HUNT FOR GREEN THUMBS

Those people who have loved plants and growing things, and have had such a feeling for them that all plants which came under their care seemed to prosper and grow exceptionally well have been referred to for many years as having a Green Thumb.

All of us, in this Colorado Forestry and Horticulture Association aspires to having at least a faint tinge of Green on our Thumbs, but in almost every community there are a few fortunate people who have really deep green thumbs. The plants in the gardens of these people all grow vigorously and many "impossible" things are made to survive, if not flourish. All the seeds they plant, all the cuttings they set out and all the plants they transplant live and grow. We would like to bring these people and their "secrets" of success out in the spotlight so that we might become acquainted with them and profit by their successes.

Will each member of the Green Thumb family send to the editor their nominations for "Super Green Thumbers" in their community. We would especially appreciate knowing of these people in the smaller communities of the state. We will attempt to interview them and report in future issues what we have found out that might be of interest to all members. These people may be amateur, professional, men or women, young or old; just so they have had unusual success with plants.

TRENDS IN ORNAMENTAL PLANTING

By DONALD WYMAN, Arnold Arboretum

Editor's Note: We are fortunate indeed to have Dr. Wyman contribute this timely article to The Green Thumb. As most of our readers know, Dr. Wyman is the world famous Arnold Arboretum. His recent article in "Arnoldia" entitled "The Park Arboretum, How To Establish One As A Living War Memorial" has already been quoted from in The Green Thumb.

As Dr. Wyman states the Serbian Spruce and the Flowering Dogwood are not hardy everywhere. They have not been successful in Colorado. There are, however, native Colorado natives that are employed all too frequently: namely, the White fir (Abies concolor) and the Colorado Redosier Dogwood (Cornus stolonifera coloradensis). The White Fir has soft flat needles, and less Rigidity and Discard than the Kostre Blue Spruce. Our native Dogwood, like its more brilliant relative, has small flowers in the spring and a striking winter effect with its brilliant red bark, particularly if the old canes are cut out every spring.

Those who grow and sell plants are realizing that, with changing times, the public is continually demanding newer and better types of plants. It used to be that any nurseryman could grow a number of the more common ornamental plants and find a ready market for his goods, but now these common varieties are not enough to satisfy the gardening public. Newer and better varieties receive wide recognition through catalogues, garden magazines, garden club discussions and radio talks, as soon as they are available on the market.

Through these media, gardeners are becoming quickly familiar with the newer materials and naturally buy from the plantmen who can supply them.

Gardening is becoming of interest to an increasingly larger group of people because more new homes will be erected now than at any time since 1929. With better times, many other gardeners are finding it possible to spend more time and money on this enjoyable pastime and plant sales are expected to near the 1929 peak this spring.

There is no question but that variety in the plant materials about the home makes the landscape more interesting. It is not necessary to plant a Japanese barberry hedge simply because all the neighbors have one. The real gardener will use something new and different in order to add zest and interest to his plantings. He may choose the new, upright growing form of the Japanese barberry called the Trujudge Columbbery, and if he selects this, he will be doing well, for it makes a much better hedge and is considerably easier to keep clipped than the old-fashioned form.

Occasionally, over 200,000 plants of the Columberry were sold by the nursery introducing it in 1934, the first year, showing how rapid the turnover of a new meritorious plant can be with the aid of good advertising. Now there are probably nearer 1,000,000 of these plants sold each year by many nurseries who have the selling privilege under the patent.

New Varieties Replacing Old

In talking with a nurseryman who makes a speciality of growing roses, I was interested to learn that of 266 roses offered, 137 of them have been introduced into the trade since 1931. This nurseryman is finding it essential to stop growing a large number of the older varieties simply because the new ones are better or much more in demand. The same thing can be said of iris, gladiolus, delphiniums, phlox, peonies and many other large groups of garden plants. Specialists are constantly breeding new varieties in these groups so that better forms are being introduced almost every year. The gardener is familiar with these introductions through various publications and...
the plantsman has to grow them to satisfy his customers.

Two examples might be given of plants which have passed the high water mark of their popularity. These are the large flow-
ering Hydrangea paniculata grandiflora and the Koster's blue spire. Both are easily grown and most conspicuous in gardens. Mil-
ions of both have been sold but with the trend towards more rest-
ful plantings these two plants are not being used by the far-seeing gardener. It used to be that such plants were placed in the middle of open areas because they were conspicuous, but now the tend-
ency is to leave such areas un-
broken wherever possible and in any event to use better materials as specimens.

The climbing Hydrangea peti-
olaris is considerably more in-
teresting than the bush form, and people are beginning to realize that the Blue Spruce does not grow old gracefully, but in later years gets very ragged and un-
sightly. A much better plant to use in its place, in the East at least, is the newer Serbian spruce (Picea omorika) which has excellent dark green foliage, somewhat pendulous branches, and its beauty does increase with age. Formal plantings have their place, but in the majority of plantings on the smaller properties, restfulness and quiet are the chief objectives, and the large flowered hydrangea and the blue spruce do not aid in the attain-
ment of these objectives.

