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HAAS
Home Nurseries





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TERRE HAUTE, INDIANA

PREFACE

We take pleasure in presenting herewith our general Catalogue.

In the Fruit and Ornamental Department as well as in the Rose and Perennial Department our Nursery is kept fully up to the times.

We grow and offer to the customers only such trees and plants adapted to our soil and temperature and our surrounding territory.

REMARKS:—Get our special prices on large orders.

We sometimes have stock not listed. Write us if there are items wanted that are not listed herein.

TO REACH OUR NURSERIES

To reach our Nurseries from Terre Haute by carline—Board East Wabash Avenue city car either a Stadium or a Highland Lawn car. Stop at 25th street and go south to the first paved street. then turn to the left and the Nursery is located at the fourth (4th) house on the right-hand side of the road.

You may also reach our nurseries by boarding a city bus on Ohio street, getting off at 25th and Crawford, walking two blocks North and turn to the right on Poplar St. and stop at the fourth house.

Visitors are always welcome.

GUARANTEE

Nursery stock is more or less of a perishable nature. Improper care after receiving, undue exposure, or undesirable soil, also injurious insects and diseases, which may be contracted, neglect after planting, over which we have no control, may cause a tree to die regardless of how thrifty and healthy it may have been when delivered, and under these circumstances we cannot guarantee it to grow.

Any tree or plant delivered by us and upon delivery of said stock is not in good condition you are requested to notify us at once and we will make any such stock good that proves otherwise.

Clause No. 1

Any tree or plant that we plant for customers, we guarantee to replace that fails to develop foliage after transplanting but customers must notify us at once when foliage fails to appear. Notify us in writing, no telephone notices entertained.

Clause No. 2

In growing and furnishing all Nursery stock we use the greatest care to have it true to name and we will replace any that may prove untrue, but no sale by us carries a warranty express or implied as to description, productiveness, quality or any other matter over which we have no control and for any error we shall not be liable for more than the purchase price. Every purchase from us is made on these terms.

BRIEF PLANTING INSTRUCTIONS

Care of Trees Upon Delivery. When trees are delivered to you put them in a protected place immediately upon arrival and keep the roots moist. If held for a few days bury the roots in the ground at once.

Root and Top Pruning, is very important if good results are to be obtained. This should be done just before planting. **All plants** should be root pruned.

The tops of fruit trees (except possibly cherry) and shade trees should be pruned before planting. The rule is to trim off all broken or bruised branches and also to shorten the lateral branches 2-3 of the previous year's growth. Peach trees should be trimmed to a whip and the top cut back to 2 or 3 feet above the ground.

Root Pruning. All broken or bruised roots should be cut off with a very sharp knife or pruning shears. The balance of the root system should be trimmed (merely the ends cut smooth.) This freshens the roots and they will callous, then they will soon put out a new set of fine fibrous roots. Now you are ready to plant.

Planting. The holes must be made large enough that the roots may be spread out naturally and without cramping. Good fertile top soil must be used about the roots. If the trees is to be planted in impoverished ground good soil should be provided. Plant the tree deep enough so that after the ground settles the trees will be the exact depth as it stood in the Nursery; this is easily determined by the dirt ring around the tree. **Very important.**

Spread the roots out in their natural position and pack the pulverized soil (avoid clods) firmly about the roots using the feet. Tramping the soil firmly about the roots causes the roots to germinate and the result is that the tree will recover the shock of transplanting much quicker. If the ground is dry use water freely in transplanting.

THE IMPORTANCE OF WATERING

In addition to thoroughly watering your plants at the time of planting it is important especially during the first season that they should be kept in a moist condition. This does not mean frequently sprinkling, but a thorough soaking once or twice a week.

In addition to the above brief general planting instructions, you will find on some of the following pages, interspersed with plant descriptions, other special directions. At the back of the catalog may be found spraying directions, tables, and suggestive plans for planting, etc.

ORNAMENTAL DECIDUOUS SHRUBS



ARALIA. Angelica Tree

Small trees that give a tropical appearance to gardens. Require slight protection in winter.

A. spinosa, **Hercules Club**. A native plant, valuable for producing tropical effects.

Amorpha fruticosa. **False Indigo**. Long, narrow, feathery leaves. Flowers dark purple, growing in loose panicles. 5 to 20 feet. May 15 to 30.

AMYGDALUS. Flowering Almond
A. rosea flore pleno, **Pink Flowering Almond**. (F) 3-4 feet. Rose pink. April. Flowers in April, the branches being a perfect mass of blossoms from base to tip. Plants are scarce but well worth the extra price asked for it. Excellent plant in any border.

A. Davidiana alba, **White Flowering Almond**. Single white flowers appear before leaves; the first tree to flower in the spring, hence particularly desirable on this account.

HIBISCUS—Althea, Rose of Sharon

Tall, slender shrubs, doing well in locations where other plants would fail. Blossoms are single and double, coming in August when there is but little in bloom. Planted for hedges and screening purposes. Offered to color.

Double White, *Jeanne d'Arc*. This is a pure white, double-flowering variety. Very attractive.

Double Red, *Boule de Feu*. Freest blossoming of all the doubles. Very attractive; bright in color.

Ardens. Double; rich purple; fine
Paeoniaiflorus. Double flesh. Double flower silvery pink, a very desirable shrub.

Berberis Thunbergii, **Thunberg's Barberry**. A beautiful Japanese variety of dwarf habit. The spray-like branches have spines on them, and are covered with small foliage, changing to beautiful red in autumn. It bears a mass of bright scarlet fruit which is very attractive during the winter months.

Box-Barberry. A dwarf, upright form of the familiar *Berberis Thunbergii*; perfectly hardy; lends itself most happily to low edgings for formal gardens, when set about 4 inches apart. Also makes a beautiful low hedge when set 6 to 8 inches apart. Foliage is light green, changing in autumn to dazzling red and yellow.

CARAGANA. Pea Tree

C. arborescens, **Siberian Pea Tree.**
1. Showy, small yellow flowers in June. Dark green wood and neat foliage.

CALYCANTHUS or Sweet-Scented Shrub.

The *Calycanthus* is one of the most desirable shrubs. The wood is fragrant, foliage rich, flowers of a chocolate color, having an agreeable odor. They blossom in June and at intervals afterwards.

CEPHALANTHUS. Button Bush

This shrub grows well in moist and wet ground and its curious balls of blossom on long stems, which hang all summer as brown seed balls, are very picturesque.

C. occidentalis. A tall growing native shrub with globular heads of white flowers in July.



Barberry

Buddleya Variabilis Magnifica, **Butterfly Bush, or Summer Lilac.** The name Butterfly Bush was applied to it because it seems to attract butterflies in large numbers. This shrub from a young plant set out either in the spring or fall, will mature to full size the first summer, producing a handsome bush, which the first year often maintains a height of four feet. It produces long, graceful stems, which terminate in tapering panicles of beautiful lilac-colored flowers. A single plant the first season will throw out as many as 50 flower spikes, which increase greatly in number during the succeeding years. Flowers in June and continues each season until the frosts nip it. The foliage and blossoms are exceedingly fine. Is semi-herbaceous. We recommend covering the roots with manure, leaves or other suitable material as winter approaches, as this will produce a heavy growth the following season.

CLETHRA. White Alder. Sweet Pepper Bush

Very hardy, blooms every season without fail; cold never harms it; flowers pure white, in spikes 3 to 6 inches long, in Aug. A bed of *Clethras* will perfume the air for a long distance around. A single sprig will

fill a room with its delightful fragrance. It is a neat upright, growing shrub, and is not only valued for its beauty and sweetness, but is now in demand for the honey-bee to feed upon. The honey is almost white, thick and fine flavor. The plant is very easy of cultivation; never fails to bloom after a hard winter, and is worthy of a front place in every garden.

C. alnifolia. Spikes of clear white fragrant flowers in August.

QUINCE BERRY *Cotoneaster Acutifolia*

Foliage dark green, holding its color until late autumn or early winter. The flowers are white or rose, followed by purplish black fruits.

CORNUS. Cornel or Dogwood

Liberica, **Red-branched Dogwood**. Very conspicuous and ornamental in winter, when the bark is blood red.

Comptonia Asplenifolia, **Sweet Fern**. A low shrub with fern-like fragrant foliage, well adapted for massing on rocky banks and sandy stretches. Very hardy and ornamental.

CYDONIA, Japan Quince

Cydonia Japonica. **Japan Quince**. Very early in spring, this fine old shrub is completely covered with dazzling scarlet flowers, followed by small, quince-shaped fruits which are quite fragrant. Growth bushy and dense, with protecting thorns.

Daphne Cneorum. **Garland Flower**. This is an evergreen shrub of trailing habit of growth. Flowers bright pink; fragrant. Suitable for rockery.

DEUTZIA—Deutzia

Their hardihood, fine habit, luxuriant foliage, and profusion of attractive flowers, render the *Deutzia* among the most beautiful and deservedly the most popular of flowering shrubs.

Crenata, **Double-flowered Deutzia**. Flowers double white, tinged with rose. One of the most desirable flowering shrubs.

Lemoinei. A hybrid obtained by crossing the well-known *Deutzia gracilis* with *Deutzia parviflora*. Flowers pure white, bordering on stout branches, which are of upright growth. Habit, dwarf and free-flowering.

Gracilis, **Slender-branched**. A charming species of dwarf habit. Flowers pure white. Fine for pot culture, as it flowers freely in a low temperature. The first to flower about the middle of June.

Gracilis Rosea. Same as *Gracilis* (slender branched) with pink flowers.

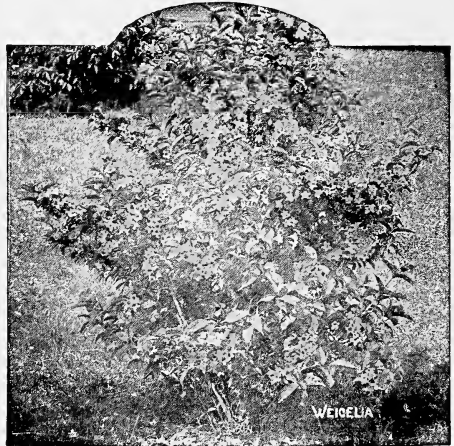
Candidissima. (F) 6-8 ft. White June. A very useful shrub with sweet scented flowers in long clusters. It is rapid in growth, thrives in any good soil and is a free bloomer.

Pride of Rochester—A variety producing large double white flowers, the back of the petals being slightly tinted with rose. It excels all the older sorts in size of flower, length of panicle, profuseness of bloom and vigorous habit; blooms nearly a week earlier than *Deutzia crenata* *flore pleno*.

DIERVILLA. Weigela

Very desirable, hardy, easily grown and great bloomers. As these shrubs grow older they gradually spread and droop; in June and July they are covered with large, trumpet-shaped flowers of varying colors. In borders and groups of trees they are very effective; bloom after lilacs in June. The following are the most desirable varieties:

D. vernosa variegata. 4. A dwarf grower, forming a compact bush (the variegation is light yellow; changing to white; flowers deep rose.

**WEIGELIA**

D. rosea, **Rose-colored Weigela**. 4. A hardy and beautiful shrub, bearing in May a profusion of rose-colored flowers. Introduced from China and justly considered one of the finest shrubs we have.

