

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

62.67

Buskirk's

1938

Library and Systematic Botany
Herbaria Collections
Rec'd MAR 7 1938
Catalog

LIBRARY
RECEIVED
JUN 18 1936
Department of Agriculture



Hardy Lilies

WATER LILIES, AQUATIC PLANTS
FISHES AND AQUARIUMS
PLANTS FOR THE ROCK GARDEN

BUSKIRK'S AQUARIUM

INDEPENDENCE

OHIO

You Are Invited to Visit Our Nursery

FIRST, let us take a trip to the rock garden. A gently sloping hillside provides the scene. Native rocks, with clinging moss, and small stones are laid into easy steps from base to top. Terraces appear here and there, where you may stop and study the plants and enjoy the unusual scene.

This rock garden will never be completed, for each year brings new plants that we want to try. So, no matter when you come, or how often you visit us, you will always find something of interest in the rock garden. We are happy to say that it contains a great variety of plants and evergreens, thus giving an idea of the effect produced by different plants in various environments and locations. Shade plants, sun plants, wall plants, those for steps, etc., are all on display, making a beautiful sight the whole season through, while the sections containing evergreens make an interesting picture all winter.

Lily Pools and Fish Ponds

MORE than fifty pools are in our gardens. Some have rock edges, some are made of concrete, others are just dug out of the clay, but all are filled with waterlilies and aquatic plants. Some of these pools contain fancy fish of various kinds. Feeding time is an interesting sight. Late in the afternoon you will probably see Mr. Buskirk going to one of the pools near his home with food for the trout. They expect him and come to the surface of the water ready for their supper.

Near the garage you will find a cage of lovebirds, billing and cooing; a little farther on, a cage of fancy pigeons; and still farther on, several cages of beautiful pheasants in varieties, showing their lovely coloring behind the wire enclosures. The gorgeously colored peacock is lord over all, since he has full range of the grounds. Neither can we forget the pair of swans as they paddle all day long in their individual pool at the rear of the lawn.

Greenhouses

NOW we will go through the greenhouses. As you enter, you realize you have found something interesting and different. You see long rows of concrete tanks—here and there a beautiful water lily in bloom. You can see different kinds of aquatic plants, each in their individual tanks and as we walk down the aisle, you discover that there are thousands of fish in the tanks. One tank has blue, another red and still another, black fish. You then come to a tank with a wire screen basket, perhaps covered with glass—you wonder what it all means; if you should ask one of the men working there, he will tell you that there are a pair of nest building fish in there; perhaps he will show you the nest. If the fish are hatched he will show you thousands of tiny fish smaller than you thought ever could exist. He will also explain to you that the breeders are in the wire basket and kept there, while the smaller ones swim out and get away from the parents as they sometimes will eat them.

You are beginning to get interested, you want to know what those red fish are in the large basket in the next tank, and he will tell you they are female Red Platyis and that they give birth to the little fish; they, too, are kept in the basket so enabling the little ones to swim out and be out of danger of being eaten up.

Then you will ask what are the little specks that are swimming around by the millions. He will explain that those are live Daphinae, that they have been raised to feed the little fish, and so on until we come to the end of the greenhouse and step into a room with 50 aquariums with different kinds of tropical fish. There are rows of concrete tanks on the bottom filled with fish which belong to the Goldfish family—Fantails, in red, black and calico; the Telescope fish with large protruding eyes, in different colors; common Goldfish, Comet-tail, Shubunkins in red, white and blue, Turtles, Newts, Chinese Walking-fish.

Now we will go to the small room where you will find 40 or 50 aquariums of the fighting fish, Paradise, Badis, Cichlasoma, the beautiful Blue and Green Bettas; then we will go into another greenhouse and perchance you have come at the right time to see the Giant Victoria with eight or ten leaves 4 to 6 feet across, turning up at the edge 3 to 4 inches like huge pie plates.

You will enjoy a visit to our nursery. To look over our splendid display of evergreens, shrubs, and plants will alone repay for the trip, but you will find numberless other points of interest. The vast acreage occupied by the nursery and Mr. Buskirk's residence is an array of naturalistic beauty.

Our Organization

MR. A. S. BUSKIRK started the nurseries a generation ago with a few trees and shrubs in his own yard. He has watched over and directed the expansion of the organization, gleaning a wealth of ideas and experience.

Mr. Buskirk has a wide personal acquaintance among garden lovers, and realizes that water and rock gardening is the type of planting in which home owners are personally interested. Therefore he believes this booklet will help you select just the plants you need for your particular purpose, and will serve as a guide to the construction, planting and care of your lily pool rock garden.

Terms of Business

We guarantee all stock furnished by us to be first class, true to name, all of a size, so as to give immediate results. However, there are causes for failure over which we have no control and we can assume no responsibility after stock is delivered.

Cash with Order. To avoid unnecessary record keeping in our office, we request you to send cash with order.

Shipping. Plants should be sent by express rather than parcel post.

Adjustments. Complaints must be made within ten days after goods are shipped, or adjustments will not be made.

NO ORDERS ACCEPTED FOR LESS THAN ONE DOLLAR

DENSO - SUB - AQUA

The Rubberized Under Water Paint

Denso-Sub-Aqua is an especially formulated non-poisonous coating for use in aquarium and lily pools or on any concrete surface which is constantly under water.

Denso-Sub-Aqua is composed of pigments and colors unaffected by water, ground in a special water-proof vehicle with Densol Rubber Base Liquid.

This special coating imparts depth and clarity and gives a unique color to the pool.

It will also stop small leaks.

It is not injurious to fish or plants.

It adds life and beauty to the appearance of any aquarium or pool.

CHARACTERISTICS

Coverage: 400 to 500 square feet per gallon one coat.

Colors: Sky blue, sea green, white, and black.

Price: 1 gallon.....\$4.50
1/2 gallon..... 2.35
1 quart 1.25

DENSOL HANDY-CAULK

Caulking and Glazing Compound

For repairing cracks in cement pools. Filling cracks and other openings in brickwork, tile joints, stone coping, furnace joints, etc. Sealing or caulking the openings around door and window casings, domes, etc. Repairing roofs, gutters, downspouts, cisterns, wood and steel tanks, etc. Glazing greenhouses, steel sash, windows, skylights, hotbed sash, etc.

Price: \$1.00 per tube.

(Put up in tubes holding about 1 quart.)

BLOOD MEAL

A good fertilizer for all water plants. Use 1 quart per bushel of clay soil, or 1 quart for 2 bushels of good garden soil. Quart carton 50 cents.

The Lure of the Water-Garden

HAVEN'T you always wanted a garden different from your neighbor's, and then let hoeing, weeding, and watering discourage you?

But that was before you thought of a water garden, with its lasting beauty and fragrance, attainable with a minimum of effort. Whether a lake, a concrete pool, or just a wash tub set in the ground, you have only to put in the plants and let nature be your gardener.

Water Lily culture has not been thoroughly understood in the past, and so has been considered a rich man's hobby. Water Lilies are easily grown; one does not need experience in order to be successful, and as the plants are not expensive there is no reason why they should not be grown in many more gardens than at present. Their requirements are few: sunshine for the full day, rich soil and water. Those conditions can be given in the back yard, in a tub, just as well as in the broad expanse of a private estate or city park.

There are no flowers more beautiful than Water Lilies, or endowed with a more distinctive, delightful fragrance, and a wider range of color: white, blue, yellow and various shades of pink to deep red. Some are "day bloomers," like the common Water Lily; others do not open until evening, so that those prevented by duties from enjoying the "day bloomer" can harvest the full measure of enjoyment from the flowers that open in the early evening and remain open until noon or later the following day. Each flower opens about five successive days, then disappears under the water's surface.

The wonderful possibilities of Water Lilies are strikingly manifested by the rich colors and exceptionally long blooming season of the finest types.

With the native Water Lily and the yellow Indian Lotus, many desirable immigrant strains have intermingled in the melting pot of hybridization beginning a rainbow of beautiful shades: brilliant crimson of the hardy and prolific *Nymphaea Gloriosa*; deep cerise of the sweet scented Rose Arey; evanescent shell pink of the charming Morning Glory; every sparkling orange tints of Paul Hariot; dull bronze of the starry Sioux; soft sulphur yellow of *Chromatella*; creamy white of the night blooming Egyptian *Dentata*; mauve lilac of the new August Koch; delicate caerulean blue of the enormous Mrs. Edward Whitaker; deep royal purple of Panama-Pacific; dark blue of the true African Zanzibariensis, enhanced by the soft green shades of floating leaves. They are so productive that even a small collection provides a profusion of fragrant blossoms both day and night during the whole summer.

Overtopping these attractive flowers that bloom upon the surface are the parasol leaves and stately blooms of the *Nelumbium* or Lotus, revered by pagan ancients as sacred to the deities. Who has not read of the haunting fragrance of the Sacred Lotus of the Nile!

With Water Lilies and Lotus as the motif of the picture, it is incomplete without harmonious surroundings. For the foreground use the lesser aquatic plants: azure Water Hyacinths with

floating bulbs, gay yellow Water Poppies and Floating Hearts, four-leaved Water Clovers, delicate fringed Water Snowflakes, variegated Sweetflags, the Arrow-heads, Parrot-feathers, and Lizard's-tail. For the background choose taller growing bog plants: native blue Pickerel Weed, Wild Rice, or Hardy Rushes, Cat-tails, the Umbrella Palm, Egyptian Papyrus, or the Japanese Taro.



To frame the picture provide a border of Forget-me-nots, Japanese Iris and perennials from the old-fashioned garden, or perhaps a rockery overgrown with moss and mounded with Ground Ivy Sedum or Alpines. Finally, outrival Midas with a touch of living gold in the form of fishes that in one season multiply their treasure many times—truly a pot of gold at the foot of the floral rainbow.

In concrete pools the finer types of goldfish will match the lilies in multitudinous colors—red, gold, dark and light blue, pearl silver and black, or perhaps as calico fish combining all shades. Chinese artistry has contributed fish with grotesque bodies and telescope eyes, while the Japanese have characteristically bred the graceful Veiltails with long flowing fins.

When winter comes your water garden may be perpetuated in miniature in an aquarium with submerged evergreens, red and brown aquatic shrubs, dwarf palms, waving grasses, floating jungles, glistening pebbles, and rock palaces. Such plants are both the background and the life balance for the exotic fishes that find in it a perfect home.

Goldfish exist in many pleasing forms. Even more interesting are the active and iridescent tropical toy fishes—the Mexican Swordtail that bears living young, the Chinese Paradise Fish that builds a nest of thousands of bubbles, a veritable air castle, the striped Danio or Zebra Fish, the Ribbon-tailed Hapochilus, the chameleon-scaled Cichlids, the eel-like Chinese Walking Fish that can jump many times its own length out of water and walk back if it falls on land, the Spotted Gambusia or Mosquito Killer, the stately Brazilian Halfmoon or Scalare, and many others with most curious habits.

The ancient practice of changing water in a fragile globe, to the constant annoyance of all parties concerned is now taboo. Properly bal-

anced aquariums may be left undisturbed for months or years, a bit of life in an element so mysterious to us because it is so different from our terrestrial surroundings.

NOTE—Many people have the impression that

the lily pond breeds mosquitos. True enough, but the wrigglers that hatch from the eggs are ideal food for fishes and never grow up to annoy you or your neighbors. Our numerous ponds at Independence demonstrate this convincingly.

Cultural Directions

IN NATURAL conditions Water Lilies root in rich soil in the shallow water of a marsh or pond where there is plenty of sunlight. These conditions are easily reproduced in the garden.

PONDS. In a natural pond the Water Lilies may be planted where the water is 1 to 2 feet deep. If the bottom is sand or gravel, the roots may be planted in boxes and sunk a few inches below the level. Otherwise they may be simply pushed under the soil or anchored with a stone if the bottom is too soft to hold them.

A pond is easily made by daming a small stream or spring, but it is advisable to direct the flow away from the places where the Water Lilies are to be grown. A hole dug at the side of a



stream and filled by back-water makes an ideal pond. Clay soil is very suitable for pond construction by simply digging a pond 2 feet deep, tamping the bottom and sides and filling in 6 inches of good soil. But if the excavation must be made in loose or porous soil, it is also practical to line the sides and bottom with 6 inches of clay which has been pounded and worked with botts until it is plastic.

Except in a formal garden, the clay pool is very satisfactory, as its edges provide suitable quarters for moisture loving plants, rock work, and other natural effects.

TUB CULTURE. It is entirely practical and satisfactory to grow Water Lilies, Lotus, and aquatics in tubs, half-barrels, or any container 2 feet or more across that will hold water. After filling the container half full of the rich soil mixture and setting the plants, an inch of sand or gravel should be added, and the water run in carefully, using a saucer or paper to break the flow to prevent disturbing the soil.

Hardy water lilies, lotus and submerged and shallow water plants may be planted directly in the soil; bog plants may be potted and set slightly above the water level; tropical water lilies should be put in 6 or 8 inch pots, set into the soil to keep the growth of the plant within

suitable limits, additional fertilizer being worked in as required. Parrot-feather may be used to conceal the edges of the tub, and with a few fish to eliminate mosquitoes, the garden is complete.

Unless the tub is very large, one water lily will be enough although a number of aquatic plants may be grown with it. Several tubs may be used to give the effect of a much larger pool and at very little expense.

An interesting adaptation of the tub garden is to set one or several tubs in the ground and build a rockery around the edge, completely disguising the receptables, and providing a setting for fine rock plants.

SOIL AND PLANTING. The best soil for aquatic plants is a mixture of three parts of fibrous loam or good garden soil with one part well rotted cow manure. Other manure may be used but not when fresh, as its fermentation may foul the pool and injure the young plants. Bone-meal is not desirable unless mixed with the soil (1 quart to the bushel) several months before use. Bloodmeal is a good commercial fertilizer and may be used to feed plants that appear to have exhausted their soil. We supply this in convenient packages sufficient for three to five Water Lilies at 50c per carton.

Hardy Water Lilies should be given new manure or bloodmeal each year and new soil every two or three years.

Water Lilies should be set with the crown of the plant just beneath the surface of the soil, which is then covered with an inch of sand or gravel to keep the water clean. Eight inches of water above the crown is best for the production of blossoms. Any depth from 6 inches to 2 feet will do, but young plants should always be started in shallow water where the warmth of the sun reaches them. Full sunlight on the pool is very desirable for the growth and formation of blossoms.

At least one cubic foot of soil should be allowed for each Water Lily and more if possible. To obtain satisfactory growth in boxes they must be large enough to provide plenty of nourishment. A single plant in a box 2 feet square and a foot deep, filled with proper soil, will develop remarkable blooms.

It is best, though not necessary, to have a separate container for each Water Lily as the leaf spread averages 3 feet in diameter. Shallow water plants may be set in the same box to advantage.

The green scum which appears in the pool at intervals is a vegetale growth resulting from the exposure of fresh water and new soil to the sunlight. It usually disappears in a short time with the assistance of a few snails. The use of chemicals is not advisable on account of probable injury to the fish and plants. Changing water that has become green generally prolongs the condition by providing new spores or perhaps

fresh fertilization. The old water should clear up in a short time without further attention.

PLANTING TIME. Hardy Water Lilies may be planted after the middle of April, as at that time new leaves appear in the ponds. Tropical varieties are propagated in greenhouse pools and set out as growing plants when the temperature averages about 70 degrees, usually not until June in the latitude of New York, Cleveland and Chicago, but much earlier in the South. Tropical lilies make remarkable growth and when well fertilized, bloom within several weeks after planting, continuing to produce their enormous flowers until late in the Fall. They may also be grown in a sun room or conservatory pool, blooming the year round with the aid of occasional rations of bloodmeal poked under the soil. It is to be noted that young tropical lilies have a tendency to become dormant if planted out in too cold, deep or shaded water, but if the plants are removed to a warm sunny location they usually start to grow again.

FISH AND SNAILS. Since the first question that arises when the new pool is suggested concerns the effect it will have on the mosquito population it is well to remove any doubts by the assurance that the favorite food of many kinds of small fishes is the larva, or wriggler, which hatches from the egg of the mosquito. It is therefore only necessary to provide the fish and you will have a very effective trap for the pests.

The small black aphids which infest the leaves and stems above water should be washed off with the hose so that the fish can destroy them. The small tropical fish are all active insect enemies. They multiply rapidly in the pool and are easily kept over winter in small aquariums, where their interesting habits and flashing colors are a constant source of pleasure.

Goldfish will winter outside in ponds or pools containing soil and roots or in pools which are

covered to prevent freezing. They should not be left under the ice in clean pools unless the ice is broken frequently, as the water may become foul when aerated. In the absence of an aquarium, fish may be kept in a tub in the basement, preferably under a drip from the water faucet to eliminate the need of changing. Fancy Goldfish are sufficiently valuable and attractive to justify good care in a suitable aquarium.

Tropical fish should be taken from the pool as soon as the temperature goes much below 60 degrees and kept in an aquarium properly balanced with plants so that the water need not be changed.

CUT FLOWERS. The lasting quality of Water Lily blossoms makes them satisfactory for decorative purposes. Tropical varieties that stand above water look best in vases, and the hardy varieties should be floated in dishes of water. Ordinarily, cut blossoms follow their customary habits of opening and closing, but it is possible to keep them open continuously by dropping paraffin from a lighted candle between the petals at their union with the stem.

Closed blossoms are safely shipped by packing in damp paper, and their adaptation to pool displays, table decorations and floral pieces is making them very popular. We can supply cut flowers of hardy varieties from June to October and small quantities of Blue Lilies at any time.

WINTER CARE. Under normal conditions hardy Water Lilies, Lotus and native aquatics winter in the ponds under water and seldom need protection unless the water gets very low, in which case a covering of leaves, straw or manure should be provided.

Unless heavily reinforced, a concrete pool is more likely to need protection than Lilies, as the expansion of ice frequently cracks the walls. A small pool may be covered with boards and litter so that little or no ice can form on it or



Formal Pool

the pool may be drained and the roots covered with litter; if the roots are planted in boxes, these may be taken out and protected in a trench, or taken into a cool basement and kept covered with moist burlap until Spring. Dry rot is destructive to dormant roots and should be avoided by providing natural conditions of cold and moisture.

Tropical Lilies are best treated as annual plants, and replaced year after year, as their beauty and extraordinary productiveness more than justify their moderate cost. They may be kept in bloom all year in indoor pools but it is difficult to make them form dormant bulbs which may be wintered in moist sand. Dormancy is not caused by cold but by lack of nourishment, and if the foliage is allowed to freeze off, the bulbs seldom form. Planting in small container so that the soil is exhausted and the bulb formed before frost, dwarfs the blooms and greatly reduces the length of the season. September is their time of greatest production, if undisturbed. Likewise in order to set out young plants in June, the bulb must be started to grow in warm shallow water about February. For these reasons it is seldom worth while to try to preserve the tropicals unless a greenhouse pool is available.

How to Order Water Lilies

THESE Prices are Net and are quoted F.O.B. Independence, which means that we ship orders at the customer's risk and expense; and after the delivery of properly packed goods to the express station or post office we assume **no further liability for loss or damage en route.**

We prefer to make all shipments express collect, since this service includes a guarantee against loss, damage or delay. We ship parcel post only when specifically requested and when funds are enclosed to cover postage, and, preferably, insurance.

OUR TERMS ARE CASH. WE DO NOT SHIP C. O. D. nor do we open accounts for new customers unless the initial order is accompanied by satisfactory commercial references.

To avoid delay at the Canadian border, customers should enclose the number of their permit to import plants, obtainable from the Plant Pest Board, Dept. of Agriculture, Ottawa.

WE GUARANTEE OUR STOCK to be in good condition when it is packed; should there be any question about this on arrival, the goods are to be returned at once for our inspection. We do not guarantee your results after planting, since unusual conditions over which we have no control, improper treatment or the natural mortality of living material may interfere with the growth of plants.

We are pleased to furnish specific cultural directions for any of our plants and to assist you in adapting them to your conditions. Inquiries should be made before the plants are received, and our directions should be followed closely, as negligence in planting is the chief cause of poor results and dissatisfaction.

Many of our customers prefer to have us select combinations of plants for them, and if this service is desired, please sketch or describe for us the pool and its surroundings so that the results may be made to harmonize.

Sometimes, due to an unusual demand, we are

The name "tropical" is rather misleading, as many of our finest and best known garden flowers do not live over winter but are cheerfully replaced each year. None of them, however, will bloom for so long a period or produce so many large and fragrant flowers as tropical Water Lilies.

CORRESPONDENCE. In these paragraphs we have tried to cover the questions that ordinarily occur to those who want good results from their pools, and to summarize, we repeat that the essentials are food soil, plenty of sunlight and warm shallow water. We are always interested in the experiences of our customers and appreciate letters describing in sufficient detail the methods of planting and results so that we may intelligently discuss the difficulties.

SELECTION OF PLANTS. We are pleased to give you the benefit of our experience in choosing suitable plants for the pool or its borders. Accordingly, we have made up a number of collections of plants that have proved popular individually, and which may be combined in a well balanced and attractive water garden. These collections also represent an appreciable saving in price over the separate items.

unable to supply certain varieties to all who send orders. In such cases we substitute similar plants unless otherwise instructed.

We prefer to ship the different varieties at the proper time for planting in your locality. Hardy lilies may be shipped from early May to late August, while tropical varieties should not be planted before June, except in the South.



Lotus Pond at Buskirk's

FREE LOTUS

All orders for Water Lilies either Hardy or Tropical, and Shallow Water Plants, selected from this catalogue amounting to \$5.00 or more, and received by us before May 1st, 1933, we will give you **FREE** one Pink Lotus (*Nelumbium Speciosum*) if you will mention same in your order.

This offer does not apply to any of the Special Collections or on anything else only that mentioned above.



Our Special Selection of Prize Winning Lilies

Mrs. A. S. Buskirk. The most exquisite and finest of all pink Vivaporous Lilies. Awarded the gold medal as the best new pink day blooming tropical lily at the Cleveland Flower Show of 1932. Distinct in color, beauty, and large numbers of blooms. At present some of these lilies planted in only 5 inch pots in one greenhouse have four and five blooms open on one plant, truly a rare number of blooms. The flowers are full petaled, each one containing 25 or more, the upper half of stamens are a rich yellow, this gives the flower a unique appearance, as only two colors are shown, the circle of yellow in the center surrounded by one shade of pink. At the

first sign of sun in the morning the flowers open wide and remain so until dark. Often they have remained open all night. This new lily is extremely fragrant and has received applause from all who have seen it.

The Mrs. A. S. Buskirk lily is a hybrid and was developed from seed produced by repeatedly crossing three of the most famous hybrid lilies, Blue Bird, Mrs. Robt. Sawyer, a dark pink and General Pershing a light pink. These lilies are all noted for their large size and number of blooms and this new lily is an honor to its parents. A new and rare jewel among water lilies. **\$7.50 Each.**

New and Old Varieties That Are Outstanding

COLLOSSEA. This magnificent variety is flesh colored at first then turning to white. One of the earliest spring blooming lilies, blooms until October. Flowers are large and exquisitely fragrant. Large leaves. **\$4.00 Each.**

Gloire du Temple-Sur-Lot. (New.) Remarkable and very large, double Nymphaea resembling an immense decorative dahlia in form. Opens a beautiful pink that changes gradually to a pure white; stamens yellow; very fragrant. Frequently has over a hundred long, narrow, curled petals. **\$4.00 Each.**

GONNERE. One of the new Lil'es from Latour-Marliac. "The variety reminds one of Tuberosa Richardsoni in many respects but it is more interesting because more floriferous. Large, very double, pure white flowers; stamens canary-yellow." **\$4.00 Each.**

GOLIATH. A Marliac creation. Very large tulip-shaped flowers with wide rose tinted petals around white stamens blended with orange and yellow. A very desirable variety. **\$5.00 Each.**

Mrs. Richmond. A rare variety of singular beauty. Very large flowers of deep rose with lilac tints; petals broad and full; stamens a delicate canary-yellow. Rare and extremely choice. **\$5.00 Each.**

Mme. Wilfon Gonnere. Flowers unusually large, with a double row of petals. The color is bright rosy carmine, resembling the La France rose. **\$8.00 Each.**

PRINCESS PAT. The deep red Tropical Lily, very free blooming giving blooms from early Spring until Winter, Sometimes flowers wide open are frozen in the ice, being a Vivaporous type, it is quite difficult to put them to sleep for the Winter. This is by far the most desirable lily for growing in a wash tub or small pool, as it does not obtain a large size and requires very little fertilizer to assure its growth. **\$2.50 Each.**

Sunrise. Flowers 8 to 10 inches across, with clear yellow petals and lemon-yellow stamens. A beautiful Water Lily. **\$3.00 Each.**

Tuberosa Richardsoni (Snowball). Flowers perfect cup-shape, pure white, double, and of good size—generally 6 to 8 inches across—with petals which are somewhat fluted in the center. True variety. **\$2.50 Each.**

Vesuve. The petals are a very bright, dark red, the stamens are red, tipped with yellow—a striking color combination that attracts the attention of the visitor. Next to Gloriosa it is the freest flowering red Lily. Young leaves are dark red, mottled with brown. **\$3.00 Each.**

Hardy Water Lilies

THE popularity of this class of Nymphaeas has increased so rapidly that some of the varieties can scarcely be propagated in sufficient quantities. It is desirable that orders be sent in early to avoid disappointment, and it is well to indicate what varieties may be substituted when orders are placed late in the season. No winter care is necessary in natural ponds or lakes, and there is nothing more beautiful than a broad expanse of water dotted with the green lily-pads and fragrant blossoms in all shades of red, yellow, orange, white, or pink. The numerous artificial lakes which are being built in connection with real estate development are admirably adapted for the naturalizing of colored Water Lilies, as they are usually devoid of other aquatic plants.

Hardy Lilies are equally at home in concrete pools, half barrels, or tubs; and with a little care to prevent actual freezing of the roots, their beauty and fragrance may be enjoyed year after year. Lack of experience will not interfere with results, as Water Lilies, "just grow" when provided with sunlight, rich soil, and warm shallow water.

White Water Lilies



Hardy Lily—Gladstone

GLADSTONE. The King of the Whites, surpassing all other Nymphaeas in size and freedom of bloom. \$1.50 Each.

Loose. Originator's description: "A beautiful, large, white Water Lily, 5 to 7 inches across, with a peculiarly delightful fragrance. Particularly desirable, as it is a free and continuous bloomer, the flowers opening earlier in the day than any other Water Lily." \$1.50 Each.

Marliacea albida. Blooms continually throughout the season. The petals are white; yellow stamens. Really an excellent variety. \$1 Each.

Odorata. Indigenous to the northeastern United States. The flowers are of medium size, white, with yellow stamens. Well suited for planting in ponds to obtain natural effects, and should be used freely because of its beauty. 40 cts. each, \$2.50 for 10.

Odorata gigantea (Hopatcong). Well known in southeastern United States, where it grows naturally in ponds. Flowers pure white, quite large, and produced freely. 50 cts. each, \$3 for 10.

Odorata minor. A dwarf form of *N. odorata* and more suitable for tub-growth. 50 cts. each, \$3 for 10.

Tuberosa maxima. Pure white, fragrant flowers of medium size, and globular shape. The *Tuberosa* varieties are good for naturalizing as they are strong growers and will do well in deeper water than most varieties. 50 cts. each, \$4 for 10.

Vera Louise. This is a new white Water Lily that is very promising. Large, very fragrant, and a good strong grower. \$2.00 each.

Pink Water Lilies

Eugenia de Land. Flowers deep rose-pink, with long, narrow petals and yellow stamens, borne upon the surface of the water. The plants are strong growers and will produce flowers freely. \$1 each.

Helen Fowler. A seedling with deep pink, fragrant flowers 3 to 5 inches across. A strong grower and a continuous bloomer. \$1 each.

Laydekeri Rosea. A medium size variety with petals that are pink changing successively to rosy carmine and then to deep carmine, stamens bright red orange. Suitable for tub culture. \$3 each.

