Hints on Lily Culture

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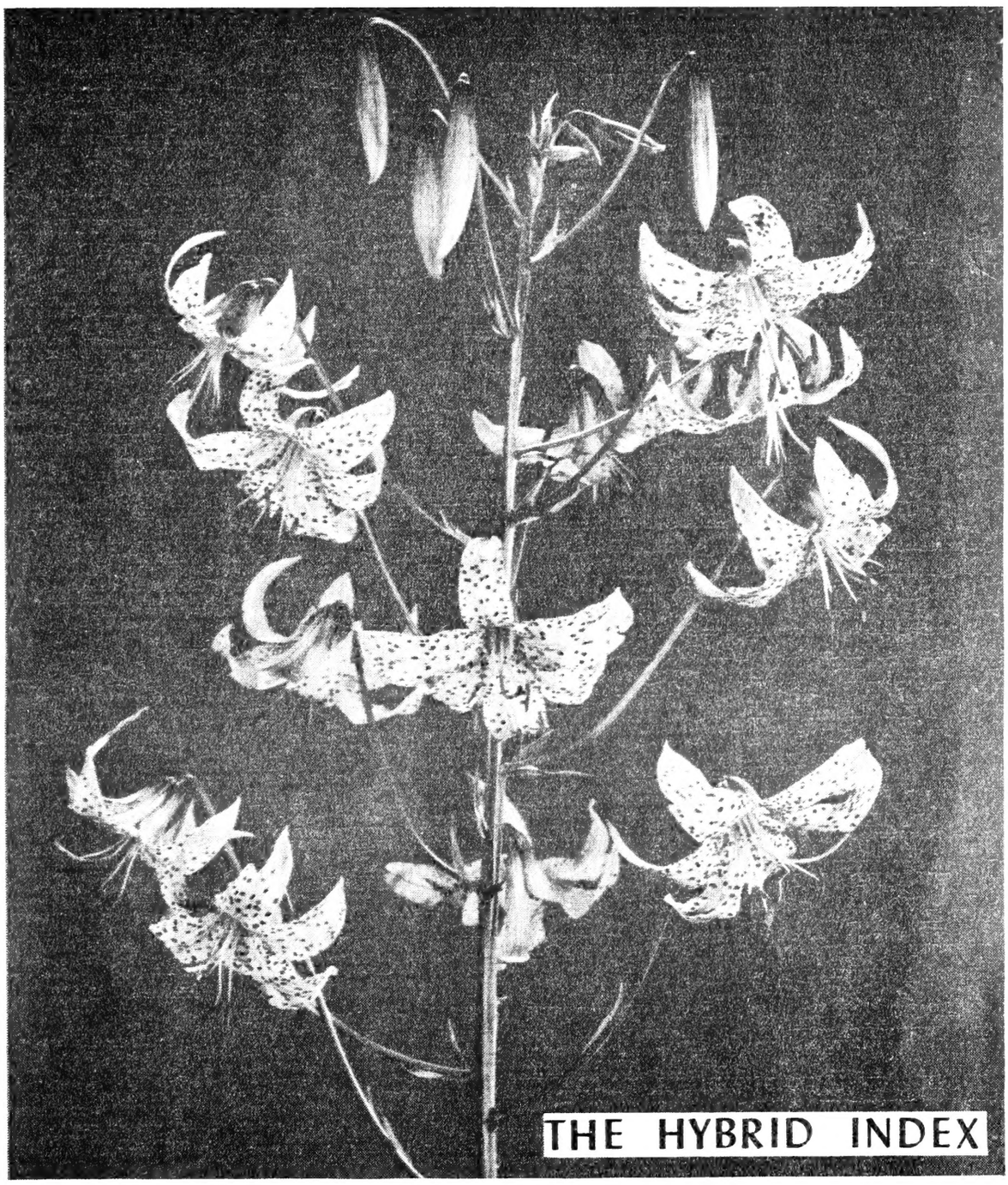


Most of you receive many catalogs; some are quite elaborate, with colored pictures and effusive descriptions. If I sent out such a catalog and sold enough lilies to pay for it I would be out of business. Instead, I have tried to make this pamphlet helpful and interesting.