D. hybrida Eva Ratbke. A charming Weigela, flowers brilliant crimson; a beautiful, distinct, clear shade.

Desmodium penduliflorum. A woody perennial with gracefully arching clustered stems. In autumn it is covered with drooping racemes of rosy purple flowers. Well adapted for planting with other shrubs or in masses. 3 to 5 feet. August 10 to Oct. 1.

EUONYMUS. Strawberry Tree

Euonymus alatus. Winged Burning Bush. A handsome shrub 6 to 8 feet tall, with corky-winged branches. Native of China and Japan. Leaves oval, bright green, fading in Autumn with gorgeous tones of red and crimson. A capital shrub for an isolated

specimen plant, attracting attention wherever seen. 3 to 4 feet, 4 to 5 feet,

EXOCHORDA. Pearl Bush

E. grandiflora. 3. A most elegant and distinct shrub from North China, with a full branching habit, making finally a plant 10 ft. high and fully as broad, and is perfectly hardy. Its foliage is broad, lanceolate-ovate, sharp pointed. The flowers in May and June are pure white, in racemes of five and six, with spoon-shaped petals, which are very narrow and stand apart at the base. There is a delicate fragrance which adds to its charm. The un-opened buds are pearl like. Worthy a place in every collection.

FORSYTHIA.

Golden Bell

These are pretty shrubs of medium size. All natives of China and Japan. The flowers are drooping, yellow, and appear very early in spring, before the leaves. The best very early flowering shrubs

F. fortunei.
Fortune's Forsythia. Growth upright, foliage deep green; flowers bright yellow.

F. intermedia.
Bright golden flowers; glossy green foliage.

F. suspensa.
Weeping Forsythia. Similar to Fortunei, but with somewhat drooping growth.

F. viridissima.
A free, hardy shrub; a native of Japan, with deep yellow flowers early in spring; leaves and bark deep green.



HYDRANGEA

ELEAGNUS

Angustifolia. **Russian Olive**. A large shrub, sometimes forming a small tree, with long, narrow, silvery-green foliage; flowers yellow, followed by yellow fruit. 3 to 4 feet.

HYDRANGEA

The native species are handsome shrubs of medium size, with fine large leaves, and generally of a light green color, and perfectly hardy. The introductions from Japan and China are interesting and valuable. *Hydrangea paniculata grandiflora* is remarkable in foliage and flower, and being perfectly hardy, is of great value.

H. arborescens sterilis, **Hills of Snow**. A form of the last with all of the flowers ray-like and sterile, resembling a snowball. A very handsome floriferous hardy shrub, literally loaded with dazzling white flowers and continuing to bloom for a large part of the summer.

H. paniculata grandiflora, or **Large Panicle Flowered Hydrangea**. 3. A fine shrub, growing from 8 to 10 feet high; flowers in great pyramidal panicles a foot long, are at first pure white, then changing to pink. Begins to bloom early in August.

H. quercifolia, **Oak-leaved Hydrangea**. Large leaves, lobed, like those of an oak and downy cream-colored flowers in medium-sized panicles in August.

HAMAMELIS. Witch Hazel

H. virginiana, 8 ft. Yellow. November. An attractive shrub for producing naturalistic effects. Grows well in shade. Large in leaf and unusual because of period of blooming.

HYPERICUM. St. John's Wort prolificum. Shrubby St. John's Wort. Medium tall; covered with yellow flowers in summer. Use in masses.

Kerria japonica, **Japanese Rose**. Bright yellow flowers, giving striking effects in spring. Slender green branches 4 to 6 feet long, with rough-veined leaves. Foliage attractive throughout the summer. April 5 to 30.

japonica flore-pleno, **Double-flowered Kerria**. Double yellow blossoms, about an inch in diameter, appear early in April. The bush is of vigorous growth and spreading habit. 3 to 5 feet. April 16 to 30.

Lonicera

The fragrant flowers, showy fruits, and fine foliage possessed by this group have pushed them to the forefront of ornamental shrubs. They are hardy, transplant easily, and are adapted to almost any shrubby grouping. See "Vines" for the trailing varieties of this species.

Lonicera fragrantissima, **Winter Honeysuckle**. 8 to 12 feet. March and April. Delightfully fragrant white flowers that come with the first breath of spring. Scarlet fruits. A broad, many-branched shrub with excellent foliage.

Lonicera morrowi, **Morrow's Honeysuckle**. 8 to 12 feet. An open bush with crooked branches. Its red berries are especially ornamental in August and last a long time.

Lonicera tartarica, **Tartarian Honeysuckle**. 6 to 8 feet. May. The favorite, old-fashioned Bush Honeysuckle with slender upright branches. Pink flowers.

Var. *alba*, **White Tartarian Honeysuckle**. 6 to 8 feet. May. A white-flowering form of the above.

L. tatarica rubra, 7-9 ft. Red. April. This is very attractive in blossom, being one of the few early pink flowering shrubs. Has bright red berries that stay on all summer.

L. bella candida. Another fine variety with red fruit.

Aquifolium, **Holly-leaved**. A beautiful Holly-like shrub, with showy, golden yellow flowers and purplish leaves. Very ornamental.

Pachysandra terminalis, **Japanese Spurge**. An evergreen ground cover with attractive dark green leaves, valuable for planting in shady places where grass will not grow. When once established, it becomes a veritable mat, completely covering the ground.

CHINESE MAGNOLIAS

M. Soulangeana, **Soulangé's Magnolia**. A variety of the *Conspicua*, with showy white and purple flowers, cup-shaped, and three to five inches in diameter; foliage large and glossy; blooms later than *Conspicua*. One of the finest and hardiest.

Magnolia Nigra. Same as *Magnolia Soulangeana* with blossoms red.

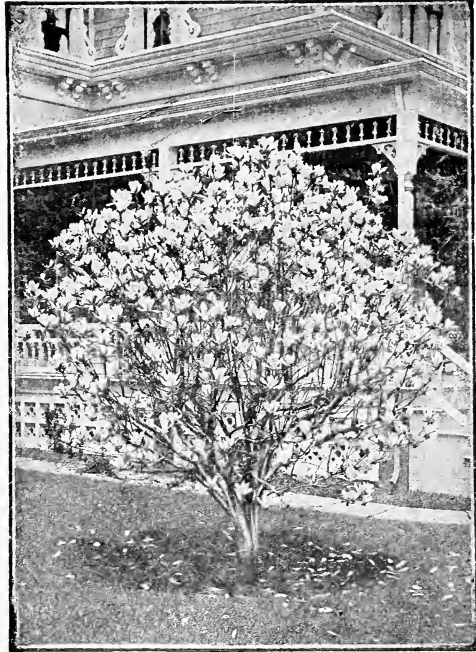
PRUNUS

Prunus pissardi. **Purple-leaved Plum**. A handsome small tree of garden origin, with purple foliage. Very hardy and retaining its color throughout the summer. In spring the blush-pink flowers are borne in great profusion, harmonizing with the color tone of the unfolding leaves.

P. triloba **Flowering Plum**. A small shrub with downy, broadly ovate and often 3-lobed leaves. Native of China. Flowers double, pink or rose-color, appearing just before the leaves unfold, very profuse and showy. Very hardy and desirable. 2 to 3 feet, each 3 to 4 feet.

PHILADELPHUS, Mock Orange

Mock Or. is an invaluable shrub. Of vigorous habit; very hardy, with large handsome foliage and beautiful white flowers, produced in the greatest profusion at the blossoming season. It merits a prominent place in all collections of shrubbery. Most of the varieties, except those of dwarf habit, form large-sized shrubs, 12 to 15 feet high. They can, of course, be kept smaller by pruning. The dwarf sorts do not yield many flowers, but are such pretty, compact plants as to be very useful where small shrubs are desired. All of the varieties flower in June, after the *Weigelia*. The season may be considerably extended planting the late-flowering sorts.

**MAGNOLIA**

P. coronarius, **Common**
Pure white highly scented flowers. One of the first to flower.

P. hybrida, **Philadelphus Nivalis**. Vigorous, graceful, pure white, fragrant.

P. foliis aureus, **Golden-Leaved**
4. This is a very pretty, medium size plant, with golden-yellow foliage. It keeps its color the entire season; valuable for striking contrasts with purple-leaved shrubs.

Ph. Gordonianus, **Gordon's**
3. A vigorous grower and profuse bloomer; flowers slightly fragrant and valuable on account of blooming late.

P. Virginal One of the most beautiful of the *Philadelphus*. This variety produces large, double-crested flowers of pure white, which are sweetly scented. A tall and vigorous grower.

RHUS. Sumach

Rhus aromatica (*R. Canadensis*). **Sweet-scented Sumach.** A much-branched spreading shrub, usually 2 to 4 feet tall, widely distributed in North America. Leaves compound, consisting of 3 bright green leaflets. Flowers yellow, disposed in short spikes or clusters along the branches. 4 to 5 feet.

R. cotinus, **Purple Fringe, or Smoke Tree.** 3. The large masses of misty purplish flowers in June give it the name of Smoke Bush. Leaves change to varying colors in fall.

R. typhina, **Stag Horn.** 3. Foliage compound, light green, and large size brilliantly colored in fall. An effective plant for grouping in masses. Thrives on poor soil

Rhodotypos kerrioides, **White Kerria.** Leaves ovate, with a long slender point, bright green and lustrous. Flowers pure white, an inch or more across, appearing in late spring. Blue-black berries retained throughout the winter. 4 to 5 feet. April 5 to June 1.

ROBINA. Locust or Acacia

R. hispida, **Rose or Moss.** 3. Of spreading, irregular growth; long elegant clusters of rose-colored flowers in June, and at intervals all the season.

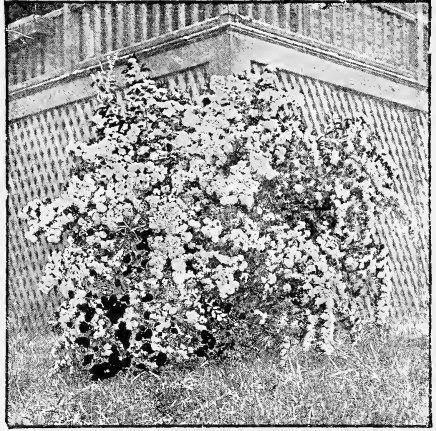
RIBES. Currant

A gay flowering shrub in early spring; very easy to cultivate.

Ribes odoratum (*aureum*), **Golden Currant.** Upright shrub to 6 feet. Leaves three-lobed, shining green. Flowers yellow, in clusters. March 15.

ROSA RUGOSA

Rosa Rugosa, **Japanese Rose.** Beautiful rich green wrinkled foliage. Brilliant single flowers in May and intermittently all summer, changing to small tomato-like seed vessels.

**SPIREA****SPIREA, OR MEADOW SWEET**

Anthony Waterer. A beautiful variety with broad heads of deep pink flowers. Grows two to three feet high, making a shapely bush. Blooms in June, and now and then throughout the season.

Billardi. Rosecolored; flowers in spikes; blooms in summer.

alba collusa, **Fortune's Dwarf White Spirea.** 4. A dwarf, bushy, symmetrical shrub; flowers white; keeps in flower all summer.

S. Douglasi, **Douglas' Spirea.** 4. Beautiful, deep, rose-colored flowers in spikes, in July and August.

S. Froebeli, **Froebel's Spirea.** A choice free blooming sort, with large panicles of rose-colored flowers. An acquisition.