Marliac Flesh. Color light pink, which grows somewhat darker toward the base of the petals. \$1.25 each.

Marliac Rose. The flowers are deep rose color. One of the peculiarities of this plant is that the young, tender leaves are blush-red, changing to deep green as they become older. \$2 each.



Hardy Lily—Marliac Rose

Masaniello. An exquisite shade of pink. The plant is unusually strong growing and blooms freely. \$2 each.

Morning Glory. A beautiful Nymphaea of our own introduction. The color is a delicate shell pink, almost white at the petal tips, shading deeper toward the center of the flower; fragrant. \$2 each.

Neptune. An attractive combination of rosy pink flecked on white, deepening the shading from the tip to the base of the petals, and from the edge to the center of the large cup-shaped flowers. \$3 each.

Odorata, W. B. Shaw. The fragrance of the blooms, added to their rich rose color, makes this one of the most attractive hardy Nymphaeas. It produces flowers almost continuously. \$1 each.

Pink Opal. A new deep pink variety which has proved its value. The buds are almost round, opening into a flower with comparatively short petals, and having a distinct value for cutting. \$1.25 each.

Rose Arey. This variety seems to be in bloom all the time, and the dark pink color of the blooms is very effective. The plants make a strong, heavy growth. \$1.75 each.

Rene Gerard. One of the finest of all hardies. Has large blooms 8 to 10 inches across. Many rosy crimson petals wide at base and tapering to waxy points. Stamens are intense ochre yellow which enhances the coloring of the petals making this variety one of the most desirable of the newer creations. \$4 each.

Tuberosa Rosea. The blooms are a delightful shade of pink, usually 4 to 5 inches across, and borne well above the water, making them very desirable for cutting. Plants are vigorous in growth and bloom freely. \$1 each.

William Doogue. Delicate pink blooms, with a fragrance which renders them doubly attractive. Plant blooms continually, and the splendid, cup-shaped flowers, 5 to 6 inches across, form a desirable addition to any pool. \$2 each.

Notice:

We will have large specimen plants of many varieties of Water Lilies growing in pails or large containers, priced according to size and variety. They can be planted successfully all summer, and will give immediate effect.



Hardy Lily—Attraction



Hardy Lily—Paul Hariot

Red Water Lilies

Atropurpurea. A gorgeous variety with large dark crimson blooms, very gracefully incurved petals, golden yellow stamens. Leaves deep green on top and purplish red beneath. \$4 each.

Attraction. The color of this superb variety is deep red, tinged with rose, and the sepals are white, striped with color of the flower. This is easily the largest hardy Water Lily in cultivation, as it will frequently produce blooms 8 inches across. \$3 each.

Escarboucle. A very beautiful large flowering variety. Petals vermilion red with somewhat darker vermilion red stamens; sepals streaked with red, a free bloomer. \$4 each.

Gloriosa. This can well be called the most satisfactory Water Lily. It is the earliest to bloom, and continues to flower until late summer, producing more blooms than any other sort. In the spring the flower is colored a deep carmine, which becomes darker as the season lengthens. The blooms are perfect in form, and 4 to 6 inches across. \$2.50 each.

James Hudson. An exceptionally fine variety, large tulip shaped blooms; petals sharp, a rare red coloration with mauve reflection. \$8 each.

James Brydon. An unusual rosy crimson flower, beautifully cup shaped and of free blooming habit. The foliage is handsome. \$2.50 each.

Laydekeri purpurea. Deep rose-crimson with extremely brilliant orange-red stamens. \$2 each.

Robinsoni. \$2 each.

Every Garden May Have Water Lilies

Water Lilies need no attention after planting, other than to see that the pool or tub has an ample depth of water. If planted in a natural pond, the tubers may be sunk in the soft bottom; if in a pool or tub, the tubers should be put in a box of soil (about 2 feet square and 1 foot deep), cover the soil with an inch or so of clean sand, then fill with water.

Yellow and Copper-bronze Water Lilies

Aurora. When the flowers first open they are a creamy yellow tinted with rose, which gradually changes to a dark red by the third day. A small plant, suitable for tub culture. **\$1 each.**

Comanche. A strong growing variety and the finest of the changeable types. The prevailing color the first day is apricot, deepening later to a rich copper-bronze, streaked with red. **\$2 each.**

Indiana. This brilliantly colored and prolific type changes from yellow-orange to bright coppery red. Leaves heavily blotched, showing little of the olive-green through the dark maroon shading. **\$1.50 each.**

Marliacea chromatella. Medium sized flowers, usually 4 to 6 inches across, bright yellow, with stamens somewhat deeper in color. Leaves green, mottled brown. One of the best yellows and a most satisfactory Water Lily. Best seller on the market today. **\$1 each.**

Paul Hariot. Certainly one of the very best varieties, and one of the most beautiful of the hardy Lilies. Petals are clear yellow, shading to red toward the center of the flowers and at the base of the petals. The plants bloom almost continuously, and are most satisfactory for planting in home grounds. **\$2 each.**

Phoebus. In color, shades between copper-bronze and yellow. Good sized flower. **\$3 each.**

Sioux. A very choice and desirable variety; large rich copper yellow colored petals changing with age to a yellow red. Deep yellow stamens. Beautiful bronze-green leaves lightly spotted with deep brown. **\$1.50 each.**

Solfatare. Changeable brassy pink. **\$2 each.**

Sunrise. The name suggesting its early opening. A burst of beautiful large clear yellow flowers 8 to 10 inches across. The great profusion of long curved and delicately crinkled petals around lemon yellow stamens. One of the best hardy lilies. The blooms are gracefully carried well above the water. **\$3 each.**

Tropical Water Lilies

Blue, Lavender, Purple, Red, White, and Pink.

TROPICAL Water Lilies, or Nymphaeas, have many desirable qualities. Although they are set out late in the season, usually June, they make such remarkable growth that within several weeks blossoms appear, and continue in size and numbers until heavy frosts destroy the foliage. As cold does not cause them to become dormant, the blooming season closes much later than that of the hardy varieties. Five months is a fair average in northern states, lengthening in the South, and in indoor pools, to the full year where the temperature averages 65 to 70 degrees. The plants are remarkably adaptable and may be made to produce 3 inch flowers in a bucket of water, or 12 inch flowers and a 6 foot leaf spread when planted in a large box in a sunny pool. The blossoms are carried a foot or more above the surface of the water, in pleasing contrast to those of the native or hardy varieties, and many of them possess a lasting fragrance.

The effect of sunlight on the tropical lilies is somewhat unusual. Some open in the morning and close late in the afternoon, like the hardy Nymphaeas, and others open at dusk and remain open until the following noon or on cool, cloudy days they may scarcely close at all. These types are designated as "day blooming" and "night blooming" respectively, although the latter name does not truly indicate the generous flowering habit of this most satisfactory of all Water Lilies for those who have little time to enjoy their gardens in the heat of the day. The blossoms of both day and night bloomers last about five days, and as there are often three or four open at the same time from midsummer until frost, the tropical Nymphaeas are justly considered the aristocrats of the water garden.



Day Blooming—General Pershing

Day-blooming Tropicals

August Koch. Viviparous blue with lilac-purple shading. **\$2 each.**

Bluebird. A real blue. Viviparous. Its pure exquisite blue color, full petaled and cup-shaped blooms which rise well above the surface of the pool in large numbers, has made it the most desired of the blue lilies. **\$3 each.**

Colonel Lindbergh. Exceedingly large flowers, deep blue in color and distinctly fragrant. The blooms are carried a foot or more above the water. The leaves are oval, dark green, flaked with brown on the upper surface and purple and brown on the under side. **\$2 each.**

Dauben. The best known viviparous Lily. Produces small blue flowers in great profusion. The small leaf plants frequently bloom while still attached to parent plant. Fine for tub or aquarium culture. A continuous bloomer. **75c each.**

General Pershing. One of the finest novelties of recent years. Very large, fragrant flowers of pure, warm pink, unlike any other Day-blooming Water Lily. Very free flowering and one of the most highly prized. **\$2.50 each.**

Janice. A new pure white, bell or cup-shaped Water Lily originating at Independence. We consider it one of the finest day-bloomers. **\$2.50 each.**

Mrs. C. W. Ward. Petals rich rose-pink, illumined by a mass of golden stamens. Flowers are borne well out of the water. **\$1.50 each.**

Mrs. Edwards Whitaker. The largest and most striking of the day-blooming tropical Lilies. Its blooms are frequently over a foot in diameter and are produced in quantity. The color is lavender-blue, which becomes paler as the bloom ages. Petals slightly rounded at the tips and quite numerous. **\$2 each.**

Mrs. George H. Pring. A new and novel type that produces numbers of large, fragrant, white flowers with pointed petals. **\$1.50 each.**

Mrs. Robert Sawyer. Light pink. Plant is a strong grower and carries many flowers at one time. **\$2 each.**



Night Blooming—Frank Trelease

Night-blooming Tropicals

The night-blooming or, more accurately, night-opening Nymphaeas, are derived from very ancient parentage. To the Egyptians, they were known as the Lotus, and from the records remaining to us we may trace the important part they played in the life and religion of this mystic race. Opening at dusk, these flowers are the guardians of the night, not closing again until the sun is high in the heavens; and if the sky be overcast, the vigil continues through the whole day, perhaps, and the following night until the wayward sun returns, or the bloom's allotted span of life (five days) has passed.

Bisset. Rose-pink flowers, frequently 10 inches in diameter; petals broad, concave, giving a cup-shape effect; deep orange stamens. **\$1 each.**

Dentata. Flowers pure white, with golden yellow stamens. They are large and open out flat. **\$1 each.**

Dentata magnifica. Similar to the preceding in color, but because of selection the blooms are very much larger. **\$1.50 each.**



Day Blooming—Panama Pacific

Mrs. Woodrow Wilson. Lavender-blue. Plants of medium growth and adapted to tubs and small pools. **\$1.50 each.**

Panama-Pacific. Flowers deep royal purple, with yellow stamens. The buds are green-bronze, flaked with red-brown, and the petals edged with red. Like the other viviparous Lilies, it blooms freely and perpetually in the proper environment. **\$1.50 each.**

Pennsylvania. Deep blue flowers a foot across and produced freely; sepals marked with purple lines and dots. The leaves are slightly speckled with brown above; beneath, the ground color is red-purple at the edge, shading to pale green centers. **\$2 each.**

William Stone. Rich violet-blue, shaded amaranth. **\$1.50 each.**

Zanzibariensis. Flowers are deep purple, some 6 to 8 inches across; fragrant. **\$2 each.**

Zanzibariensis azurea. Similar to the preceding, except that the flowers are lighter in color and a trifle more open. **\$1.50 each.**

Zanzibariensis rosea. General characteristics of this plant are the same as the above, with the exception of the colors, which are in various shades of rose. Opens earlier in the morning than other sorts. **\$1.25 each.**



Night Blooming—Bisset

Dentata superba (Juno). It would seem that perfection in white Water Lilies has almost been achieved in this variety. It probably produces the largest flowers of any of the night-blooming tropicals. **\$2 each.**

Devoniensis. Bright rosy red. Several flowers, from 8 to 10 inches in diameter, are produced at one time, and carried on stems well above the foliage. **\$1 each.**

Frank Trelease. Dark crimson, with deep reddish brown stems. Flowers are from 8 to 10 inches in diameter. **\$1.50 each.**

O'Mara (Omarana). Deep rose-red petals which are marked by a white stripe through the center; stamens orange-red. **\$1 each.**

Rubra rosea. Brilliant rosy carmine, with reddish brown stamens. **\$1 each.**

Sturtevant. Bright pink, flushed with red. A valuable variety for large pools and ponds. **\$1.50 each.**

MIXED VARIETIES. There are always some of the Tropical Lilies becoming mixed, which we are not sure of, and we will sell these unnamed. **75c each, \$6.50 for 10, \$50 per 100.**

SEEDS

We have a limited amount of seed of the Tender Water Lilies, mixed varieties, at **50c per pkt.** Also, the Sacred Lotus seed in separate colors, Pink, White and Yellow, at **50c per pkt.**

Victoria seed, **6 for \$1.**

Do not fail to see the tropical birds and rock gardens while at the nursery

FREE LOTUS

All orders for Water Lilies either Hardy or Tropical, and Shallow Water Plants, selected from this catalogue amounting to \$5 or more, and received by us before May 1, 1933, we will give you **FREE** one Pink Lotus (*Nelumbium Speciosum*) if you will mention same in your order.

This offer does not apply to any of the Special Collections or on anything else, only that mentioned above.

Nelumbiums--The Water Lotus of Ancient Worship and Lore

THIS is the Lily that was revered by the Egyptians. Designs patterned after its flowers are found upon many burial crypts and ceremonial instruments. These picture manuscripts show plainly that the Lily was held to be possessed of mysterious power, or perhaps that it was a symbol of the peace and beauty of human happiness in the life to come.

If you have Nelumbiums in your garden this year, you may be able to understand the suppliant attitude of the Egyptians toward the flowers. They have an unusual beauty, that is true, but is there anything about them which savors of the supernatural, any peculiarity of form or coloring that is never found in other flowers? That is a problem each flower enthusiast must answer for himself.

Album Grandiflorum. The fragrance of the flowers makes this sort particularly attractive. They are always quite large and pure white in color. **\$1.50 each; potted plants \$2 each.**



Victoria

Luteum. This variety, native to some of the states in the South and West, is commonly known as Water Chinquapin or American Lotus. The flowers are rich yellow; the plant seems entirely at home in the East. **\$1 each; potted plants \$1.50 each.**

Roseum Plenum. The blooms of this variety are always large and double. The color is deep pink. **\$2.50 each; potted plants \$3 each.**

Shiroman. This is easily the largest of the Nelumbiums. The flowers are snow white and decidedly double. The plants require no particular attention and are vigorous growers. **\$3 each; potted plants \$3.50 each.**

Speciosum. The Sacred Lotus of the Nile. It grows well under almost all conditions. Both flowers and leaves stand well above the water. Blooms are always large and fragrant; color is a rosy pink. The plant is hardy in the latitude of Cleveland and northern Ohio. **\$1 each; potted plants \$1.25.**

For the center of pools, the varieties of Lotus are especially desirable as they contrast well with the lower growing Water Lilies. If space is limited, they may be used as specimens in a large tub. They are not common, and therefore are always interesting.

VICTORIA—The Royal Water Lily. Absolutely unlike anything else in the aquatic genera, these Lilies may be instantly recognized by their large leaves, often more than 6 feet in diameter. The margins are turned up at the edges to a height of 3 to 8 inches, giving the leaves the appearance of huge pie pans. Blooms are produced at night, and are worthy of the leaves in size, since they attain a diameter of 12 to 18 inches. They open on two successive days late in the afternoon, changing in color from white to pink or red, and exhaling a rich fragrance somewhat similar to a pineapple. They require almost tropical heat to produce blooms, and most people grow them for the leaves alone. Practically indispensable for water gardens on large estates or in parks; because of their size they cannot be grown elsewhere. **\$10 each; seed 6 for \$1.**

Trout-pond Plants

Seldom do trout ponds or streams have enough plant life to meet the needs of the fish. Now it is easy—and inexpensive—to secure the necessary plants.

We grow pond plants in enormous quantities, grouping the varieties in a **Special Trout-pond Collection at \$6 per bushel.**

Visitors are welcome at all times. You will find recreation and pleasure in studying the Water Lilies, the Fancy Fish, the Swans, the Pheasants, and other interesting nature subjects.

Bargain Collections

OUR twenty years' experience in growing and selling lilies and plants for the Water Garden has enabled us to learn the wants of many of our customers. Some want only the hardy plants, others desire the tropical, whereas the majority are interested in both as the night bloomers and blue lilies come only in the tropical varieties. It is hard to get or have a real beauty spot without very many of the tropicals such as Papyrus, Water Taro, Floating plants, like water Hyacinths. So in making up these collections we have kept that in mind.

If your pool is only large enough for three lilies, it takes about so many of each of the other plants to complete the collection. A few plants growing up out of the water will break the flatness, and a few floating and other plants to be planted in the bottom will purify the water; they are known as Oxygenating plants.

COLLECTION 25

- Three hardy lilies for small pool. **\$2.**
 1 Albida, white
 1 W. B. Shaw, pink
 1 Chromatella, yellow

COLLECTION 26

- Three hardy lilies that will give you lots of bloom. This collection is for the ones who want something a little better. **\$4.50.**
 1. Gloriosa, red
 1 Chromatella, yellow
 1. Gladstone, white

COLLECTION 27

- Five hardy lilies. **All for \$4.50.**
 1 Odorata Gigantea, white
 1. Chromatella, yellow
 1 Sioux, copper shade
 1. W. B. Shaw, pink
 1 Tuberosa Rosea, rose

COLLECTION 28

- Five hardy lilies. **High grade collection for \$12.**
 1 Attraction, red
 1 Chromatella, yellow
 1 Gonnere, double white
 1 Colossea, light pink
 1 Rose Arey, dark rose

COLLECTION 29

- Hardy lilies and lotus for large pool, for **\$9.50.**
 1 Tuberosa Maxima, white
 1 Tuberosa Rosea, pink
 1 Sioux, copper red
 1 Chromatella, yellow
 1 Mark Hanna, flesh
 1 Odorata Gigantea, white
 1 Helen Fowler, pink
 1 Laydekeri Purpurea, red
 1 Pink Lotus
 1 Yellow Lotus

COLLECTION 30

- Real beauties for **\$19.50.**
 1 Gloriosa, red
 1 Comanche, copper
 1 Gonnere, double white
 1 Paul Harriot, watermelon pink
 1 Lotus, double red
 1 Marliac Chromatella, yellow
 1 Gladstone, large, white
 1 Colossea, light pink
 1 Vesuve, dark red
 1 Lotus, pink

THE FOLLOWING COLLECTIONS CONTAIN BOTH TROPICAL AND HARDY LILIES

Shipable June 1

COLLECTION 31—\$2.25

- 1 Rubra Rosea, red night bloomer
 1 Dauben, blue day bloomer
 1 Marliac Chromatella, yellow, day bloomer

COLLECTION 32—\$4

- 1 Dentata Superba, white night bloomer
 1 Mrs. C. W. Ward, pink
 1 Gladstone, white

COLLECTION 33—\$7.50

- 1 Colossea, flesh
 1 Chromatella, yellow
 1 Devoniensis, red night bloomer
 1 Panama-Pacific, purple
 1 George H. Pring, white

COLLECTION 34—\$4.75

- 1 Dentata, white night bloomer
 1 Dauben, blue
 1 Chromatella, yellow
 1 Helen Fowler, pink
 1 Sioux, bronze-red

COLLECTION 35—\$2.25

- 1 Sioux, bronze-red
- 1 William Stone, blue

COLLECTION 36—\$18

- 1 Mrs. Ed Whitaker, blue
- 1 Dentata Superba, white night blooming
- 1 Panama-Pacific, purple
- 1 Gloriosa, red
- 1 Chromatella, yellow
- 1 Gonnere Double, white
- 1 Mrs. A. S. Buskirk, double pink

COLLECTION 37—\$6.00

- 1 Colossea, flesh
- 1 Pennsylvania, blue
- 1 Devoniensis, red night bloomer

COLLECTION 38—\$6

- 1 Colonel Lindbergh, blue
- 1 C. W. Ward, pink
- 1 Gladstone, white
- 1 Frank Trelease, red night bloomer
- 1 Pink Lotus

**THE FOLLOWING COLLECTIONS ARE MADE
UP OF ALL TROPICAL LILIES**

Shipment after June 1st

COLLECTION 39—\$1.75

- 1 Dauben, blue
- 1 Dentata, white night bloomer

COLLECTION 40—\$2.50

- 1 Rubra Rosea, red
- 1 Mrs. Pring, white

COLLECTION 41—\$4.50

- 1 Mrs. Whitaker, blue
- 1 Dentata Magnifica, white night bloomer
- 1 Mrs. C. W. Ward, pink

COLLECTION 42—\$4.50

- 1 William Stone, blue
- 1 Mrs. Pring, white
- 1 Mrs. Sawyer, light pink

COLLECTION 43—\$5.50

- 1 Dentata, white night blooming
- 1 Frank Trelease, red night blooming
- 1 Dauben, blue
- 1 Mrs. Pring, white
- 1 Zanzibariensis Rosea, pink

COLLECTION 44—\$8

- 1 Dentata Superba, white night blooming
- 1 Colonel Lindbergh, blue
- 1 Sturtevant, pink night blooming
- 1 Panama-Pacific, purple
- 1 C. W. Ward, pink

COLLECTION 45—Best ten tropicals, \$20

- 1 Dentata Superba, white night blooming
- 1 Devoniensis, red night blooming
- 1 August Koch, blue
- 1 Mrs. Whitaker, light blue
- 1 Mrs. A. S. Buskirk, pink, new
- 1 Panama-Pacific, purple
- 1 Mrs. Pring, white
- 1 General Pershing, pink
- 1 H. C. Haarstick, rose night blooming
- 1 Mrs. Sawyer, light pink

COLLECTION 46—Tropicals and Lotus, \$6.50

- 1 Rubra Rosea, red
- 1 Pennsylvania, blue
- 1 Janice, white
- 1 Pink Lotus
- 1 Yellow Lotus

COLLECTION 47—\$2.50

- 1 Dauben, blue
- 1 Frank Trelease, red night blooming
- 1 Pink Lotus

COLLECTION 48—\$3.50

- 1 Mrs. C. W. Ward, pink
- 1 William Stone, blue
- 1 Pink Lotus



A Few Lily Ponds at Buskirk's

A Rock Garden

2 Nice Pools, All for \$12.50

Get an old barrel, saw in half, or two tubs.

Get a few stones.

Place on pile of earth excavated as background.

Fill tubs about one-third full or rich dirt. Put 1 inch of sand over same and fill with water.

Then send to Buskirk's and you will receive the following plants, lilies, fish and scavengers (tender water plants shipped after June 1st).

You can have and enjoy the rock garden and pool like the photo at right.



A Water Nymph

Special Introductory Offer

Three Bargains for Garden or Pool

COLLECTION A Plants for Rockery

- 2 Ferns
- 6 Sempervivum assorted
- 3 Festuca glauca
- 3 Sedum sarmentosum
- 3 Myosotis
- 3 Sedum stoloniferum
- 3 Sedum spectabile
- 3 Arabis alpina
- 3 Dwarf Iris
- 3 Aster, Mauve Cushion
- 1 Eulalia japonica variegata
- 3 Variegated Ribbon Grass
- 1 Variegated Sweet Flag
- 1 Yucca
- 3 Phlox subulata

Regular price, \$9.25

Special Collection, \$6.15

No exchanges made

COLLECTION B

Plants for Water Garden

- 1 Water Lily, Blue
- 1 Water Lily, Pink
- 1 Water Lily, Marliacea Chromatella, Yellow
- 1 Pickerel Rush
- 2 Water-Hyacinths
- 3 Parrot's Feather
- 3 Oxygenating Plants
- 3 Floating-Heart
- 1 Spiral Palm

Regular price
of 16 plants, \$5.25

Special Collection, \$4

No exchanges made

COLLECTION C

Fish and Scavengers for Two Half-Barrels

- 1 pair Goldfish, 6 to 8 inches
- 1 pair Shubunkins, 3 to 5 inches
- 6 Japanese Snails
- 6 tadpoles
- 2 Clams
- 6 Trumpet Snails
- 1 pair Frogs (green) or Geo. Turtles
- 1 Shipping-can

Regular price, \$5.25

Special Collection, \$4

**Rock Garden and Water Garden Collections Combined,
for Two Half-Barrels Set in Ground, Collections A, B, C
\$12.50**

Buskirk's Crystal Pool

We have had hundreds of inquiries for an inexpensive portable pool, and after many years of scientific research and development we are now ready to announce the Buskirk Crystal Pool.

Buskirk Crystal Pools are made of specially fine mesh copper wire, completely impregnated with rubber and will give many years of service. Can be left outdoors during the winter months without harm. This pool comes to you complete and can be installed by a child in just a few hours' time. Size 3x5 ft., \$17. 3½x7 ft., \$19.

SIMPLE INSTALLATION

A Child Can Install It

Unpack the pool, place the tubing together at the corresponding **Red Marks** (this is now the

shape of your Crystal Pool), lay this on the ground at the exact place you wish your pool, drive the stakes on the outside of the tubing at each white mark to a depth that you wish the top of your pool, place an aluminum cap on top of each stake. Lay the assembled tubing on these and you can now level the rim by raising or lowering the stakes and adjusting the washers.

Remove the earth close inside the stakes to a depth of twenty inches from the top, disassemble the tubing, insert this in the rim of the pool, place on the stakes, fill with water and your installation is complete.

Collections B and C above, are appropriate for this pool.

Shallow Water Plants

A NATURAL pond will have an area of shallow water where a profusion of flags, rushes, reeds and small flowering plants delight the eye. Your pool will be the more attractive when provided with a place where water, two to eight inches deep, will support the same growth for a center piece, corner ornaments, or an aquatic flower border.

Giant Arrowhead (*Sagittaria sagittifolia*). Distinctive leaves shaped as the name indicates, and standing 1 to 3 feet above water. Flowers freely in a series of white spikes. 25c each.

Double Arrowhead. \$1.00 each.

Great Bulrush (*Scirpus lacustris*). A very interesting Rush 3 to 9 feet high. 25c each.

Weeping Bulrush (*S. cernuus*). A dwarf variety growing from 3 to 12 inches high. 3 for 50c.

Cat-tail (*Typha latifolia*). One of the favorite native swamp plants. 3 for 50c.

Cat-tail (*T. angustifolia*). A tall, slender variety. 3 for 50c.

Floating Heart (*Nymphoides peltatum*). This plant has leaves like the nymphaeas and produces brilliant yellow flowers quite freely. It is hardy and will go well with almost any combination. 3 for 50c.

Flowering Rush (*Butomus umbellatus*). A hardy plant with peculiar three-sided leaves in graceful clumps. Attractive pink flowers are borne aloft on round stems. Fine for naturalizing in a pond. 50c each.

Sweet Flag (*Acorus calamus*). The well known Sweet Flag. 3 for 50c.

Variegated Sweet Flag (*A. calamus variegatus*). A beautiful variegated Sweet Flag. 25c each.

Four-leaf Water Clover. A four-leaf Clover which sends up a luxurious growth of aerial leaves. 2 for 25c.

Parrot Feather (*Myriophyllum prosperpinacoides*). A very interesting little aquatic plant. Will grow in 12 to 15 inches of water or in moist soil equally as well. Has feather-like foliage which always attracts attention. 3 for 50c.

Pickerel Rush (*Pontederia cordata*). The blue flowers of this plant have made many friends, particularly as they are produced freely. 2 for 25c.

Primrose Creeper (*Jussiaea repens*). A rapid-growing, partially submerged vine with waxy green leaves and yellow flowers. 2 for 25c.

Purple Water Hyacinth (*Eichhornia azurea*). Plants of creeping habit, the runners floating out upon the water. Flowers of rich purple with delicately fringed petals. 50c each.

Lizard's Tail (*Saururus cernuus*). A hardy bog plant growing 2 to 3 feet above the water. Blooms from July to August. Small, fragrant



Aquarium Plants

flowers are produced in dense terminal spike, the upper part arching gracefully. 2 for 50c.

Wild Calla (*Calla palustris*). A rather small plant with white flowers. In many respects it resembles the common house Calla, or Zantedeschia. 25c each.

Water Plantain (*Alisma plantagoaquatica*). A plant with heart-shaped leaves standing about a foot above the water, and spikes of white flowers. 2 for 25c.

Water Cress. Thrives in sun or shade. Edible; hardy. 2 for 25c.

Water Poppy (*Hydrocleis nymphoides*). Flowers bright yellow similar to those of annual poppy, and are carried almost the whole season. 2 for 25c.