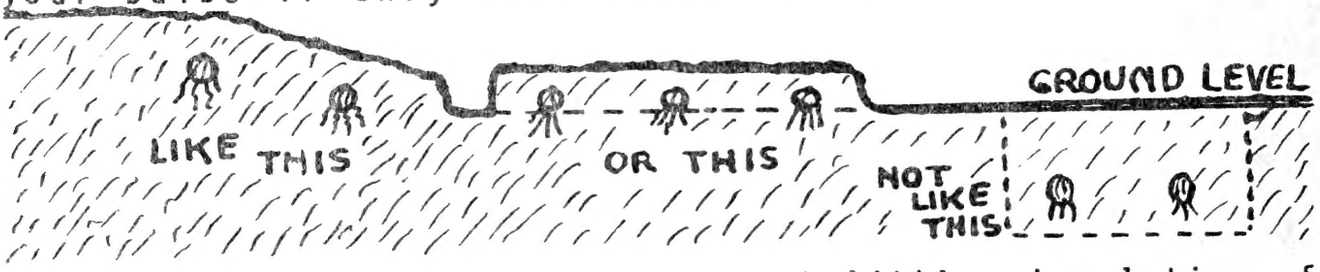
Long ago I mailed one very similar and promised another if it seemed justified. That one was very well received but many things happened--including leaving the farm. So this is fourteen years late, but here it is.

On the back page is a list of the lilies that I have for sale. If you want more information about any of these, please write. I have photographs of most of them. Also, I have about fifty species and hybrids in quantities too small to list. Correspondence welcomed.

HINTS ON LILY CULTURE

Probably no one garden will grow all lilies well; but I am growing all those listed and about fifty more with fair success on an acre of ground in Seattle, It is rather heavy loam underlaid with hardpan, but rolling enough for surface drainage. I have a drain tile through the middle of the tract.

If your conditions are favorable you can just plant the bulbs and leave them alone. Usually some precautions are needed. All lilies like good drainage. Most of them will grow in a good sandy loam where water does not stand. Even the so-called bog lilies want their bulbs above water level. If your garden does not slope enough for drainage the lily bed should be raised. Do not dig a hole and fill it with gravel. That collects stagnet water which will kill your bulbs if they must stand in it.



Air drainage is also important. A little circulation of air during the night will often prevent frost damage when early spring growth in an air pocket a few feet away will be killed. And a brisk breeze that dries the foliage after a rain or heavy dew may keep botrytis from damaging your plants. Lilies thrive and look best with certain companion plants; but do not surround them with so much shrubbery that they get no air or sun.

Some sunlight is indispensable; but most lilies appreciate the shade of neighboring plants at least part of the day. Loosely-growing herbaceous plants shelter lilies from destructive winds as well as shade the soil. Too much shade results in soft growth and few flowers.Lilies planted too near a building usually suffer from lack of water. Beside a fence is better. In the filtered sunshine of Puget Sound most lilies thrive in the open field--hence our commercial plantings that produce strong, thrifty bulbs.

If possible, the ground should be prepared for planting some months in advance. The incorporation of leaf-mold or other humus will improve most soils, especially heavy clay or light, sandy soils.

If bulbs are to be planted near vigorous trees or shrubs a wooden box (like an apple box) should be sunk and the bulbs planted in that. The boards may deter the tree roots until the lilies become established.

To prevent damage by mice or squirrels, the bulbs may be surrounded by a wire netting. The material sold as hardware-

cloth is good. Baskets eight or ten inches deepare easily formed from it and if half-inch mesh is used there is no interference with root action.

Plant lilies with a spade--not a trowel. Dig up the ground at least eighteen inches deep, turning the top-soil down where the roots will be. In "trenching" for any plant I like to put sods at the bottom of the bed. This is humus in its best form. Many lilies make roots on the flower stem above the bulb, in addition to those on the base of the bulb. These are commonly called "stem-rooting" lilies. Deeper planting is advised for these than for those that make roots on the bulb only. The latter are called "base-rooting".

Perhaps the safest rule is, "Cover the bulb to a depth equal to three times the diameter of the adult bulb". As L. pumilum grows to only a little over an inch in diameter it should be covered about three inches deep; while auratum or Henryi may be covered with about eight inches of soil so it can make plenty of stem roots to support the heavy flower stalk. Bulbs should be planted a little deeper in light soil than if the soil is heavy. An exception to this rule is L. candidum which should be covered only two inches deep and may thrive with the top of the bulb exposed to the air.