Plant Characteristics Important

It used to be the “style” to plant many upright growing ever-
greens at the base of the house and keep them closely sheared. This fad is fortunately fast disappearing, since such un-
sightly plantings are not in the least restful to the eye and only accentuate the base of the build-
ing, whereas a good foundation planting should aid materially in tying in the house with the sur-
rounding landscape. People are beginning to realize that only cer-
tain of the lower growing plants are suitable for foundation planting, since taller growing types eventually obscure windows and sometimes are impossible to re-
strain properly.

Gardens in general are giving

more and more attention to

the special attributes of particu-
lar plants, their ultimate height,
time of bloom, fruiting characters, autumn color and the like. Often great care is taken in selecting even a few plants, to ascertain that they will fulfill the purpose for which they are desired with a minimum amount of care. Plants, particularly woody plants, are be-
ing selected that have interest at more than one season of the year. The mock-orange, for ex-
ample, may be of interest only when in bloom, but the flowering dogwood (which, on the other hand, has interest every season of the year because of its good flowers in the spring; its green foliage in the summer which is not susceptible to any serious disease or insect pest; its outstanding red fruits; and red autumn color in the fall; its in-
teresting horizontal branches all winter long. If a little time and thought are given to the selection of a plant, usually just the right

plant for the right place can be

found.

This growing interest in plant

materials is forcing many cities and state highway commissions

to intelligently plant the high-
ways. Formerly little attention was given to this, but with so many people depending largely on motoring for enjoyment and relaxation, the beautification of the highways cannot be over-
looked. Groups of citizens inter-

ested in gardening are going a

long way in vigilantly compelling many of these reluctant high-
way commissions to landscape our highways. Now many city and

state highway commissions have

their own landscape architects who are responsible for making

unattractive parts of the highway beautiful, by using the right plant

materials.

Our knowledge of pool con-
struction has increased consider-
ably during the past few years for

now we pools that will be

waterproof for many years. Garden pools are increasing in

popularity for many a garden is greatly enhanced with the addi-
tion of a beautiful spot of still water. Water lily specialists have

improved water plants to such an extent that now there is a great

demand for them. The tropical fish fad which swept the country a few years ago induced many

people to build outdoor pools, for such places are ideal to put small fish during the summer period.

Here the fish can readily feed and multiply under the leaves of the protruding water plants.

Rock gardens are still very much in favor and the tremendous number of new plants now avail-
able for these plantings is ast-
ounding. The rock garden

enthusiast uses terms that may be difficult for the ordinary garden-

er to understand, and quite often his one and only interest in gar-
dening is his rock garden.

Garden Illumination

Garden lighting is fortunately becoming popular and soon there will be firms again manufacturing special lighting equipment for this

purpose. It proves most interesting, for just by turn of a switch the home owner can show all or part of his garden to his guests even on the darkest night. The lights vary in size and strength

but all connections are made com-
pletely waterproof and can be

used for several years. One of the most interesting points about the equipment is that it can be easily moved from one part of the gar-
den to another and so the home owner can move his equipment continually, to illuminate each part of the garden as it comes into bloom.

Electricity is again coming to

the aid of the gardener in the form of the electric hotbed. These

hotbeds, heated by electric cables in the soil are comparatively in-
expensive to construct and to op-
erate and are opening new fields of endeavor in the garden. By such means it is possible to grow

seedlings early, to have early rad-
ishes and lettuce, and to propa-
gate many ornamental plants by cuttings.

Many a tired business man gets

real enjoyment from planning and working in his garden. With all the modern aids available, his inclinations can fol-
low any one of many interesting lines. The garden becomes a place where he works for amusement and enjoyment, where he takes his friends for healthful outdoor relaxation, an “outdoor living room” in every sense of the word.

These are a few of the concrete arguments for local arboreums.

People are becoming so increas-
ingly interested in the different phases of gardening that it be-
hooves the community to assist in every way possible. In Denver, for instance, a local arboretum is much needed. If funds could be found for such a worthy project, the entire community and sur-
rounding country as well would benefit. It could easily lead the

way in making the entire com-
munity a more beautiful and en-
joyable place in which to live.
V-E day and V-J day have come and gone. The problems of peace are replacing those of a war economy. Millions of service men are being released and other millions of defense workers are being laid off. Every possible avenue of employment must be explored.

The American Forestry Association, with which the Colorado Forestry and Horticulture Association is affiliated, recognized this problem some time ago and what is more, decided to do something about it. As a contribution to postwar reconstruction and to factual handling of postwar forestry questions the Association early in 1944 launched a fact-finding survey to determine what effect the war was having upon the country's forests and forest lands and what would be their condition when hostilities cease.

Mr. John B. Woods was selected national director of the Survey. Through a cooperative arrangement with Colorado A. & M. College, J. Lee Deen and J. C. H. Robertson were appointed regional consultants for the Central Rocky Mountain Region and the Southwest. Inasmuch as most of the forest lands in these regions are publicly owned the job consisted largely of obtaining data from public agencies, chiefly the U. S. Forest Service.

The U. S. Forest Service is cooperating with the American Forestry Association in the survey and is revising its estimates of stand, growth, drain and other pertinent data in the light of present-day developments. Over the United States as a whole the heavy cutting occasioned by war demands will be an important factor to consider when making future plans. The loss sustained through the Englemann spruce bark-beetle epidemic in Colorado has reached proportions, the significance of which is not realized in this state. Mr. Theodore Krueger is making the revision for the Forest Service in consultation with Mr. B. R. Lexen of the Rocky Mountain Forest and Range Experiment Station.