Wild Rice (*Zizania aquatica*). The importance of Wild Rice as a food for water-fowl cannot be over-emphasized. Easily grown in shallow water and is decidedly ornamental, as it shoots up rapidly and makes a growth of 5 to 10 feet. 2 for 25c; \$1.00 doz.

NO. 50—AQUATIC PLANT COLLECTION For Small Pools Without Lilies, \$3.50

- 25 Plants—Assorted
- 2 Tall Growing Plants for center
- 10 Medium Plants
- 8 Oxygenating Plants
- 5 Floating Plants.

NO. 51—MEDIUM SIZED POOL COLLECTION, \$5.00.

- 6 Shallow Water Tall growing Plants—Assorted
- 12 Medium and Low Growing Plants—Assorted
- 10 Oxygenating Plants
- 6 Floating Plants

NO 52—LARGE POOL COLLECTION—WITHOUT LILIES, \$10.00.

- 25 Tall Growing Plants
- 25 Medium Growing Plants
- 25 Oxygenating Plants
- 10 Floating Plants

Marsh or Bog Plants

JUST at the edge of a pond you will need clumps of ornamental and semi-tropical plants, roots deep in the rich wet loam but with crowns and stems preferring the air and sunlight. In a concrete pool you may have a ledge or box of soil partially immersed, or you may prefer to put individual plants in flower pots set so that the soil comes above the water level. The thing to remember is that Marsh plants like wet feet but do not like to swim or wade. Many are excellent house plants and will grow indoors if the pot is set in a saucer kept full of water.

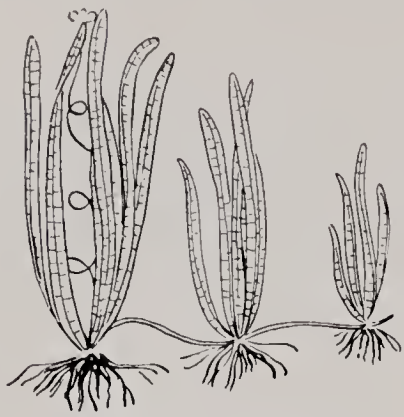
- Butterfly Lily** (*Hedychium coronarium*). The masses of fragrant, pure white flowers, looking much like large white butterflies, are borne in large, terminal clusters, on every stalk all summer and fall. 50c each.
- Butterfly Lily** (*H. chrysoleucum*). Similar to above, except flowers have a yellow blotch in center of the largest petal. 50c each.
- Water Arum** (*Peltandra Virginica*). A hardy aquatic with graceful, spear-like leaves and calla lily flowers. 25c each.
- White Calla Lily** (*Zantedeschia aethiopica*). A well known house plant that can readily be grown in moist places at the edge of the pool. Flowers pure white. \$1 each.
- Yellow Calla Lily** (*Z. Elliottiana*). Similar to the preceding but with yellow flowers. \$1 each.
- Forget-me-not** (*Myosotis scorpioides*). Small blue flowers with golden centers; dark green foliage. Very attractive along a stream and will grow equally well in water or on the border. 3 for 50c.
- Iris Pseudacorus** (Yellow Flag). A tall, sword-leaved plant bearing broad yellow flowers of the Japanese Iris type. Valuable and attractive. 25c each.
- Iris Pseudacorus gigantea**. A giant-flowered form of Pseudacorus. Will attain a height of 7 feet when growing conditions are right. 50c each.
- Iris Pseudacorus alba**. Very rare white form of Pseudacorus. \$2 each.
- Iris versicolor** (Blue Flag). Like the yellow variety, only the flowers are blue and it is not such a rank grower. 25c each.
- Iris versicolor rosea**. A variant form of Versicolor in a striking red color. Very rare. \$2 each.
- Japanese Water Taro** (*Colocasia violacea*). An ornamental, broad-foiled plant thriving in wet soils. Foliage shading to violet. \$1.50 each.
- Japanese Water Taro** (*C. multiflora*). Large deep green foliage. Small, 50c each; large, \$1 each.
- Japanese Water Taro** (*C. antiquorum illustris*). Green foliage marked with purple or black spots. Small, 50c each; large, \$1 each.
- Lobelia cardinalis**. Rich fiery cardinal flowers. 25c each.
- Lobelia syphilitica**. Similar to the above, but the flowers are blue, streaked with white. 50c each.
- Marsh Marigold** (*Caltha palustris*). Bright yellow flowers. In many places known as the "Cowslips." 25c each.
- Papyrus**. The Egyptian water plant with stems from 5 to 8 feet high, surmounted with a tuft of thread-like leaves. Small, 25c each; large, 50c each.
- Spiral Palm**. Similar in growth to the Umbrella Palm, but produces greenish white flowers. Plants from 3-inch pots. 25c each.
- Umbrella Palm** (*Cyperus alternifolius*). Long, slender, drooping foliage at the top of a stem from 2 to 3 feet high. Grows readily when the roots are in moist soil or even when completely submerged. Plants from 3-inch pots. Small, 25c each; large, 50c each.
- Variiegated Umbrella Palm**. Foliage marked with center stripe of white. Small, 50c each; large, \$1 each.
- Dwarf Umbrella Palm**. Similar to the common variety, but with shorter stems. 25c each.
- Water Canna** (*Thalia dealbata*). Resembles a canna in growth, with purple flowers all summer. 50c each.

Submerged or Oxygenating Plants

WHATEVER the size or style of the pool, you will wish the water to be pure and clear. Plants growing under water either absorb the impurities or release oxygen to destroy them. Oxygenating plants are indispensable when fish are present as they provide a perfect balance for the animal life.

The plants listed below are equally suited for ponds, pools or indoor aquariums. They will grow without planting, but all do better if rooted in soil, in shallow water or in the lily boxes.

- Vallisneria spiralis**. Common names, "Ribbon Grass, Tape Grass, or Italian Vallisneria." Most popular of the aquatic plants used in planting an aquarium, and as it multiplies very rapidly, it soon produces a dense growth which gives off an abundance of oxygen. The leaves are green and grow straight from the sand at the roots to the surface of the water, producing a very decorative effect. The plant does best in warm water, therefore is most desirable in tropical aquariums.
- Sagittaria gigantea sinensis**. Common name, "Giant Sagittaria." This plant ranks highest as an oxygenator. The leaves are dark green and are broader and tougher than vallisneria. Bears clusters of white flowers above the water in summer.
- Sagittaria natans**. Produces long, slender, light green leaves, and spear-shaped floating leaves. Flowers like *Sagittaria gigantea sinensis*.
- Sagittaria subulata**. Common name, "Dwarf Sagittaria." This plant grows to a height of about 2 inches and is very desirable for small aquariums and for planting in the foreground in large tanks. Leaves narrow, thick and dark green.



Vallisneria spiralis



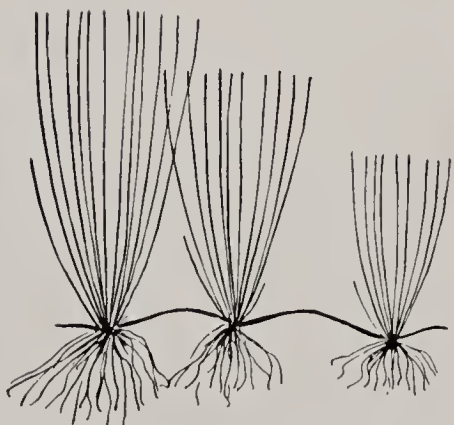
Giant Sagittaria



Sagittaria subulata



Ludwigia



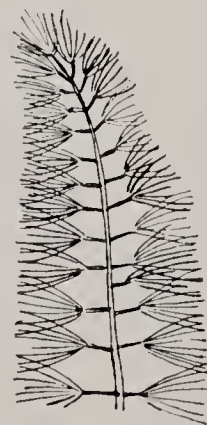
Hair Grass



Anacharis



Cabomba



Myriophyllum



Salvinia

Cultivated Anacharis. Claimed by some aquarists to rank highest as an oxygenator, it is also one of the most popular aquarium plants. It is a rapid grower, obtaining a length of several feet. Stocks may be broken apart, and, when planted in sand, readily take root, producing new plants.

Wild Anacharis. Without doubt the best oxygenating plant for the lily pool, but is not suitable for the aquarium as it grows eight months of the year only, and when decaying in the aquarium may produce undesirable results.

Elodea. Floats in a dense mass, affording shelter for baby fish. Very good as an oxygenator and the breeding tank will require no other plant. This floating plant may be moved from one aquarium to another without any setback.

Cabomba caroliniana. Common name, "Fanwort." A bright green plant with a stock like a straw, from which grow fan-like leaves. A good food for goldfish, providing a laxative to their diet. The most common aquatic plant sold in pet shops.

Myriophyllum. Very similar to cabomba and used extensively for goldfish to spawn their eggs on in the spring. The leaves are very fine and make a good nest. A good plant for the lily pool.

Ludwigia. There are a large number of species of Ludwigia, but the best variety comes from South America. It is desirable for its decorative value. The under side of the leaves is red, contrasting with the other plants.

Eleocharis acicularis. Common name, "Hair Grass." The dark green leaves look like bunches of hair growing out of the sand. A small clump in front of other plants is attractive.

Southern Spatterdock. A beautiful light green aquatic plant which has become very popular as an ornament. The leaves are large, and when about 6 inches long are 1½ inches wide.

Herpestis. One of the newer introductions. The stem is large and the leaves are oval. When growing above water it has clusters of purple flowers, with a pleasing fragrance.

Lysimachia. A light green plant with round leaves. A desirable ornamental for aquarium or pool.

Potamogeton crispus. One of the best plants for lily pools as it propagates rapidly in rich soil. The leaves are various shades of green and red.

Cryptocoryne. This is the most expensive of all desirable oxygenating plants. Although it was imported a number of years ago from Europe, it propagates so slowly that it is seldom offered for sale. The plant is a desirable size, with short, broad dark green leaves.



Southern Spatterdock



Lysimachia



Azolla



Duckweed

	Each	Doz.
Anacharis (<i>Elodea canadensis</i>).....	\$.15	\$1.00
Cabomba (Fanwort) .....	.15	1.00
Myriophyllum .....	.15	1.00
Herpestis .....	.15	1.00
Ludwigia .....	.15	1.00
Sagittaria sinensis .....	.15	1.00
Sagittaria natans .....	.10	.75
Sagittaria subulata .....	.05	.40
Vallisneria .....		.50
Lysimachia .....	.15	1.00
Potamogeton .....	.15	1.00
Southern Spatterdock .....	.25	1.25
Eleocharis (Hair Grass).....	.25	
Elodea .....	.25	
Cryptocoryne	1.00	

8 Varieties of oxygenating plants
in collection for only..... **\$1**

COLLECTION 28A. For either aquarium or small pool; state when ordering what you want it for. \$1.

COLLECTION 29A. Enough for medium sized pool when 5 lilies are used. \$2.50.

COLLECTION 30A. Oxygenating plants for large pool, assorted in many varieties, our selection. \$6 per 100.

Other Plants Needed in the Aquatic Garden

THE Water Lily is the queen of water flowers and like a queen should be given harmonious surrounding. Other aquatics are needed to make up the royal procession, where their color, form and grace will enrich the setting and contribute to the spirit of the garden. Plan to make the garden of your dreams complete by having in it some of these other subjects so necessary to finish the picture. We list them by groups and offer suitable collections in every case to help you choose fitting companions to your lilies.

Floating Plants

First we think of the surface of the pool. Perhaps the water is deep and the sides offer no lodging for rooted plants. This does not matter, however, for some of the finest aquatics will grow and bloom merely floating on the surface, deriving nourishment from the air and water. In nature they drift to shallow water where the roots soon anchor and growth is very rapid. In other words, Floating Aquatics are always at home in any pool.

Azolla (*Azolla caroliniana*). Small, crinkly, green plants which resemble miniature ferns in the pool. If exposed to bright sunlight, they turn a dark, rich red. **Portion, 25c.**

Duckweed (*Lemna minor*). Tiny plants about 1/4 inch in diameter, which float on the surface. Excellent food for goldfish. **Portion, 25c.**

Salvinia (*Salvinia braziliensis*). Dainty green leaves covered with tiny plant hairs which produce a velvety nap. They grow in a chain, and after seven or eight leaves are produced they divide into new plants. **Portion, 25c.**

Water Lettuce (*Pistia stratiotes*). The blue-green leaves form a rosette which resembles a head of lettuce. Will grow well in shade. **25c each; \$1 per doz.**

Water Fern (*Ceratopteris thalictroides*). A true Fern which floats on the water. As the leaves age, young plants spring out from their edges, gradually building up a large floating mass. **15c each; \$1 per doz.**

Water Hyacinth (*Eichhornia crassipes major*). The shiny dark green leaves project from 3 to 10 inches above the water, and the stems contain bulbs which are filled with air. Flowers are purple and are shaped like an ordinary hyacinth. The roots are long and bushy, making an ideal nest in which goldfish can spawn. **15c each; \$1 per doz.**

Water Snowflake. 25c each; \$2 per doz.

COLLECTION 25A. Collection of floating plants made up of 5 varieties, enough for small pool. \$1.

COLLECTION 26A. Enough for medium sized pool for \$2.

COLLECTION 27A. Large pool collection, 35 plants for \$3.

FREE LOTUS

With all orders for Water Lilies either Hardy or Tropical and Shallow Water Plants, selected from this catalogue amounting to \$5.00 or more, and received by us before May 1st, 1933, we will give you **FREE** one Pink Lotus (*Nelumbium Speciosum*) if you will mention same in your order.

This offer does not apply to any of the Special Collections or on anything else only that mentioned above.

The Aquarium

By G. W. DIETZ, Aquarist

AN EXTREMELY fascinating living picture. When you enter the living room on a dark, dull, winter morning, at the window is a beautiful bit of nature. The soft light from the electric globe, shimmering through the aquatic plants, reveals activity and life. The scene pleases you with a sense of its usefulness and brings to you those things that are worth while in life.

There the little fishes dash back and forth, urgently pleading for the morning meal, and seem to indicate their knowledge of your intentions. If food is dropped into the water, rivalry and strife begin when each fish tries to secure the most desirable morsels; each one tries to obtain his rightful share, or a little more. Isn't this very much like the attitude of the so-called more intelligent animals?

When feeding is over, the activities of their little world begin. Their personal difficulties must be settled, their love affairs carried on, and the nest-building undertaken. One cannot understand it all, but we know that it is interesting and that the glitter of the beautiful colors adds to the charm. Keeping these little friends happy is sufficient reward for the slight effort required. To study them and to make their little lives as natural as possible is a never-ending delight.

Every person should have a hobby. We think that the most fascinating hobby is collecting and studying life in water. An aquarium may brighten many an hour for a weary man; it is restful to the busy woman, and a continued source of pleasure to the children.

Erecting an Aquarium

Place the aquarium in the position where it is to remain. Be careful that the four corners rest on the stand, so that it will not rock, and also be sure that it is level. Cover the bottom of the aquarium with about 1½ inches of well-washed fine sand, then fill with water to about half its capacity. It is now ready to receive the plants, which may be set at the sides or the back, as you please. After the plants are in place add the fish and the snails, and fill with water to about 1½ inches from the top.

An attractive plan for planting is to have about 2 inches of sand at the back, sloping to 1 inch at the front; this causes the dirt and refuse to roll to the low place, where it may be easily removed. The plants should be placed around the sides and across the back, leaving a clear space in front where the fish can swim and feed.

A Balanced Aquarium

THE first question the beginner always asks of the aquarist is, "How often do I need to change the water?" The answer is, if the aquarium is properly balanced the water does not need changing. The water will not become stagnant—fresh water is added only to replace evaporation.

The governing principles are very simple. The fact is that the fish exhale carbon dioxide, which the plants use, breaking up the combination, retaining the carbon for food and returning oxygen to the water for the fish to breathe. Fish and plants depend on each other.

Next we must contend with bits of decaying food and plants, so we introduce a collection of scavengers to consume this, such as snails, tadpoles, and clams; chief among these are the snails. No balanced aquarium can be maintained without them.

Some plants are better oxygenators than others, and are named according to their value—Vallisneria, Anacharis, Sagittaria, Cabomba, Hair-grass, and Ludwigia. Most of the others are ornamental. There cannot be too many plants, as long as the fish have room to swim.

The number of fish to be placed in the aquarium depends on the species. Fish that live in cold water require far more oxygen than those that inhabit tropical pools. When goldfish are to be used, a satisfactory rule is one inch of fish (not including the tail) to a gallon of water. That is to say, a 10-gallon aquarium will properly accommodate ten fish 1 inch long or five fish 2 inches long.

Tropical fish are native of warm, shallow pools, where the water contains practically no oxygen. They may be crowded in a very small space and will do well when there are 6 inches of fish to the gallon. This, and the fact that they will reproduce in a small aquarium, is what makes them so desirable.

The exchange between plants and the fish has already been explained, but the plants, in order to do their part, require light. They remain healthy and grow only under the influence of sunlight, but too much light is not desired as it induces the growth of algae and small plant-life which turns the water a dark green. This water, however, is very beneficial to the fish; in fact, fish which were sick often become well and healthy when placed in green water.

A north window is the best summer location for an aquarium, and an east window in winter. An aquarium can always be set to one side of the south or west window.

Tropical Toy Fishes

A great number of varieties of fancy, brilliant hued Tropical Fishes are suitable for the aquarium, and as they will propagate in a small container, they afford a fascination for their owner and will always delight his friends.

“Tropical” is a name that is applied to fish that have been imported and will not stand the temperature of the water in outside pools in winter. Some of the delicate varieties require a temperature of 70 degrees or more. It will be

necessary to furnish heat for this type during cold weather. This can be done by immersing a common electric light bulb in the water; care should be taken that the metal to which the globe is connected does not touch the water. Have about an inch of the glass between the socket and water.

Nearly all Tropical Fish are very active, so it is advisable to keep the aquarium covered with a piece of glass; this also helps to retain the heat.

Aquariums

Each season sees the Aquarium growing in popularity. It is valuable from an educational point, as it gives an opportunity to study different types of animal and plant life at close range.

We carry a large stock of Aquariums on hand at all times, therefore your order will be filled promptly.

Handy Aquariums

No. 301. 10x6x7 inches. Welded steel frame; painted green. Holds about 2 gallons of water. **\$1.25 each, \$12 per doz.**

No. 302. 12½x7½x8½ inches. Welded galvanized steel frame; painted cream or green. Holds about 3 gallons of water. **\$2.50 each.**

No. 303. 14½x9½x11½ inches. Constructed same as No. 302. Holds 6 gallons of water. **\$4 each.**

Victor Aquarium

An Aquarium that will last a lifetime. Clear, double-strength glass; slate bottom; block aluminum feet; rigid, angle-drawn frame of polished aluminum. Readily kept bright and attractive looking in its natural finish. Shipped in wooden box, which guards against breakage.

Length inches	Width inches	Height inches	Gallons	Price
12½	6½	8½	3.....	\$ 3.75
14½	8½	10½	5½.....	5.50
20½	8½	10½	7½.....	7.50
24½	8½	10½	9.....	9.00
20½	10½	12½	11.....	10.00
24½	10½	12½	12½.....	12.00
20½	12½	14½	15.....	12.00
24½	12½	14½	18.....	13.00

Majestic Aquarium

We take pride in offering you this Aquarium. Its beauty must be seen to be appreciated. Made with a nickel-plated, heavy-angle steel band around the bottom and monel metal corners which will never rust. No metal band is used around the top; the bottom is an extra-thick piece of tested plate-glass; the sides and end glass are heavy plate with ground and polished edges. Some of the larger sizes contain glass almost ¾ inch thick. Where the glass joins they are anchored together so they cannot spread. This Aquarium is so constructed that it may be moved while filled with water without danger of leaking; in fact, we guarantee it from leaking for one year. If the Aquarium should accidentally become broken, you may have it repaired by us at a small cost. These Aquariums can be made any practical size or shape you may desire. We will be glad to quote you a price.

Standard sizes packed in wooden box for shipping.

Length inches	Width inches	Height inches	Gallons capacity	Price
16	8	10	5.....	\$ 6.00
20	10	12¼	10½.....	10.00
20	10	14¼	12½.....	11.50
24	12	14	17.....	15.00
30	10	12	15½.....	15.00
30	12	14	22.....	22.00
36	14	14	31.....	30.00

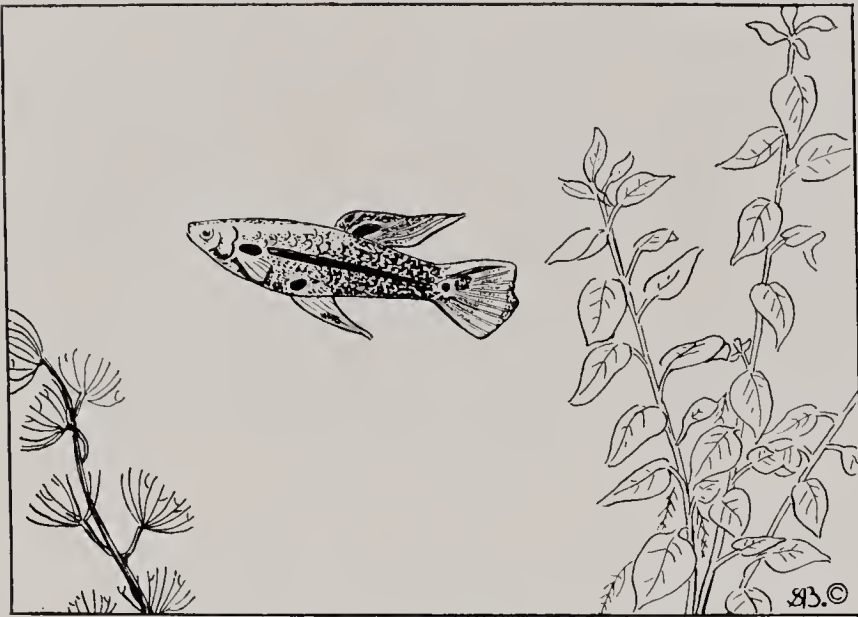
Can be equipped with an outlet connection for running water at a cost of \$2.50 extra.

Ornamental iron stands with vitrolite or white marble shelf and top can be furnished for Aquariums. Prices quoted on request

IMPORTANT

All Tropical Fish listed in our catalog are bred and raised in tanks in our greenhouses. The water used comes from Lake Erie and is practically rain water. You can expect good results with our fish in your aquarium, as it is convenient for you to supply them with rain water by catching it in crocks or pails. Never use water from a spring or deep well, as it may contain mineral which would be detrimental. Also do not use water which has fallen on a tar roof. Whenever introducing new specimen which have been living in different water than that used in your aquarium, be sure to isolate them for a period of two weeks, as they may develop some contagious disease from the change, and cause serious trouble with your healthy fish.

Viviparous Fishes



Lebistes Reticulatus or Guppyi

Lebistes Reticulatus or Guppyi

Common name, "Rainbow Fish." This is the best known of the tropical fish, and is considered best for the beginner, as it stands a large amount of abuse. It will do well and raise large families in a temperature ranging from 50 to 100 degrees Fahrenheit. Its young are born alive; the ova are hatched within the female's body. The little fellows are capable of looking out for themselves when only a few minutes old, and so have a fair chance to multiply. Fish which bear their young alive are known as "viviparous."

One female Guppyi will bear from 16 to 60 young every six weeks. The males have an extraordinary variation of color, and it is practically impossible to find two alike. They are well called "Rainbows." A native of South America. 25c per pair; \$1 for 6 pairs; \$7 per 100.

Xiphophorus Helleri

Common name, "Swordtail." The Swordtail is next in popularity to the Guppyi, and the peculiar swordlike tail of the males makes this fish very attractive. They are viviparous, bearing their young alive, the same as the Guppyi.

The sword of the male may be green or orange, edged with black, and the body has a greenish cast. A native of the streams of Vera Cruz and



Xiphophorus Helleri

the Rio Panuco River. Temperature 60 to 90 degrees Fahrenheit. \$1 per pair, \$4 per doz.

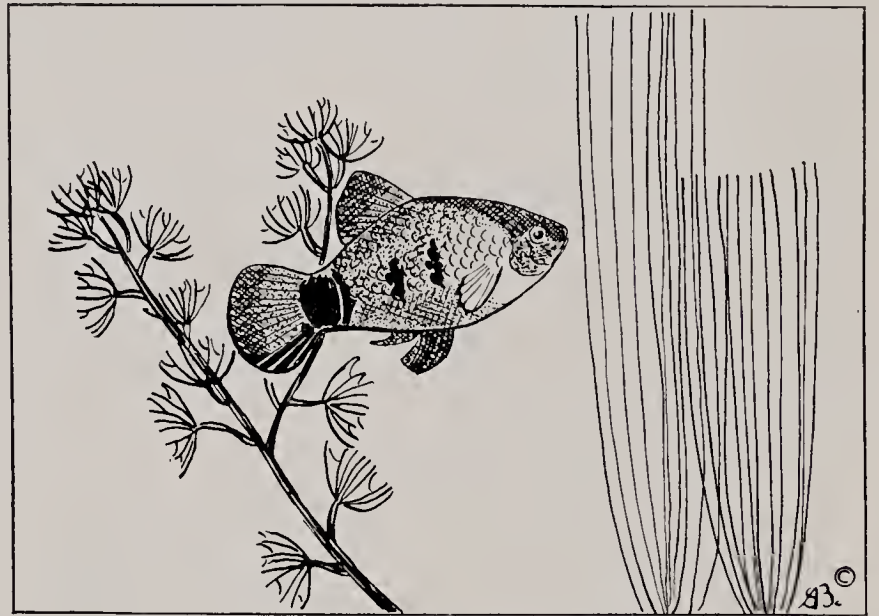
Platypoecilus Maculatus

Common name, "Moon Fish." In the countries of Central America frequented by the Swordtails are also found the *Platypoecilus*. The Platy resembles the Swordtail, but lacks the sword. These fish are very closely related and are easily crossed, thereby producing hybrids.

Like the Guppyi, they belong to the viviparous group. The first two or three rays of the anal fin of the male are modified and form a sexual organ, while the anal fin of the female is a full fin; this is the method by which the fish fancier tells the sexes.

At the base of the tail of the *Platypoecilus* is a dark crescent-shaped patch. Because of this mark the fish is known as "Moons."

Moon Fish are very easy to propagate. The dark spot at the anal of the female is caused by the presence of young fish. When the female has



Platypoecilus Maculatus

a distended abdomen, a brood of young fish may be expected. She should be placed alone in a small aquarium provided with plenty of plants; when the young are born she should be removed. Moon Fish will thrive and breed if kept in a temperature of 70 to 80 degrees Fahrenheit.

Pure Red Moons.....	\$1 per pair; \$4 per doz.
Pure Blue Moons.....	\$1 per pair; \$4 per doz.
Pure Black Moons.....	\$1 per pair; \$4 per doz.
Pure Gold Moons.....	\$1 per pair; \$4 per doz.
Crescent Gold Moons.....	\$1 per pair; \$4 per doz.

Mollienisia Latipinno

Common name, "Sailfin." *Mollienisia* belong to the viviparous group and are found in great numbers in the swamps and streams in the southern part of the United States. The male is very beautiful. The principal colors are light lavender, brilliant orange, black, and white.

In the water the gorgeous dorsal fin is very conspicuous, and the blue tail, while in motion, has a peculiar twisting movement which reflects the sunlight. The Sailfin is the largest of the viviparous group of fishes that are maintained in the home aquarium. They sometimes reach a length of 4 inches. This fish is very desirable as

it will stand a temperature from 40 to 90 degrees Fahrenheit. It is very peaceful, seldom, if ever, attacking another fish, regardless of how small. \$1 per pair, \$4 per doz.