Lily bulbs when shipped should have live roots, protected like any other perennial. Lilies are more accomodating than most perennials as they try to grow new roots if the old ones are destroyed. Even so, they should not be given such a handicap to existence. Perhaps the greatest disservice ever given to the genus Lilium was calling it a bulb. Too many people confuse its treatment with that of the tunicated bulbs (tulip, narcissus etc.) or corms (gladiolus, crocus). It pains me to see them get such treatment in garden stores and I sometimes wonder that so many lilies live after such treatment. If you must depend on a local merchant for lily bulbs, you should order early and get delivery as soon as he receives stock from the growers.

It is much better practice to order from a grower who will send you freshly dug bulbs. There are several such in various parts of U.S. and Canada. Some of us are not entirely dependable, but in general you will get better bulbs.

If your lily bulbs have live roots--as they should have --give them the same care that you would give tree roots. A hole having been made a little deeper than the bulb is to be planted, place an inch of sand in the bottom, set the bulb on this and surround it with sand. Mark its position with a stake and fill the hole with loam, labeling it properly. In the spring, work the ground carefully so the

sprouting flower stem will not be injured. Do not use a hoe near the stake. Some lilies, particularly Henryi and Hansonii, often come up early enough to be damaged by spring frosts. Others may not appear until June; and I have known L.auratum to make no top growth for two years, but upon investigating I found a sound, plump, well-rooted bulb.

Water lilies judiciously. Soak the ground when needed; then let it dry before another watering. Keep the ground moist and cool in Summer with a mulch of leaf-mold or peat moss which should be put on at the advent of hot weather. Sawdust is being much used as a mulch--sometimes with unsatisfactory results. It depletes the soil of nitrogen and available phosphorous. If you should use sawdust, you should make a generous application of a complete fertilizer with high nitrogen and phosphorous content and in addition, for each bushel of sawdust add about half a pound of ammonium sulphate divided into two or more applications. See circular 891, U. S. Dept. of Agriculture.

Well rotted manure makes a good winter mulch for most lilies, but remove it in the Spring before growing weather comes. Spring mulch encourages early growth which may get frosted. The temperature next to a straw mulch may be five or six degrees cooler than the surface of nearby soil not mulched. That is enough difference to lose lilies. If that mulch is applied in the Fall before the ground freezes, rodents may move in and spend the Winter eating your bulbs. It has happened to me. Remember that mulch is not to prevent freezing of the soil; but rather to keep it from thawing. Shallow-rooted plants make good summer ground cover for lilies.

Fertilizing is probably the most controversial subject in lily culture. I may err in applying too little, but I think that slower growth makes a better rooted bulb of firmer texture. If an extra year or two is required to grow a salable bulb that way, I have lots of time. Do not allow raw fertilizer to come in contact with the bulb. I like to use bone meal when planting. It is slowly available and lasts. Experiments have shown that lilies need nitrogen in the Spring, but after blooming require mostly phosphorous and potash. The use of cow manure as a winter mulch pretty well takes care of Spring needs and two or three light side dressings of a 3-10-10 commercial plant food in early summer seems adequate. The so-called trace elements added to plant food have given wonderful results with lilies and I hope all fertilizer manufacturers will soon find it necessary to add them.

I have tried foliar feeding in a small way without evident harm to lilies. It is too soon to determine the benefit. I used the soluble fertilizer largely because it con-

tained the trace elements. Wood ashes supply potash; the increased substance and color being readily noted. Preferred practice is to work most of the fertilizer into the ground the year before the lily bulbs are planted.

Remove and burn withered flowers. Allowing lilies to set seed reduces next year's blooms. Many years ago I tried this with L. regale. Bulbs that bore an average of 25 blooms were allowed to set seed, and next year produced about 15 blooms. When dug that Fall the bulbs were about an inch in circumference smaller; while neighboring bulbs that had the blooms removed immediately on opening showed a satisfactory increase in size. Cutting the flowers so that much of the foliage is removed has the same effect. If cut when the first buds start to open perhaps a third of the stalk can be taken without serious damage; but if you remove all the stalk you can figure on sacrificing the bulb.