Virtually all of Colorado's timber is composed of softwoods—largely Englemann spruce, lodgepole pine, Douglas fir plus some minor species. There is a timbered national forest area of about nine million acres, and privately-owned and state forested land amounts to approximately five million more. In addition there are approximately five million acres of timbered lands in other federal holdings such as National Parks, Indian Reservations and Grazing Districts. There is a state forest of approximately 70,000 acres. Although much of Colorado forest lands are classified as non-commercial, chiefly valuable for purposes other than timber, Forest Service figures show that commercial forests cover an area of approximately eight million acres in this state.

It is estimated that the current annual growth of saw lumber in Colorado is approximately 300 million board feet, yet in 1943, under pressure of war-time need for lumber, only 89 million board feet were cut. True, this cut would have been higher had sufficient wood labor been available but an annual growth exceeding the cut is the usual thing. It should be marked that because of the ravages of the Englemann spruce bark beetle the current spread between growth and cut is considerably less than in 1943. There are now 27 billion board feet of commercial saw timber in Colorado's national forests.
The market for lumber is here. Some species such as aspen require specialized use such as for match sticks and excelsior. The U.S. Forest Service has brought in large scale manufacturing which is operating in lodgepole pine. The largest single market for native lumber at the present time are the packaging industries. Approximately 80 per cent of the lumber used by these industries is now shipped in from outside. Not only is Colorado losing transport charges, but labor is being employed elsewhere which could be adding to the annual income of our state.

Colorado presents definite problems which call for initiative and ingenuity in solving. The terrain is rough and rugged and the trees are relatively small in size. This makes for expensive logging.

CONSERVATION
WHAT CAN I DO ABOUT IT?

We are all interested in conservation, but most of its applications are distant and vague to us. We may be in favor of conserving soil, and grassland, and forests, and birds, and flowers; but we are not farmers or foresters or woodsmen and can do little more than preach the gospel of conservation.

In one form of conservation we can all help — conservation of natural beauty — and who would say that this is not important. Do we not all wish to preserve the wonderful beauty of our country for our children's children? Conservation of natural beauty is subject to two abuses. The one of removing or defacing existing objects of nature, and the other of leaving civilized material to clutter up and spoil the natural effects. We should all develop the habit of never leaving foreign material in the beautiful wild places. We enjoy these places because they are wild and natural, and remind us that there are the rest of ages of evolution. One orange peel or gum wrapper can spoil the illusion we so cherish.

Why not form the habit now of never throwing down a piece of paper or wrapper, of any other waste material? And while we are at it, why should we throw such things out the car window at any time? They make the roadside and streets look messy and unattractive. Make a habit of collecting such things in a special pocket or the glove compartment of the car and emptying them where they can be burned. This is one thing that we can ALL do to preserve our natural beauty. It is so small a thing, but means so much. None of us would so thoughtlessly throw rubbish around our own yard or house, why not be as considerate of others?

It appears that Colorado conditions call for a radical departure from orthodox logging methods. Just what changes will take place the writer does not know, but some they will.

Rather poor methods of manufacturing used in processing native lumber have further complicated the picture. Poorly sawn, poorly seasoned lumber have been the rule too often. Grading has been practiced only rarely. This need not be. Several examples have been found of local sawmill owners who are improving expense by making their own posts. These firms have built their business on excellent manufacture, proper seasoning and careful grading, thereby demonstrating that good lumber can be made here. The days of reward to men of imagination and enterprise are still with us.

BARBED wire and woven wire, staples and posts. Just like taxes, fence repair is an expense that every rancher has every year. He must keep up his fences to keep out trespass stock and control the movement of his own stock within the ranch.

It takes cash to buy wire and staples but most ranchers can reduce the fencing expense by making their own posts. Every ranch in the mountains has young, thrifty stands of pine, spruce and fir. Trees that are just the right size for fence posts, but have not been used very much because they usually rot out in about five years. Instead split cedar or pitch pine posts are bought which have been shipped in from Idaho, Montana or South Dakota.

If nature was careful in the way she scattered seed, young trees would be spaced far enough apart on a newly stocked stand without crowding. But instead of that, the seeds are scattered the thickest around the base of thirfty seed trees and grow into a dense stand of young saplings. So many that they soon crowd each other for light, water, and food until the weak trees stagnate and die. The weak trees should be removed so the better trees can grow quickly to sawlog size. Thinnings of this kind can be treated with preservative and made into a durable fence post. There's no need of charging a high price for a fence post that must be shipped hundreds of miles when good fence post material is available right at home.

A man equipped with an axe and a Swedish cross cut saw can make a hundred or more posts a day by thinning out overcrowded thickets of pine, spruce, or fir. It is work that can be done any time during the year. The Swedish saw has a tubular steel frame and is a big improvement over the old buck saw.

These posts must be treated with preservative, but this is not difficult or expensive and there is a treatment to fit nearly every condition. The old standard treatment is to heat dry posts in a hot creosote-oil mixture for an hour or more. Posts treated this way 30 years ago are still in good condition.