Mollienisia Sphenops

Common name, "Black Mollienisia." A native of the southern United States. Mollienisias, which are all black, are never found in nature. Years of work, and carefully selected breeding conducted by fish fanciers have produced the all-black fish. When the young are born they are coal-black, but in a few weeks become dull gray; after this they gradually turn black, some, no matter how black their parents may be, will never become all black. A good male will be coal-black in six months, and a female in from one to two years. The males do not live as long as the females; for this reason a bunch of young fish will contain more males than females. Males live about four years, while females may live twelve years. Black Mollienisia are desirable in any aquarium, as they will feed on algæ and slime, helping to keep the aquarium clean. Temperature 70 to 90 degrees Fahrenheit. The dis-



Mollienisia Sphenops

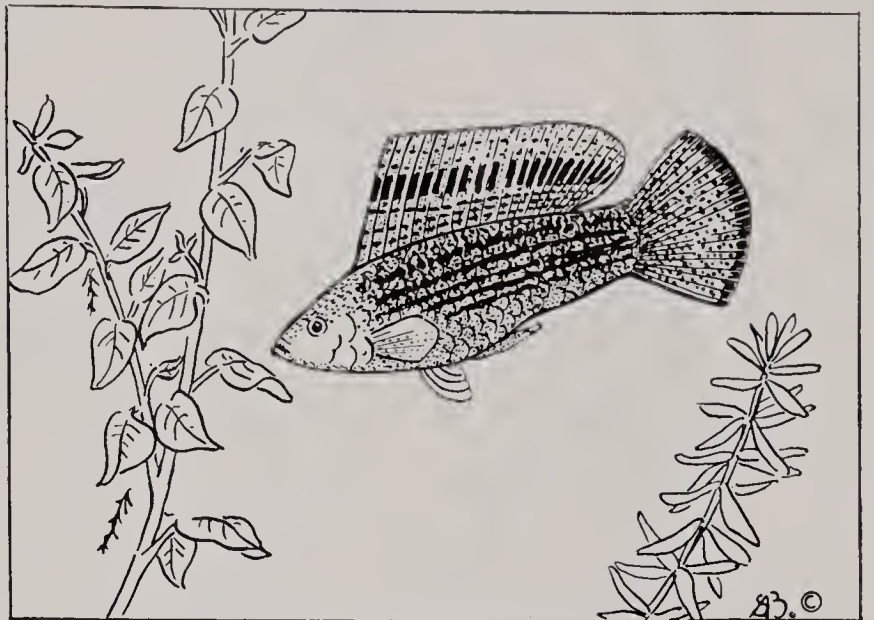
position and breeding habits are the same as the Sailfins. Young fish, \$1 per pair; adult fish, \$3 per pair.

Hybrids

These are produced by crossing Swordtail females with male Platyi. In hybridizing, it is necessary to raise the female Swordtails to maturity as virgins when they may be crossed with any male Platyi. All the hybrids are beautiful fish regardless of the cross. They grow to a size considerably larger than their progenitors, will live longer, and are capable of reproduction. The hybrids from the Red Platyi are red with black markings. From black, we get a fish almost all black, with a few blue scales and white fins, while from the blue male Platyi is developed a many hued fish—yellow, green, and red markings with shiny scales. Red Helli are produced by crossing the female red hybrid with an orange-tail Swordtail. Any color, \$1 each.

Heterandria Formosa

Common name, "Mosquito Fish." This is the smallest viviparous fish in the world. The female, when full grown, measures about 1 inch



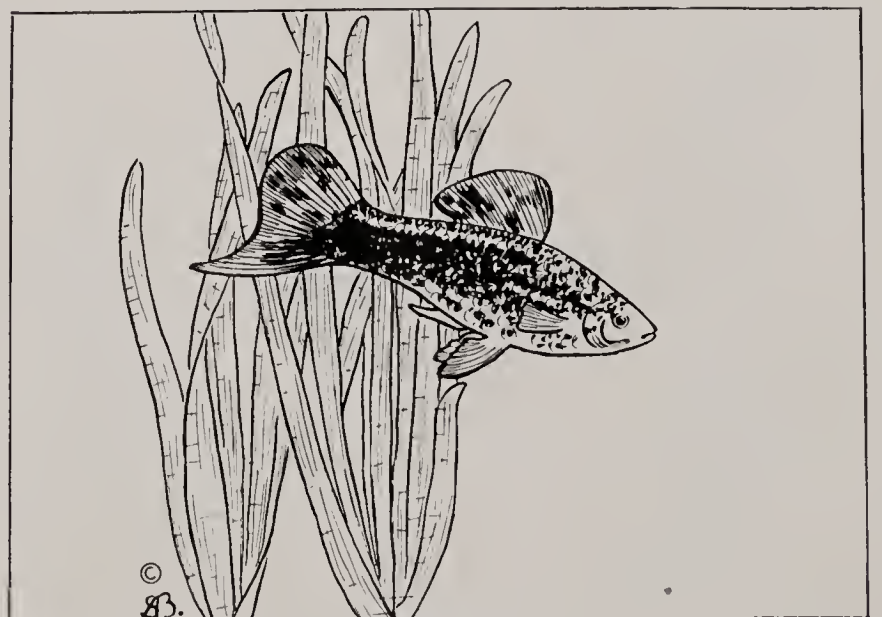
Mollienisia Latipinno

in length and the male about $\frac{5}{8}$ inch. It is plentiful in the southern states from North Carolina to Florida. A desirable fish for the aquarium as it stands a temperature that is just a few degrees above freezing. The general coloring of the body is greenish yellow, with a dark band from the mouth to a spot at the base of the tail, and about 7 or 8 streaks across the band. On account of the small size of the fish, it may be confined in a pint of water; even in this small container it will breed and produce young. 50c per pair, \$1 for 3 pairs, \$1 per doz.

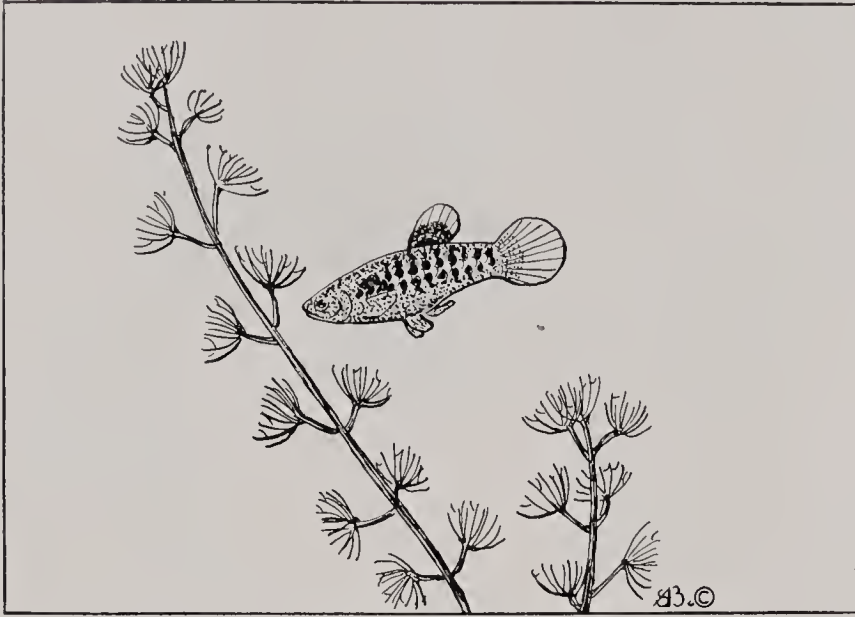
Gambusia Holbrooki

Common name, "Leopard Fish." The name Gambusia is derived from the Spanish word "gambusio," meaning an insignificant little thing. Whoever gave this name to the Leopard Fish was not well acquainted with this vicious little fellow. His common name far better describes him, as he is full of fight from his head to his tail and is capable of worrying a 3-inch goldfish to death, if they are placed together in a small glass globe. They cannot be kept in an aquarium with other fish as they spend all of their time tearing at the fins of any fish that is confined with them; in fact, the female will eat the male fish if he is much smaller than herself.

Breeding in the aquarium is no more difficult than with other viviparous fishes. Ripe females should be isolated in a separate tank with plenty of plants for the young fish to hide in from the



Hybrids



Limia Vittatus

mother who will surely devour them upon discovery. The aquarist must watch the breeding tank and remove the female as soon as she is apparently spent.

The male measures about an inch in length

when full grown. In color, he is silvery white with black spots, and the blacker he is, the more preferred. The female reaches a length of $2\frac{1}{2}$ inches and in color is a light gray, with the fins marked with small dark spots. The Leopard Fish will stand a temperature as low as 40 degrees Fahrenheit. Excellent mosquito killers for pools. This fish is found as far north as North Carolina and in the swamps surrounding the Gulf. 50c per pair, \$2 per doz.

Limia Vittatus

Native of Cuba. This fish makes a rather attractive addition to the well known collection of live bearers. The color varies from a light olive to deep violet, and the sides of the body are edged with bright blue scales. Its fins are transparent and have a yellowish green cast, with a dark blotch at the base of the dorsal or top fin. The breeding habits do not differ from other live bearing fish. Females give evidence of the impending increase by the distended abdomen. The temperature should be from 65 to 90 degrees Fahrenheit. 75c per pair; \$3 per doz.

Oviparous Fishes

(Egg-layers)

Oryzias Latipes

Common name, "Medakas." The name Oryzias is from the Greek word "orysa," which means rice. As this fish is found in large numbers in the rice fields of China, it is often called the "Rice Fish."

Medakas are the easiest of the egg layers to breed. The eggs are extruded from the oviduct and cluster about the anal region of the female, resembling a bunch of grapes. They are carried here for some hours; later they are brushed off by some plants to which they become attached. The eggs are quite large and are plainly seen. After the eggs are transferred from the female to the plants, the plant may be moved to another jar where they will hatch in a few days.

The Medakas will stand a temperature as low as 45 degrees Fahrenheit, and is one of the most inoffensive fishes. This makes it very desirable for the aquarium. 75c per pair; \$3 per doz.



Oryzias Latipes—Medakas



Danio Rerio

Danio Rerio

Common name, "Zebra Fish." The Danio Rerio are natives of the waters of Ceylon, a small island southeast of India. It is one of the most attractive fish in our aquariums. Constantly in motion; it has never been known to stop swimming, even a fraction of a minute, when in good health. Will stand a temperature of 45 degrees Fahrenheit and propagates without difficulty in a small aquarium. One of the best fish for the beginner. The body color is a light olive-green, and a black stripe runs the length of the body from the gill plate through the tail; fins are also striped.

The eggs are not adhesive and will fall to the bottom of the aquarium. A layer of pebbles about $\frac{1}{2}$ inch in diameter should be placed over the bottom of the breeding tank, and every few days they can be taken out and eggs removed with a siphon tube and transferred to a hatching tank, where they will hatch in about two days. 75c per pair, \$3 per doz. Pearl Danio, \$1 per pair, \$4 per doz.

Barbus Ticto

Common name, "Iridescent Barb." Native of India. Ticto is a desirable little fish (about 1 inch in length) to add to a happy family collection. As the common name implies, the scales reflect the light, giving the body of the fish a bronze color. The anal and venal fins are rosy red. Two black spots appear on the body, one near the head and the other near the base of the tail. Their breeding habits are the same as Rosy Barbs. Temperature from 55 to 90 degrees Fahrenheit. \$1 per pair; \$4 per doz.

Barbus Conchoniis

Common name, "Rosy Barbs." *Barbus conchoniis* is a native of India, and in the wild state often reaches a length of 5 inches. Specimens raised in an aquarium seldom exceed 3 inches in length. Barbs live for some years and are easy to breed. They lay their eggs on plants the same as goldfish; also, they can be taken care of without difficulty during the winter as they can stand a temperature as low as 45 degrees Fahrenheit.

Both sexes are alike in size, and during the greater part of the year they have the same



Esomus Danrica—Flying Barb

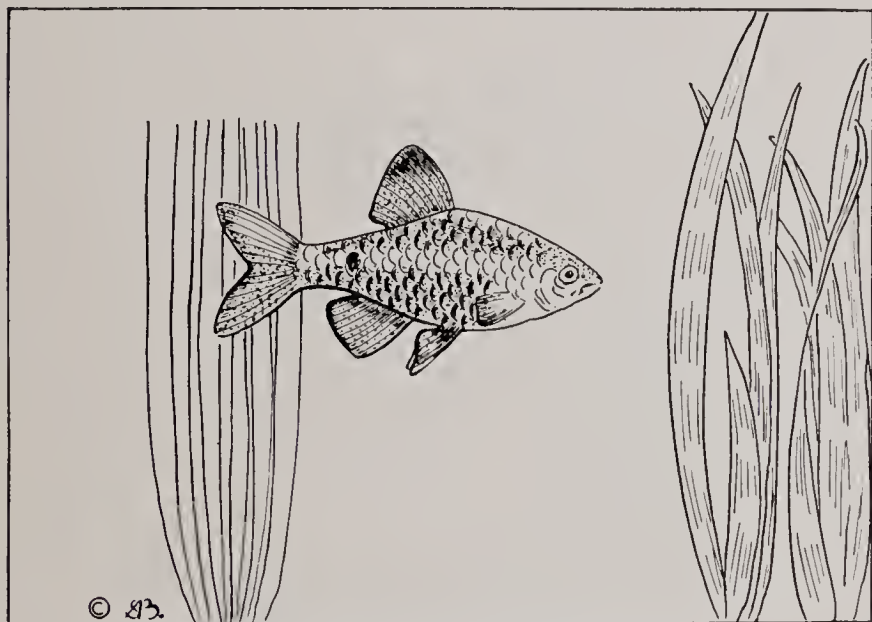
Fahrenheit is desired. Breeding habits, same as other Barbs. \$1 per pair; \$4 per doz.

Esomus Danrica

Common name, "Flying Barb." Native of India. A curiosity and an interesting addition to aquarium fish. About 2 inches in length when full grown. In color it is a steel-blue, with extremely bright scales. At the base of the tail there is a large black spot which is edged with copper. The fins are transparent; all the fins are in proportion in size to the body except the pectorals, which are very large. A first glance suggests an airplane, as the fins are spread out straight from the sides and the fish is a very rapid swimmer. The barbels, which hang from the corners of the mouth, are about one-fourth the length of the body. Flying Barbs are easy to breed, laying large numbers of eggs on the plants, which may be moved to another aquarium to hatch. Temperature from 60 to 90 degrees Fahrenheit. \$1 per pair; \$4 per doz.

Ctenobryon Spilurus

Common name, "Silver Tetra." Native of Guiana. The best known of the Tetra, as thousands of them have been bred and sold in the United States. It grows to a length of 2 inches in the aquarium. The body is very thin and deep, with the top fin large and the anal fin extending from the center of the body almost to the tail. As a showy fish it is second to none.

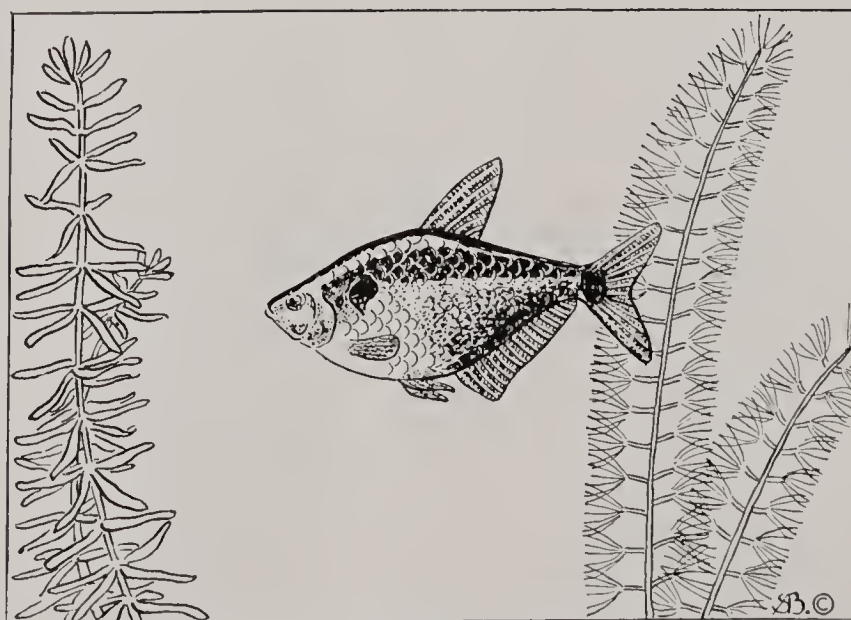


Barbus Conchoniis—Rosy Barbs

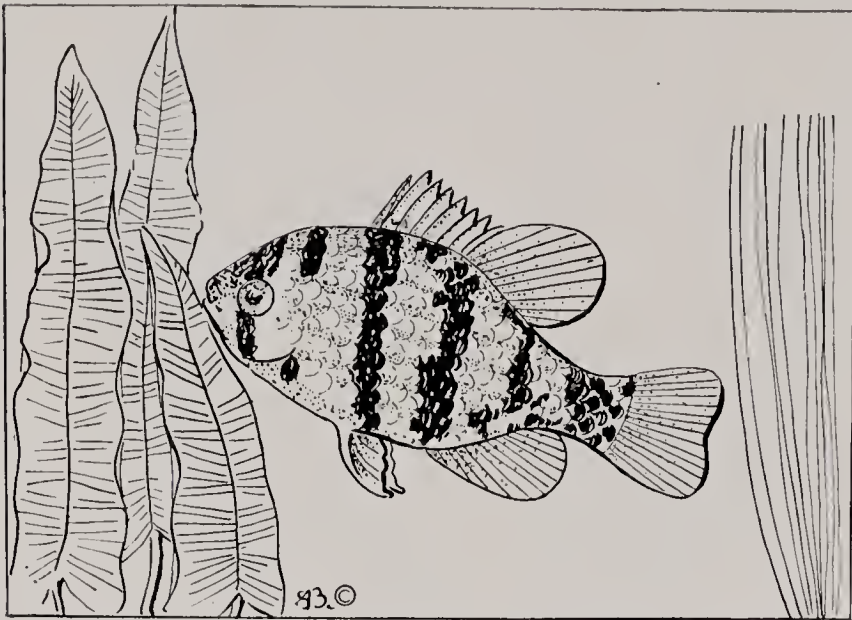
colors, a silvery green. The female does not change color, but the male, during spawning season, takes on a brilliant rosy hue, over which the scales appear like flecks of silver, while the side fins are suffused with orange-red and the back fin has a bright black dash at the tip. Sex can be told by the black dash on the top fin. \$1 per pair; \$4 per doz.

Barbus Semifasciatus

Common name, "Striped Barb." Native of China. When raised in an aquarium this fish grows to a length of 2 inches. The dominant color is a bright olive-green, with several dark stripes reaching half way around the body. From the stripes this Barb derives its Latin name, *semifasciatus*, meaning half-striped. The stripes may always be found on the female but are not noticeable on the male; at spawning time the fins of the male appear red. Some fanciers who have had the pleasure of seeing them at this time declare they are the most beautiful of all the Barbs. Coming from southern China, they require a warm temperature; 70 to 90 degrees



Ctenobryon Spilurus—Silver Tetra

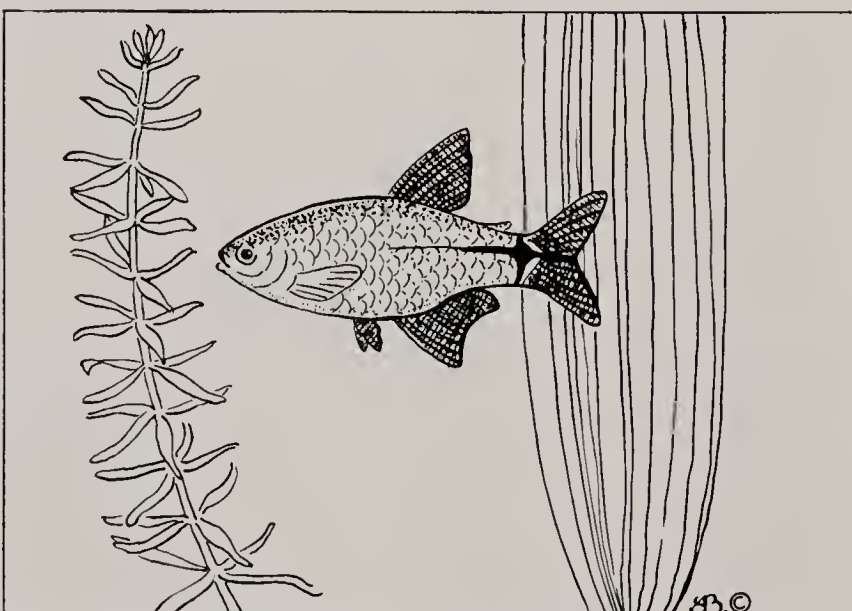


Mesogonistius Chaetodon—Poor Man's Scalare

The steel-blue body is covered with exceedingly fine scales of bright silver color, with a large black spot prominent at the base of the tail. Silver Tetra are very rapid swimmers and like to dart at and play with other fishes, but they are thoroughly harmless. In breeding habits, they are like goldfish, laying adhesive eggs on the plants. Temperature 70 to 90 degrees Fahrenheit. \$1 per pair; \$4 per doz.

Hemigrammus Caudovittatus

Common name, "Tetra Von Buenos Aires." This fish was given the name of a city in the South American country of which it is a native. In the aquarium it grows to a length of 3 inches. Its brilliant color and size make it a very desirable fish. When viewed in bright light, it shines like silver, but with all its fins, except the dorsal, colored blood-red. A large diamond-shaped black spot shows prominently at the base of its tail. The sexes are alike in size and color, except in breeding season, when the fins of the male become deeper red, and the development of the eggs makes the female deeper and heavier. The eggs are small and not adhesive, and when spawned are scattered among the plants and sink to the bottom. The parents must be removed from the spawning tank after laying the eggs or they will eat them. Temperature 70 to 90 degrees Fahrenheit. \$1 per pair; \$4 per doz.



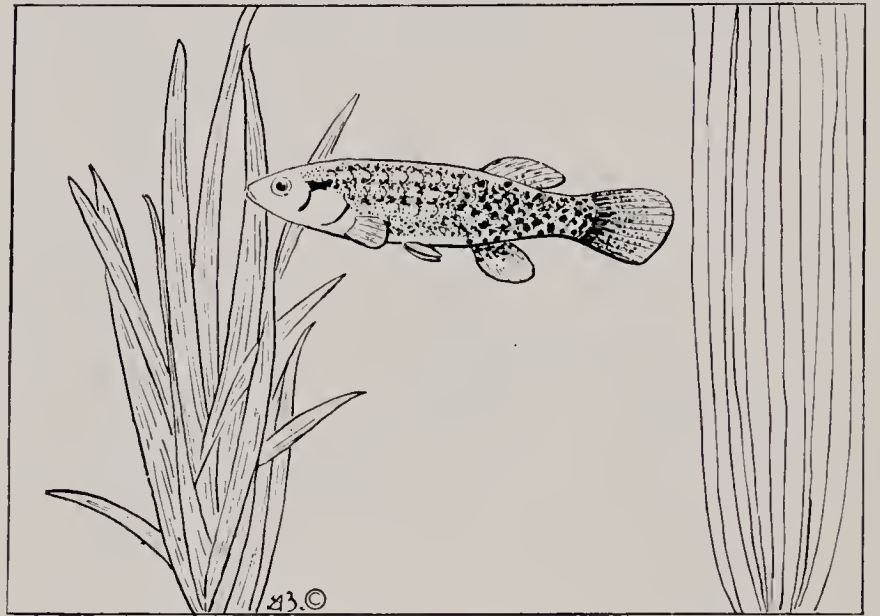
Hemigrammus Caudovittatus—Tetra Von Buenos Aires

Hyphessobryeon Flammeus

Common name, "Tetra Von Rio." Native of Rio de Janeiro, Brazil. It grows to a length of 1¼ inches. The Latin word *flammeus* means flame, which describes the color. At first sight the fish appears to be all red, but the body is crossed vertically with three black stripes and the fins are edged with black. The anal fin of the male is bordered with a wider stripe of black than the female, and by this the sexes are very easily told. Breeding habits are the same as Tetra Von Buenos Aires. Temperature 70 to 90 degrees Fahrenheit. \$1.50 per pair; \$6 per doz.

Fundulus Chrysotus

Common name, "Golden Fundulus." This is a native of the United States, and may be found anywhere from South Carolina to Florida, and in the swamps surrounding the Gulf of Mexico. The male and female are both colored a golden hue. The male has reddish brown spots on a glistening ground color of golden green; also, some of the fins are spotted with red, and there is a green spot on the gill covers. The body of



Fundulus Chrysotus—Golden Fundulus

the female is spotted with silver. The difference in appearance of the female and male, caused by the spots on the body, sometimes confuses the amateur into believing them to be different species.

The Fundulus chrysotus will stand a temperature as low as 45 degrees Fahrenheit, and will lay eggs in a small aquarium. As with all Fundulus, they lay only a few eggs a day over a period of weeks, sometimes missing a few days between spawnings. They deposit one egg at a time on the plants, which can be moved to a hatching tank. \$1 per pair; \$4 per doz.

Mesogonistius Chætodon

Common name, "Poor Man's Scalare." The Chaetodon is found along the Atlantic Coast from New Jersey south to South Carolina. It is a brackish water fish living in salt water as well as fresh water, but can be acclimated to live entirely in fresh water. Stands a temperature of 45 degrees Fahrenheit, and will live peacefully with goldfish. It is valued very highly as an aquarium fish. The Chætodon lays its eggs in a group on some plants that have been selected for a nest. These should be removed to a hatch-

ing tank as the parents often eat the young fish. The eggs will hatch in 48 hours. Its coloring is very beautiful, consisting of black bands running across a brownish yellow body, and also through the fins. The largest *Chætodon* I have ever seen measured about 3 inches in length. \$1.50 per pair; \$6 per doz.

Jordanella Floridae

Common name, "Flag Fish." As its name indicates, the *Jordanella* is a native of Florida, and its common name is very appropriate. The male has a row of greenish gray running along the back, a second row extending from the center of the body to the tail, while red, greenish gray, and bright green stripes extend the length of the body from the gills to the tail; the top and anal fins are spotted with red.

The female is not so attractive as she has no red color. Her body is a greenish gray which is mottled; at times, dark bars appear to run crossways of the body.

The Flag Fish will stand a temperature of 45 degrees Fahrenheit. It lays its eggs on plants in a group, and the male stands guard over them



Hemichromis Bimaculata—Jewel Fish

they are guarded by their proud parents until they are able to swim; then they will form a school, with the adults in the center, making a beautiful and interesting sight.

Jewel Fish have vicious dispositions and should never be placed in a community tank with peaceable fish.

The adult fish enjoy a meal of angleworms, but will take dried shrimp and daphinae. They stand a temperature of 60 to 90 degrees Fahrenheit; 80 degrees is best for breeding. Young fish, \$4 per doz.; mated fish, \$2.50 per pair.

Cobitis Fossilis

Common name, "Weather Fish" or "Doctor Fish." These are useful acquisitions to the aquarium or pool because of their habit of rooting deep into the sand at the bottom in search of food, and ejecting the sand through the gills after thoroughly separating and absorbing matter that might cause pollution of the water. The name "Weather Fish" has been given to the species on account of their peculiar actions just before a storm—they come to the surface and snap for air. During dry weather they bury themselves under the sand. It got its name of "Doctor Fish" because it eats all parasites which fall to the bottom of the aquarium. Will stand a temperature from 40 to 90 degrees Fahrenheit. Native of Germany. \$1 per pair; \$4 per doz.



Jordanella Floridae—Flag Fish

for a while, keeping the female, who would eat the eggs at once, at a distance. The plants containing the eggs should be removed to a hatching tank as soon as laid. They will hatch in about a week. \$1 per pair; \$4 per doz.