S. Opulifolius aureus, **Golden Ninebark.** A striking variety, bright yellow leaves, changing in summer to a beautiful golden, bronzy yellow. Splendid for producing bright effects.

Prunifolia, or **Bridal Wreath**. Very desirable, having double, daisy-like flowers of pure white in the greatest profusion. 2 to 3 ft.,

Spiraea Reevesiana **Fl. Pl.** A tall, slightly drooping, shrub bearing clusters of creamy white double flowers in May. Fine leaves remaining dark green into the Winter.

Thunbergii, **Thunberg's**. Extremely neat and graceful in its habits; dwarfish and rounded; drooping branches, narrow, yellowish green foliage; white flowers, early in spring. 18 to 24 in.

Van Houtt. The grandest of all the Spireas; it is a beautiful ornament for the lawn at any season, but when in flower it is a complete fountain of white bloom, the foliage hardly showing. Clusters of twenty to thirty flat white florets make up the raceme and these clusters are set close along the drooping stems. Perfectly hardy, and an early bloomer. The best and most popular shrub for foundation planting.

SAMBUCUS. Elder

S. nigra aurea. 8-10 ft. White. June. One of the best yellow foliage plants. Retains its color the entire season and is very conspicuous in every planting. Quick to establish itself, robust grower and attractive.

STEPHANANDRA

Stephanandra flexuosa. 6 to 8 feet. June. Drooping, arching branches clothed with feathery fern-like leaves. Brilliant bronze-red tints in autumn. Useful for informal hedges and mass effects.

SYMPHORICARPUS. Snowberry,

St. Peter's Wort or Waxberry

These useful shrubs grow in any soil.

S. racemosus, **Snowberry. 4.** Bushy form, pink flowers in summer, quantities of large, white waxy, roundish berries in autumn. Very ornamental.

S. vulgaris, **Indian or Red Coralberry. 4.** Low-growing, spreading, graceful habit; foliage attractive; noteworthy from the beauty of its clusters of red berries.

LILAC—Syringa

Well-known, beautiful shrubs, indispensable in every collection. They flower in May.

Charles X. Reddish purple

Frau Dammann. This is the best white lilac grown. The panicle or truss is immense, flowers of medium size and pure white. This and Ludwig Spaeth are the two best lilacs of recent introduction.

Syringa vulgaris alba, **Lilac, Common White.** 6-8 ft. April. No shrubs are better known than the Lilac. This is the old-fashioned white that everyone knows.

Syringa vulgaris. **Common Lilac.** 8 to 12 feet. May. The well-known, old-fashioned Lilac. Flowers are remarkably fragrant, varying from (R) "Pale Wisteria Blue" to "Lavender."

Vtr. President Frey. A beautiful blue; individual flowers, very double and very large; the panicle is magnificent; one of the finest lilacs.

Persian, Purple. Foliage resembles the Privet more than the lilac. Flowers are most abundant.

Rubra de Marey. A very fine red variety. Scarce and very handsome.

TAMARIX

Tamarix. Strong, slender, tall-growing irregular shrubs, with feathery foliage and small, delicate flowers, borne profusely on gracefully bending branches.

VIBURNUM

V. opulus, **High Bush Cranberry. 3.** One of the best for planting. Its berries resembling cranberries, hang until destroyed by frost late in the fall; wood and foliage similar to that of the Common Snowball.

V. plicatum, **Plaited-Leaved Viburnum or Japan Snowball. 4.** Handsome, plicated leaves, globular heads of pure white, neutral flowers early in June. It surpasses the common variety in several respects. Its habit is better, foliage much handsomer, flowers whiter and more delicate. We recommend this most highly.

Var. sterilis, **Guelder Rose, or Common Snowball. 5.** A large-sized shrub, with globular clusters of pure white, sterile flowers the latter part of May.

FOREST TREES (Shade Trees)

ACER. Maple

A. dasycarpum or *eriocarpum*, **Silver-leaved or White.** A hardy rapid growing native variety, of irregular rounded form; foliage bright green above and silvery beneath. Valuable for producing quick shade. Smooth, straight trunk. Valuable for street planting.

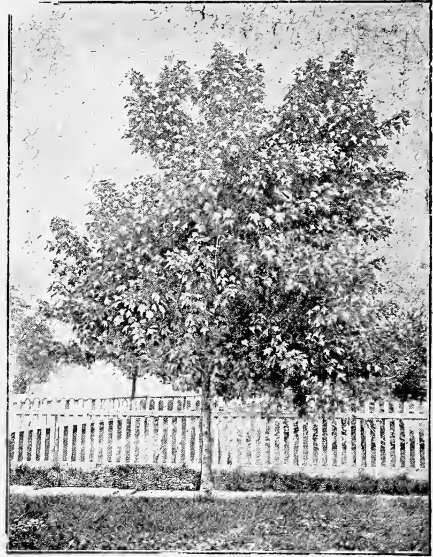
platanoides, **Norway Maple.** Absolutely the best all-round shade tree. Forms a wide, rounded head of vigorous branches. Leaves deep green, usually five-lobed turning yellow in fall. One of the best ornamental trees for lawn, park, and street planting. Does best in a good soil. 30 to 50 feet.

A. saccharinum, **Sugar or Rock Maple.** A well known native tree valuable alike for its production of sugar and wood; its stately form, rapid growth and fine foliage, make it desirable as an ornamental shade tree.

Schwedlerii, **Schwedler's Norway Maple.** Young shoots and leaves of a purplish crimson color, changing to a purplish-green in the older leaves. A very desirable tree.

NEGUNDO

N. fraxinifolium, **Ash-leaved Maple, Manitosa Maple or Mox Elder.** A native tree, maple-like in its seeds, and ash-like in foliage; or irregular spreading habit, and rapid growth.

**SILVER MAPLE****SORBUS. Mountain Ash**

S. aucuparia, **European.** Similar in appearance to American, with finer foliage, and smaller, deeper-colored berries from July to winter, much more desirable than the American, and everywhere very popular. When fully grown, 20 to 35 feet.

AILANTHUS. Tree of Heaven

A. glandulosa. A Japanese tree, with long feathery foliage; rapid grower, producing a tropical effect; exempt from all diseases and insects.

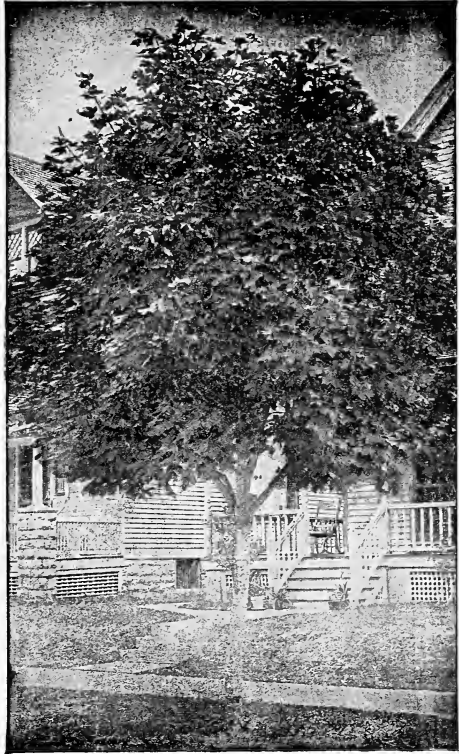
CELTIS. Nettle Tree. Hackberry

C. occidentalis, **American Nettle Tree.** A rare native tree having numerous slender branches that spread out horizontally.

PLATANUS. Plane Tree

P. occidentalis, **American Plane, Sycamore or Buttonwood.** Heart-shaped leaves at base, with sharp pointed lobes.

P. orientalis, **Oriental Plane.** This tree is fast becoming popular for street planting. It is a rapid, upright, clean grower and long lived; beautiful, dense foliage it is not affected by the air of cities nor of insects.

**SYCAMORE****MULBERRY—MORUS**

M. tatarica, **Russian Mulberry.** This makes a round headed tree, quick of growth and very profuse foliage. It is wonderfully productive of fruit and for anyone wishing to attract birds this tree cannot be surpassed. If planted in chicken runs it will produce fruit for several months. The fruit is considerably smaller than our native variety but the tree bears so profusely that it is visible for a considerable distance.

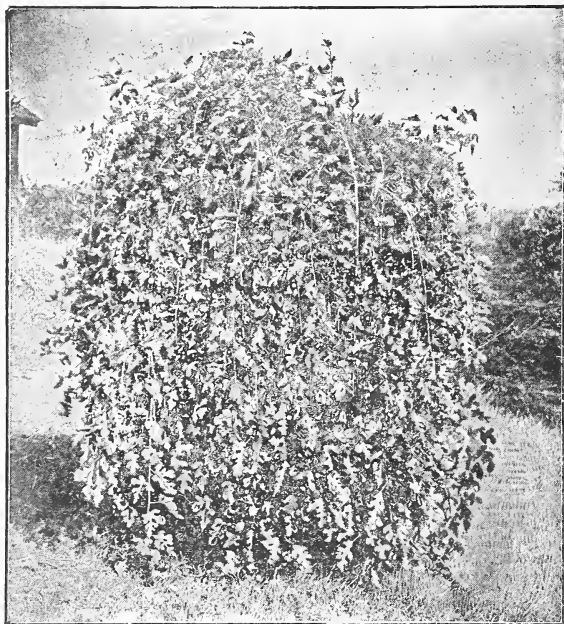
LIRIODENDRON**Tulip Tree, or White Wood**

L. tulipifera, **Tulip Tree or White Wood.** One of our largest native trees with large, glossy, light green leaves, shaped like a violin and beautiful, tulip-like flowers. Very desirable for planting on lawns, or where trees are desired that will make a rapid growth.

BETULA. Birch

B. alba, **European White Birch.** A graceful tree, with silvery bark and slender branches. Erect when young, but after four or five years assumes an elegant drooping habit. Very desirable.

WEEPING TREES



MORUS. Mulberry

M. Tartarica pendula, **Tea's Weeping Russian Mulberry.**

One of our prettiest hardy, small, weeping trees. Forms a perfect umbrella-shaped head, with long, slender branches drooping to the ground parallel to the stem.

WEEPING MULBERRY

WILLOW—SALIX

S. babylonica, **Weeping Willow.** A tree of stately appearance with long pendent branches swaying their silvery foliage in every breeze, quick to take hold when transplanted, will give a finish to a lawn not obtained in any other tree. This too makes a good screen and whether planted on moist or dry grounds thrives with unusual vigor.

Var. *ramulis aureis*, **Golden-Barked Babylonian.** 2. Bright golden bark in winter. Same habit as Babylonian or Common Weeping.