A newer process which shows great promise is to soak dry, peeled posts in a cold solution of diesel fuel or kerosene to which is added a little poisonous chemical called pentachlorophenol. This is sold under the trade name of Permatrax A and posts placed in it for from one to two hours will soak up enough preservative to give them a long life.

Both of the above methods work satisfactorily only on peeled posts that have dried for 5 to 6 months after cutting. Usually a rancher wants his posts right now, so he may prefer one of the following methods recently developed for treating freshly cut, green posts. When these posts are placed in a barrel containing a solution of zinc chloride salts and water they will quickly soak up enough of the poisonous zinc chloride to effectively preserve the portion of the post which is to be placed in the ground. The high war-time price of zinc chloride makes it an expensive treatment which may average as much as 25 cents per post as compared with the other treatments which will cost from 6 to 15 cents.
Two new treatments which show great promise use sodium fluoride and other toxic salts mixed with water or with a coal tar liquid. The salt and water paste is daubed on the outside of the freshly cut, peeled posts and the posts are then covered for 15 to 20 days with a waterproof covering while the salt penetrates into the wood. The posts are then dried and are ready to go in the fence. The salt-coal tar mixture can be painted on the butt of the freshly cut post and covered with a strip of tar paper. The post can immediately be set in the ground and will treat itself during the following months. These treating materials are sold under the trade name of osmose salts and osmoplasic.

Last fall five field demonstrations were held in central Colorado to show the actual treatment of pine, spruce and fir posts by the above treatments. These demonstrations were sponsored by Soil Conservation Districts, who were assisted by men from federal and state conservation agencies.

It is planned to have more demonstrations this year to show Colorado ranchers how they can thin their thickets of young pine, spruce and fir trees and use these thinnings to make fence posts, which when treated with a preservative, will give a long lasting post and help reduce one ranch maintenance post. Portable power saws will also be in operation at these demonstrations.

Russell Ford, State Extension Forester, Fort Collins, will be glad to send you complete information on any of the above post treatments or it will be sent at your request from the Soil Conservation Service at Littleton.

GEORGE BEACH RETURNS TO FORT COLLINS

Major Geo. A. Beach, who has been on military leave from the department of horticulture, Colorado A. & M. College since 1942, has now returned to the college. Major Beach has served with a field artillery unit in North Africa, India and China, and was overseas for 15 months, returning to the United States in August. Major Beach has assumed his duties as professor in the department of horticulture and will again take up his classes in ornamental horticulture and landscape design, as well as research in the field of floriculture. In addition to his regular duties, Professor Beach will act as veteran counselor for returning ex-service men in the division of agriculture.

AFFILIATED MEMBERSHIP

Combined membership in the Colorado Forestry and Horticulture Association, including the publications of both organizations — the Green Thumb and American Forests — may be had for $4.00. For this type of Affiliated Membership, please send check for $4.00 to L. C. Shoemaker, treasurer, 1608 Broadway, Denver. This arrangement will make it possible for you to keep in touch with the latest forestry and horticultural development, not only in Colorado, but throughout the entire nation. New affiliated membership is open only to those who are not now members of the American Forestry Association.
IT'S EASY TO GROW ROSES
By FRANK M. RICHARDS, Richards' Gardens, Fort Collins

Treatment on Arrival

WHEN you receive your roses give them the greatest care; never expose the roots to the drying action of winds for a moment. Unpack the package immediately and plant as soon as possible. Don't wait for warm spring weather; plant dormant roses as soon as possible after frost. The ground but don't work soil while it's sticky. If you're not ready to plant, heel-in plants in a corner of the vegetable garden or other out-of-the-way place. Cover tops and all with moist soil; they will keep here up to a week or ten days if necessary.

Planting Location

Where you have room for only a few roses, you need not always be in a bed by themselves; planted in front of taller shrubs or low evergreens roses will provide summer and autumn color often lacking in border and foundation plantings. It is surprising how a few Hybrid Teas and especially Polyanthas can fully set in the foreground will be perfectly at home, even though it may be in partial shade.

Preparing a Rose Bed

We're terribly annoyed when we read how important it is to "excavate" and prepare a rose bed according to a lot of half-baked theories that have been handed down from one writer to another when we know and have demonstrated that the culture of roses is no more difficult than that of any other flower (indeed, easier than many!)

If you are going to plant new roses in a place where you have been successful with other flowers before, little need be done except a thorough spading about twelve inches deep (one spade depth). If you are forced to plant in a new location where the soil is low in fertility it may be better to remove about nine inches of topsoil, putting it to one side, then dump in enough manure to cover the bottom of the bed two or three inches deep and fork it, mixing well. This should give eight or ten inches of manure and soil for the bottom of the bed. Then return the topsoil, mixing a half pound of steamed bonemeal to a bushel of soil, but add no more manure as it will rot the rose roots if it touches them. The manure which was dug into the bottom of the bed will be decomposed and a part of the soil by the time the roots get down to it. This work should be done as far in advance of planting as possible (we hope you did it fast fall!) so that the soil will be settled and firm by planting time.

If the beds are prepared just before planting, the soil should be trampled, to pack it, as it is being thrown in. Roses will not do well unless the soil is firmly packed around the roots. When the soil is settled a rose bed should be an inch or two higher than the surrounding surface.