Hemichromis Bimaculata

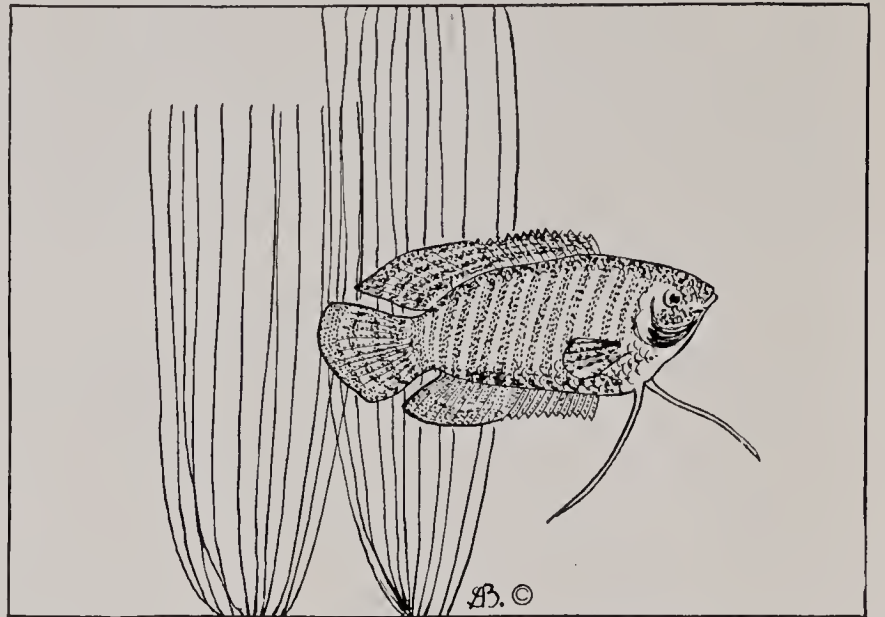
Common name, "Jewel Fish." One of the most popular and best known of the Cichlids. It is a native of Africa, and may be found from Egypt south to the Congo River. The splendor of its color is amazing. The body, from the abdomen upward, is a bright scarlet, blending into a rich olive on the back; glistening emerald dots, in broken lines, bespangle the body and verticle fins, the latter edged with red. The breeding habits of this fish are most interesting. Its eggs are deposited on a stone or flower pot, to which they adhere. During incubation one parent or the other stands guard, fanning constantly with their fins to create a circulation of the water. The eggs hatch in about thirty hours. During the first three days the young are unable to swim, so the parents fashion hollows in the sand, to which they are moved. Here



Cobitis Fossilis—Weather Fish



Macropodus Viridi Auratus—Paradise Fish



Trichogaster Lalius—Dwarf Gourami

Macropodus Viridi Auratus

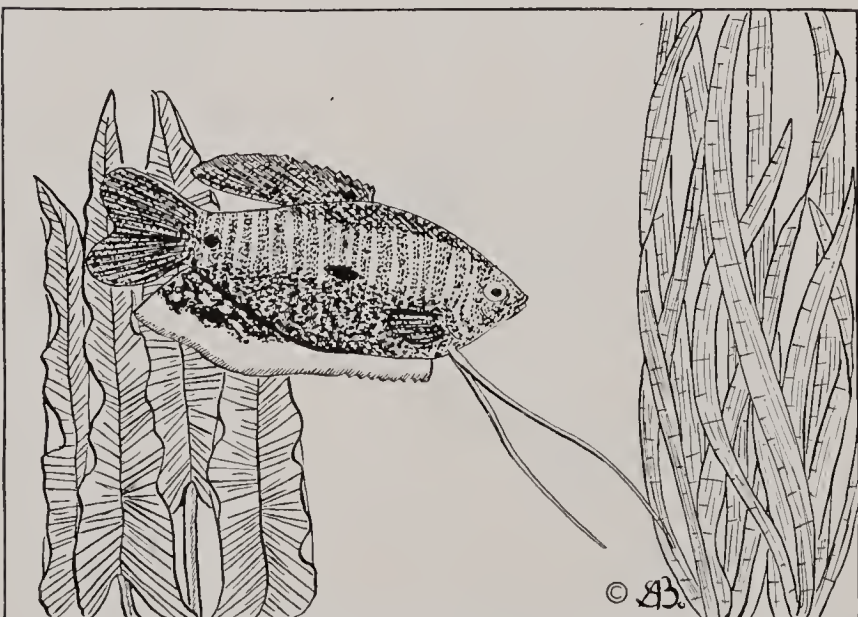
Common name, "Paradise Fish." Native of southern China. One of the most interesting and desirable egg-laying fishes for the amateur. The coloration is difficult to describe, as the fish has the power to change it. At times the impression is that of a greenish brown, with a large number of stripes running vertically, alternately light and dark, verging into olive with black markings. Sometimes the stripes are iridescent blue and a deep red, while the long, graceful fins are outlined and spotted with shades of red, yellow, blue, and brown. If the fish becomes excited, as at breeding time, the color array is very brilliant. The Paradise Fish belongs to the Labyrinth group, a class of lung fishes which are not dependent upon the supply of oxygen in the water, but take air from the surface and store it in a cell under the gill cover, called the labyrinth. It may readily be seen that a large aquarium or a lot of plants are not necessary for its maintenance; in fact, a pair will live and breed in a one-gallon bowl.

The breeding of the Paradise Fish is most interesting and may take place at any time during the year when food and temperature are satisfactory. At spawning time the male begins to build the nest; coming to the surface, he will take a mouthful of air, which he coats with a mucilaginous secretion from his mouth, and expels it in the form of a bubble, beneath the spot which he has selected. This operation is indus-

triously repeated until a substantial bubble-nest of about 3 inches diameter and $\frac{1}{2}$ inch high has been completed. The female is then invited beneath the nest where they embrace and the eggs are expelled and fertilized. The eggs sink to the bottom, where they are collected by the male and placed in the nest. At this time the female should be removed or she will eat the eggs. In about 36 hours the eggs hatch, and the male must keep the baby fish in the nest. Often he is very busy, as several youngsters will fall out of the nest at the same time; if he did not put them back they would drown. After five days remove the male, as he may tire of the job and eat the little fellows.

Paradise Fish are very hardy and may be kept in the average home without any attention in regard to temperature. In their natural environment they are subjected to very rough usage. They inhabit small pools at the base of the mountains where the water at times becomes very warm; at other times these pools become dry and the fish buries itself in the mud. They can live for some time if the gills are moist. Again, the snow and ice on the mountain top melts and the icy water fills the pool. It can be seen that it is hard to kill a fish that lives under these conditions. They must breathe the air from the surface and will not live for a long time under ice.

This beautiful fish is a great fighter, and cannot be maintained in an aquarium with other fishes. However, he is well worthy of having a



Osphromenus Trichopterus—Three Spot Gourami



Bettas—Siamese Fighting Fish

small aquarium of his own in any home. 75c per pair, \$3 per doz.

Ospormenus Trichopterus

Common name, "Three-Spot Gourami." A native of the East Indies. The Three-Spot is a very desirable fish to add to a collection, as it is the largest of the tropical fish which will live peaceably with such small fish as the Guppy. It often reaches a length of 4 inches when raised in an aquarium holding about 15 gallons of water. The body is tan, and the large anal fin, which reaches almost the length of the body, is very beautifully spotted and mottled in colors ranging from yellow to deep brown. In the center of the body is a prominent round black spot, and another spot is at the base of the tail; the eye is black and the same size as these spots, which explains the common name. The Three-Spot is a Labyrinth or lung-fish, taking air from the surface, so may be maintained in a very small aquarium. Breeding habits same as Paradise. At breeding-time it will protect the nest, attacking any fish that comes near it. Temperature 65 to 90 degrees Fahrenheit. \$1 per pair, \$4 per doz.

Trichogaster Lalius

Common name, "Dwarf Gourami." Native of India. The Dwarf is a timid, friendly fish which grows to a length of 1½ inches and will live peacefully with other fishes. In color, the body is a light blue, crossed by orange-red stripes which are formed of many tiny dots placed so closely together that they appear as lines. Its very large fins are highly colored, the same as the body, with red borders, and the dorsal and anal fins reach almost from the head to the tail, being pointed at the rear ends on the male and round on the female. The ventral fins are like threads and are as long as the body. Dwarf Gourami belong to a group of Labyrinth or lung-fishes. In breeding habits they are the same as Paradise Fish, with the exception that the Dwarf weaves small bits of plants in the bubble-nest and the female often helps in this work. Temperature from 70 to 90 degrees Fahrenheit. \$3 per pair.

Bettas

Common name, "Siamese Fighting Fish." These fish I choose to describe in a group, as

they are all hybrids from *Betta splendens*. For some years past *Betta splendens* and *Betta rubra* were offered for sale, but these fish were the same species, the ones with most red being called *Betta rubra*. Ofttimes among a batch of young fish would be found some that were cream-color; these would be destroyed as scrubs. Evidently some aquarist possessed intelligence enough to cultivate these and produced the *Betta cambodia*, a beautiful fish with gold-colored body and large red fins. Through selective breeding there developed a fish with a tail that grew to three-fourths the length of the body; this was called the Veiltail Fighting Fish. A short time after *Betta cambodia* were offered for sale I obtained a pair, the male of which was spawned with a female *Betta splendens*. From this spawning were raised about 150 fish, approximately two-thirds of which were colored like the *Betta splendens*; the rest were *Betta cambodia*. Some of the fish resembling *Betta splendens* were very beautiful, having dark-colored bodies and long, bright red tails. The progeny of these fishes are sold today as *Betta splendens* and *Betta trickeri*.

A few years ago an aquarist placed on the market a Blue Betta; this is known as *Betta cyana* (the last name *cyana* is a Greek word for blue). Another Betta is all bright green; this is called the Green Betta. Commercially, the Bettas have been a huge success. No other fish has ever met with such demand. They are all beautiful in color, peaceful with fishes of other species—when they wish to fight they pick only on one of their own kind. They are Labyrinth or lung-fishes, and will live and breed in one gallon of water. Breeding habits same as Paradise Fish.

During breeding time, which occurs about once a month, the males assume a grotesque appearance, the whole body shining with metallic color, while the gill-plates are thrown forward and out, exposing the red gills; with arched back and fins wide spread, he dashes back and forth across the aquarium. The body of the Betta grows about 1½ inches long. Temperature 65 to 90 degrees Fahrenheit; for breeding, 80 degrees is best.

Betta Cambodia (Breeders), \$3.00 Per Pair.

Betta Cyana (Breeders), \$3.00 Per Pair.

Green Betta (Breeders), \$3.00 Per Pair.

Betta Splendens (Breeders), \$3.00 Per Pair.

Breeding Goldfish

BREEDING takes place in an aquarium in the home generally in February, and in the pools outside from April 1 until June. However, Goldfish may spawn any time during the summer, as they are capable of spawning ten to fifteen times during the year if well fed and kept in warm water. When the female is filled with spawn, the body has an enlarged appearance. At spawning-time, the male develops small white dots or tubercles on the gill-plates and the largest bone of the pectoral fins.

All pools and aquariums should contain some plants on which Goldfish like to lay their eggs. *Myriophyllum*, *Cabomba*, or *Water-Hyacinths* are well adapted for this. The spawning generally takes place in the morning and continues until about noon. During this time the fish will swim rapidly about the pool, the female in the lead and the males swimming rapidly after her, sometimes crowding her against the sides of the pool and then against the plants, often pushing her clear out of the water. The eggs are distributed haphazardly all over the plants, and they are fertilized by the male as fast as they are laid. After the spawning is over, the fish will turn and start to eat all the eggs they can find. However, one female Goldfish may lay approximately 100,000 eggs a year, so if they are not crowded in small quarters, some eggs will hatch and an increase may be expected in the number of fish in the pool.

If the Goldfish are fed by the owner, they will soon become tame and will come to the side of

the pool whenever anyone approaches. Also, they will not be so eager in their search for the eggs after they are laid. If fish are not fed in the pool, they will be very shy and will try to hide by stirring up the dirt in the bottom of the pool whenever they see a person approach.

Giant Goldfish

A type of Goldfish which has the same shape as the Common Goldfish, and sometimes grows to be 20 inches in length. However, they are considered large size when they measure 14 inches from the nose to the tip of their tails. Their color is white, red, red and white, or gold and black.

Breeders, assorted colors: 7 to 8-inch, 75c each, \$6.00 doz.; 8 to 10-inch, \$1.00 each, \$8.00 doz.; 10 to 12-inch, \$1.50 each, \$12.00 doz. (Will be furnished in all red if customers prefer).

Comet-tail Goldfish

The Comet is a graceful variation from all other breeds of Goldfish, as the body is long and slender and all the fins are elongated. Sometimes its tail grows as long as its body, which, together with the ability to traverse the water like a streak, makes the fish well named. To the American breeders falls the honor of producing the Comet Goldfish.

Assorted or Red, 4 to 6-inch, 50c each, \$4.00 doz.; Breeders, assorted, colors or red, 6 to 9-inch, \$1.00 each, \$8.00 doz.; 9 to 12-inch, \$2.00 each, \$18.00 doz.

The Shubunkin

The Chinese produced this fish, and the name means "brocade" in English. Its coloring is unique and no two fish will be found colored alike. They may be mottled with all the colors of the rainbow; in fact, some dealers are listing them as "Rainbow Fish." The body formation is a little different from that of the Common Goldfish. It is very hardy and will winter well in an outside pool.

Mottled Blue, Red or Black, 2 to 3-inch, 25c each, \$2.00 doz.; 3 to 5-inch, 50c each, \$4.00 doz.

Fantail Goldfish

The best known of the fancy fish. They are indeed beautiful, and the distinguishing feature is the double tail which is joined at the top. The body is very short and round, which gives them the appearance of being fat. This shape of body makes the fish slow in movement and contented in small aquariums. It will winter well in outside pools and is easy to breed.

Fantail, 2 to 3-inch, 50c each, \$4.00 doz.; Breeders, 3 to 5-inch, 75c each, \$6.00 doz.

Common Goldfish

This type of fish is known as the "Woolworth Trout" as the 10-cent store of that name sells many thousands of them each year. They are native of the Liao River in Korea, where they are found in great numbers, but very few are red or any other color except plain gray. The brilliant colors that we are familiar with have been produced by selective breeding.

Breeders, assorted colors, 3 to 4-inch, 20c each, \$1.60 doz.; 4 to 6-inch, 25c each, \$2.00 doz.; 6 to 7-inch, 50c each, \$4.00 doz.

Fringetail Goldfish

Generally known as the Japanese Fringetail. It was produced in Japan by people who love the beautiful. An improvement on the Fantail, the body being shorter and almost round, and the fins long and graceful, sometimes hanging like veils from the body. The caudal fin or tail is divided at the top, thus producing two complete tails. It is known as the most beautiful of the fancy fishes.

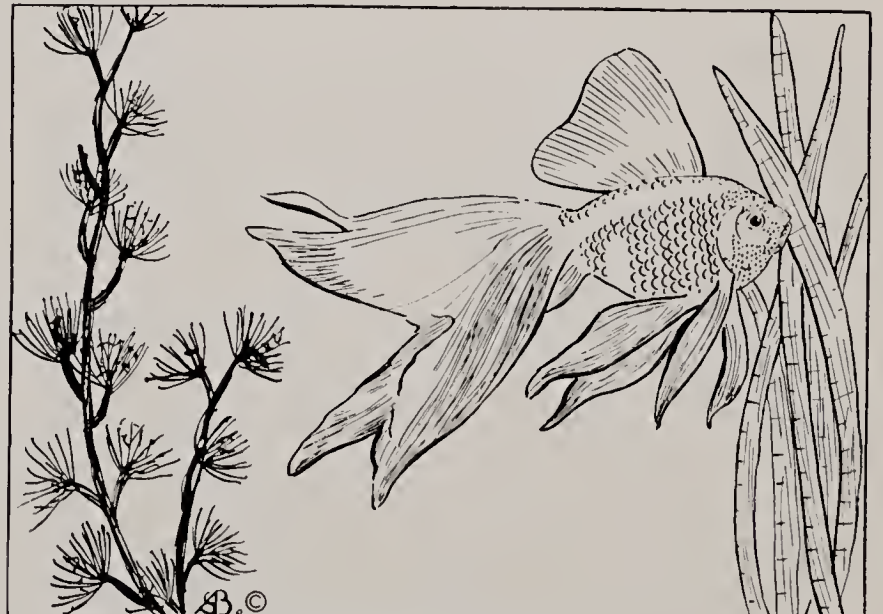
Breeders, 2 to 3-inch, 75c each, \$6.00 doz.; 3 to 4-inch, \$1.00 each, \$8.00 doz.; extra large over 6-inch, \$5 each.

Telescope Goldfish

These must be regarded more as freaks or curiosities than as objects of beauty. They are the product of the Chinese who are so skillful in producing such things. The eyes project far from the head, thus giving them their name. There is quite a similarity between their expression and that of the face of a pug dog. At first sight one may regard them as the extreme of ugliness. However a closer acquaintance is apt to modify this opinion. As the ways of fish go, they may be regarded as affectionate; at least they are docile and always ready to accept food and lots of it. Telescopes may be either single, fantailed or fringetailed, and the color may be gold, pearl, black, or brocade. Some fine specimens have six different colors, consisting of blue, black, yellow, green, red and white.



The Shubunkin



Fringetail Goldfish



Telescope Goldfish

A jet-black fish, known as the Chinese Moor, is regarded as the most valuable. As usual with homely creatures, the uglier a Telescope fish looks, the better fish it is. In spite of the large size of their eyes, a Telescope fish does not seem to have as good vision as do fish with normal eyes. This is due to the fact that their eyes are overdeveloped, similar to the overdeveloped tails on Fantails and Fringetails, causing them to be sluggish in their movements and to swim with difficulty. The origin of the weird Telescope-eyed Goldfish has been the subject of fanciful theories, but there can be little doubt that the strain was produced by selective breeding from the individuals which showed more or less bulging eyes. Telescope eyes vary considerably in shape and in direction. The majority of them are spherical or conical. Tubular eyes are rare and highly prized, but any form is considered good so long as they are large and stand out far from the head. Some telescope eyes point forward; this is unusual. Telescopes are very easy to breed, and, as their eyesight is poor, they are not so apt to eat their eggs and young.

Breeders, 2½ to 3-inch, \$1.00 each, \$8.00 doz.; extra large, over 5-inch, \$5.00 each.

How Fish Are Shipped

READ THIS BEFORE ORDERING

Be sure to allow 25c for shipping can.

Tropical fish will be shipped in tin cans when the weather permits, this is usually during the summer months between June and October. These tin cans are not returnable as the cost of sending them back is 20c and they seldom reach us in a condition that they may be used again. During winter or at any time the weather is cool, fish are shipped in 1 Gallon thermos jugs which are packed in large insulated cans, these must be returned to us by prepaid express which costs 20c anywhere in U. S.

Goldfish in large amounts or Giant Goldfish are shipped in large cans which are valued at \$10.00 each, these must be returned to us at once. The 25c you send for shipping can will be charged for the use of special shipping container.

We guarantee safe arrival on all fish shipped on retail orders; in case of loss during shipping you must obtain from the express agent a bad order report and send this to us, otherwise no attention will be given your claim.

COLLECTION OF LIVE BEARING TROPICAL FISH

One pair each of Swordtails, Red Platyi, Blue Platyi, Gold Platyi, Young Black Mollies, Lina Vitatus, Hybrids, Young Black Mollies, dria and 2 Prs. Guppyi. Four red snails and 1 pkg. Vitamin food. Total, 22 live-bearing fish, 4 snails, food and shipping can, TOTAL VALUE \$10, all for \$6.50.

COLLECTION OF OVIPAROUS OR EGG LAYING TROPICAL FISH

One pair each of Zebra, rosey Barbs, Barbus Ticto, Medakos, Flying Barbs, Tetra Von Buenos Aires and Bettas, 4 red Ramshorn Snails and 1 Pkg. of Vitamin food. Total, 14 Fish, 4 snails, food and shipping can, TOTAL VALUE \$10, all for \$6.50.

RAINBOW COLLECTION OF TROPICAL FISH

One pair each of seven (7) varieties of tropical fish all different colors which will make a pleasing picture of your aquarium. Some live bearers and some egg layers our selection. Total 14 fish, 4 Red Snails, 2 Jap Snails, 12 Black Ramshorn Snails, 1 Pkg. Vitamin Food, Shipping can. ALL FOR \$6.50.

SPECIAL COLLECTION OF GOLDFISHES

for an aquarium or pool

One pair each of red or spotted Telescopes, Fantails, Black Telescopes, Comets, Fringetails, Shubunkins and Common Goldfish, 6 Jap Snails, 12 Ramshorn Snails and 2 Clams. Total 14 fancy Goldfish, 18 Snails, 1 Qt. Independence Prepared Food and shipping can. All for \$9.00.

SPECIAL COLLECTION OF GOLDFISH

for a large pool

One pair each of Giant Goldfish 8 to 10 inch, Comet Tailed Gaints 9 to 10 inch, Shubunkins 5 inch and Fantails 4 to 5 inch, 12 Jap Snails, 12 Ramshorn Snails, 6 Clams and 6 Tadpoles. Total 8 large and selected Goldfish, Collection of Scavengers, and 1 qt. of Independence Prepared Food. All for \$9.00.

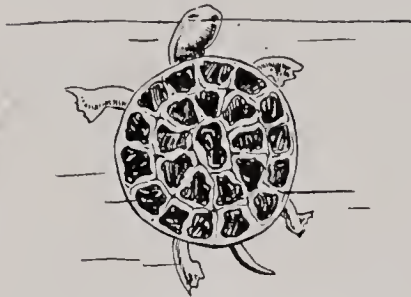
(Note: This collection will be shipped in a large special can which must be returned to us.)

Six (6) common goldfish with above collection for \$1.00 extra.

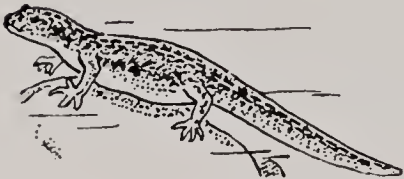
Scavengers—To Keep the Pool in Order

THE crystal clearness of natural ponds or lakes is the result of plants and animals feeding on all the impurities and using up all available food. If we wish to keep artificial pools pure and clear and avoid green scum, we must have balanced plant and animal life growing in the pool. In addition to the lilies, other desirable plant life is introduced, such as a quantity of submerged oxygenating plants or other aquatics. All available fertilizer is soon used up and little scum can form. As these aquatics are beautiful as well as useful, we put in animal life to keep them fer-

tilized continuously and keep them cultivated, pruned and free from injurious insects. Fish feed upon the insects and mosquitoes, snails devour algae and green scum, tadpoles eat decayed matter, and clams or mussels act as continuous filters to keep the water clear.



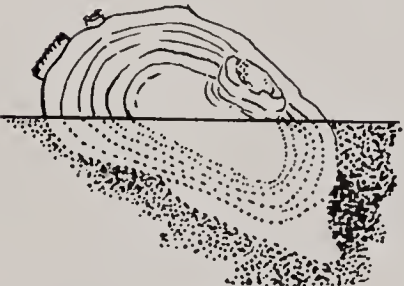
Geographic Turtle



American Salamander



Frog



Clam

Geographic Turtles. As these little fellows enjoy sunning themselves on the lily-pads, they make interesting ornaments for the pool. They also will eat dead fish, snails, clams, or any other creature that happens to die in the pools. 15c each.

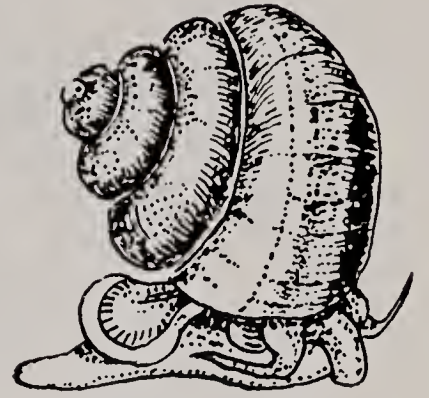
Tadpoles. The younger generation of the frog family, which lose their tails and develop feet the first or second season and become frogs. The Tadpoles consume the refuse from the fish, eat the excess food which falls to the bottom, and decaying plants. Entirely harmless to other inhabitants of the pool. 40c for 10.

Green Frogs. Good mosquito-catchers; also the musicians of the pool. Their grandstand is the lily-leaves. 25c each.

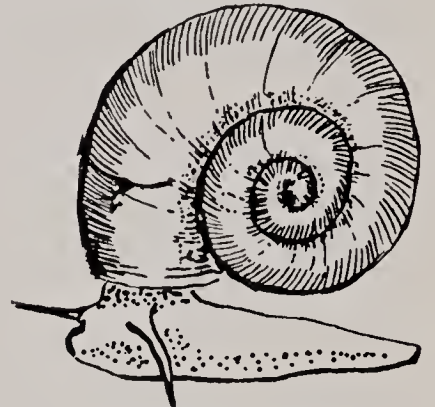
American Newts. Make very interesting pets, and if regularly fed soon come to recognize you. It is fun to watch these little fellows at feeding time. In color the back is a rich olive brown, spotted with red and black; the under parts are yellow and orange. The males are easily told from the females as their hind pair of legs is three times bigger and thicker than the front pair. 10c each.

Clams or Fresh-Water Mussels. These filter all floating organisms from the water, leaving it crystal clear. They are equipped with a siphon arrangement by which they suck water in one opening and eject it from another, by this means obtaining their food. 15c each, \$1.00 doz.

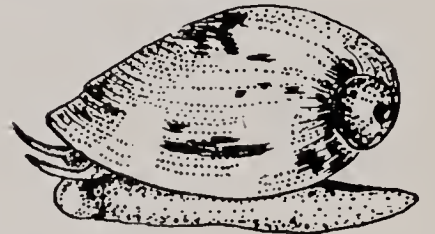
Japanese Live-bearing Snails. Large, hardy Snails which live for some years. Very active in eating algae and scum. Interesting in that they bring forth fully developed young about the size of a pea, which are able to take care of themselves among goldfish. 15c each, \$1.00 doz.



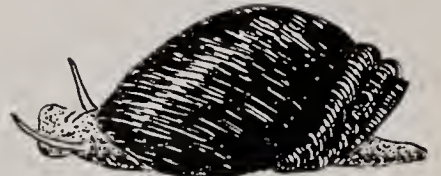
Japanese Snail



Red Ramshorn Snail



African Snail



Pond Snail

Trumpet Snails. One of the best Snails for the pool as they consume large amounts of algae and decaying vegetable matter. They lay thousands of eggs which, when hatched, furnish food for the fish. Recommended to breeders of game fish and can be furnished by the thousands. 50c for 10.

Red Ramshorn Snails. These are the best and most ornamental of the aquarium scavengers. 15c each, \$1 doz.

African or Papershell Snails. Light yellow-brown, with dark spots. 50c for 6.

Black Ramshorn Snails. Very active in removing algae and scum. Multiply very rapidly. 50c for 12.

JUMBO FROGS

These big fellows, with their melodious voices, are needed to give the real touch of nature to a pool. They take care of themselves, but never harm the fish. A pair will give a lot of pleasure to visitors. A pair of breeding size for only \$5.

All Fish and Scavengers must be sent by express.

The Fish listed in this Catalogue will be in stock constantly and can be shipped at any time. At times we have limited numbers of the rarer Tropical Fish on hand, and if you desire to obtain any Fish not listed, we will be glad to get them for you if possible.

COLLECTION NO. 10

Scavengers for Small Pool

1 Geographic Turtle	6 Tadpoles
12 Snails, 3 Varieties	With Shipping Can
Total	\$1.00

COLLECTION NO. 11

Scavengers for Medium Pool

12 Jap Snails	1 Pair Green Frogs
1 Dozen Tadpoles	2 Geographic Turtles
6 Clams	With Shipping Can
12 Black Ramshorn Snails	
Total	\$2.50

Fish-Food and Aquatic Supplies

The various items here listed can be shipped immediately, as we carry a supply amply large for your requirements. In all cases, it is advisable to send supplies by express.