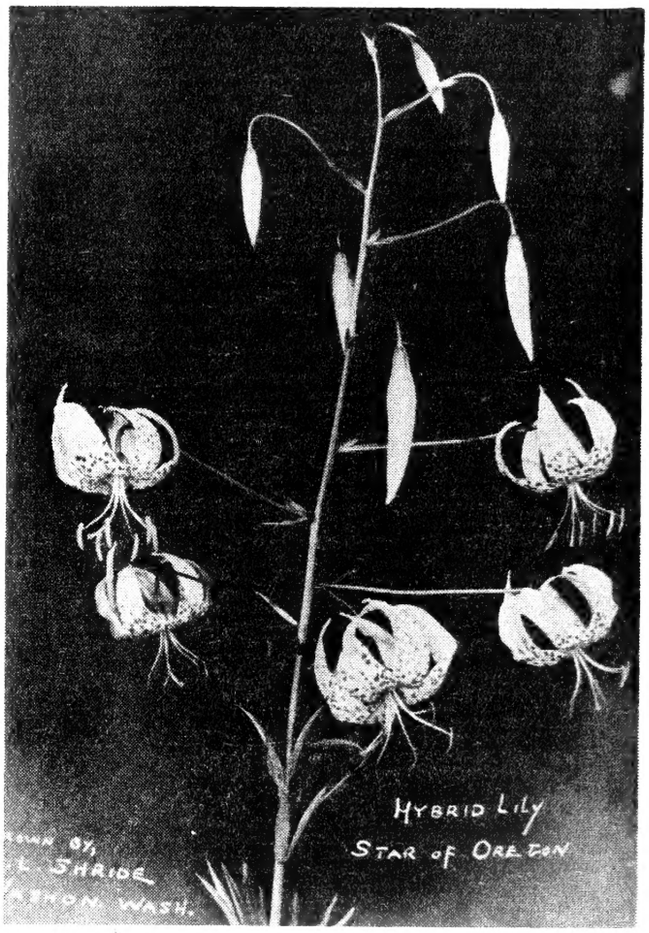
Do not plant a lily where another one has failed. Do not transplant a lily that is doing well. Lilies that multiply rapidly, like pardalinum, should be dug once in three or four years for division. If you think others are depleting the soil, it is better to remove the soil over the bulb and replace with rich compost without disturbing the roots.

GET THEM YOUNG

Some lilies are difficult to establish. Humboldtii, Szovitsianum (and monadelphum), testaceum and Washingtonianum are especially so and I recommend that small bulbs be purchased. If an unexpected bud appears, remove it. I would like to advise that procedure for lilies just moved; but I know it would be useless. Long range results would be much more satisfactory if the bulb were allowed the first season to establish itself without being required to produce flowers and perhaps seed.

Remember that a lily bulb forms the buds a year before they open as flowers. If the bulb that you purchased was thriving in a nursery row last Summer at blooming time, it gauged its ability to bloom next season and set buds accordingly. Then if it is dug, kept out of the ground for days--or weeks--before being planted in an alien soil, it has several possible courses of action. At best it gets rooted before Spring growth requires feeding and produces the flowers that you hope for. It may not make top growth at all, using the season to get rooted. It may abort the entire flower stalk before blooming time and live to bear flowers in a year or two. Some of the buds may be blasted, thus reducing the effort required so that the plant produces a part crop. At the worst it may produce the full head of flowers and expend the bulb making good on last season's committments, in which case you lose a bulb.

Star of Oregon



Parryi

THE HYBRID INDEX

I have had uniformly good reports on this lily which I introduced in 1953, and some were decidedly enthusiastic. It bloomed well in the mid-west where its parents have failed, and behaved satisfactorily on the East Coast. I used Parryi pollen on a Humboldtii X pardalinum seedling. Then I selected the best of the resulting seedlings and selfed it. In that progeny there was not one that would not be a good garden subject. After several years study I made my choice and began propagating it. I do not know at this writing how well the picture on the front page will illustrate it.

Index grows on a sturdy stalk up to five feet tall. The foliage is scattered with an occasional half-whorl. The flower is larger than either of the parent species, slightly reflexed, light orange in color with small maroon spots well distributed. The flower has good substance and 20 on one stalk is not uncommon. To those of you who know the Bellingham hybrids and Parryi I need only to say that Index is intermediate. It is a very showy lily that transplants well; although it is not at its best for two or three years. Large bulbs are priced at $1.00.