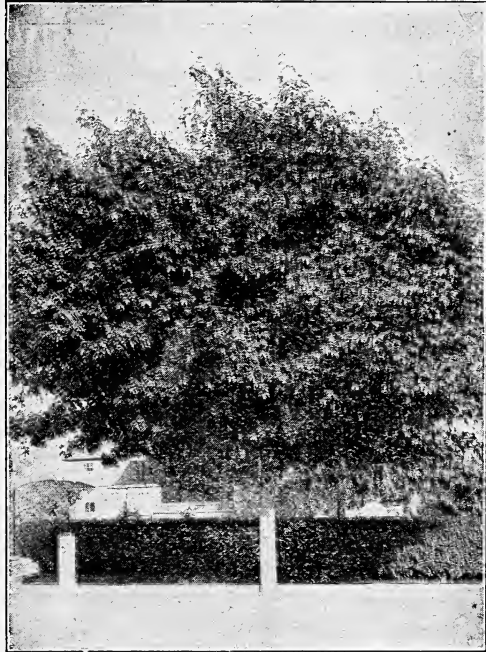
BETULA. Birch

Var. *pendula laciniata*, **Cut-leaved Weeping Birch.** Without question one of the most popular and beautiful weeping or pendulous trees, for planting in yards or lawns. Its bark is white or silvery, branches of a drooping habit, with foliage that is deeply cut and fine. Rapid grower and perfectly hardy. The most popular of all birches.

ORNAMENTAL TREES

GLOBE NORWAY MAPLE**Acer Globosum**

A round headed tree with dense dark green foliage. Very distinct and desirable for producing formal effects.

**NORWAY MAPLE****CRATEAGUS**

Var. *coccinea flore pleno* Paulii, **Paul's Double Scarlet Torn.** Flower bright carmine red. Superior to any of its color. A very popular variety.

DOGWOOD, Cornus**CORNUS. Flowering Dogwood**

C. florida, **White-flowering Dogwood.** An American species of spreading irregular form. The flower appears before the leaves in the spring, are about three inches in diameter, white and very showy. They begin to appear just as the Magnolia flowers are fading. They remain about two weeks. We regard it all things considered, as one of the most valuable trees for ornamental planting, ranking next to the Magnolia as a flower-

ing tree and only second to the Scarlet Oak, in brilliant foliage in autumn.

Var. *flore rubra*, **Red-flowering Dogwood.** A variety producing flowers suffused with bright red; blooms very young. One of the finest flowering trees.

CERCIS. Judas Tree or Red Bud

C. Canadensis, **American Judas Tree.** A very ornamental native tree, medium in size, with heart-shaped leaves of pure green color and glossy surface. In early spring, before the leaves appear, it is covered with a profusion of delicate pink flowers, from which it derives its name, Red Bud. Flowers at the same time as the Chinese Magnolias and grown as a single tree, deserves to be classed with our finest ornamentals.

FLOWERING CRAB, Malus

Malus Bechteli, Bechtel's Double-Flowering Crab. A sturdy grower, hardy and of medium size. Flowers are double and resemble delicate pink roses, and are very fragrant. When in bloom looks like a mammoth rose bush. Blooms while very young. Suitable for almost all soils.

RED FLOWERING CRAB**Malus Floribunda**

(S). One of the best of the flowering crab-apples. It blooms profusely, the rose-colored buds opening into white blossoms. Yellow fruits follow in the fall.

PERSICA. Peach

P. vulgaris fl. alba plena, White-Flowering Double. Double white flowers. Blooms in May. Perfectly hardy.

P. vulgaris fl. camelliaeflora plena. Flowers rose colored.

P. vulgaris fl. rosea plena, Rose-Flowering Double. Beautiful delicate rose-colored flowers like small roses. Blooms in May.

**CATALPA**

Catalpa Speciosa. A variety which is said to have originated in the West; it is very hardy and a rapid grower and is being extensively planted for commercial purposes; has broad deep green leaves and beautiful large blossoms, making it a highly ornamental tree for lawn or street. Valuable for planting in groves for growing poles, posts and railroad ties.

C. Bungei, Chinese Catalpa. Of dwarf habit but when top-grafted on tall stems 5 to 7 feet from the ground it produces a very dense, effective, umbrella-shaped tree.

JAPANESE MAPLE

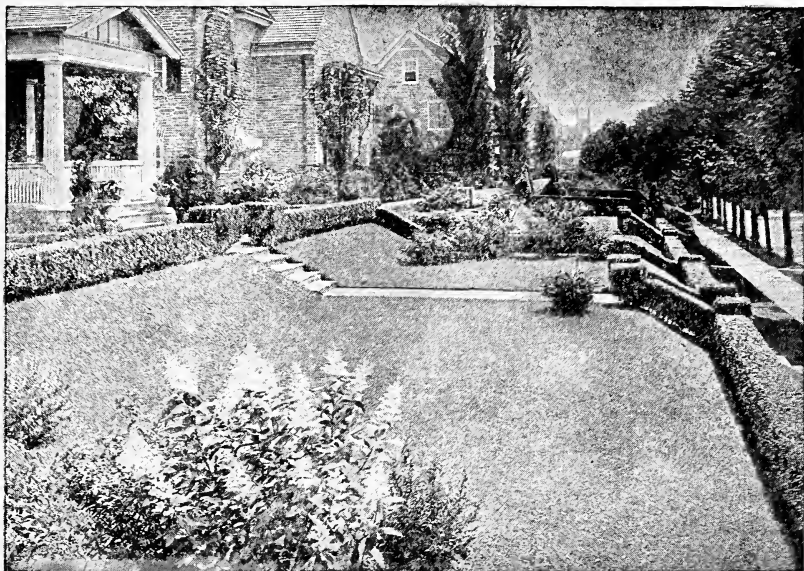
Acer palmatum, Japanese Maple. Handsome shrubs or dwarf trees, valuable for planting as single specimens, grouping on the lawn, or in beds near buildings, giving a most pleasing color-effect.

Var. aureum, Golden-leaved.

A golden-leaved variety of the above, very desirable but quite scarce. Foliage changes from green to gold, to bronze and then to a greener shade again.

palmatum atropurpureum, Blood-leaved Japanese Maple.

In the spring the star-shaped foliage is a dark red, turning to purplish red and retaining that color most of the season. Probably the best, and certainly the most popular of all the Japanese Maples because of its effectiveness when placed where it has a background of green foliage. Makes a bushy specimen 10 to 15 feet high.



JAPANESE FLOWERING CHERRY
Cerasus Amanogawa

Pyramidal in habit. Beautiful rose colored flowers covering the entire tree. It resembles a Lombardy Poplar tree in growth.

A. Hippocastaneum, European or White Flowering Horse Chestnut, 1.

A very beautiful, well known tree, forming a round compact head, with dark green foliage and an abundance of spikes of white flowers, slightly marked with red. Very hardy and healthy variety.

POPULUS. Poplar

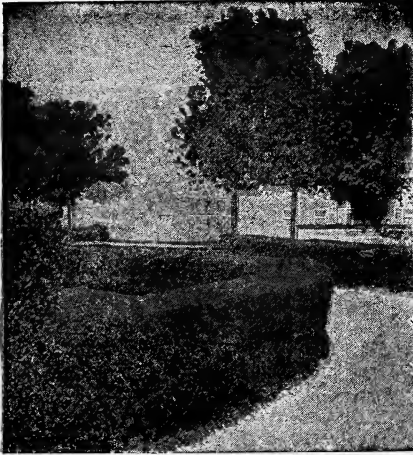
P. fastigiata or dilatata, Lombardy. Well known for its erect, rapid growth and commanding spiry form. Very desirable in large grounds or along roads, to break the average height and forms of other trees.

SALISBURIA

Maiden-Hair Tree or Ginkgo

S. adiantifolia. A rare, beautiful tree from Japan, with remarkable fern-like foliage, distinct and fine. Especially desirable for planting on lawns or in dooryards, rapid grower.

**ORNAMENTAL
DECIDUOUS HEDGE PLANTS**



PRIVET HEDGE

L. IBOLIUM PRIVET

A new privet resembling California privet but more hardy. Valuable for planting in cold climates.

L. Nanum Compactum, **Lodense Privet**. This is a new dwarf, distinct form of Privet of extremely compact low-growing habit. The foliage is rich, dark green and of extreme hardness. It is particularly useful for low hedges and borders, as it stands shearing very well and can be kept low and compact very easily.

DWARF BOXWOOD

Buxus Suffruticosa

A low growing evergreen shrub with glossy leaves adapted for bordering flower beds. Seldom obtain a height over 8 inches. They bear trimming readily.

AMOOR RIVER PRIVET HEDGE

The hardy Privet, resembles the California type, but absolutely will not winter-kill at 25 degrees below zero.

PRIVET—Ligstrum

Ovalifolium, **California**. This is the most glossy-leaved and rapid growing of all the half-evergreen plants used for low hedges around private lawns, and is the universal favorite at Newport and other fashionable seaside resorts.

L. vulgare, **Common or European Privet**. 4. Narrow foliage, and showy white flowers, and profusion of black berries.

L. regelianum, **Regel's Privet**. (F) 5-7 ft. White. June. A low, spreading variety being very twiggy, with a dense foliage not so glossy as California. Because of its graceful appearance, hardness and adaptability to any soil and shady places, it is the most widely used Privet for landscape work.

The following are also very desirable for ornamental hedging, description of which will be found under the proper headings in this catalogue:

Altheas, Barberry, Hydrangea Paniculata, Roses Spireas, Berberis Thunbergii, Japanese Barberry, Berberis Nana, Japanese Box Barberry Berberis Thunbergii Atropupurena, Japanese Red-leave Barberry, Rosa Rugosa, Japanese Rose Hedge, Lilac Purple and Lilac White Syringa, Spirea Van Houtti.

AMPELOPSIS

A. quinquefolia, **American Ivy**, **Virginia Creeper** or **Common Woodbine**. A native climber of vigorous growth with digitate leaves; a fine green in summer, changing to rich crimson in Autumn. It throws out tendrils at the joint by which it fastens to anything it touches, affords shade quickly and is very desirable for covering walls, verandas, or trunks of trees.

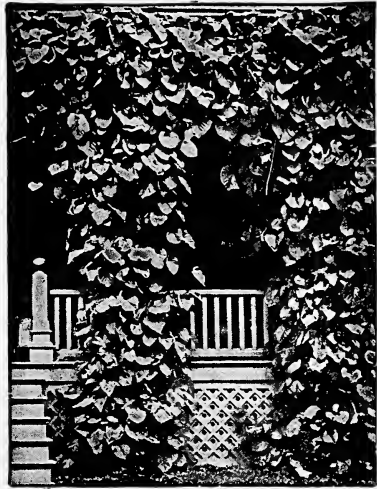
A. veitchii, **Boston**, or **Japan Ivy**. A beautiful, hardy, climbing plant of Japanese origin. Especially valuable for covering walls, as it clings firmly to the smoothest surface, covering it evenly with overlapping leaves, which form a perfect mass of foliage. The color is a fresh deep green in summer, changing to the brightest shade of crimson and yellow in autumn. It is a very rapid grower. It is quite hardy and becomes more popular every year.

ARISTOLOCHIA **Pirthwort** or **Pipe Vine**

A. sipho, **Dutchman's Pipe**. A very rapid climber with large, dark green foliage, and curious, pipe-shaped, yellowish-brown flowers.