Buskirk's Vitamin Fish Food. A food scientifically prepared and balanced, and contains all the elements and vitamins for the health and growth of fish—80 per cent meats, 20 per cent cereals and salts. All valuable tropical and goldfish at our greenhouses are raised on this food. Where only adult fish are to be fed, a small feeding-ring should be used, as the food is prepared so that the fine particles will run over the surface of the water to the plants at the back of the aquarium where the baby fish hide and feed. **Pkg. 50c; pt. \$1; qt. \$1.75.**

Pure Dried Shrimp. An excellent food for game-fish, goldfish, and tropicals. **Lb. (or 1 qt.) 75c.**

Dried Daphinae. The carcasses of small crustaceans, sometimes called "water fleas." High-quality fish food; does not foul the water unless fed in large quantities. Excellent for tropical fish. **Pt. 75c; qt. \$1.25.**

Independence Prepared Fish Food. Contains meat and cereals. A balanced food giving the fish a variety of diet. **Lb. 75c.**

Enchytre Worms. Small white worms, a live food for feeding tropical fish. The worms are raised in a mixture of good soil, leaf-mold preferred, and are fed on bread and milk every two weeks. **1 qt. carton 75c.**

Turks Island Sea Salt. Does not contain any ingredient to prevent it from caking. Fish exhaust the supply of salt in the aquarium in approximately one month. This should be replenished, using salt as a preventive for disease. Is far better than any cure. **Qt. 50c.**

Buskirk's Chemical Aquarium Neutralizers. Retards development of ichthyophthira in tropical aquariums; prevents decaying of snail-shells; neutralizes the ammonia produced by decaying plants. Necessary in all balanced aquariums. **2 for 25c, \$1.00 per doz.**

German Fungus Cure. A cure for most fish diseases; removes scum or fungus growth in a few hours. It is advisable to use as an antiseptic before introducing new fish in the aquarium, or on fish after a trip in a shipping can. **35c Pkg.**

Aquarium Cement. For constructing or mending aquariums. Oil in small can and dry powder, packed in a quart carton, to be mixed as needed. Full directions on package. **Carton \$1.00.**

Dip-Nets. Goldfish Nets, 6-in., with 2-ft. wood handles. **50c each.**
Small Cloth Nets, 3-in. **15c each.**

Glass Thermometers. **25c each.**

Glass Feeding-Ring. **10c each.**

Glass Dip-Tubes. To remove sediment from aquarium. **40c each.**

Thermometer Holders. **10c each.**

Buskirk's Aquarium Heater

Made of a glass tube filled with glass sand in which is installed an electric bulb. If light is desired, you may raise the bulb above the sand. The top of the tube is covered with a removable rubber cap which prevents water from the glass aquarium cover from dropping into the tube. If more heat is desired, change to a larger watt bulb. When heater is installed **the bulb only** should be covered with sand; the socket should not be covered. Standard sizes always on hand are 6 in., 9 in., 12 in., and 15 in. **Price \$2 each.**

Tropilite Heater and Illuminator

This Heater contains a patented reflector which casts the light to any part of the aquarium desired, also a movable cork inside the glass tube, which can be adjusted to the water-level, thereby obtaining efficient heating. Electric light bulb may be changed if more heat is desired. **9-in. size, \$2.75; 12-in. size, \$3.00; 15-in. size, \$3.50.**

Thermostat for Tropical Aquarium

Reliable, compact and efficient. Can be used with most any type of heater built in a celluloid tube which will not break. Made with silver points, which will insure long life. This thermostat will operate as high as 12 ten-gallon aquariums at one time, using a 25-watt bulb in each. Easy to adjust, simply by turning a hard rubber knob at the top. Will keep the aquarium at any temperature from 50 to 100 degrees. **PRICE \$2.00.**

Buskirk's Aquarium Heater (State size) and Thermostat, complete \$3.50

Second Hand Majestic Aquariums

We carry a large stock of Aquariums on hand aquariums which our customers have traded in on either larger or smaller ones. These have been overhauled and refinished until they look like new and we guarantee them against leaking, also that their appearance will please you. A real bargain furnished in any size above six gallons at 60c per gallon.

Planning the Rock Garden

THE rock garden is, possibly, one of the most interesting forms of modern gardening. Interest in rock plants is increasing yearly, and a rock garden places no limit on the designer's artistic ability. It gives a delightful diversion from a formal type of garden, as the designer can secure a great range of effect, either in form of a dry rock wall, a retaining wall, the edge of a drive, a formal or informal pool, steps, terraces, walks, hillsides, steep banks, or only a division in the garden which may be devoted to rock plants, set among a few stones—just enough to demand the name of "rock garden."

A great quantity of stone is not needed to make a rockery; indeed, it is often the scarcity of stones that makes the most attractive garden. The various plants may be grouped according to the color of the foliage as well as to the blooming season, thus making an interesting picture. Expert hands are not needed, and frequently the amateur secures the most pleasing results, for it is always the plants themselves that make the picture, half concealing the nearby rocks and creeping out between crevices of others. You will find building a rock garden a most fascinating task.

Many estates have natural rock ledges, and while these ledges are interesting subjects to work on, they require an experienced operator to chisel out steps, fill crevices with soil and plants, thus creating a beautiful rockery without destroying the natural effect.

Most of our plants are field-grown, but a few varieties are grown in pots. While the pot-plants are not so large as field-grown specimens, they often transplant much better. Pot-plants also are very convenient for planting in the crevices of rocks, as the roots with the soil on them can be crowded into the open space. We expect to have nearly all varieties in pots for late spring and summer planting, so they can be used directly from the pots at almost any season.

Construction of the Rockery

The spirit of the rockery is essentially natural. Avoid any appearance of artificiality. The ideal spot is a rugged, picturesque piece of ground where the natural formation or deposits of rocks and boulders suggests this treatment.

Select stones that have been lying on the surface and have an old, weather-beaten appearance. They will, of course, be of all sizes; the average size will depend on the size of the rock garden. A large garden demands large stones, but even in a small garden a few large stones help the appearance wonderfully. It is also wise to select a type of stone that does not crumble easily and then keep to the one kind throughout the garden.

The largest stones should be placed at the base and form the background, and the face of the rockery may, in the same garden, range from a gentle slope to almost perpendicular. In some instances, more particularly in large gardens, the overhanging rock is very effective.



Rock Plants

Each stone should slope backward, so that the water will run toward the rockery and soak the soil between the rocks. As each stone is laid, ram the prepared soil in every crevice and pocket so that not the smallest air-hole is left.

Thought should be given to providing access to all parts of the rockery by means of appropriate paths.

Planting Directions

Alpine plants require a cool, well-drained soil, a good mixture being composed of one part of good garden loam, one-third leaf-mold, one-third sand, and some lime-rock or broken mortar. The plants are placed in the crevices of the rocks slightly slanted (as explained under construction), which permits the plant-roots to creep, giving them a cool root-run.

Nearly all the plants under the heading "Shade" and most of them under the heading "Part Shade" will do better planted in soil consisting of one part leaf-mold, one part sand, and one part good garden soil, but no lime. This mixture will answer for rhododendrons, azaleas, and evergreens, which are not happy in lime soil.

The ideal season for planting rock plants is in the early spring, just as soon as the ground can be worked, and lasting until the hot, dry summer months, and again during the latter part of August, September, and early October. They can be planted all summer if care is taken to water constantly until they take root. Fall planting must be done early.

As soon as the plants are received, unpack and water them, keeping them moist. Supply water, after planting, by hose watering or underground irrigation, until they have taken root.

In general, best results are obtained by massing several plants of one variety. Give the most favorable spots to the choicest Alpine gems and keep the larger, more vigorously growing sorts away from the weaker ones. Certain rock-plants, such as the Saxifrages, have a leaf-growth that forms a dense rosette which would rot if water lodged in the crown.

Choosing Rock Plants

Many beginners in rock-gardening are like the Indian squaw who, when given her choice, took the cheap red calico dress instead of the silk Paris gown.

Don't pick out just those with gaudy bloom. The choice rock plants are often those with dainty, delicate flowers. Many are treasured for their odd shape or for their evergreen foliage.

Don't buy rock plants like you would muslin or beans—by the yard or pound. Some people measure the value of a plant by the size of the clump. When you buy a diamond, you don't expect to get something the size of a glass doorknob.

Many of the rare choice rock plants will be small when you buy them. That is the way they should be. You want a plant that is true to name, that will take root in your garden, and thrive and live for years. If you want a large plant in bloom, that will make an immediate show, go to the florist—he supplies plants for that purpose. But then you'll have a flower bed, not a rock garden.

The purpose of a rock garden is to provide a home for plants whose native habitat is the side of a peak or an upland meadow—not to keep up with Mrs. Jones or make a display of rocks.

Special New and Rare Alpine Plants

	Each	10		Each	10
ACHILLEA (Milfoil or Yarrow) <i>sibirica</i> . Long, graceful, silvery leaves that are effective all summer. 10 to 12 in.....	\$.25	\$ 2.00	A. reptans rubra . Dark purplish blue flowers. Height, 3 to 4 in.....	.25	2.00
A. tomentosa . Forms a low mat of feathery-like leaves surmounted by flat heads of yellow flowers in June and July. Height, 6 to 8 in.....	.25	2.00	ALYSSUM (Madwort). A species of plants desirable for borders, rock gardens, or in a dry wall. Free flowerings.....		
A. abrotanifolia . White flowers in clusters. Ash-gray, downy foliage. Height, 6 to 9 in.....	.50	4.00	A. saxatile compactum (Rock Madwort). Bright yellow flowers in early spring. Height, 1 ft.....	.30	2.50
A. Ptarmica fl. pl. (The Pearl.) 2 ft. July to October. Pure white flowers borne in great profusion on strong erect stems. As a cut flower it is of great value.....	.25	2.00	A. serpyllifolium . Pale yellow flowers peering through the rough hairy leaves. Dwarf. Height, 4 to 5 in.....		
ÆGOPODIUM (Goutweed) <i>podagraria variegatum</i> . White margined leaves that are extremely decorative. A rapid growing plant useful in rock gardens and for covering barren places. Height, 12 to 15 in.....	.25	2.00	ANCHUSA myosotidiflora . Slender stems bear panicles of bright blue flowers above large, heart-shaped leaves. Thrives in partial shade. April, May. Height, 1 ft. .25 2.00	.25	2.00
AGROSTEMMIA (<i>Lychnis</i>) <i>alba</i> (Evening Campion). Flowers white.....	.25	2.00	A. Dropmore . Tall spikes of beautiful blue flowers, flowering all summer. Rough broad foliage. 4 to 5 ft.....	.25	2.00
A. coronaria (Mullein Pink). Silvery gray leaves on a stiffly branched plant. Showy brilliant purple-crimson flowers in June and July. Height, 2 ft.....	.25	2.00	ANTHERICUM (<i>Paradisea</i>) <i>liliastrum major</i> (St. Bruno's Lily). Small, lily-like, white flowers on erect spikes. Foliage narrow and grass-like. May, June. Height, 18 in.....	.40	3.50
AJUGA (Bugleweed). Desirable for the rockery or for ground-cover in shady places. Blooms in May and June.....			AQUILEGIA (Columbine). Excellent perennials for rock gardens and borders.....		
A. genevensis . Dense spikes of blue flowers. Height, 6 to 8 in.....	.25	2.00	A. alpina . Bright blue flowers with short spurs. April, May. Height, 6 to 10 in... .30 2.50	.30	2.50
			A. caerulea (Rocky Mountain Columbine). Blue and white flowers, long spurs. Extremely handsome, even better than some of the newer hybrids. Height, 18 in.....	.35	3.00

	Each	10		Each	10
<i>A. canadensis</i> (American Columbine). Red and yellow flowers, borne freely in early spring. Charming in crevices and in similar places.....	.25	2.50			
Dobbie's Imperial Hybrids. A wonderful hybrid mixture. Contains every conceivable shade.....					
ARABIS (Rock Cress). Great mats of white flowers are produced very early in the spring, and the foliage provides a soft grayish green carpet through the season. Desirable for rock gardens and borders....					
<i>Arabis alpina.</i> Pure white flowers in dense masses .....	.25	2.00			
<i>A. alpina flore-pleno.</i> Similar to the preceding but with double flowers.....	.40	3.50			
A PROCURENS					
ARENARIA (Sandwort) <i>grandiflora.</i> One of the best pure white rock-garden plants .....	.25	2.00			
<i>A. montana.</i> Silvery white flowers in early spring which resemble upturned morning-glories. Foliage in compact tufts.....	.30	2.50			
<i>A. verna caespitosa</i> (Moss Sandwort). Small, white flowers on thread-like stems, above a mass of mossy foliage. Height, 1 to 3 in. ....	.25	2.00			
ARMERIA (Sea Pink or Thrift). Dwarf plants that thrive in almost any soil. Foliage in evergreen tufts, surmounted by dense heads of pink flowers on stems 9 to 12 inches high. Blooms nearly all summer.					
<i>A. maritima.</i> Flowers pale pink. May, June. Height, 3 to 6 in. ....	.25	2.00			
<i>A. maritima alba.</i> White flowers above the deep green foliage. Height, 3 to 6 in. ....	.25	2.00			
ASPERULA odorata (Sweet Woodruff). Erect plants with fine-toothed foliage and heads of snowy white flowers. Increases rapidly and is desirable as a ground-cover in shaded places and for rock-gardens. May. Height, 6 to 8 in. ....	.35	3.00			
ASTERS. Certain varieties are esteemed for rock-gardens and borders. All are beautiful and vary greatly in time of flowering, size of bloom, and general appearance					
<i>A. acris.</i> Large, blue flowers with long showy petals. September. Height, 1 ft. ....	.25	2.00			
<i>A. alpinus</i> (Rock Aster). Purple flowers on rather long stems. Desirable for rock-garden or for border. Late May and June. Height, 9 in.					
<i>A. alpinus albus.</i> White flowers in spring. Height, 6 in. ....	.25	2.00			
<i>A. alpinus, Dark Beauty.</i> Deep violet-blue flowers in May and June. Height, 6 in. ....	.30	2.50			
<i>A. alpinus giganteus.</i> Extra-large, soft blue flowers. A stronger grower than the type. Height, 12 to 15 in. ....	.35	3.00			
<i>A. alpinus rubrus.</i> Flowers bright reddish lavender in May and June. Height, 6 to 12 in.					
<i>A., Mauve Cushion.</i> A spreading plant from 2 to 2½ feet across. Flowers light mauve. October, November. Height, 9 in. ....	.25	2.00			
AUBRIETIA. A family of plants closely related to alyssum, and chiefly used in rock-work and for edgings. The growth is rapid, and plants soon make a good showing among the stones and neighboring plants.					
<i>A. eyri.</i> Showy purple flowers almost hiding the silvery foliage. The plants make a close mat among rocks and among borders. April and May. Height, 3 to 4 in.					
<i>A. deltoidea purpurea</i> (Purple Lady Aubrietia). Large, purple flowers. Plants somewhat upright in habit. Height, 4 to 5 in. ....	.25	2.00			
ARTEMESIA					
Silver King. 3 ft. Is comparatively new in gardens. Its striking gray stems and leaves and rapid branching habit stamp it as unique among foliage plants. The flowers are insignificant, but it makes up for this lack by its slender ghost-like appearance .....	.25	2.00			
LACTIFORA. An excellent hardy border plant, producing large, branching panicles of sweet scented, creamy white flowers, excellent for cutting. Three to four ft. August-September.....	.25	2.00			
ANTHEMIS—Marguerite					
<i>A. tinctoria Kelwayi.</i> 2 to 3 ft. Compact, fern-like foliage, from which rise brilliant masses of single, bright yellow flowers like Daisies from June through August. Succeeds well in a dry soil and among rocks.....	.25	2.00			
ACONITUM—Monkshood. Lovely late summer and autumn flowering herbaceous perennials of stately growth, particularly adapted for shady or half-shady borders, woodland gardens, or the waterside. 2 to 3 ft. Blue. Good for cutting .....	.30	2.00			
ARNICA					
<i>Montana</i> (Mountain Tobacco.) An attractive border plant not very well known in America. Stems about a foot high with clusters of yellow daisy-like flowers .....	.50	4.50			
ANEMONE—Windflower					
<i>Anemone Japonica</i> (Japanese Windflower). Mixed .....	.25	2.00			
<i>ANEMONE pulsatilla</i> (Pasque Flower). Large flowers, varying in color from light lilac to deep purple. The root-system requires deep soil. April, May. Height, 8 in. ....	.35	3.00			
BAPTISIA. False Indigo.					
<i>Baptisia australis.</i> 4 ft. Late May and June. A handsome plant, with deep blue Lupin-like flowers in long racemes. Adapted to any garden soil.....	.25	2.00			
BOLTONIA. False Chamamile.					
<i>Boltonia asteroides.</i> September and October. Stems 5 to 6 ft. Numerous Aster-like white flowers. One of the best late-flowering perennials .....	.25	2.00			
BELLIS perennis (English Daisy). These Daisies do well in half-shaded places in rock-gardens or in the border. The flowers are full, double, rosy red, white, and pink. April to June. Height, 3 to 6 in. ....	.25	1.50			
<i>Etna,</i> large, deep scarlet.....	.25	2.00			
<i>Lutea,</i> cream color, novelty.....	.35	3.00			
Bellidicoides. A dainty little miniature of the <i>Bellis perennis</i> , except that it throws out numerous runners and so forms a wide mat, covered in summer with small, white daisies. Fine for rockery.....	.35	3.00			
CALAMINTHA (Satureia) alpina. An aromatic plant that grows well in stony soil and in full sun. Purple flowers in spikes. June. Height, 6 in. ....	.25	2.00			
CAMPANULA (Bellflower). Several members of this family are well-known in the perennial border, but certain varieties are desirable in the rock-garden.					
<i>C. carpatica</i> (Harebell). Light blue flowers on erect stems. July, August. Height, 8 in. ....	.25	2.00			
<i>C. carpatica alba.</i> A white form of the preceding .....	.25	2.00			
<i>C. portenschlagiana.</i> Dark blue flowers in May and June. Foliage makes a dense carpet 3 to 5 inches high.....	.35	3.00			
<i>C. rotundifolia.</i> The Bluebells of Scotland. Blooms from June to August. Height, 12 in. ....	.25	2.00			
<i>Sarmatica.</i> A low-growing, much branched variety. Each plant with 8 to 10 stems not over 16 inches high. Covered with pale blue, bell-like flowers. Foliage a silvery gray. Splendid variety for rockery .....	.40	3.50			
<i>Muralis.</i> Very dwarf plant covered with blue-purple flowers in June. Fine for wall or rock garden. The most popular wall plant or rock plant of the entire Campanula group .....	.50	4.00			
Campanula Medium—Canterbury Bells. The plants are more or less pyramidal in growth, about two and one-half feet in height, and profusely covered with large, bell-shaped flowers. Extremely showy. Mixed colors .....	.25	2.00			
CALYCANTHEMA (Cup and Saucer). Tall, erect growing plants completely covered with large cup and saucer-shaped flowers during late May and June. One of the loveliest of biennials and a perfect plant for the old-fashioned, hardy garden. Mixed colors .....	.25	2.00			
CERASTIUM tomentosum. Silvery foliage and white flowers; excellent for covering dry, sunny places. June .....	.25	2.00			
CONVALLARIA majalis. The well-known Lily-of-the-Valley; pure white, fragrant, bell-shaped flowers in May and June. Height, 8 to 10 in. Clumps .....	.50	3.50			
CRUCIANELLA stylosa. Pale pink flowers. Low-growing, seldom more than 9 inches high. June to September .....	.25	2.00			

	Each	10		Each	10
CARNATIONS—Hardy Border					
Mixed Shades. A riot of color and flowers in great abundance in June and July, are the result from just a few plants. Cut back all flower stems when through blooming	.25	2.00			
CENTAUREA—Bachelor Button					
C. Montana. Hardy, continuous blooming plant bearing large, blue flowers on long strong stems; fine for cutting	.25	2.00			
C. Macrocephala. Large, thistle-like, golden yellow flowers; useful for cutting and showy in borders. July and August. 3½ feet high	.25	2.00			
COREOPSIS					
C. Lanceolata. 2-3 ft. Forms large, dense clumps. Well-known and very popular perennial, bearing rich yellow flowers most profusely in June, but to some extent all Summer if kept picked. (Five plants at the 10 rate)	.25	2.00			
CHELONE—Turtlehead					
C. Lyoni. Bright rose pink flowers. Very large and conspicuous. 2 ft. August and September	.25	2.00			
CHEIRANTHUS. Siberian Wallflower.					
A. Allioni. 1½ ft. May and early June. Flower heads bright orange and very fragrant. Lasts for a long time as a cut flower. Hardy biennial, resowing itself every year. Splendid for rock gardens	.25	2.00			
HARDY GARDEN CHRYSANTHEMUMS					
Hardy Pink	.25	2.00			
Hardy Red	.25	2.00			
Hardy White	.25	2.00			
Hardy Yellow	.25	2.00			
White Pompon	.25	2.00			
Bronze Pompon	.25	2.00			
Yellow Pompon	.25	2.00			
DIANTHUS (Hardy Pinks). The varieties here listed are suited to dry rockeries, dry soils, and sunny locations. All Pinks grow easily and thrive in well-drained soil.					
D. caesius grandiflorus (Cheddar Pink). Compact in growth, making a cushion of leaves above which rise the rose-colored flowers. May	.35	3.00			
D. deltoides (Maiden Pink). Deep red flowers with a crimson eye. Plant creeping with 6 to 10-inch stems. Excellent for rock-gardens	.25	2.00			
D. latifolius fl.-pl. Everblooming Hybrid Sweet William, with double crimson flowers	.25	2.00			
D. ARVENIENSIS					
D. Alpinus Allwoodi. New. This is one of the loveliest of all rockery Pinks	.50	4.00			
	.25	2.00			
	.35	3.00			
D. FISHERLI					
DIANTHUS PLUMARIUS (Old-Fashioned Clove Pinks). Double and single blooms. Blooms throughout the Summer	.25	2.00			
DIGITALIS—Foxglove.					
D. Gloxiniaeflora. 4 to 5 ft.	.25	2.00			
DICENTRA eximia (Fringed Bleeding-Heart). A delicate, plume-like plant with foliage resembling ferns. The flowers are rose-colored, in drooping racemes. Excellent for shady places. Height, 12 in.	.35	3.00			
D. spectabilis (Bleeding Heart). An old-fashioned flower that succeeds best in the shade. The blooms are heart-shaped, rosy red, and produced from April to July. Height, 2 ft.	.35	3.00			
DELPHINIUM—Larkspur					
Blackmore and Langdon Strain, Mixed. Grown from famous English seeds.					
1 year	.25	2.00			
2 year	.35	3.00			
Wrexham Strain Hollyhock Delphinium. Choice mixed colors. 2 year	.50	4.00			
Named varieties \$1.00 to \$5.00 each.					
DRABA aizoides. Bright yellow flowers in early spring. Height, 2 to 3 in.	.50	4.00			
EPIGAEA repens (Trailing Arbutus). An evergreen, trailing plant with clusters of extremely fragrant, pink flowers in April and May. Thrives in the shade, in soil free from lime. A lovely little native plant. Height, 4 in.	.50	4.00			
ERINUS alpinus carmineus. Rosy purple flowers, with foliage in form of a rosette. Desirable for rock-gardens	.35	3.00			
EUPHORBIA (Milkwort) Myrsinites. A prostrate plant with bluish foliage and large heads of yellow flowers	.25	2.00			
HARDY FERNS. When we think of Ferns we think of the shady nook, but there are some varieties that do well in the sun. The large rock-garden in the shade seems to be incomplete without them, but the value of Ferns should not be overlooked for planting in open places, or where they may be shaded a part of the day.					
Adiantum pedatum (American Maidenhair Fern). One of the finest native Ferns, with graceful frond-like foliage. Height, 12 to 15 in.	.25	2.00			
Aspidium (Polystichum) acrostichoides (Wood Fern). Evergreen. Deep green fronds. It should be planted in the shade. Height, 12 in.	.25	2.00			
Dennstedtia punctilobula (Hay-scented Fern). Fronds extremely broad, making the plant good for massing. Height, 1½ to 2 ft.	.25	2.00			
Osmunda Claytoniana (Interrupta). A distinct and very beautiful native species; foliage velvety green, with prominent brown spores in middle of fronds	.35	3.00			
Osmunda regalis (The Royal Fern). Wonderful in damp, marshy places, where its rich yellowish green foliage and golden stems make very striking subjects	.35	3.00			
Polypodium vulgare. Evergreen. Forms a dense mat from 4 to 10 inches high	.35	3.00			
Woodsia obtusa. Fronds form rosettes of grayish foliage. Height, 1 ft.	.35	3.00			
FUNKIA (Hosta). A handsome plant, often called Plantain Lily, and thrives almost anywhere. Specially desirable for borders and rock-gardens. Small lily-like flowers and glossy foliage.					
F. lancifolia. Lilac-blue flowers in July and August. Long, narrow leaves. Excellent for shady rockery	.25	2.00			
F. plantaginea grandiflora (subcordata grandiflora). Pure white flowers and large golden yellow foliage	.35	3.00			
Funkia variegata. Blue flowers. Foliage variegated with white	.25	2.00			
GAULTHERIA procumbens (Wintergreen). A low-growing, evergreen plant with glossy foliage in Summer and red berries in Winter	.35	3.00			
GERANIUM (Crane's Bill) argenteum. Silvery foliage. Thrives well in dry places in the rock- or soil-garden	.35	3.00			
G. sanguineum. Bright crimson flowers. Attractive foliage. Grows about 18 inches high	.35	3.00			
G. sanguineum album. A white-flowered form of the preceding	.35	3.00			
GEUM (Avens). Low-growing plants with brilliantly colored flowers which resemble small roses. Visitors to our rock-garden greatly admire the Geums during the blooming season.					
G. chilense, Mrs. Bradshaw. A new variety with dark red, double flowers produced freely from June to September. Height, 2 ft.	.35	3.00			
G. coccineum. Dazzling, intensely scarlet flowers from June to August. Height, 12 in.	.50	4.00			
Geum, Lady Stratheden. Rich yellow, double flowers, produced the greater part of summer and autumn. A splendid variety. Height, 2 ft.	.35	3.00			
GYPHOPHILA cerastioides (Mouse-ear Gypsophila). A small plant, forming dense, mat-like growth on rockwork. Large, lilac flowers, veined pink, are produced freely. Height, 3 to 4 in.	.35	3.00			
G. repens (Creeping Gypsophila). A trailing plant with tiny white flowers; fine for rock-gardens and open steps. June and July. Height, 6 in.	.25	2.00			
G. PANICULATA compacta	.25	2.00			
G. BRISTOL FAIRY (Double variety)	.50	4.50			
GAILLARDIA—Blanket Flower					
Grandiflora. This is considered one of the most beautiful and desirable plants in cultivation, beginning to bloom in June they continue one mass the entire season. Fine for cutting	.25	2.00			
GLOBULARIA—Globe Daisy					
Trichosantha (Globe Daisy). A dwarf tufted little plant with beautiful lavender flower heads	.35	3.00			

Ornamental Grasses

	Each	10		Each	10
Ornamental Grasses are used chiefly for mass effects, although they may be used to advantage with small shrubs in the border. They are particularly effective for the margins of ponds and lakes. If the plumes are cut in late fall, they may be used for indoor decorations. If left uncut, they will retain their form practically all winter and thus add decorative features for the garden.					
ARUNDO donax. A tall-growing reed, often reaching 15 feet. The leaves are long and broad, bright green, and the reddish brown blooms turn to silver-gray at maturity	.50	4.00			
Arundo donax variegata. Leaves are striped green and white. Not so tall as the preceding variety. In extremely cold climates this species must be protected in winter. Potted plants, \$1 each	.50	4.00			
ELYMUS glaucus (Blue Lyme Grass). Narrow, glaucous silver foliage. A beautiful plant useful in borders or at the edge of taller plants. Height, 2 ft.	.35	3.00			
EULALIA gracillima univittata (Japanese Rush). Long, narrow, bright green foliage with a silvery midrib	.25	2.00			
E. japonica variegata. Foliage striped with white and stems marked pink or yellow. Height, 5 to 6 ft.	.25	2.00			
E. japonica zebrina. The yellow markings run across the leaf rather than lengthwise. Height, 6 to 7 ft.	.25	2.00			
FESTUCA glauca (Blue Fescue). A pretty, dwarf, tufted grass with blue-green foliage. Interesting and useful in the rock-garden and for border of perennial beds	.25	2.00			
PHALARIS arundinacea variegata (Variegated Ribbon Grass). Variegated foliage. Excellent for borders. Height, 12 to 15 in.	.25	2.00			
HEPATICA triloba (Liverleaf). Pretty blue flowers in very early spring. Height, 4 to 6 in.	.25	2.00			
HEUCHERA (Alum-root). Rosette-like plant, with nodding stems and sprays of			drooping flowers. Thrives in half-shady places in a border and rockery.		
			H. brizoides. Flowers pink, from May to September. Height, 6 in.	.35	3.00
			H. sanguinea (Coral Bells). Forms a dense rosette of leaves from which rise many slender stems, surmounted by crimson bells. June to September. Height, 12 to 18 in.	.35	3.00
			HOUSTONIA purpurea. A native plant that forms a dense tuft of foliage and produces hundreds of blue flowers in May and June. Thrives in moist and sour soils. Height, 2 to 3 in.	.25	2.00
			HYPERICUM repens. Creeper with bright yellow flowers about 1½ inches in diameter	.25	2.00
			HEMEROCALLIS—Day Lilies		
			H. Dr. Regal	.25	2.00
			H. FLAVA	.35	3.00
			H. FULVA	.25	2.00
			H. THUNBERGI	.25	2.00
			H. KWANSO	.30	2.50
			HIBISCUS—Mallows		
			H. New Giant Flowering. 3-5 ft. July-Aug. Huge single flowers like mammoth Hollyhocks. Pink, white or red by color	.25	2.00
			HOLLYHOCKS		
			Few gardens ever grew without their row of stately Hollyhocks somewhere in the background. There is unusual charm in the single varieties. 6-8 ft. July-Aug.		
			All varieties	.25	1.50
			Double Red and Yellow.		
			Newport Pink. Very double, bright pink.		
			Single Mixed.		
			Double Mixed.		
			IBERIS sempervirens (Candytuft). A multitude of white flowers in spring almost hide the evergreen foliage. Height, 8 to 10 in.	.30	2.50
			I., Little Gem. Pure white flowers in June; blue-green foliage. Splendid as a rock-garden or edging plant. Height, 6 in.	.35	3.00

Iris Germanica

The family favorite of many years ago was the Iris. Because of the great market demand, it was considered a fad, and, like most fads, came into fashion, held a high pinnacle of esteem and then after reaping its share of popularity receded into humble solitude.