Spacing Plants

There is no hard and fast rule for spacing. We have seen roses planted six inches apart, other roses planted thirty inches apart, and both blooming prodigiously. We like them best spaced 18 to 24 inches apart. Closer spacing makes it necessary to haul in soil for winter protection, wider spacing leaves them looking lonesome.

Planting Instructions

During the planting operations carry the roses in a bucket of water in which some clay soil has been dissolved. Make the "soup" thick enough so it will stick to the roots.

Make the hole in which the plant to be set large enough so the roots can be spread down and out naturally. Spreading the roots when planting is important. Plants with cramped roots never do so well as those that have plenty of root room when set. Cut off bruised or injured roots, shorten over-long roots (never coil them around the hole) and cut the tips of others with a sharp knife.

Put the plant in position so the "buds" ("knuckle," "knob," "joint") is not more than an inch below the surface of the soil when planting is completed. THIS IS IMPORTANT. Time was when it was thought necessary to bury the bud six inches but successful modern roses planters set the bud right at ground level, or very slightly covered. Don't let it stick two or three inches above ground, either.

Work fine soil among and over the roots, gradually firming it down until it is almost full when the soil should be stamped with the feet and made as compact as possible. Make absolutely certain the soil is firm around the roots. The depression thus made is then filled with water. After this has drained away, fill it again, and if there is any doubt that this has reached the lowest roots fill it the third time. Finish covering and leveling with loose soil and do not tramp any more after water has been applied.

To enjoy good roses the canes must be cut back to about eight or ten inches, even though you hesitate to cut away perfectly live, green wood. Good roses are produced on new shoots from near the base of the plant. This hard pruning refers to Hybrid Tea roses. Hybrid Perpetuals, Polyanthas and Climbers may be left longer.

Now comes probably the most important point for rose insurance in our climate: After the branches have been pruned or cut back, draw up a mound of soil to cover most of the branches. This is done to prevent drying out by wind and also injury by hard frost and thus gives the roots time to become established and working before tops are making excessive demands for food. This mound of soil must be removed within about two weeks when the eyes will begin to swell and grow; remove it gradually on cloudy days.

Summer Care

Your roses will need regular irrigation from now on, and more important, regular cultivation. Soak them thoroughly about every ten days; hoe them three times between each irrigation. If you do this you will never find your soil baked and hard, and you'll be surprised how quickly you can "go over" even a large bed of several dozen.

Feeding

During the first season commercial fertilizers should not be used, with the exception of a little bone-meal at planting time. Over-feeding has killed many newly planted roses. For established roses a handful of steamed bone-meal spread around each plant, not too close, and hoed in in August is always beneficial. Manure applied as outlined under "Winter Protection" is the best of all rose foods.

How To Cut The Blooms

How to cut the blooms depends entirely on how you like them — if for low table arrangements cut short stems, if for vases cut long stems. The only rule that can be laid down is to leave at least two leaves on each stem so new flowering stems will start from each stub. Often heavy canes carrying large clusters of bloom will grow up to four feet or even taller. When the last
bloom has faded from one of these vigorous canes cut the whole thing back to 18 or 20 inches — this makes a neater, better shaped plant and longer stems for your cut flowers.

Roses will last longer if cut very early in the morning and conditioned for three or four hours in cool water up to their necks before arranging. At summer temperature above 80 degrees they never last long; keep them cool as possible.

Protecting Roses From Enemies

There are two diseases which attack roses. Mildew, which looks like its name, is likely to appear late in the summer and can be got rid of by spraying with wettable sulphur. Black-spot, a leaf disease, begins as blackish or purple spots on the leaf, enlarging rapidly and causing the leaf to become yellow and fall off.

Black-spot is incurable but its spread is effectively checked by a wettable sulphur spray once every 10 days (the same spray we use for mildew). Many other sprays and dusts have been recommended but wettable sulphur does the job most efficiently, with the least residue, and at lowest cost. Use one rounded tablespoonful per gallon of water — be sure you have wettable sulphur, not drugstore "flowers of sulphur" or other cheap sulphur.

Aphids, or green plant lice, feed on the buds and young shoots and multiply thickly over the tins and buds on new growth. They are destroyed by spraying with Black-Leaf 40 or Evergreen, two teaspoons per gallon of water. Whip up a suds with a small handful of mild soap chips before adding Black-Leaf 40. Aphids seem to appear in waves; for awhile you may have to spray every five days, then you may go a month without seeing one. In severe infestations three thorough sprayings 24 hours apart may be necessary but this will dispose of them for a long time.

The other class of insects damage the roses by eating the leaves or flowers. These can be poisoned; the best poison to use is arsenate of lead, one heaping tablespoon per gallon of water. Common sense will tell any rose grower when a leaf or flower chewed by an insect that they should be sprayed at once.

Dealing with the Western Rose Curculio ("snout beetle," "puncture bug") isn't so easy. Owing to their method of feeding, by puncturing flower buds and occasionally the stems below the buds, poison sprays are worth little. Careful, regular hand-picking and destruction of punctured buds, which may contain the eggs, is the only effective control. A thorough cleanup of "hips" or seed pods of shrub roses in late winter will kill many larvae before they emerge. There is only one generation annually and the reason no trouble after midsummer.