TECOMA **Trumpet Flower**

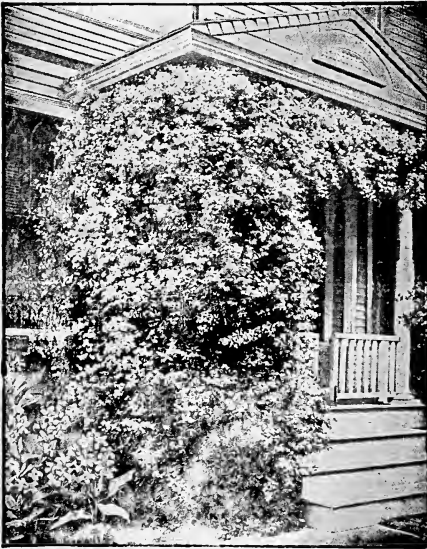
T. radicans, **American Trumpet**

**DUTCHMAN'S PIPE**

Vine. Very hardy; large trumpet-shaped scarlet flowers in August.

CELASTRUS **Staff Tree** or **Bitter Sweet**

C. scandens, **American Bittersweet**. A native twining plant having large leaves, yellow flowers, and clusters of orange capsuled fruit.

**CLEMATIS****CLEMATIS** OR **VIRGIN'S BOWER**

We give much attention to this magnificent family of climbers and annually propagate all of the leading and hardy sorts. No other hardy climbers exceed in beauty and effectiveness and finer sorts of Clematis. As a screen for fences, for pillars along garden walks, for training on walls or arbors, in masses on rockwork, for the veranda or cultivation in pots, it has no rival among strong-growing blossoming plants. It does best in a

h. deep, sandy loam and should be well mulched with rotten manure in winter. The variety *Paniculata*, which is sweet-scented, is doubtless the most popular of all and the easiest grown. Other leading varieties are *Henryi*, *Mme. Edward Andre*, *Ramona*, etc.

C. Henryi. One of the best perpetual Hybrids; of robust habit and a very free bloomer. Flowers white, large and very showy. July to October.

C. Jackmanni. One of the most popular varieties, a free grower and abundant and successful bloomer, producing flowers until frozen up. Color an intense violet-purple, remarkable for its velvety richness. Originally introduced over forty-five years ago, since which time many new varieties have been placed on the market, the Jackmanni has no superior and very few, if any, equals.

C. Mme. Edward Andre. A vivid crimson Clematis, large size and borne as freely as the Jackmanni. The habit is vigorous and the plant is popular on account of its exceptional brilliancy and persistency as a bloomer.

C. Paniculata (A sweet-scented Japan Clematis.) This variety is now quite generally planted throughout the country. It is a vine of very rapid growth, quickly covering trellis and arbors with handsome, clean, glossy green foliage. The flowers are of medium size, pure white borne in immense sheets and of a most delicious and penetrating fragrance. They appear in September at a season when most vines are out of bloom. We can recommend this plant in the strongest manner as one of the best vines to grow near the house. It makes a growth of from twenty-five to thirty feet in a single season and does well when cut back to the ground each year. It is the easiest growing and most satisfactory of all the Clematis.

MATRIMONY VINE—*Lycium*

Chinese. A superb variety, which has been a favorite for many years.

It is a most vigorous, hardly climber in any position. It continues flowering, and new berries remain on the vine until late into the winter.

THE EVERGREEN BITTERSWEET (Climbing *Euonymus Radicans* Vegetus Beautiful Year Around.

Particularly adapted to cover garden walls, old stumps or embankments with any exposure, but the fruiting is best when the plants receive the warm sun; the plants are strong, robust climbers and in fall and winter bear a profusion of bright red berries. The vine is covered the whole year with green foliage, and absolutely holds the color even in the hottest summer or the coldest winter. The vines show many clusters of bright red berries that carry them through the winter months.

LONICERA

L. Halleana, Halp's Japan Honeysuckle. An almost evergreen variety, with pure white flowers, changing to yellow; very fragrant and a vigorous grower. Covered with flowers from July to December. Best bloomer of all.

Var. Belgica, Monthly fragrant, or Dutch Honeysuckle. Flowers red and pale yellow, sweet scented. Blooms through the summer.

L. sempervirens, Scarlet Trumpet Honeysuckle. Flower deep red; trumpet shaped; flowers all summer; a native climber and appropriate for trellis and rockwork.

WISTARIA

W. Sinensis, Chinese Wistaria. One of the most magnificent hardy climbers, producing racemes of pale, purple flowers early in spring and autumn, and growing at the rate of fifteen or twenty feet in a season attaining an immense size.

ROSES

Hybrid Tea Roses

Killarney Brilliant—This fine Irish rose is an old favorite of the ever-blooming class. The beautiful pointed buds open up into brilliant pink, intensely fragrant flowers of large size. A vigorous grower and free bloomer.

La France—Moderately vigorous, pink rose. Splendid size and very fragrant. Belongs to the ever-bloomers.

Gruss An Teplitz (Virginia R Coxe)—This is the freest bloomer in our list. From early summer until late fall there is scarcely a day that roses cannot be picked from it. Color bright, velvety crimson, fragrant, vigorous, hardy and easy to grow. This is the best all-purpose rose we can offer.



Sunburst—very select, with long spiral buds; a lovely bronzy yellow fading to apricot.

White Killarney—A white sport of the well-known "Killarney," with all the prominent and desirable qualities of that variety. Flowers large and pure white. A great acquisition.

General MacArthur—Dazzling crimson scarlet, exquisitely perfumed. One of the grandest red roses ever offered, either for cutting or bedding.

Los Angeles—The following is the originator's description: "Los Angeles is, by all odds, one of the finest roses ever introduced. The growth is very vigorous, and produces a continuous succession of long stemmed flowers of luminous flame-pink, toned with coral and shaded with translucent

gold at the base of petals. In richness of fragrance it equals in intensity the finest Marechal Neil The buds are long and pointed, and expand into a flower of mammoth proportions, while the beauty of form and ever increasing wealth of color is maintained from the incipient bud, until the last petal drops." We have this rose on our grounds and we can truthfully say the above description is no exaggeration. To see a bed of Los Angeles in bloom is to see a wonderful blaze of color. No other rose like it.

Laurent Carle (Pernet Ducher, 1907)—Color brilliant velvety carmine. A very promising variety; another Rose it will certainly pay you to try. We know it has a future.

White La France, or Augustine Guinoisseau (Guinoisseau, 1889)—Beautiful light fawn color, almost white; rightly described as an almost white La France. Extra fine.

Miss Lolita Armour (Per.)—Bud of medium size, globular; flowers very large, supped, double, borne, several together, on long stems; very lasting; strong fragrance. Color, chrome yellow at base, shading to burnt orange and copper; reverse of petals chrome-yellow at base, shading to bright salmon with brilliant copper suffusion; passes to lovely shade of shrimp-pink and copper with age. Foliage abundant, leathery, glossy bronze-green, large. Growth very vigorous, bushy, upright; abundant bloomer. Silver medal. N. R. S. 1919.

F. J. Grootendorst, H. Rug. (F. J. Grootendorst & Sons, 1920; disseminated in U. S. by A. N. Pierson, Inc., 1920)—Rosa rugosa ruflra X Baby Rambler. Type, Rugosa foliage, Poly-

antha flowers. Bud small, ovoid; flower small, open, double, borne in clusters on average length stems; very lasting; slight fragrance. Color bright red, edges of petals serrated like a carnation. Foliage sufficient, small, leathery, wrinkled, dark green; disease resistant. Vigorous grower of bushy habit, bearing a profusion of blooms from June to October. Very hardy.

Alice Rothchild—Long pointed white buds, very double flower, constantly in bloom.

Mrs. Aaron Ward (Pernet Ducher, 1907)—Coppery-orange in the open bud, golden-orange when partly developed pinkish-fawn of lovely shade when fully open, when it looks like a full, fluffy-silk rosette. Color effect of the whole flower is Indian-yellow. No wonder everybody who sees it falls in love with it.

HYBRID PERPETUAL ROSES

Frau Karl Druschki, or White American Beauty or Snow Queen (Lambert, 1900)—This grand Rose has become renowned as the very highest type of its class and the best snow-white Rose ever introduced. It is an extraordinarily strong grower, and has the vigor and hardiness of an oak. Its magnificent flowers are nothing less than glorious—immense in size and produced with great freedom. The color is a marvelous white without a tinge of yellow or any other shade. A true paper white, the standard by which all white Roses are judged.

General Jacqueminot (Roussel, 1853)—Crimson-scarlet; large, full. Very fragrant. Excellent.

American Beauty—The world-famous rose. Rich, rosy-crimson, ex-

quately shaded. Magnificent buds. Flowers extra large and deep petaled; of beautiful form and very double. This hardy rose has the ever-blooming qualities of the Tea Rose with the delicious odor of the La France. The great American forcer and bedder, each shoot producing a bud. A universal favorite.

Anna de Diesbach—Bright carmine-rose, a beautiful Rose of large size

Magno Charta—Bright pink, suffused with carmine; a beautiful Rose and a strong, vigorous grower; one of the best.

Soleil d'Or—Large, full and globular, fragrant; buds conical shaped; color varying from gold and orange yellow to reddish gold, shaded with nasturtium red.

Paul Neyron—Deep rose color, good foliage; by far the largest variety in cultivation; one of the best.

CLIMBING ROSES

Climbing American Beauty (Hoopes Brothers & Thomas, 1911) (H. W.)—A seedling from American Beauty with Wichuraiana and Ted blood in its veins. The introducers say of it: "Same color, size and fragrance as American Beauty, with the addition of the climbing habit. Good foliage and better blooming qualities. One plant of this new Rose will produce twenty times as many flowers in June as the old American Beauty, besides blooming occasionally during the summer. Blooms three to four inches across; has proved perfectly hardy and stands heat and drought as well as any Rose in our collection." This Rose has already made its mark and wherever it has been planted it has pleased, and you will lose if you are slow to take hold of the "Climbing American Beauty." It grows and blooms.

American Pillar—Magnificent climbing rose which thrives almost everywhere. It makes an exceptionally strong growth beginning early in the season. The foliage is rich, dark green and very resistant to disease or insect injury. The single flowers are pink to carmine with white centers. There is no more beautiful rose in existence.

Crimson Rambler—Judging from demand, this is the most popular climbing rose in the list. The crimson flowers are borne in heavy clusters, presenting a very striking appearance.

Dorothy Perkins (Perkins, 1902) (H. W.)—A most beautiful deep pink; the flowers are borne in large clusters of small double blooms and are very sweetly scented; quite first class. Another Rose for the masses.

Dr. W. Van Fleet (Henderson, 1910) (H. W.)—Flowers when open run four inches and over in diameter. The center is built high, petals beautifully undulated and cupped. The color is a remarkable delicate shade of flesh-pink on the outer surface, deepening

to rosy-flesh in the center.

Red Dorothy Perkins, or Excelsa (Walsh, 1909) (W.)—It is a good deal to claim for a Rose, but we are within bounds when we describe Excelsa as a brilliant Crimson Rambler flowered on glossy, varnished Wichuraiana foliage. The defects of Crimson Rambler are its unsightly foliage in unseasonable weather and its defoliation by insects; the infusion of Wichuraiana blood assures an ornamental climber which is nearly evergreen; and this will assure this lovely crimson-scarlet pillar Rose a place in every American garden, for it is quite hardy in addition to all its other fine points. The flowers are very double, produced in large trusses of thirty to forty, and almost every eye on a shoot produces clusters of flowers. The color is intense crimson-maroon, the tips of the petals tinged with scarlet. The finest of all Crimson Ramblers.

Hiawatha (Walsh, 1905) (H. W.)—Its flowers are about one and one-half inches across, and produced in long, pendulous sprays, with frequently from forty to fifty flowers on a spray. In color, it is brilliant ruby-carmine, with a clear white eye and a mass of golden stamens.