But the Iris is coming back, not as a fad, but as a fundamental requirement to successful planting. Whether at a distance or near at hand, the colors in a clump of Irises are exquisitely beautiful. Distance,

due to atmospheric conditions, tends to gray or soften the colors. This is Nature's method of blending into a harmonious color scheme those colors which may otherwise clash.

Again, if the Iris is studied at close range it is not only the magnificence and boldness of color that attracts attention, but an observation of the minute petal venation is indeed food for thought. It makes one wonder at the perfection of the Master-hand.

Standard German Iris

S. means Standards, the upright portion of the flower;

F., Falls, the drooping portion.

	Each	10		Each	10
Afterglow. Pink shading to yellow	.25	2.00	Flavescens. (De Candolle.) S. and F. a delicate shade of yellow. Flowers large, sweetly scented; desirable for massing and for cutting. Height, 30 in.	.25	2.00
Ballerine. Blue-violet	.50	3.00	Harlequin. (Perry, 1903.) Pale yellow with light purple markings. Dwarf	.25	1.00
Blue Boy. Light blue. Early	.50	3.00	King Edward (Ruberrima). (1887.) Reddish purple	.25	1.00
Cecile Minturn. Rose	.25	2.00	Leonidas. Lavender to deep violet. S. dome shaped; F. slightly incurved and ruffled	.25	1.00
Dalila. White	.50	3.00	Parisiana. (Vilmorin, 1911.) S. white and lilac-purple; F. white, frilled at edge with violet	.25	1.00
Delicatissima. Lilac	.50	4.00	Princess Victoria Louise. (Goos & Koene-mann, 1910.) S. sulphur-yellow; F. rich plum, bordered cream. Early blooming and desirable in landscape work. Height, 24 in.	.25	1.00
Edouard Michel. Wine-red	.50	4.00	Quaker Lady. (Farr, 1909.) S. smoky lavender with yellow shading; F. ageratum-blue and old-gold; yellow stigmas and beard. Height, 38 in.	.25	2.00
Lieut. A. Williamson. Blue	.25	2.00	Rhein Nixe. 2 ft. Snow white standards and Plum colored falls	.25	1.50
La Neige. Ivory-white	.35	3.00	Juniata. Said to be the tallest bearded Iris. Clear blue self colored. Very fragrant	.25	1.00
Magnifica. Red-violet	.35	3.00			
Morning Splendor. Violet	.50	3.50			
Mother of Pearl. Pale blue	.25	2.00			
Mrs. Hetty Matson. Lilac	.50	3.50			
Oriflamme. Bright blue	.25	2.00			
Roseway. Light red	.50	4.00			
Seminole. Violet-rose	.50	4.00			
Souv. de Mme. Gaudichau. Purple	.35	3.00			
Susan Bliss. Rose-pink	.50	4.00			
Sweet Lavender	.50	4.00			
Brooksiana (Queen of May). (Salter, before 1859.) The effect of the bloom is light pink	.25	2.00			
Crusader. (Foster, 1913). S. uniform light blue; F. bluish violet; white throat lined with brown; orange beard. Height, 40 in.	.25	2.00			

Iris Kaempferi - Japanese Iris

JAPANESE IRISES are ideal plants for bordering natural pools or swampy ground. The plants are not happy if planted where water stands during winter or in late spring. They should be set where they have plenty of moisture, but should not stand in the water. Japanese Irises bloom later in the season than the German sorts, and therefore extend the flowering period.

	Each	10		Each	10
Catherine Parry. Double. Blue, overlaid rosy red, high tufts in center almost triple .....	.25	2.00	Mahogany. Double. Purplish mahogany-red. The erect petals are prettily crested. Latest to bloom.....	.25	2.00
Columbia. Double. Blue with pure white veins; yellow center.....	.35	3.00	Marjorie Parry. Double. Delicate light mauve .....	.50	4.00
Daghastan. Double. Rosy red, veined white .....	.50	4.00	Minerva. Single. Pink, tinted rose.....	.35	3.00
Delice. Delicate lavender, shaded lavender-pink; yellow blotch at base of petals....	.50	4.00	Mongol Khan. Single. Deep rosy red. Extra large .....	.50	4.00
Doris Childs. Double. Pearl-white, deeply veined rosy plum; center petals deep plum, edged white .....	.35	3.00	Mount Hood. Double. Light blue shaded darker; bright orange center.....	.50	4.00
Eleanor Parry. Double. Claret-red, flamed white and blue. Compact; medium-sized .....	.50	3.50	Purple and Gold. Deep purple, with gold center .....	.25	2.00
Fascination. Double. Blue, lightly veined white .....	.25	2.00	Rose Anna. Double. Ivory-white, heavy ruby-red veins; conspicuous yellow blotch; stigmas dark plum.....	.50	4.00
Gold Bound. Large, white blooms with yellow centers; six petals.....	.25	2.00	Rose H. Scheepers. Double. Mauve-gray, overlaid blue .....	.50	4.00
Hana-gosho. Dark claret; three petals.....	.35	3.00	Temple Flower. Single. Ivory-white, heavily blended with soft bluish violet; veined white; inner petals white edged phlox-pink .....	.50	4.50
Idzumigawa. Double. Gray, shaded with violet .....	.25	2.00	Uchiwa. Crimson-purple, with a few white veins .....	.25	2.00
Kuma-funjin. White, with lilac border; six petals .....	.25	2.00	Yomo-no-umi. Creamy white. Six petals. A free-flowering early variety.....	.35	3.00
La Favorite. White, freely veined blue; rich purple center .....	.50	4.00			

Iris Species

The following varieties are all good for damp places and waterside.

	Each	10		Each	10
Dorothea K. Williamson (Wmsn. 1918). Large velvety flowers of the most vivid purple. Thirty inches. Generally considered one of the very finest of the beardless Irises. Fine as a cut flower. It requires a moister situation than bearded Iris .....	.35	3.00	Pseudacorus alba. A very rare, creamy-white form of Pseudacorus, with all of its good qualities	1.00	7.50
Pseudacorus , 36 to 48 inches. A rich yellow, this color being entirely lacking in Siberian Irises, and it is especially attractive planted with them. It will also grow in a marsh or swamp and makes a pretty picture in a pool, or along the water's edge, just an inch or two under the water. It is excellent for naturalizing, as it will take care of itself. It will also do equally well under ordinary garden treatment .....	.25	2.00	Pseudacorus gigantea. A giant flowered form of Pseudacorus, with all of its good qualities retained .....	.35	2.50
			I. versicolor. (The native Blueflag.) Used for planting in wet places.....	.25	2.00
			ORIENTALIS, Snow Queen. (Barr, about 1900.) Flowers, ivory-white on tall stems .....	.25	2.00
			SIBIRICA, Perry's Blue. (Per., 1912.) Clear blue, possibly the finest of the family. Desirable for cutting because of the long stems. Plants free-flowering; stems from 2 to 3 feet high.....	.25	2.00

Dwarf Iris for Rock Gardens

	Each	10		Each	10
PUMILA. Very early-blooming, dwarf plants. The growth is rapid, and plants soon form a dense mat, which makes them desirable for edgings and for patches of color in rock-gardens.			ers of grayish white, forming curiously shaped rosettes. June to August. Height, 6 to 8 in.....	.35	3.00
Cyanea. S. bright blue; F. deep blue.....	.25	2.00	LINUM flavum (Flax). Light yellow flowers in June and July. Height, 12 in.....	.25	2.00
Excelsa. Large, deep yellow flowers, with orange beard .....	.25	2.00	L. perenne. Blue flowers in midsummer. Height, 12 in. ....	.25	2.00
Schneekuppe. S. white; F. slightly marked yellow at base .....	.25	2.00	LIATRIS —Kansas Gayfeather		
Ariadne. Dark blue .....	.50		L. pycnostachya. 3 to 5 ft. Tall, dense spikes of purple flowers in August. One of the choicest and most conspicuous species .....	.25	2.00
Atroviolacea. Purple.....	.50		L. spicata. 3 to 4 ft. Aug.-Sept. Vivid lilac rose flowers in dense spikes. Of easy culture in a sunny place.....	.25	2.00
Blue Beard. White and blue.....	.25		LILIUM (Hardy Lilies). These add greatly to the beauty and charm of a rock-garden. The length of stem tends to break the flatness of the usual garden form.		
Cristata. Amethyst-blue .....	.25		L. batemannieae (Turk's-Cap Lily). Color reddish orange, stained with apricot. The stems grow from 3 to 4 feet high and often carry ten flowers in July and August .....	.30	2.50
Ditton Purple .....	.50		L. philadelphicum. Bright orange-red flowers slightly tinged at the center with yellow and spotted deep purple; red anthers. June and July. Height, 12 in.....	.30	2.50
Dixmude. Violet .....	.50		L. regale (Royal Lily). Enormous white flowers shaded pink and with a canary-yellow center. Hardy and will grow almost anywhere. Height, 2 to 3 ft.....	.25	2.00
Dr. Mann .....	.25				
Dr. Potter .....	.25				
Eclipse. Purple .....	.25				
Morocain. Purple .....	.25				
Negus. Bright purple .....	.50				
Orange Queen. Yellow .....	.25				
Socrates. Purple .....	.50				
Statellae. White and primrose.....	.50				
Verna. Lilac-purple .....	.25				
LAVENDER					
L. Vera (Old English Lavender.) A herb having deliciously fragrant leaves and flowers. Should be wintered in the cellar in this latitude .....	.25	2.00			
LEONTOPODIUM alpinum (Edelweiss). A noted plant from the Alps, with flow-					

	Each	10		Each	10
<i>L. tenuifolium</i> (Coral Lily). Flowers rather small but a very handsome shade of coral and vermilion, with foliage slender and slightly drooping.....	.25	2.00	<i>Champs de Elysee</i> . (Dwarf.) A very bright rosy-magenta.....	.25	2.00
<i>L. tigrinum</i> (Tiger Lily). Bright red flowers covered with large purplish spots. August. Height, 2 to 5 ft.....	.30	2.50	<i>Gruppkinigen</i>.....	.35	3.00
LYCHNIS			<i>General Von Heutz</i> . Enormous large flowers of a brilliant salmon red colour with pure white center.....	.35	3.00
<i>L. chalcedonica</i> . (Maltese Cross). Brilliant scarlet flowers in June.....	.25	2.00	<i>Koenigshofer</i>.....	.30	2.50
<i>L. viscaria splendens</i> . Flowering profusely in June and July. 8 to 10 inches high; fine border plant.....	.35	3.00	<i>Miss Lingard</i> . Earliest white; will bloom twice if flowers are picked.....	.25	2.00
<i>L. alpina</i> . Reddish purple flowers and tufted green foliage. Height, 12 in.....	.25	2.00	<i>Mrs. Jenkins</i> . Pure white, very large truss.....	.25	2.00
<i>L. haageana</i> . Very large, brilliant orange-scarlet flowers in May and June. Height, 12 in.....	.25	2.00	<i>Mrs. Chas. Dorr</i> . A tall, vigorous blue-mauve or lavender.....	.25	2.00
LYTHRUM—Rose Loosestrife			<i>Paul Dutrie</i>.....	.25	2.00
<i>L. salicaria roseum</i> . Long spikes of rose colored flowers. Used for naturalizing in moist or wet places, or for the hardy border.....	.25	2.00	<i>Rijinstroom</i> . Large-flowered bright rose. Very popular.....	.25	2.00
LYSIMACHIA			<i>Robinson</i>.....	.25	2.00
<i>L. nummularia</i> . (Moneywort.) Rapid growing ground cover with tiny, cup-shaped yellow flowers. For use on banks or under trees when grass will not grow. Price in quantity, \$12.00 per 100.....	.25	1.50	<i>Thor</i> . A lovely shade of deep salmon-pink suffused and overlaid with a scarlet glow. A splendid variety. Late with tall vigorous growth.....	.25	2.00
LOBELIA			<i>Von Lassberg</i> . The purest snow-white in cultivation. Large open truss, ideal as cut flower.....	.25	2.00
<i>L. cardinalis</i> . (Cardinalflower.) Tall spikes of rich cardinal red, blooming in August. For naturalizing along streams.....	.25	2.00	<i>Widar</i> . Lilac blue with irregular white center.....	.25	2.00
MONARDA. Oswego Tea			PHLOX . No rock-garden can be complete without specimens of Phlox. In fact, the family contains many of the finest rock-garden plants. All are extremely easy to grow, and from the great number of varieties we have selected those which experience has proved to be the best.		
<i>MONARDA didyma</i> . (Bee Balm.) 1½ to 2½ ft. June to September. Showy heads of brilliant scarlet flowers in rich profusion; very effective.....	.25	2.00	<i>P. amoena</i> . Bright pink flowers in dense heads. April and May. Height, 4 to 6 in.....	.25	2.00
<i>MAZUS rugosus</i> . Dainty lilac and white flowers in early spring. Height, 4 in.....	.25	2.00	<i>P. divaricata (canadensis)</i> . Lavender flowers which are quite large and fragrant. May. Height, 10 in.....	.25	2.00
<i>MENTHA requieni</i> (Requien Mint.) A very small, creeping plant with round leaves and pale mauve flowers. Scented like peppermint. Charming in flagstone work as it forms a dense carpet.....	.25	2.00	<i>P. subulata</i> (Moss Pink). In May and June the moss-like foliage is completely covered with small pink flowers. Height, 4 in.....	.25	2.00
<i>MERTENSIA virginica</i> . Bell-like flowers, blue and pink, are produced in early spring. The plant prevails in a moist, shady place. Height, 1 to 2 ft.....	.25	2.00	<i>P. subulata alba</i> . Pure white flowers. This species is used chiefly for carpet bedding and in rockeries and borders.....	.25	2.00
<i>MYOSOTIS alpestris</i> (Forget-me-not). A compact variety with pale blue flowers in May and June. Height, 8 in.....	.25	2.00	<i>P. subulata lilacina</i> . Light lilac flowers.....	.25	2.00
<i>M. palustris semperflorens</i> . Rich blue flowers. A more profuse bloomer than the preceding variety. Desirable for damp places.....	.25	2.00	<i>P. subulata Vivid</i> . A bright shade of pure pink. Possibly the finest of all.....	.35	3.00
<i>NEPETA mussini</i> (Catmint). A familiar plant, rather compact in form, with masses of lavender flowers. Height, 12 to 18 in.....	.25	2.00	PACHYSANDRA		
<i>NIEREMBERGIA rivularis</i> . Cup-shaped, creamy white flowers from June to August. Creeping plant, excellent for rock-gardens. Height, 8 in.....	.30	2.50	<i>P. terminalis</i> . An evergreen ground cover used extensively for planting under shrubbery or evergreens, or where the ground is bare and conspicuous. Covered with white flowers in spring.		
<i>ENOTHERA</i> (Evening Primrose). A group of plants that are extremely successful in sunny locations. Flowers come in great freedom all summer.....	.25	2.00	PAEONIA SINENSIS		
<i>Æ. missouriensis</i> . Trailing plants with pale yellow flowers 5 to 6 inches in diameter. A splendid perennial for general garden use. June to August. Height, 10 in.....	.25	2.00	<i>Albert Crousse</i> . Large, very full, convex blooms of soft shell-pink.....	.50	4.00
<i>Æ. speciosa</i> . Snow-white flowers all summer. Erect in growth. Height, 18 in.....	.25	2.00	<i>Baroness Schroeder</i> . Rose type; late. White with shadings of flesh. This is one of the finest Peonies. Its immense flowers of great substance.....	1.00	7.50
<i>PAPAVER alpinum</i> . A smaller and more delicate plant than the Iceland Poppy. Flowers are white, pink, orange, or yellow.....	.35	3.00	<i>Eugenie Verdier</i> . Magnificent large flowers of delicate flesh pink with lighter margin, overlaid with silvery sheen.....	.75	6.00
<i>P. nudicaule</i> (Iceland Poppy). Flowers vary in color from pure white to deep orange, are carried all the season, and are extremely showy at all times. The plant forms a tuft of bright green foliage, from which the stems arise. Height, 12 in.....	.25	2.00	<i>Edulis Superba</i> . The old-fashioned full, double pink; very bright; early. A good variety.....	.50	5.00
POPPIES, Oriental			<i>Felix Crousse</i> . Rich amaranth red.....	.50	4.00
<i>Bracteatum</i> . Like P.			<i>Festiva Maxima</i> . Still a prize winning variety. Immense white with a tiny scarlet mark near the center. Midseason.....	.50	4.00
<i>Orientalis</i> (Oriental Poppy). Tremendous scarlet, cup-shaped blooms of brightest crimson-scarlet, with large, purplish black blotches at base of petals, creating a wonderful contrast when bloom is fully open.....	.25	2.00	<i>Le Cygne</i> . 9.9. Very large, perfectly formed flower, freely produced; cream-white with a touch of green at the heart. The finest white. Received the highest rating of any Peony.....	3.00	
PHLOX decussata			<i>Longfellow</i> . Brilliant cherry-red flower of large size. Good reds are hard to find and this is a very satisfactory one.....	1.00	
<i>Albion</i>.....	.25	2.00	<i>Mons. Jules Elie</i> . Bomb type. A royal beauty among Peonies and possibly the largest flowered. Color ideal lilac pink, overlaid with a silvery sheen which fairly glistens in the sunlight.....	.75	6.00
<i>Beacon</i> . A very fine brilliant bright cherry red.....	.25	2.00	<i>Mons. Martin Cahuzac</i> . 8.8. Medium size, globular, semi-rose type. Dark purple-garnet with black reflex. The darkest Peony known. Strong, vigorous grower, free bloomer; midseason.....	1.00	8.00
<i>Commander</i> . A very large-flowered variety of orange scarlet. A superior new variety.....	.25	2.00	<i>Primevere</i> . Bomb type; midseason. Outer petals sulphur-white, center petals deep sulphur yellow. Best yellow Peony grown.....	1.00	8.00
			<i>8.7 Reine Hortense</i> . Midseason. Very large. Lovely rose-pink in a halo of white. Deliciously fragrant. A dependable sort, one of the world's finest. Tall, free flowering, stiff stems.....	1.00	8.00

	Each	10
8.5 <i>Tenuifolia Flore Pleno.</i> Early, very double, dazzling red. The earliest red to bloom. Foliage beautifully cut and lacinated	3.00	
Therese. One of the world's finest Peonies. Rich, satiny pink of huge size. Reflex of petals glossy and shining	1.25	10.00
PENTSTEMON—Beardtongue		
<i>P. barbatus.</i> Tall graceful spikes of coral red flowers. Fine for cutting	.25	2.00
PHYSOSTEGIA—False-dragonhead		
<i>P. virginiana.</i> 3 to 4 ft. Tall, slim habit. Flowers closely set on long, graceful, terminal spikes. Flesh pink to lavender pink. August	.25	2.00
<i>P. virginiana alba.</i> White form	.25	2.00
PHYSALIS FRANCHETI—Chinese Lantern Plant		
<i>P. francheti.</i> Grown for its orange red fruit which makes splendid decorations for Hallowe'en, or for dried bouquets	.25	2.00
PLATYCODON—Chinese Bellflower		
<i>P. grandiflorum.</i> Wide open, bell-shaped flowers, in blue or white, held uprightly from a mass of close, compact foliage. One of the most useful and permanent perennials. No hardy border should be without it	.25	2.00
PLUMBAGO larpentae (Blue Leadwort). Deep blue flowers. One of the best dwarf plants for the rock-garden or the border. August and September. Height, 6 to 12 in.	.25	2.00
POLEMONIUM reptans. Loose clusters of blue flowers in April and May. A dwarf, compact perennial, 8 to 12 inches high	.35	3.00
POLYGONATUM multiflorum (Solomon's Seal). Greenish white flowers in long sprays. May and June. Height, 2 ft.	.35	2.00
POTENTILLA (Cinquefoil). Single and double blooms of extreme brilliance are produced in abundance during July and August, when flowers are welcomed in the rockery. Both the leaves and the flowers resemble those of the strawberry	.35	3.00
PRIMULA acaulis (Old English Primrose). Pale lemon-yellow, fragrant flowers in early spring. Plants thrive in rich soil and in shaded places	.35	3.00
<i>P. auricula alpina.</i> The flowers, which are of varying colors and quite fragrant, are borne on stems 6 to 8 inches long. One of the most valued plants for the rock-garden	.35	3.00
<i>P. japonica.</i> Terra-cotta	.50	4.50
POLYANTHUS (Bunch Primrose)		
The Polyanthus is an indispensable spring flower and should be used largely in flower beds and borders, also wild gardens and rockeries. It likes an open, half-shady position in rich soil.		
Veris Hybrids. This strain includes various shades of lilac, purple and violet, as well as a wide range of buff, orange, salmon and rich reds approaching scarlet in intensity. Quite hardy and of vigorous growth	.25	2.00
PYRETHRUM—Painted Daisies		
Roseum Hybridum. Very hardy and one of the choicest of the perennials. The attractive fernlike foliage is interesting		

	Each	10
when the plants are not in bloom and the flowers ranging from pure white through shades of pink to deep crimson are beautiful on the plant or as cut flowers. They flower the last of May and through June	.25	2.00
RUDBECKIA (Coneflower)		
Golden Glow. One of the most popular hardy plants. Grows six feet high, producing masses of large, double, golden yellow flowers shaped like a cactus dahlia	.25	2.00
Maxima. A rare and attractive variety, growing 5 feet high, with large, glaucous green leaves and bright yellow flowers 5 to 6 inches across, with a cone 2 inches high; flowers continuously from June to September	.25	2.00
Newmanni. The perennial form of the "Black-Eyed Susan." Deep orange-yellow flowers, with a dark purple cone; long, wiry stems 3 feet high; blooms all summer	.25	2.00
Purpurea (Giant Purple Coneflower). Peculiar reddish purple flowers, with a very large, brown, cone-shaped center. Blooms from July to October. 3 feet	.25	2.00
SANGUINARIA canadensis (Bloodroot). White flowers in April and May are followed by large, deep green leaves. Height, 6 in.	.25	2.00
SANTOLINA chamaecyparissus (Lavender Cotton). A dwarf evergreen plant with fragrant, silvery white foliage. Useful in the rock-garden, the border, and in carpet-bedding. Height, 12 in.	.25	2.00
SAPONARIA ocymoides (Rock Soapwort). A half-trailing plant with bright pink flowers which are both showy and effective. May to August. Height, 6 in.	.25	2.00
SAXIFRAGA. These plants will thrive in almost any soil. They grow about a foot high, forming masses of deep green foliage. The flowers appear in early spring.		
<i>Saxifraga cordifolia</i> (Heartleaf Saxifrage). Bright rose-colored flowers and waxy foliage. April and May	.50	4.00
<i>S. macnabiana.</i> Large white flowers spotted with red. Height, 2 ft.	.50	4.00
S. (Megasea) Hybrids. Flowers in varying shades of rose or pink. Plants have excellent foliage, do well in shade or sun, and are superb for rock-gardens or borders	.35	3.00
<i>S. moschata.</i> Flowers vary in color from cream to light red. Dwarf	.75	6.00
We have the following varieties of Saxifraga in limited quantities	.75	6.00
<i>S. cuneata</i>		
<i>S. caniferae</i>		
<i>S. andrewsii</i>		
<i>S. aizoor rosea</i>		
<i>S. balcana</i>		
<i>S. brillisant</i>		
<i>S. linkulata alberti</i>		
<i>S. magesia cordifolia purpurea</i>		
<i>S. hostii</i>		
<i>S. androsace vellosa</i>		
<i>S. androsace lactea</i>		
<i>S. moschata</i>		
<i>S. beesiana</i>		
<i>S. magesia afghanica</i>		
<i>S. magnesia bessiana</i>		
Azurea. A Rocky Mountain species. Grows 3 to 4 feet high, producing, during August and September, pretty sky-blue flowers in the greatest profusion	.25	2.00

Sedum - Stonecrop

These are ideal plants for rockeries. The culture is extremely simple as they will thrive almost anywhere, even succeeding in sand and sun where other plants will not grow. They will grow in cracks between stones and seem to fit in every place.