Winter Protection

The best winter protection is to hill earth around the stems of the plants to a height of eight or ten inches. Then fill the hollows between the hills with barn or stable manure. There's no need to hurry this job — the latter part of November is early enough. The bed will look neater and plant will be whipped less by winter winds if they're cut back to a uniform height of 20 to 24 inches. NEVER CUT THEM BACK TO SIX INCHES IN THE FALL — to do so is to invite disaster. Be sure the ground is thoroughly wet before the roses are covered. Many roses are dried up by long periods of scant soil moisture in our Colorado winters. Freezing is in itself a drying process, making an ample reserve of soil moisture essential.

Climbing roses will come through about three winters out of five if merely wrapped with several thicknesses of burlap, but the bestest way is to take the canes down from their support, bundle them together and cover completely with earth, always making sure that the base of the plant is well covered so that no cane is killed at that point.

Polyanthas as a class seem considerably hardier than Hybrid Teas and we no longer bother to cover them (that's just one more reason we love these cheerful little fellows!) Shrub roses, as their name implies, need no winter protection.

In the spring remove the coarse part of the manure and dig under the shoots which have withered flowers on them may be cut out to the base of the plant, or to the point where a new cane springs from them. There is only one generation annually and they cause no trouble after midsummer.

How To Prune Roses

More hokum has been broadcast about how to prune roses than most any other phase of rose culture. Pruning of established roses begins when the winter covering has been removed. The first and obvious thing to do is cut away the dead wood always found; here in Colorado that is about all the spring pruning that is necessary.

Only fresh, green wood should be left on the plant. All other stems should be taken away entirely, even if the plant is reduced to one or two bare stems. Take out all branches which cross and make all cuts clean, just above an "eye."

Hybrid Teas and Polyanthas bloom on shoots which grow during the year in which they arise, sometimes from the bud at the surface of the ground. Hybrid Perpetuals, Climbers, and Shrub Roses, on the contrary, bloom only on shoots that come from wood of preceding years. These facts, once understood, guide all subsequent pruning.
PUZZLER

The following letter starts some interesting speculations. How many Green Thumb readers know of similar instances of plants found naturalized far from their natural range? The tamarix here mentioned has also naturalized itself along the Colorado below Grand Junction and in places along the Arkansas. So far as anyone has determined it is identical to the Kashgar tamarix (Tamarix hispida). Does anyone know of an early record of its occurrence wild in Colorado.

Charles Kelly has spent many years exploring the little known places along the Colorado, in the Four Corners country and throughout Utah. He is now custodian of the Capitol Reef National Monument in Utah and a writer of historical stories of the early Western pioneers—Editor.

I am not a botanist, but here is something that has been puzzling me for some time. Maybe some readers of The Green Thumb can furnish the answer.

A good many years ago I lived in Tennessee, where early in spring each year the redbud tree illuminated the dark oak forest with its brilliant pinkish-red blooms, contrasting with the creamy white dogwoods and delicate wild plum blossoms.

After moving to Utah, an occasional redbud, planted as a decorative shrub, reminded me of the great masses of blooms so much admired in the Tennessee hills, but they never seemed to develop properly and appeared to lack somewhat in color. The reason for this was apparently because they were not native to western soil. Or so I thought.

Then I made a trip by boat down part of the Colorado river known as Glen Canyon, beginning at the mouth of the Fremont in Utah and ending at Lee's Ferry, Arizona. This was during the month of April. I could hardly believe my eyes when, turning a bend in the narrow canyon, there appeared a group of bright blooms near the base of the cliff which could be nothing else than the old familiar redbud. Pulling ashore this was verified by ex-
amining the heart-shaped leaves just beginning to form on some of the shrubs which here were the size of small trees. Other clumps of redbud decorated the canyon at intervals all the way to Lee’s Ferry.

In this same canyon, on sandbars and along the water’s edge, groups of tamarix, a shrub not originally native to the Colorado. It is thought to have been first planted in gardens at Greenriver, Utah, and the seed carried downstream by floods. In some places it has almost supplant the native willows, but there is a beneficial effect in binding the loose sand and preventing too rapid erosion. Never having found the redbud anywhere else in Utah, it seemed logical to suppose that it had been accidentally introduced to the Colorado river.

To check on this, I searched the records of Major Powell’s expedition of 1869, which first penetrated the mysteries of the Colorado. In one lone paragraph I found mention of redbuds, which proved they were native rather than introduced, but there before the first white men saw the Colorado.

So here is the puzzle: Why is the redbud found growing in the canyon of Colorado river, when it is not found nowhere else, so far as I can learn, in any of the surrounding country or canyons?

I have not been able to ascertain just how far upstream or downstream this shrub extends, but do know that it is found along the river for 200 miles above Lee’s Ferry, at an average elevation of 5500 feet. Have never seen it on Upper Green River or its tributaries, and have been told it does not appear in Grand Canyon. The fact of its being so apparently isolated and far from its native country has bothered me for a long time. Maybe the botanists can clear up the mystery.

—Charles Kelly.

**SOME VERBAL BOUQUETS FOR THE GREEN THUMB**

We know that some of our members are enjoying the bulletin for they tell us they are. Here are a few of their comments:

“What a nice magazine. I have always wondered why we did not have such a magazine.”

