowers that in spite of so many people gathering them, it seemed almost impossible that the supply could ever be exhausted; but of recent years, with the means of easy transportation, the overwhelming loss of our choice wild flowers is only too true. It seems strange that the flowers our States have chosen as their emblems have, in most cases, been the ones those States have had to pass laws to protect! All those who have been fortunate enough to have seen our Blue Columbine carpeting the deep shadows of Spruce and Pine; that glorious Painters' Brush like a flame on the hillside, and fields of Blue Penstemons reflecting the sky above them, should have, in their feeling of joy and pride, a desire to guard and protect them as well!

In the early Spring, starting with Purple Anemonies, in their little fur coats—(for snow is often on the ground) all sorts of flowers appear. Mertensia, that graceful, drooping blue-bell, with the tiny tinge of pink in it—growing along brooks and damp places in late April and all of May, is one of the most beautiful of all Spring flowers. Only the female Bumblebee is flying when the Blue Bell blooms, and she is not nearly as gallant as her spouse, for whom she wants the nectar at the bottom of that narrow cup—from laziness or mischief, she goes outside, perforates the cup and drinks—flying away without paying the price! A dash of pollen for a sip of nectar!

Where thousands of our Blue Columbine were to be seen from the roadside ten years ago, hardly one can be found now. Many plants were pulled up by the roots, as a blossom was carelessly torn from them, killing it and future generations as well, for no seed was left. Take a packet of seed with you the next time you go to the mountains, plant it with care, and in time, blossoms will again give pleasure to those who pass by. Cut Wild Flowers—never pull them. They fade very quickly, and the majority are thrown away long before home is ever reached.