	Each	10
DWARF VARIETIES		
Sedum acre (Gold Moss.) A low-growing plant with light green leaves and masses of yellow flowers; suited to covering ledges. May and June. Height, 4 in.	.25	2.00
<i>S. Acre Major</i>	.35	3.00
<i>S. Acre Minium</i>	.35	3.00
<i>S. album</i> (White Stonecrop). A creeping variety with tiny white flowers in July and August. Height, 4 to 6 in.	.25	2.00
<i>S. album minor.</i> Similar to the above but half as small as the type	.35	3.00
<i>S. anglicum.</i> Pearly white flowers on stems about 3 inches high	.35	3.00
<i>S. anacampseros</i>	.35	3.00
<i>S. altissimum</i>	.35	3.00
<i>S. asiaticum</i>	.35	3.00

	Each	10
<i>S. cupressoides</i>	.35	3.00
Sedum dasyphyllum. One of the smallest, seldom over 2 inches high. Blue-gray foliage	.50	4.00
<i>S. ellacombianum</i>	.50	4.00
<i>S. ewersi</i>	.35	3.00
<i>S. fimberatum</i>	.35	3.00
<i>S. forsterianum.</i> Round bunches of tiny yellow flowers on a small plant	.25	2.00
<i>S. glaucum.</i> An excellent dwarf variety with light grayish foliage	.35	3.00
<i>S. hispanicum.</i> Similar to <i>S. glaucum</i>	.35	3.00
<i>S. hybridum</i>	.35	3.00
<i>S. kantschaticum.</i> Orange-yellow flowers. Foliage turns to golden yellow in autumn	.35	3.00
<i>S. lydium.</i> A carpet of bright green foliage which changes to reddish bronze in late summer. Height, 4 in.	.25	2.00
*MIDDENDORFFIANUM. A very choice kind, forming neat little bushes of pretty dented leaves of bronzy green hue	.35	3.00

	Each	10		Each	10
Middendorffianum diffusum. A new introduction from Europe; similar to Middendorffianum, but neater.....	.50	4.00	S. ternatum (Mountain Stonecrop). Flowers white with reddish anthers. The creeping shoots are from 6 to 8 inches long, with leaves about half an inch long	.25	2.00
S. obtusatum. Yellow flowers in June. The small foliage is dull green in spring, turning to red in summer. Height, 4 in.	.50	4.00	ERECT-GROWING VARIETIES		
S. pruinatum. Golden yellow flowers in July. Blue-gray foliage.....	.35	3.00	S. Brilliant. Flowers are vivid amaranth red .....	.25	2.00
S. pulchellum. A very neat native with foliage turning reddish in fall; yellow.....	.35	3.00	S. spectabile. Immense heads of showy rose-colored flowers. A pretty, erect species with light green foliage. Height, 18 in.....	.25	2.00
S. sarmentosum (Stringy Sedum). Flowers yellow. Slender prostrate shoots with small leaves in whorls. Height, 4 in.....	.25	2.00	S. atropurpureum .....	.35	3.00
S. sexangulare (Hexagon Stonecrop). A rapid-growing plant making a dense mat of dark green foliage.....	.25	2.00	S. variegata .....	.50	4.00
S. sieboldi (Siebold Sedum). Flowers pink, borne above bluish green foliage which has a pink margin. The branches are slender, with the leaves arranged in whorls of three.....	.35	3.00	We have the following varieties of Sedums in small amounts.....	.50	4.00
S. spathulatum purpureum. Dark yellow flowers. Reddish foliage, marked with gray in the center of the rosette.....	.35	3.00	Refelexum		
S. spurium coccineum. Rosy crimson flowers in July and August. Height, 6 in.....	.25	2.00	Moranese		
S. stoloniferum. Large clusters of pink flowers in June and July borne on trailing stems. Height, 6 in.....	.25	2.00	Tennifolium		
			Album Purpureum		
			Oppositifolium		
			Hispanicum Minus		
			Linearis		
			Linearis Verigata		
			Reflexum Minor		
			Spurium Splendens		
			Allacombianum		
			Terenatum		
			Surrium		
			Spattinilifolium		
			Reflexum		
			Sartorianum		
			Hirsutum		
			Acre Aureum		
			Strihuryi		
			Nevii Beyuchianum		
			Album Chloratum		

Sempervivum - Houseleek

An interesting family of plants which are used freely in rock gardens. All varieties are evergreen, and add to the beauty of the garden in winter. The plants are increased by rosettes sent out by the parent plants; these small specimens surrounding the larger plant are extremely attractive.

	Each	10		Each	10
Sempervivum alberti. Medium-sized rosettes; pointed leaves. Flowers rose-red. Height, 8 in.....	.25	2.00	S. soboliferum (Hen-and-Chickens). Flowers yellow, carried above rosettes of silver and bronze foliage. Height, 6 to 9 in.	.25	2.00
S. alpinum. Flowers purplish. Rosettes 2 to 3 inches in diameter.....	.25	2.00	S. tectorum (Roof Houseleek). Rosettes are 3 inches or more across. The leaves are longer and thicker than the other varieties and are tipped with red.....	.25	1.50
S. arachnoideum (Spiderweb Houseleek). Tips of the leaves are connected by silvery threads. Flowers bright red.....	.25	2.00	S. tectorum atroviolaceum. Flowers purple or violet .....	.50	4.00
S. arachnoideum tomentosum. Numerous red flowers and flat white rosettes.....	.25	2.00	S. atropurpureum .....	.50	4.00
S. atropurpureum veloseum. Large, reddish green foliage. A pleasing variety.....	.50	4.00	S. thompsonii .....	.50	4.00
S. asimile .....	.50	4.00	S. tomayeri .....	.50	4.00
S. arachnoideum laggerii .....	.50	4.00	S. triste. Lower part of the foliage is dull green and the upper part light brown. The flowers are bright red and the rosettes from 2 to 3 inches across.....	.25	2.00
S. arenarium .....	.50	4.00	S. villosum .....	.50	4.00
S. borisii .....	.50	4.00	S. violaceum .....	.50	4.00
S. blandum rubicundum .....	.50	4.00	SIDALCEA		
S. brauni. Flowers red. Bronze-green leaves turning to red in the fall.....	.25	2.00	Rosy Gem. Erect growing, more or less branching plants, 2 to 3 feet in height, producing their showy bright rose-colored flowers during June and July. They will succeed in any garden soil in a sunny position .....	.25	2.00
S. calcareum. Flowers red. Foliage solid, thick, and closely packed. Height, 3 in....	.50	4.00	SILENE (Catchfly). A family of plants related to the pinks. All have attractive flowers and foliage.....		
S. ciliatum. Green foliage in small rosettes	.75	6.00	S. alpestris. Dwarf plant with pure white flowers in May and June.....	.25	2.00
S. rubrum .....	.75	6.00	S. schafta (Autumn Catchfly). Covered with masses of bright pink flowers from July to October. Height, 4 to 6 in.....	.25	2.00
S. cinerascens. Bronze foliage. Close and compact growing .....	.25	2.00	SILENE maritima rosea. A double form with pink flowers.....	.50	4.00
S. doellianum. Flowers red. Small light green rosettes with the tips of the inner leaves connected by fine threads.....	.25	2.00	SPIREA filipendula (Dropwort). Creamy white flowers tipped in red are borne on slender stems. Fern-like foliage in tufts	.25	2.00
S. fauconnetti. Leaves deep green, turning to bronze in the fall.....	.25	2.00	STACHYS lanata (Woundwort). An old-fashioned garden plant desirable in rock-work. Soft silvery foliage. Height, 4 in.	.25	2.00
S. fimbriatum (Fringed Houseleek). Rosettes reddish at the base and fringed with hair at the tip. Flowers red. Height, 6 to 10 in.....	.15	1.00	TEUCRIUM orientale (Germander). Blue flowers are produced in abundance. Plant dwarf, with good foliage.....	.35	3.00
S. funcki. Marked by bright red stems connected with emerald-green rosettes about 2 inches across.....	.25	2.00	THALICTRUM		
S. glaucum. Flowers vary from pale to bright red.....	.25	2.00	Aquilegifolium. Graceful foliage like that of Columbine, and rosy purple flowers from June to July on 2 to 3 feet tall spikes	.35	3.00
S. globiferum (Globe Houseleek). Yellow. Rosettes 2 to 3 inches across, with shorter leaves than other varieties. New rosettes are on stems from 1½ to 3 inches long....	.25	2.00	THYMUS (Thyme). These old-fashioned sweet herbs, which come from the mountains, make a close, fragrant carpet on dry, sunny banks where other plants or grasses will not thrive.....		
S. heuffellii .....	.50	4.00	Thymus serpyllum (Mother-of-Thyme). An evergreen plant valued for ground-covers and rockeries. The lilac flowers are very small .....	.25	2.00
S. helledrandtii .....	.50	4.00	*Serpyllum album (White Mountain Thyme). Forms dense mats of dark green foliage and clouds of white flowers..	.25	2.00
S. hirtum. Small rosettes tinged with red, and covered with short hairs.....	.35	3.00			
S. juratense .....	.50	4.00			
S. malbys hybrid .....	.50	4.00			
S. mettenianum. Flowers light rose. Rosettes 1¼ to 2 inches across, flattened....	.35	3.00			
S. mogriogii .....	.50	4.00			
S. montanum. Compact rosettes, containing from 60 to 80 leaves, tinted brown on tips. Flowers red.....	.25	2.00			
S. pulchellum. Foliage in small rosettes....	.25	2.00			

	Each	10
* <i>Citriodorus Argenteus</i> . Variegated form, silver and little green; fragrant; rare.....	.35	3.00
<i>T. serpyllum citriodorus</i> . Golden yellow flowers.....	.35	3.00
<i>T. serpyllum coccineus</i> (Crimson Thyme). Similar to <i>T. serpyllum</i> , but with bright crimson flowers. Height, 2 to 4 in.....	.25	2.00
<i>T. serpyllum lanuginosus</i> (Woolly-leaved Thyme). Bright pink flowers and woolly foliage.....	.25	2.00
* <i>Nitidus</i> . A rare variety with very fine grayish foliage and purple flowers.....	.50	4.00
TROLLIUS europaeus (European Globe Flower). Desirable plants with dark green foliage and showy lemon-colored flowers, like small buttercups, 1 to 1½ inches across, on long stems. Plants thrive in moist places and where they may be partially shaded. May to July....	.35	3.00
Europaeus, Orange Globe . Desirable free-flowering plants, producing their giant orange-yellow, buttercup-like blossoms on stems 1 to 2 feet high from May until August.....	.50	4.00
TRITOMA—Red Hot Poker		
PFITZERI . Rich orange-scarlet blooms borne on stems 3 feet high, very attractive for mass planting or singly in the border. In bloom from August to October. Succeeds in any garden soil, but responds quickly to liberal feeding. Must be protected in winter.....	.35	3.00
TUNICA saxifraga (Tunic Flower). Pinkish flowers, produced all summer. Plant dwarf, with tufted, delicate foliage.....	.25	2.00
UMBILICUS Chrysanthus . A creeping Sem-pervivum forming great mats of small rosettes ½ in. around; greyish blue and velvety.....	.50	4.00
VERONICA (Speedwell). These plants thrive amazingly in rich, well-drained soil, where they may have full sun. In the family are some of the most beautiful plants for rock-garden work.....		
<i>V. allioni</i>.....	.50	4.50

	Each	10
<i>V. filiformis</i>.....	.50	4.50
<i>V. gentianoides</i> . Large light blue flowers edged with dark blue, are carried in long spikes. June and July. Height, 1 ft.....	.25	2.00
<i>V. incana</i> . Spikes of violet-blue flowers in July and August. Height, 1 ft.....	.25	2.00
<i>V. spicata</i> . 18 in. June and July. Long spikes of violet-blue flowers.....	.25	2.00
<i>V. teucrium rupestris</i> . A prostrate form making a thick green carpet which is almost hidden by dark blue flowers in May and June.....	.25	2.00
<i>V. teucrium rupestris nana rosea</i> . Like above but flowers mauve-pink.....	.50	4.00
VIOLA (Tufted Pansy). These plants combine features of the familiar violet and pansy. All are dwarf and are useful in rock-garden work.....		
<i>V. cornuta, Jersey Gem</i> . Pure violet flowers which are large and fragrant. Absolutely hardy and will grow in any soil and in full sun. May to November. Height, 6 in.....	.25	2.00
<i>V. cornuta, Sutton's Apricot</i> . A beautiful rich apricot shade tinted orange toward center.....	.25	2.00
<i>V. cornuta, White Perfection</i>.....	.25	2.00
<i>V. cornuta, Golden Yellow</i>.....	.25	2.00
VINCA . Periwinkle, or Trailing Myrtle.		
<i>Vinca minor</i> . 8 in. Handsome evergreen foliage; showy bright blue flowers, borne freely in early spring and at intervals throughout the summer and autumn. It is perfectly hardy and is much used as a ground cover under trees or in shady nooks, where few plants will thrive.....	.25	2.00
YUCCA filamentosa (Common Yucca). Ornamental plants with sword-like foliage. Tall spikes of fragrant, drooping, bell-shaped white flowers are carried in June and July. An extremely showy plant.....	.25	2.00
<i>Y. filamentosa variegata</i> . (Variegated Yucca.) Leaves have broad margins of a beautiful creamy yellow.....	.50	4.50

Evergreens for the Rock Garden

By interspersing Dwarf Evergreens throughout the rock gardens, an all-year effect is obtained. Small pines, junipers, etc., seem particularly happy in such a location. These little Evergreens will relieve flatness and lend an appearance of age to the planting.

Potted Evergreens for Rock Garden

These evergreens have been growing in pots for a year and longer. The pots are full of roots and are all ready to make a good growth this spring. Many of them will double in growth the first three months. Just knock them out of the pot and crowd them into the crevices in the rock garden, or they can be put out in the garden and grown for a year or two for foundation planting. We can supply all of these varieties in large sizes. Therefore, we are listing the small sizes at a price within reach of everyone.

Prices of special Potted Evergreens, 25c each;
\$2.00 per 10; \$15.00 per 100

Potted Evergreens should be sent by express.

Juniperus Juniper

Few evergreens seem to fit every place and purpose as do the Junipers. There is a wide range of color in the foliage, variations in form and in size, while all are hardy and vigorous growers. The dwarf varieties are especially useful for covering banks and rough grounds, while the upright sorts are required in landscape work to give height to the general planting.

Juniperus chinensis pfitzeriana (Pfitzer Juniper). Bluish green foliage. The plant is vase-shaped and rather spreading. Useful in all forms of planting.

Juniperus Communis Depressa. Our common Juniper, with light bluish foliage. This variety is very hardy, will live in light sandy soil, and will withstand severe exposures. A splendid plant for rock gardens.

J. communis hibernica (Irish Juniper). A semi-dwarf, upright tree; used in formal plantings, to border paths, and to give accent in foundation plantings.

J. horizontalis douglasii (Waukegan Juniper). The foliage is a soft blue in spring and early summer, gradually changing to rich purple in autumn. Plant compact, growing close to the ground, rarely over 10 inches in height.

J. sabina (Savin Juniper). Deep green foliage. Useful in rockeries and in front of taller evergreens. Height, 2 to 3 ft.

J. sabina tamariscifolia (Tamarisk-leaved Juniper). A low-growing and spreading variety with finely cut foliage.

Pinus Pine

Pinus montana mughus (Mugho Pine). Deep green foliage. A useful, low-growing evergreen for rock-work or lawn decoration.

Retinospora False Cypress

Distinctive because of the form of the foliage, which is slender and fern-like.

R. pisifera plumosa (Plume Cypress). Finely cut grayish green foliage of a feathery appearance. Grows in a pyramidal form and should be sheared in spring.

R. pisifera plumosa aurea (Golden Plume Cypress). Foliage tipped with gold.

Thuja Arborvitae

Always popular for group plantings and for formal specimens. Trees thrive best when exposed to full sun.

Thuja occidentalis (American Arborvitae). Pyramidal in form, densely covered with bright green foliage from the ground up. Can readily be clipped to any height.

T. occidentalis compacta (Parsons Arborvitae). A ball-shaped form of the preceding, with light green foliage.

T. occidentalis ellwangeriana (Tom Thumb Arborvitae). Low-growing and compact.

T. occidentalis globosa (American Globe Arborvitae). A compact, dwarf, globe form, useful as hedges or specimens.

T. occidentalis hoveyi (Hovey Arborvitae). Low-growing, dense, and compact.

T. occidentalis lutea (George Peabody Arborvitae). Bright, golden yellow foliage. Compact in habit.

T. occidentalis sibirica (Siberian Arborvitae). Dark green foliage. Compact in habit and one of the hardiest of the family.

Tsuga Hemlock

Tsuga canadensis (Canadian Hemlock). Native to the eastern United States. One of the most beautiful native evergreens for ornamental work. May be used as hedges or specimens. A mature tree may be 60 feet or more in height.

Evergreens for Rock Gardens— Guide

Special Collection 8A

EVERGREENS FOR ROCK-GARDENS

These small evergreen trees, varying in height from 4 to 6 inches, are grown in quantity for rock garden work.

Japanese Dish Gardens. This collection of small evergreens is especially good for the popular dish gardens. The trees are taken up without soil, but are packed in damp moss so that freshness is retained. 15c each.

American Arborvitae (*Tbuja occidentalis*). Foliage bright green on upper side, and yellowish on under side.

Chinese Compact A. V. THUYA orientalis compacta

Chinese Dwarf A. V. THUYA orientalis nana.

Chinese Golden A. V. THUYA orientalis aurea

Balsam Fir (*Abies balsamea*). Carries the fragrance of the Canadian woods.

Austrian Pine (*Pinus nigra austriaca*). Stiff, dark green needles in pairs.

Mugho Pine (*P. montana mughus*). Low growing and spreading.

Blue Spruce (*Picea pungens glauca*). Bluish foliage.

Norway Spruce (*P. excelsa*). The familiar "Christmas tree Spruce."

White Spruce (*P. canadensis*).

One plant each (10 trees
4 to 6 inches high)
sent postpaid for **\$1.25**

Cotoneaster horizontalis (Rock Cotoneaster). A trailing shrub that is fine for rockeries. The foliage turns to tones of red and bronze in late autumn, while brilliant red berries remain all winter.

Plants from 2-in. pots.....\$.25 \$2.25

DAPHNE cneorum (Garland Flower). Clusters of bright pink, highly fragrant flowers in May. 2-in. pot..... .25 2.00
6-8-in. spread75 5.00

EUONYMUS (Evergreen Bittersweet). All varieties are particularly desirable because of dense, evergreen foliage and extreme hardiness. Splendid ground-covers

E. radicans (Winter Creeper). Glossy, dark green foliage. Valuable for covering soils or can be trained as a spreading shrub. 2-in. pots25 2.00

E. radicans coloratus. Introduced by Arnold Arboretum. Foliage turns bright red in autumn, retaining the color for the entire winter. 2-in. pots..... .25 2.00

E. radicans minimum (Baby Winter Creeper). Much smaller than the preceding but equally suitable for rock gardens. 2-in. pots25 2.00

E. radicans vegetus. A trailing evergreen vine, clinging to rockwork or walls. Roundish green leaves. 2-in. pots..... .25 2.00

HEDERA helix (English Ivy). A familiar evergreen plant. Not hardy when exposed to cold winds and grown on open walls. If used as a ground-cover or as an edging to flower beds, it can readily be protected during cold weather. 2-in. pots25 2.00

PACHYSANDRA terminalis. Extremely valuable as a ground-cover in shady places. Particularly good under deciduous trees, or at the edge of a group of evergreens. Glossy, light green leaves making a dense mat..... .25 2.00

Plants for your Rock-Garden

HERE are a dozen collections of extra good plants for rock gardens, whether in sun or partial shade. The collections include the very best varieties, and we invite your special attention to Collections AA, BB, and CC, which contain the cream of popular rock plants, Collections 1C to 12C are equally good varieties, but the plants are smaller and, of course, are offered at a lower price.

Collection AA

Ten Modern Rock Plants

Arabis procurrens. White flower.

Aster mauve cushion.

Geranium sanguineum. Rosy pink.

Geum sibiricum. Bright scarlet.

Hypericum polyphyllum. Golden yellow.

Dianthus alpinus. Deep rose or purple.

Silene maritima rosea. Pink: double.

Dicentra eximia. Fringed Bleeding Heart.

Daphne cneorum. Pink.

Achusa myosotidiflora. Bright blue.

One plant each of ten named varieties and one free plant, postpaid for **\$3**

Collection BB

Plants for Shaded Rock Gardens

Achusa myosotidiflora.

Campanula carpatica. Light blue; ht. 8 in.

Plumbago larpentæ. Deep blue.

Primula acaulis (Polyanthus). Lemon-yellow.

Leontopodium alpinum. Grayish white.

Trollius Europæus (Globe Flower). Yellow.

Viola Cornuta, Jersey Gem. Violet; fragrant.

Mazus rugosus. Lilac and white. Height 4 inches.

Saxifraga cordifolia. Rose color.

Saxifraga macnabiana. White spotted red.

Satice latifolia. Bluish lavender. Height 1 to 2 feet.

One plant each of 10 named varieties and one free plant, postpaid, for **\$3**

Collection CC

Tall-Growing Plants for Large Rock Gardens

The plants in this collection are not less than 12 inches tall when in bloom.

Aquilgeia alpina. Bright blue.

Dianthus plumarius. White to pink.

Lavandula vera (English Lavender).

Heuchera (Alum root). Hybrid varieties.

Lychnis viscaria splendens. Rose-pink.

Potentilla Hybrids (Cinquefoil). Mixed.

Santolina chamæcyparissus. White foliage.

Sedum spectabile (Stonecrop). Pink.

Sedum spectabile, Brilliant. Rosy crimson.

Veronica gentianoides, True Blue.

Stachys lanata.

One plant each of 10 named varieties, one plant free, ppd. for **\$2.50**

Special Collection 14A

Hardy Ferns

10 plants in 6 varieties (our selection) sent postpaid for \$2.

Special Collection 15A

Hardy Asters

Asters vary greatly in time of flowering, in size of bloom, and in general appearance. This collection of varieties is especially adapted for rock gardens.

10 Hardy Asters in 6 varieties (our selection) sent postpaid for \$2.

Special Collection 16A

Hardy Garden Lilies

1 bulb each of 5 varieties (including Regal) sent postpaid for \$1.50.

Special Collection 17A

Selected Gladiolus

1 **bulb** each of 10 different varieties, properly labeled, sent postpaid for \$1.25.

Special Collection 18A

Selected Dahlias

All High Grade

5 **Show** and 5 **Exhibition** varieties, all different, properly labeled, sent postpaid for \$1.50.

Special Collection 19A

Tuberous Begonia

One of the most showy plants in our rock garden. Thrives best in partial shade. Flowers double and single; assorted colors. **10 bulbs, assorted**, sent postpaid for \$2.

Plants furnished after June 1, 10 for \$3.

Each plant labeled and sent prepaid at price named.

Col. No.		1 New Variety Free. Our Selection.
1C	10 Sedums in 10 varieties.....	\$1.25
2C	10 Sempervivums in 10 varieties including 1 red variety	1.50
3C	5 Sedums, 5 Sempervivums, all different.....	1.25
4C	10 Medium growing plants, 10 varieties shade or part shade	1.50
5C	10 Low growing flowering plants for sunny rockery, 10 varieties	1.50
6C	10 German Iris, 10 varieties, one Morning Splendor Free (red).....	1.50
7C	10 Dwarf Iris, 10 varieties, several rare va- rieties, a \$5 collection for.....	2.50
9c	6 Hardy Ornamental Grass, six varieties.....	1.25
10C	Plants for large rockery, assorted 100 plants not less than 25 varieties, our selec- tion, large plants, express not paid.....	15.00
	A bargain—half above collection, 50 plants	8.00
11C	8 Hardy Phlox, all different.....	1.25

NOTICE: We will not prepay postage on any collections west of the Rocky Mountains or Canada.

Birds and Fowls

We breed as a hobby the following birds and at times have some to spare:

Silver Pheasants. Imported from China. The crest and under body parts are of black purple. The surface plumage and tail being white, marked with black lines. **\$25 per pair; eggs in season \$10 per doz.**

Lady Amherst. For splendor and sheer riot of color, Lady Amherst is second only to the Golden. The male bird is bedecked in a myriad of colors. Bright red crest, tippet of pure white and black edging, iridescent green breast changing abruptly to pure white, wing coverts of brilliant blue and green, tail coverts light yellow, bright orange feathers prolonged into a magnificent gray-barred tail, often more than a yard long! **\$35 per pair; eggs in season \$12 per doz.**

Golden Pheasant. The Golden is the King of Pheasants; the most brilliantly plumaged bird in the world. The rich, red breast, yellow crest, orange and black tippet, with the yellow, blue and green of back and wings, rival the rainbow. **\$25 per pair; eggs in season \$8 per doz.**

Reeves Pheasant. Imported from China. Its head is covered by hood of white surrounded by a black band. The tail of this splendid pheasant commonly attains a length of five feet! In many respects, the Reeves is the most noble of all true pheasants. Golden yellow plumage, each feather edged in black. **\$50 per pair; eggs in season \$1.25 each.**

Versicolor Pheasant. The Versicolor or "many colored" pheasant can be recommended without reserve. They are remarkable layers, and have darker colors than the other varieties and are a most amazing sight with the metallic green, blue, purple and bronze appearing on their plumage, which shines like iridescent china. **\$40 in pairs; eggs in season \$12 per doz.**

Mongolian Pheasant. The pure Mongolians are a beautiful bronze red color—red back, red breast, red underparts, red tail coverts. The wing coverts of beautiful light gray, with purple and green neck plumage, set off by a wide white ring go to accentuate the deep red plumage which glistens so richly in the sunshine. **\$20 per pair; eggs in season \$10 per doz.**

Blackneck or Old English Pheasant. The first pheasant introduced from China into England many years ago. They were bred so abundantly that they were called in England the common pheasant. **\$15 per pair; eggs in season \$8 per doz.**

Blue Peafowl, \$60 per pair.

Royal Mute Swan, \$75 per pair.

Black East Indian Ducks, \$10 per pair.

Yokahomas. The long tailed Japanese fowl. Tails have been grown to a length of 12 feet (we have never been able to grow them more than 7 feet). **\$10 per pair; eggs \$6 per doz.**

Parakeets or Love Birds.

Green	\$5 per pair
Yellow	\$6 per pair
Blue	\$8 per pair

Canaries. Singers, \$5 to \$15 each; females \$1 each.

Fancy Pigeons, \$5 per pair and up.

White Fantails

Yellow Fantails

Red Fantails

Black Fantails

Blue Fantails

Red Saddles—white with red wing

Yellow Saddles—white with yellow wing

Black Saddles—white with black wing

Blue Saddles—white with blue wing

Blue Tumblers with white head, **\$3 per pair.**

Moorhead Tumblers, white with black head, **\$3 per pair.**

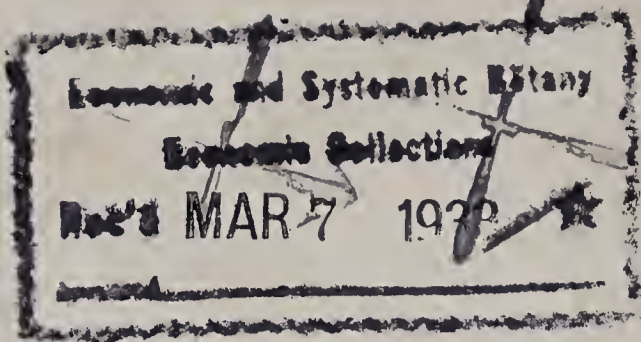
Moorhead Tumblers, white with yellow head, **\$3 per pair.**

Black Rosecomb Bantams. Little beauties, **\$5 per pair; eggs in season \$2.50 per doz.**

Buff Cochin Bantams. Pair, \$5; eggs, doz., \$3.00.

Black Cochin Bantams. Pair, \$5; eggs, doz., \$2.50.

White Cochin Bantams. Pair \$5; eggs, doz., \$2.



Special Offer

WE HAVE a large stock of the following Perennials and Rock Plants and are giving these to our customers; all orders received before June 1st accompanied by cash in full, may choose one plant from the list below for each dollar sent in for Perennials or Rock Plants, which will be sent with your order. If your order amounts to \$10 we will include free one hardy Azalia, in addition to the above free plants. This offer does not apply to Special Collection A, page 13, or Special Collections on pages 42 and 43.

Eulalia Zebrina—Ornamental Grass	Santolina Chamacyparissus
Eulalia Japonica	Primula Veris Mixed
Eulalia Japonica Variegated	Lily of the Valley Clumps
Eulalia Festuca Glauca	Hardy Chrysanthemum—Bronze Button
Penstemon Barbatus	Sempervivum Fimbriatum
Sedum Spectabel	Sempervivum Tectorum
Sedum Acre	Thyme Coccineum
Sedum Fostedranium	Thyme Languinusus
Sedum Spirium Coccineum	Chelone Lyoni