Lady Gay (Walsh, 1903) Flowers of a deep cherry pink, shading on the edge of the petals to a very delicate soft tone of pink.

Paul's Scarlet Climber (W. Paul & Son, 1917) (H. W.)—Vivid scarlet, shaded crimson, makes a brilliant display for a long period of time in the garden. A wonderful new climbing Rose. Received the gold medal and cup for the best new climber at the National Rose Society's exhibit.

Silver Moon (Henderson, 1910) (H. W.)—Flowers very large, four and one-half inches and over in diameter. Pure white in color; petals of great substance, beautifully cupped, forming a clematis-like flower. The large bunch of yellow stamens in the center adds to its attractiveness.

POLYANTHA RAMBLERS**POLYANTHA
or Baby Rambler Roses**

Lafayette (Joseph Guy) (Poly.)—Brilliant cherry-crimson flowers, as large as Paul's Scarlet Climber, produced in branched trusses continuously from June until frost. The most brilliant and satisfactory Rose in this class for bordering walks or for edging large Rose beds. Makes fine single specimens.

Catherine Zeimet, or White Baby Rambler (Lambert, 1901)—Grows to a height of twenty inches and produces double pure white flowers in abundance.

Ellen Poulson (Poulson, 1912)—Dark brilliant pink, large, full, sweetly scented. Most floriferous.

Erna Teschendorff (Teschendorff, 1911)—The flowers are of a deep crimson color, flushed with carmine, resembling the dazzling color of "Gruss an Teplitz." It is much sought after in America to bloom in pots during winter and for Easter time.

Miss Edith Cavell—Very free; brilliant crimson, white eye.

Miscellaneous Hardy Roses

Persian Yellow—Bright yellow; the most double of this class. The finest hardy yellow rose.

PLANTING SHRUBBERY

The best results with shrubbery are had when the planting is done in beds or groups. Shrubs grow best when in companionship of others. Compare plants placed individually in the sod with those in a group which enjoy the cultivation of a deep hoeing or spading once or more a year.

If shrubs are to be arranged in groups or colonies, the area that they are to occupy should first be thoroughly spaded as if for flowers, after which the planting may be done in the usual manner.

TRIMMING SHRUBBERY

Newly planted shrubbery should be cut back severely at the time of planting. This treatment reduces the number of buds to be supplied with nourishment and has a tendency to make the growth much more vigorous than if it were not so pruned. Generally from one-third to one-half of the top should be removed. While this may seem to spoil the shrub, it really is the making of it. The plant will be more bushy and can be trained, as it grows, into the shaped plant desired.

When shrubbery is planted in the Spring this trimming is perhaps most easily done before the shrub is set in the ground. When planted in the Autumn it is usually best to defer the trimming until early the following Spring.

DOES IT PAY TO BUY QUALITY TREES AND PLANTS?

MONEY INVESTED IN TREES AND PLANTS OF POOR QUALITY IS WASTED, FOR AS THE OLD ADAGE SAYS, "BIRDS OF A FEATHER FLOCK TOGETHER." THIS MAY BE APPLIED TO TREES AND PLANTS, FOR THE LOWEST PRICES AND THE CHEAPEST QUALITY ARE LIABLE TO TRAVEL TOGETHER.

EVERGREENS

A class of trees indispensable in the plantings of parks, private estate and the home grounds, possessing many and varied characteristics in habit of growth, form and coloring. They are always desirable for any landscape planting for both summer and winter effects. They accentuate the charm and beauty of the summer flowering shrubs and plants, and when king winter holds our northern country in his icy grip, they give a happy and pleasing effect with their bright coloring in the mantle of white.

We give especial care to the growing and cultivation of this class of plants, and can truthfully say they are as fine as can be found in this country.



THE JUNIPER FAMILY—Juniperus

A family of evergreens of great beauty and adapted to many uses and purposes. These plants are largely used in evergreen foundation planting, and embrace, for the most part, species of great hardihood. The tall growing varieties make good specimen and background plants, while the smaller, procumbent or prostrate forms, make desirable foreground or ground cover plants.

Var. *glauca*, **Glaucous Red Cedar. 3.** The compact, conical habit of this variety, combined with its silvery foliage, renders it very distinct and desirable.

Var. *Hibernica*, **Irish Juniper. 3.** Of dense, pillar-like growth, glaucous, green foliage.

Var. *Pfitzeriana*, **Pfitzer's Juniper. (D).** Vase-shaped, spreading growth and light green foliage producing a beautiful, soft effect. Extremely hardy. Thrives under city conditions.

Juniperus Sabina. (VD), **Savin Juniper.** A vase-shaped, somewhat upright plant with deep green foliage. Valued for rockeries, groups and borders in combination with other low-growing Evergreens. Native of Eurasia and North America with a wide range.

J. *Virginiana*, **Red Cedar.** A well-known American tree; varies much in habit and color foliage, some being quite stiff, regular and conical, and others loose and irregular. It makes a fine ornamental hedge plant.

THE SPRUCE FAMILY—Picea

Among the spruces are embraced some of the most useful as well as ornamental trees of the conifer family. They are mostly tall, conical or pyramidal trees, but there are some dwarf forms. They do particularly well in this climate and will thrive in any soil except a wet one. It is among the most largely planted of the evergreens.

PICEA

Spruce. From pix—pitch; the tree producing an abundance of resin. Conical, well-shaped trees of rapid growth and perfect hardiness, able to thrive. Extensively planted for screens, hedges and wind breaks.

P. pungens, **Spruce Colorado Green.** Symmetrical habit, very hardy, with light green foliage.

P. pungens glauca, **Colorado Blue Spruce. 2.** One of the hardiest and most beautiful of all the Spruces; in form and habit similar to the White Spruce; foliage of a rich blue or sage color.

P. pungens Kosteriana. Foliage of a rich silvery blue. The finest variety of blue Spruce known.

Hemlock. An elegant, pyramidal tree, with drooping branches and delicate dark foliage, like that of the Yew, distinct from all other trees. It is a beautiful lawn tree and makes a highly ornamental hedge.

P. excelsa, **Norway Spruce. 1.** An elegant tree; extremely hardy, of lofty rapid growth, and pyramidal form. The branches assume a graceful, drooping habit when the tree attains 15 to 20 feet in height. One of the most popular evergreens for planting, either as single specimen trees or in masses for effect or shelter. One of the best evergreen hedge plants.

**BLUE SPRUCE**

P. Pseudotsuga Douglasii, **Douglas Spruce.** Looks like a Spruce, but botanically different. The habit is regular and symmetrical; very hardy and suited for almost any purpose. The needles are soft and dark green, though sometimes glaucous.

PINUS

Pine. From the Celtic for rock or mountain, alluding the habitat of the tree. An indispensable group of trees to the landscape beautifier, in their varied forms and adaptability. They are hardy, endowed with a peculiar rugged type of beauty, and carry about them a delightful pungent aroma. Their needles are borne in tufts of two to five, and greatly add to the effective value of the tree.

P. Mugho, Dwari Mugho Pine. 4. Of low, dense, spreading growth, with very dark foliage; very hardy.

P. strobus, White or Weymouth Pine.

1. A native tree, valuable for timber purposes. Light silvery foliage; used for hedges as can be clipped like a shrub.

P. sylvestris, Scotch Pine or Fir. 1. A native of the British Islands. A fine, robust, rapid growing tree, with stout, erect shoots, and silvery green foliage. Very hardy; valuable for shelter.

 THE JAPAN CYPRESS FAMILY—*Retinispora*

The *Retinisporas* embrace the most beautiful evergreens in cultivation. They are of such diverse growth and appearance, that it is possible to select a *Retinispora* for any place or purpose. They are stately and majestic as individuals, and strikingly effective and imposing in groups. They vary much in color of foliage, green, blue, golden and the *Argentea* or silvery hue. Especially suited for foundation plantings.

R. Plumosa, Plume-like Retinispora. Of conical outline with light, feathery, green foliage. It stands shearing well, and if frequently pruned becomes compact and dense. It is useful in groups and beds, or for vases and window-boxes.

R. Plumosa aurea. The most popular and generally useful of all the golden Evergreens. In character it resembles *R. plumosa*. Is especially ornamental, and the soft plume-like golden foliage is particularly bright in spring. When pruned it becomes symmetrical and regular. It is low-branched, and the golden yellow foliage brushes the green grass in beauti-

ful contrast. A vigorous grower and unsurpassed for color effect in grouping. It is well adapted for small lawns, and appropriate for larger areas.

R. Squarosa Veitchii. Possesses the merits of *R. plumosa*, resembles it in character, and is useful in the same ways. The foliage is feathery and of a rich, silvery glaucous or steel-blue that contrasts finely with the dark green and golden tints of other varieties. One of the most showy and attractive of the class.

Taxus Cuspidata. The hardiest of the upright Yews, and of fairly rapid growth. The foliage is a brighter green than that of other varieties.

THE ARBORVITAE FAMILY—*Thuja*

The Arborvitae is a plant which seems almost indispensable to the evergreen grouping. Useful for tall columnar effects or as a dominating plant for height in any position. They are especially adapted for evergreen hedges and wind-breaks. They bear shearing well and will soon form a dense screen. This group of plants thrives in almost any soil and seems indifferent to exposure. The tall varieties are successfully used for pointed architectural effects, while the smaller growing types are desirable subjects for foreground planting.

THUYA. Western Arbor Vitae

T. occidentalis, **American Arbor Vitae**. Of conical form and rapid growth; valuable for screens and hedges; commonly called White Cedar.

Var. *globosa*, **Globe-Headed Arbor Vitae**. Grows in low, thick globe form; very desirable.

Var. **Tom Thumb**. 4. Very dwarf and of slow growth; of compact symmetrical habit; valuable where low-growing forms are needed; hardy.

Var. *pyramidalis*, **Pyramidal Arbor Vitae**. 3. Of upright compact habit, like Irish Juniper; foliage light green; very hardy. 2 to 3 ft.

Var. *pyramidalis*, **Douglas Pyramidal Arbor Vitae**. Pyramidal in form; foliage distinct; somewhat resembling a *Retinispora*.

BIOTA. Chinese Arbor Vitae

B. orientalis aurea nana. A gem for use in small gardens; very dwarf; foliage a bright golden yellow during the summer, turning to a rich, bronzy, yellow during the winter.

PLANTING AND CARE OF PERENNIALS

The planting area where the perennials are to go should be deeply spaded, digging-in a heavy application of well-rotted manure, or compost. It should then be raked smooth and the surface free from lumps.

The proper planting distance for most varieties of perennials is 18 inches. Large, growing types like Peonies, however, should go 2 feet apart and small plants 10 to 12 inches apart.

As a general rule the plants should be set with the crowns on a level with the ground. If they are planted deeper they are liable to rot; if they are planted more shallow, they are likely to dry out. An exception to the rule is the Peony, which should be planted with the crown 2 inches below the surface.

After the planting is completed, the area should be thoroughly watered, and thereafter once or twice a week throughout the season.

Each Winter the perennial bed should be mulched with straw or leaves after the first freeze. Avoid manure as it is likely to form a mat and stifle the plants. In the Spring, lightly work in an application of fine manure, or of bone meal at the rate of a single handful per plant.