ABOUT HYBRID LILIES

When I first began growing lilies, almost 30 years ago, there were very few hybrids in commerce. We knew only testaceum and some umbellatum (now called hollandicum) and elegans (now maculatum) in variety. We soon heard of Dr. Crow's Sargentiae X regale. Miss Preston made the revolutionary cross that resulted in the Stenographer Hybrids a little earlier and went on from there. Dr. Griffiths was working on the material that was to give us the Bellingham Hybrids, and obtained a stock of leucanthum chloraster that was introduced into the Sargentiae--regale complex. M. Debras started the Aurelianense and about that time everyone with a few lilies got into the act. Some with a definite plan; others haphazardly with no records.

My old friend, the late S. J. Harmling, when I protested a turk's cap--trumpet cross that he was making quoted an old proverb that he frequently used, "Niemand veiss wie ein Kuh eine Hase fangen kann". My German was never good,but that is as I remember it. Roughly it means you never can tell.(I was wrong again. He obtained an exquisite intermediate form).

At the recent Seventh Annual Meeting and Show of the N.A.L.S. held in Seattle, there were more and better hybrid lilies displayed than ever were assembled under one roof before. The casual visitor would only remark, "I never knew there were such lilies". But the knowing lily fan really struck pay dirt. There were auratum -- speciosum crosses by several growers, sulfur hybrids, umbellate forms in great variety, Aurelianense, yellow trumpets, pink trumpets and various shapes and colors. I still favor the species. Most of them have a grace and beauty acquired through countless generations of adaptation that appeals to me;but undoubtedly the day of the hybrid lily is here.

The fact that a lily is a hybrid does not make it good. Usually a cross between species gives increased vigor. Year after year my seedlings of the Bellingham seedlings and their crosses are the most vigorous plants on the farm. But please bear in mind that the weak points of the parents can be intensified as well as the good features. Any grower worthy of the name will select carefully and re-cross and backcross with a definite aim, discarding all plants with undesirable features.

I have a collection of Kodachrome slides (35 mm) of lilies suitable for garden club programs. A commentary goes with it so that anyone can make a good presentation. Write if you are interested.

PRICE LIST FOR 1954-55

These prices are for blooming size bulbs unless otherwise noted. Where larger sizes are quoted they have bloomed at least twice in the nursery. I do not recommend the purchase of large bulbs but sometimes they are wanted for propagation or exhibition purposes. Bulbs are freshly dug and shipped with live roots. Plant immediately and water well. Six bulbs are sold for the price of five. Postage and packing free on orders amounting to $3.00 or more.

(For orders from the state of Washington, add 3% sales tax.)

Amabile ____ .50
Amabile Luteum ____ .60
Aurantiacum(croceum) ____ .50
Auratum platyphyllum ____ 1.25
Bellingham Hybrids
Peter Puget
Cyrus Gates
Douglas Ingram
Sacajawea
Shuksan and
Star of Oregon are all
from scale propagation
of Dr. Griffith's stock.
Each ____ .75
Callosum ____ .50
Canadense ____ .75
Candidum ____ .50
Centifolium ____ 1.00
Cernuum ____ .60
Columbianum ____ .35
Concolor ____ .30
Davidii ____ .50
Golden Gleam ____ .35
Hansonii ____ 1.00
Henryii ____ 30¢ and ____ .50
Index(see description) 1.00
Leichtlinii
var. Maximowiczii ____ .35
Leucanthum
var. Chloraster
((centifolium) ____ 1.00
Lankongense ____ 1.25
Longiflorum ____ .50
Martagon ____ .75
Martagon album ____ .75
Medeoloides ____ 1.25
Michiganense ____ .50
Pardalinum (red) ____ .40
Pardalinum giganteum ____ .35
Parryi ____ 1.00
Pulilum (tenuifolium) ____ .25
3 bulbs ____ .50
Regale ____ 25¢ and ____ .50
Roezlii (see Vollmeri)
Speciosum album ____ 1.00
Speciosum rubrum var.
Lucie Wilson ____ 1.00
Superbum ____ .50
Testaceum ____ 2.00
" one year olds-6 for 1.00
Tenuifolium(see pumilum)
Vollmeri - yellow ____ .75
red ____ .75
West coast hybrids
4 bulbs for ____ 1.00

If you are not satisfied with your bulbs when they arrive, return them and your money will be returned. I cannot guarantee them to grow. Most lilies are ready to ship about the middle of September; but speciosum; auratum and formosanum are still in bloom at that time and should not be dug for another month or so.

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