“I enjoyed my copy of The Green Thumb very much and will be looking forward for future copies.”

“The article on pruning was worth the price of the magazine.”

“Having recently married a Colorado man, I am interested in the horticultural activities of your state, and so am pleased to receive a bulletin such as The Green Thumb.”

“I fully endorse the objectives of your Association.”

“The beautiful articles in this year’s magazine are appreciated. Many thanks to contributors and editors.”

“You have a magazine of which you may well be proud.”

“The Green Thumb has been recommended as a grand horticultural magazine. I would appreciate a note on price, etc.”

“. . . I am sending $3 check to cover same. Only sorry I did not know of the publication before this.”

“With cordial interest in this valuable and important work and best wishes.”

“I have enjoyed all issues of The Green Thumb. Please keep them coming.”

**SOME OBSERVATIONS ON PREFERENTIAL RATIONS OF LOCUSTS**

By LESLIE F. PAUL

Here are some thought-provoking observations on the plants preferred by grasshoppers. Compare these notes with your own observations. It would be interesting to carry out these over a longer period of years and under a variety of conditions. Leslie Paul is a student of horticulture for many years and has accumulated many experiences which we could all profit by sharing—Editor.

Here are a few general conclusions after about three years of study of the “grasshopper problem.”

It has been possible to make this study because of the accumulation on a third of an acre of several hundred species of plants. Before the war I kept the infestation very low by killing off most of the annual immigration from neighboring territory. Scarcity of suitable materials has increased the infestation. Grasshoppers are not strong for etsatz poison.

Evaporation may be called moderate. The observations were quite valueless in case of heavy infestation. Then the competition for just any food banishes the weak that likes admirer disappears, as does practically everything green.

It is not the place to record observations in detail, and even the conclusions are not final, but subject to correction.

1. Native plants are best: little molested, but this does not apply to introduced weeds, which are often thought to be native because of wide distribution. Some of these are immune for other reasons.

2. All plants with milky juice are practically immune. Some latex contains rubber, and possibly there is enough in all plants with latex to justify the immunity.

3. There has been held a theory that plants have, in many cases, developed strongly scented glands as a protection against insect attack; yet Spearmint and Marigold are among the favorite foods of locusts.

4. They do not much care for grasses although we have more different kinds than of almost any natural plant-group.

5. Possession of pricklies, hair or the densed of woolly coverings does not necessarily protect plants from locusts.

6. In a few cases only floral parts or fruit (sometimes only ripening fruit) are considered palatable.

7. Species of the same genus often present strange contrasts.

Lilaca—common and Persian practically immune: French hybrids, close at hand, stripped bare.

Colorado Dogwood, locking horns with Redtwig, the former untouched, but leaves, twigs and some of the bark stripped from the latter.

Siberian Pea-tree immune but the bush, Caragana frutex, was stripped.

Euonymus americanus and E. alatus, planted adjacent: the former was immune, the latter was stripped.

Mentha spicata and M. piperita are eaten to bare stems, but M. canadensis goes untouched.

Locusts love sun and heat. It is possible to have certain plants by removing them to shade, but many plants are not shade tolerant.

Locusts are extremely partial to citrus fruits, bananas and pineapples, even if partially decayed. These are ideal attractive agents in poisoned mash.

10. Hardly less attractive to them are their dead brethren, previously poisoned by a palatable mash. A secondary ring of the more recently deceased may sometimes be found around the fragments of the Borgia feast.
BOOK NOTES

BY KATHRYN KALMBACH

Lilacs For America — Report of 1945 survey conducted by the Committee on Horticultural Varieties of the American Association of Botanical Gardens and Arboreta. Reprinted and corrected July, 1943. Published by, and available from, The Arthur Hoyt Scott Horticultural Foundation, Swarthmore College, Swarthmore, Pa., $1.00 per copy. A "must have" for the lilac enthusiast.

* * *

A Synopsis of the North American Species of Delphinium by Joseph Ewan. Published as Vol. 2, No. 2, of University of Colorado Studies, and available from the University at $1.00 a copy. A technical paper of interest to our horticulturalists, prepared with Mr. Ewan's characteristic thoroughness and accuracy.

* * *

The Quest of American Life by George Norlin — another University of Colorado Studies, Vol. 2, No. 3, which will be of interest to many in this region. Published posthumously, this book is the last to come from the pen of the President of our State University from 1917 until his retirement in 1939. Dr. R. G. Gustavson says in a preface to the book, "The friends of Dr. Norlin will see in 'The Quest of American Life' an epitome of the life of their friend." Available from the University at $1.00.

* * *

Hortus Second by L. H. Bailey — formerly $12.00, now offered by Macmillan, the publishers, at $5.00. A real bargain!

* * *

The World Of Plant Life by C. J. Hylander — another rare

bargain! Published in 1939 at $7.95, now in its third printing, and offered by Macmillan at $3.95. A grand book for expert and amateur alike — try and lay it down in less than a long winter evening's perusal!

* * *

Flower Folk by Anne Guthrie Bicknell — a book of sheer beauty and a fine Christmas suggestion for that young niece or nephew or grandchild — if you can bear to part with it! The illustrations, all in color, by Martina Grenwis, would make anyone believe in fairies. Published in 1936, but just discovered by your reviewer. Published by Putnam at $2.50.