The perennial bed should be kept cultivated for not only does a cultivated area stimulate their growth but it is easier to keep in order than grass, which succeeds poorly beneath their shade and is in such places difficult to mow.

HARDY HERBACEOUS PERENNIALS AND BIENNIALS

ACHILLEA, Ball of Snow

A favorite hardy perennial well worth growing, giving throughout the summer an abundance of double pure white flowers in loose bunches; much prized for cutting. Height 2 feet.

Achillea Boule De Neige, the best variety of the Achillea family.

Anemone Japonica, Japanese Anemone. Valuable plants suitable for massing or single specimens. They grow rapidly and are profuse in bloom, gaining strength and beauty each year. The blooming period extends from August till mid-November, the large open flowers furnishing abundant cut flowers and a brilliant field display. Cover plants in winter. We offer strong field-grown roots only.

LONG SPURRED AQUILEGIA (Columbine)

Aquilegia, Columbine. Blooming in late spring and through the early summer months, preferring slightly shaded positions, though it does well in the sun. The flowers are borne on slender stems and mostly long spurred—coming in the many shades they do, prove very valuable in any border. 2-3 feet.

Campanula, Canterbury Bell. Another garden favorite. Blossoms borne on long stems in many shades and colors. Partial shade and rich soil produce the better blossoms. Should be in every garden. May and June. 2½-3 feet.

CHRYSANTHEMUMS Large-Flowering

These choice varieties are now deservedly popular for out-door bedding. In considering their many good qualities, there is no cause for surprise to see them cultivated so extensively. They give color, life and

beauty to the garden just at the time when other plants have been destroyed by frosts. An armful of flowers can frequently be cut in late November. With but a slight covering of leaves or litter during the winter, they will take care of themselves after once planted.

Firelight. Bright red. Early.

Nellie Blake. Reddish orange. Early.

White Doty. Pure white, cream center; high. Early.

Fairy Queen. Large; light pink, with full center. Early.

Frances Huckvale. Flesh with yellowish bronze center; high; bushy. Early.

Mrs. H. Harrison. Large; light lavender, whitish center; fine variety; high. Early.

Wolverine. Yellow; medium bushy. Very early.

DELPHINIUM, Larkspur

The hardy Larkspurs are an old-fashioned favorite, very attractive and are of easy culture. They are perfectly hardy. They grow in almost any kind of soil, but respond quickly to a liberal fertilizer. Can be planted in early spring and produce an abundance of flower spikes the first season. The flowers range through various shades of blue and white.

Delphinium Moerhemei. This is one of the finest pure white forms of the Belladonna type. Besides giving a wealth of bloom, it is particularly to be desired because it is the only white Delphinium producing its flowers in large spikes. Sometimes referred to as "The Prize of the White Delphiniums."

Delphinium Bellamosa. A dark blue of the type of Belladonna with the color of the old Formosum variety, but not liable to mildew like the latter and of stronger growth.

Funkia, Plainain Lily. An attractive group of plants of tropical appearance, lending themselves to any number of uses.

Lanceolata. Lilac flowers, valuable for its late flowering qualities. 2 ft. September.



GAILLARDIA

Gaillardia, Blanket Flower. Will grow anywhere, bearing large quantities of yellow flowers flecked and marked with crimson and brown. Starting in June, there are blossoms all summer. One of the most desirable plants for the home garden and the flowers are valued for cutting 2-3 feet

Grandiflora Superba. Extra large. **Gypsophila paniculata, Baby's Breath,** 2½-3 feet. May-June. Tiny white flowers with slight pink coloring. Almost a mist of feathery bloom. Attractive and useful to "soften" stiff stem flowers in bouquets and desirable for drying for similar use in winter.

Digitalis Foxglove. This is an old garden favorite. The flowers are borne on long stems (3-4 feet), and during their period of blossom are the most attractive thing in a border. These plants are not offered as to

Carnations. These are the hardy border Carnations. We offer these in mixed colors. The flowers are medium sized and have all the characteristics of the varieties grown under glass. 1-2 feet. June to September.

Dianthus, Hardy Pink. Interesting and useful, blooming in early spring. Many of the varieties we offer are improved forms of these old-time favorites; fine for cut-flowers. Most of them grow 10 to 12 in. high. May, June.

Barbatus, Sweet William. In separate colors: Red, White and Rose, 2 ft.

Newport Pink. A distinct variety in this favorite flower, being a salmon-rose-pink.

Scarlet Beauty. Rich deep scarlet flowers with bright green foliage.

Her Majesty. One of the best white Garden Pinks.

Bleeding Heart or D'entra. An old time favorite. Its arching stems bear drooping heart shaped flowers of white and old rose. Grows in shade. 1-2 feet. May and June.

color, but are mixed seed from best plants. They are, ordinarily, very easy to grow, thriving in loose, rich soil. May and June. Mixed colors.

Hollyhocks. Everyone knows them—with their long spikes of multi-colored flowers, borne in profusion as they are, there is no wonder they are so largely used. Blooming in June and July, so absolutely hardy that they will take care of themselves

Double. Carmine-Rose, Crimson, Rose-Salmon, Sulphur-Yellow, and White.

Hibiscus, Ma'low Marvels. Larger and more brilliant than the old forms. Plants frequently grow five feet and during July and August produce flowers 8 and 10 inches across, especially if given water. We can furnish in white, pink and red.

IRIS

The Orchid Flower of America

Iris. Familiar and well beloved flowers of spring. The purity of their beauty, and their haunting fragrance, are decidedly refreshing. They are perfectly hardy, thrive anywhere, grow and bloom luxuriantly, particularly if plentifully supplied with water or if planted in moist situations as on banks of ponds, etc. Established plants produce from 50 to 100 spikes of bloom.

Description (S) denotes the upper petals or standards; (F) denotes the lower petals or falls.

Dalila. S, pale flesh-white; F rich purple. One of the most distinct and striking; very rare. 22 in.

Delicata. Large creamy white flower.

Dr. Bernice. S, coppery bronze; F, velvety crimson. 27 in.

Parisiana. S, white, dotted and shaded lilac-purple; F, white with lilac edging. Fine large flowers. 30 in.

Florentina. White, slightly tinged lavender; very early. 27 in.

Her Majesty. S, rosy pink; F, pink, veined crimson. 25 in.

Honorable. S, golden yellow; F, rich deep brown. For massing. 18 in.

Hector. S, delicate yellow; F, deep purple. 26 in.

Black Prince. S, lilac; F, velvety black

Madame Chereau. White, elegantly frilled, wide border of pale blue. One of the most popular and admired variety and our price is far below the market.

Navajo. S, light bronzy yellow, shaded lavender; F, deep maroon, heavily veined white and yellow. 20 in.

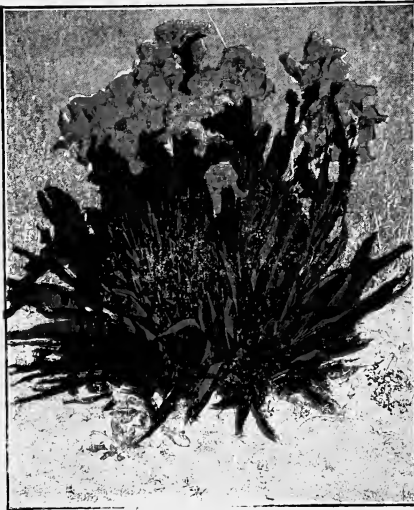
Queen of May. S and F, rosy lavender. 27 in.

Wyomissing. S, creamy white, suffused soft rose; F, deep rose, shading to a pale rose border. 26 in. ple-blue.

Princess Victoria

Louise. S, light sulphur-yellow; F, rich violet-red, edged creamy white. 27 in.

Prosper Laugier. S, bright coppery crimson; F, rich maroon. 25 in.



IRIS

LUPINUS, Downer's Hybrids

polyphyllus, Lupine. Deep blue, pea-shaped flowers on long stems. 4 to 5 ft. June, July.

polyphyllus albiflorus, polyphyllu; albus. A white form of the above.

polyphyllus Imperial. New. Purple-polyphyllus **Moerheimii.** This is the

finest of all Lupines, with its long spikes of pea-shaped flowers a foot long, on stems 3 feet long; color soft rose. June, July.

Pyrethrum, Painted Daisy. One of the most desirable perennials blooming in May and June. Attractive. We list mixed shades. 2-3 feet.

HERBACEOUS PAEONIES WITH A PEDIGREE

A noble flower, almost rivaling the Rose in brilliancy of color and perfection of bloom and the Rhododendron in stately growth. The first point in its favor is hardiness. It may be truly said to be "hardy as an oak." In the severest climate the plants require no other protection than that which they afford themselves. Then their vigorous habit and healthy growth, freedom from all diseases and insects are important arguments in favor of their cultivation. Each succeeding year adds to their size and beauty. The foliage is rich and glossy and of a beautiful deep green color, thus rendering the plants very ornamental even when out of flower. The newer varieties produce very large handsome, regularly formed cupped blooms resembling large roses. No other flower is so well adapted for large, showy bouquets. The Peony may be planted either single on the lawn or in borders. Where the lawn is extensive a large bed makes a grand show, surpassing a bed of Rhododendrons. It is really a flower for the million. It flowers early in June. Our collection has been made with great care and includes the best and most distinct varieties.

These varieties selected by us from a collection at the famous Flower show at Boston, Mass.

Eugene Verdier—Salmon pink, nearly white; fine form; large; fragrant, late, extra.

Felix Crousse—Brilliant red; large ball-shaped flower.

Festiva maxima—Flowers very large, in clusters; fragrant. The finest early white Peony.

Couronne d'Or—Very double, yellowish white; superb; very late.



PAEONY

Adolph Rousseau—Very large; deep brilliant purple; extra.

Baroness Schroeder—Flesh, changing to white; very full. Very rare.

Claire Dubois—Light rosy pink; late; extra.

Livingstone—Very double, pale pink; free flowering and late; extra.

Duchesse de Nemours—Sulphur white.

Monsieur Dunont—Sulphur white, carmine at center.

Marguerite Gerard—Large; flesh pink.

Monsieur Martin Cahuzac—Black maroon; rare.

Mme. Crousse—Open flower, pure white center, occasionally marked with carmine; fine.

Mme. Emile Lemoine—Very full, imbricated pinkish white; extra fine.

Mme. Emile Galle—Clear shell pink.

Delachii—Dark purplish crimson; shaded violet.

Plutarch (Kelway)—Deep crimson.

Modle de Perfection—Large bloom, fresh pink, marbled rose, very fine.

Harry Woodward (Richardson)—Soft flesh pink with light centre. Very late.

Avalanche (Crousse)—Fine milk white creamy centre with a few carmine stripes in centre.

Mlle. Rosseau (Crousse)—Sulphur white with pinkish flesh centre. Superb.

James Kelway (Kelway)—Large French white showing golden anthers in centre. Very fine variety. Has

been sold by some as Lady Alexandra Duff which is wrong.

Venus (Kelway)—A charming fresh mauve pink.

Pierre Ducharte (Crousse)—Soft lilac flesh pink. Very late.

Virginie (Calct)—Very fresh pink
Officinalis Mutabilis Alba—Light pink, changing to white.

Officinalis Roseo-plena—Soft bright rose.