* * *

Mycophagy by Fred J. Seaver — an article in Gourmet for May, 1945, will be of interest to mushroom addicts, and the cover of this May number, in color, will make your mouth water! We believe a copy may still be had by sending 25 cents to Gourmet, Penthouse, Hotel Plaza, New York 19, N. Y.

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Note to Colorado Green Thumbers — We are looking forward to that Reading Room in our own Arboretum, where we may browse among the great horticultural writings of the world.

DO YOU KNOW THESE PERIODICALS?

Agriculture In The Americas — Only 75 cents a year from Uncle Sam! Again from Superintendent of Documents in Washington — to keep you up-to-date on the horticulture of our near neighbors to the South.

* * *

Journal Of The New York Botanical Garden — $1.00 per year from the Garden, Bronx Park, New York 68, N. Y. Every number is absorbing — read "Gentian Walk In A Canadian Garden" in the July, 1945, issue if you need proof.

* * *

Bulletin Of Popular Information — Published by the Morton Arboretum in Lisle, Illinois, at $1.00 per year. We could almost be happy with this Bulletin and our arm-chair, for each number transports us quite literally to some delightful corner of Mother Nature's domain, with no effort on our part whatsoever!

Arnoldia — Published by the Arnold Arboretum, Harvard University, Jamaica Plain 30, Mass., at $1.00 per year (make checks to Harvard University). You will all want the May 18, 1945, number (Vol. 5, Nos. 5-7) entitled, "The Park Arboretum—How To Establish One As A Living War Memorial."

A CHILD'S GARDEN OF CHILDISH GARDEN VERSES

JOHN STOCKBRIDGE

If the Army wants to try
A small atomic bomb,
They may bust it in my Garden
Where it can't do any harm.

Note on Landscape Architecture
Near our Arches
We had some larches;
'Twixt our Pilasters
We planted asters;
But nobody knew
Why our Pergola grew!

A Tree grew on a river's bank
And gazed at its reflection.
It said, "My loneliness I thank—
'I'm not a Plant Selection."

I always favor any Movement,
For Art, or Culture, or Soil Improvement,
And in another I'll enroll—
For weeds, I favor Birth Control.

We kept our Victory Garden neat
And grew both spinach and things
to eat.

My friend Benny frenzidly
Grew a garden for Victory.
When Nippin folded, so did he!

One time in a church I set my foot
And heard the minister say,
"A weed is a flower that God has put
Where it seems to be in your way."

My Garden is so well fenced in,
I think we should do that with
Sin.

I wish I were a compost heap,
Neglected and forgotten;
My value to the world I'd keep,
Altho my life were rotten.

For some smooth shavin' lotion
My face has long been itch'in
That's fragrant as the pickles now cookin' in our kitchen.

I'm looking for some jitterbugs,
I want so much to see
If our protection from such lugs
Has come with DDT.

The dandelions in our lawn
Grow prettily and brightly,
But those our next-door neighbor
Has are really most unsightly.
THE SUCCESS or failure of a garden, be it vegetable or ornamental, probably depends more on the condition of the soil than any other factor. Moisture, insects, temperature, diseases, absence or excess amounts of certain chemicals, sunshine, protection, air and weeds all influence your garden's growth, but those plants which are growing in good soil will have a tendency to overcome many of these difficulties.

If you are moving on a new place and you have assigned a budget of $200.00 for landscaping, you might well spend half this amount on improving or replacing the soil.

Lawns, vegetables, shrubs or flowers planted in good soil will not have to be given frequent "shots in the arm" with fertilizers to keep them growing. Good soils will usually contain everything that the wonder-working B1 might add.

Yet usually our soil is the most neglected item in our garden effort. Nine out of ten new homes have yards which are backfilled with lifeless subsoil from the bottom of the basement excavation, liberally mixed with plaster, brickdust, gravel, lime, old boards and rubbish of every kind. Especially in Colorado with her naturally alkaline soils is the presence of additional lime and plaster harmful. A good many cases of failure with climbing roses is because of the deposit of plaster just under the surface around the foundation.

It should be a criminal offense for any contractor to leave any of this rubbish on the ground, and care should always be taken that the surface soil removed is replaced back on the surface. Builders all know that almost everyone will want to plant lawns and a few trees at least around their house, yet it is seldom that any consideration is given to preserving a good soil in which plants may thrive. It is a wise idea to contact a landscape architect at the same time as the building architect is employed, so that such things as preserving the soil, grades and watering arrangements may be properly planned. It is true that many hardy things will manage to survive in this "contractors' soil" but they are subject to all the ills that may beset plant life. Dandelions flourish in this soil in which blue grass struggles for existance, yet they need be no serious problem in soil which is favorable for grass.

First of all then, let us preserve our good clean virgin soil; then, since this is Colorado, and most of our soils lack humus, let us mix with this soil all the manure, peat, leaf mould and compost that it will stand. Good, rich, pliable soil may be made from either a clay or sandy base if plenty of humus is added.

It has been demonstrated time and again that many "impossible" plants can be grown in soil which is properly prepared and cared for.