Officinalis Rubro-plena—The well-known very early double crimson.

PAPAYER, Poppy.

The perennial Poppies rank among the most popular flowers in cultivation. For this reason, they should be used more freely in perennial borders, closely surrounded by other perennial plants, or planted in solid beds of mixed annuals, since the foliage of Poppies dies down after the flowering season.

The flowers are brightly colored, cup-shaped, and borne on long, graceful swaying stems. Oriental Poppies, of which varieties are offered below, produce the largest flowers in the family.

They are perfectly hardy if protected in severe winters with a light covering of leaves.

Atrosanguinea maxima. Large dark red.

Oriflamme. Orange - scarlet - red flowers of immense size.

Perry's White. Purest white.

Princess Victoria Louise. Soft salmon-rose shade to blush-rose.

PHLOX (Hardy)

Beauty and usefulness bring these hardy border plants among those of greatest importance. For massing they are very effective and their great variety of colors add a brilliancy to the landscape. Their flowering season begins in July and when the past bloom spikes are removed, the blooming period may be prolonged until fall.

Brilliant. Blood-red.

Elizabeth Campbell. Soft pink; large flower.

Sir Edward Landseer. Bright crimson.

Fraulein G. Von Lassburg. Pure white; immense panicle.

Iris. Light purple.

SEDUM ERECT GROWING VARIETY

Useful and pretty plants for the border, producing their interesting flowers late summer and fall.

Brilliant. One of the prettiest erect grow species, attaining a height of 18 inches, with broad light green foliage and immense heads of handsome showy rose-colored flowers; indispensable as a late fall-blooming plant.

Tritoma Flame Flower. A beautiful late flowering plant having handsome reed-like foliage. Flowers are a rich orange scarlet. 2-3 ft. Sept.-Nov.

Vinca minor, Periwinkle. Evergreen trailer; fine for covering bare places. Makes a handsome plant that blooms all summer; lilac-blue flowers.

Yucca filamentosa, Adam's Needle or Thread Plant. A stately evergreen thread-leaved plant producing spikes of creamy white flowers.

ORNAMENTAL GRASSES

Erianthus Ravenna, Plume Grass. Grows from 5 to 7 feet high, and produces from thirty to fifty flower-spikes. Closely resembles the Pampas Grass.

Festuca glauca. A pretty dwarf grass, with tufts of fine, bluish green foliage.

Pennisetum japonicum. It is, perhaps, one of the finest hardy ornamental grasses grown for its flowers, and for bordering or edging, growing about 3 feet high, with graceful, recurved foliage. Flowers rich mahogany, tipped white.

APPLES

Taking into consideration its hardiness, productiveness and general commercial value, the apple stands at the head of the list of fruits. In selecting the most important varieties for cultivation, it has been our constant aim to secure only those of standard excellence, and in no instance to recommend a novelty without ascertaining its history from a reliable source.

SUMMER APPLES

Yellow Transparent—A Russian apple. Tree is a hardy, upright grower; regular and early bearer, medium size. Color a rich, transparent yellow with a faint blush on sunny side; flesh melting, juicy, sub-acid.

Strawberry (Early Strawberry)—Tree a moderate, erect grower and good bearer. Fruit tender, mild and fine flavored. Season, middle to end of August.

AUTUMN VARIETIES

Maiden Blush—Large, smooth, regular, evenly shaded red cheek or blush on a pale yellow ground; flesh white, tender, sprightly, with a pleasant sub-acid flavor; bears large crops; free. August to October.

Rambo—Medium; yellow, striped

WINTER VARIETIES

Grimes Golden—This is one of the most popular apples in cultivation. Tree strong, thrifty grower. Fruit medium or above, cylindrical; regular surface, yellow veined, russeted; flesh yellow, firm, very fine grained, juicy; flavor sub-acid; quality rich. For dessert, cooking and market. November and December.

Baldwin—Large, deep, bright red. Flesh juicy, crisp and of good flavor. Tree vigorous in the East and South, though not sufficiently hardy North. November and December.

Golden Russet—Medium size and clear-golden russet color. A good ap-

Liveland (Liveland Raspberry)—Color orange yellow, striped, splashed and shaded with red, showing gray dots through the color, flesh light yellow, often stained with red; fine, tender, juicy; core medium open; flavor sub-acid, good.

Duchess of Oldenburg—A large beautiful apple, roundish. Streaked red and yellow. Tender, juicy and pleasant. Tree a vigorous, fine grower and abundant bearer. Very hardy. September.

Early Harvest—Tree healthy, vigorous and a good bearer. Fruit medium size, nearly round, somewhat flattened; surface smooth, clear, waxy yellow, rarely blushed; flesh tender, juicy, acid to sub-acid, flavor good. July.

Red Astrachan—Tree vigorous, upright, hardy and productive. Fruit medium to large; surface smooth, marbled and striped on greenish yellow; flavor acid.

with red. Fruit mild, tender, good. September to November.

Wealthy—Origin, Minnesota. Large, round; red; very handsome; fine quality; good grower. Perfectly hardy and most reliable. Very popular throughout the north. Long keeper in cold storage. Oct. to Jan.

ple in colder sections and brings good prices. Keeps till May in a cold cellar, and is then rich and sweet. Tree grows rather willowy; moderate producer. Season, Nov. to April. Origin, Western N. Y.

Ben Davis—Tree thrifty, upright grower of almost perfect shape. Fruit large, round, sometimes variable in form; surface smooth, often polished yellow, covered and splashed bright red; flesh white, tender, juicy; flavor sub-acid, not rich quality; only good for market and cooking. Nov. to Spring.



DELICIOUS APPLE

Jonathan—Tree of rather slender growth and spreading habit; fruit medium or above in size, round or oblong; surface very smooth, waxy yellow, often wholly covered with brilliant red; flesh whitish yellow, tender, very juicy; for dessert and cooking; quality best. Oct. and Nov.

Mammoth Black Twig—Extra large size, round, skin smooth, yellowish, covered with deep red, the general effect being dark red; flesh tender, tinged with yellow, crisp, sub-acid, aromatic, of excellent quality in every way. Tree vigorous, healthy and bears when quite young; very prolific.

McIntosh (McIntosh Red)—Medium large, polished smooth, yellow, nearly covered with brilliant crimson; beautiful; flesh snow white, crisp, very tender, aromatic; sub-acid; very good quality. Resembles Fameuse type, but is larger and more hardy. Tree vigorous, with spreading head; a good annual bearer; popular in northwest. November to February.

Winesap (Stayman's)—Large, roundish, deep red; medium quality; keeps well; tree a fair grower and a

Delicious—Flourishing well in every state of the Union. Bears annually; great yielder; hangs well on trees. Trees very thrifty, long lived and extremely hardy. Fruit very large, nearly covered with brilliant, dark red; flesh fine grained, crisp, juicy melting and delicious; splendid keeper and shipper; should be in every orchard.

Arkansas Black—Vigorous, upright grower. Fruit medium to large; fine flavor, beautiful dark color, almost black; flesh yellowish, slightly sub-acid, crisp. One of the best for cooking. Jan. to March.

Gano—Fruit is bright red on yellow ground, with no stripes; large, oblong, surface smooth, polished; dots minute; basin shallow, sometimes deep; eye large, cavity deep; brown in color; stem medium to long; core medium. Tree healthy, vigorous and prolific bearer. January to April.

good bearer. December to May.

Northern Spy—Large, roundish, slightly conical; striped with sunny side purplish-red; flesh white and tender, with mild, rich, spicy flavor. An old favorite and one of the best all-around apples grown. Tree is a strong, upright grower, head very compact and should be opened up by pruning to admit air and light. Dec.-June.

Rome Beauty (Gillett's Seedling)—Large, yellow, striped with red, flesh juicy, crisp, sub-acid, tree moderate grower. October to December.

Talman Sweet—Medium size pale yellow, slightly tinged with red; firm rich and sweet; excellent for preserving; tree vigorous, very hardy and productive. November to April.

Winter Banana—A highly prized and valuable market sort. Beautiful yellow fruit; flavor exquisite and very tempting; highest quality. Productive. Reliable growers represent it to be hardy North. Very popular for dessert.

Wolf River—Extra large handsome, deep red; excellent for cooking. Extremely hardy in the north. Probably the largest red apple adapted to this region. Sept. to Nov.

Stark—An apple overlooked by many. Color greenish-red, unattractive for market, but for productiveness, regularity, vigorous growth, etc., should be in every farmer's orchard.

York Imperial—Tree moderate grower and productive, fruit large, lop-sided; surface smooth; color mixed bright red on yellow ground; flesh yellowish, tender, juicy, flavor mild sub-acid; quality very good; for market, table, kitchen. November till spring.

King of Tompkins County—A standard commercial variety. Hard to beat

for either table use or cooking. Looks well for market and is just as good as it looks. Fruit bright red, large and uniform. Brings a fancy price over other varieties. Keeps well in cold storage. Flesh is yellow, crisp and juicy; vigorous and a good cropper. Season, Oct. to Feb. Origin, N. J.

Winesap—Medium size, dark red, productive variety, excellent quality, crisp and juicy; sub-acid. The most extensively grown, the most abundant bearer, with more good qualities in its favor than anything we have to offer.

Milam—A standard for 50 years. Quality excellent, color red, size medium. Well known.

CRAB APPLES

A few years ago the crab apple was thought fit only for cider, preserves and jelly, but there are varieties now that command a good price on the market for desert purposes. They are ornamental when in bloom and when loaded with their highly colored fruit.

Hyslop—Tree a moderate grower, making a beautiful shaped, thrifty tree; bears young; fruit large, nearly round, flattened at the ends; skin smooth, color dark rich red on yellow ground; flavor very good.



PEARS

The soil should be rich and well cultivated. A pear orchard should not be permitted to "go to grass." They should be pruned every year, dwarfs especially. Dwarfs should have low heads and be trained in a pyramidal form, one-half of the previous season's growth being cut off each spring.

Pears succeed best on rather steep hillsides. Plant pears midway on the

slope, putting something else on the upper and lower sections. Cultivate sparingly, so as to induce a very slow growth, and let blue grass take the land before the trees come into fruitage. When blight appears, cut off the affected parts at once and burn them; cut six inches below the lowest blight, to insure taking all infected sap.

EARLY VARIETIES

Tyson—Sugar Pear, small; deep yellow at full maturity; very early. July.

Bloodgood—Sugar Pear, large, sweet pear, ripens in July a little after Tyson. (Standard only.)

Bartlett—Large size, with beautiful blush next to the sun; buttery, very juicy and high flavored; bears early. August and September.

Also Dwarf Bartlett—fruit same.

Howell—Large size; light waxen yellow, sweet and melting. Ripens in August. Eating pear.

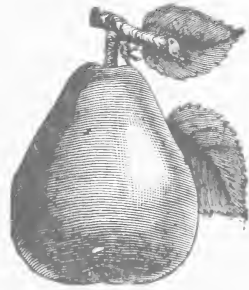
Autumn Pears

Duchess D'Angouleme—Very large, oblong, obvate, dull greenish yellow, flesh white, very juicy, buttery, with a rich, excellent flavor. Tree a strong grower. October.

Also Dwarf Duchess—Fine eating pear.

Garber—Very large, oval, narrowing at both ends; yellow as an orange; flesh whitish, juicy, sweet and very pleasant. Tree an upright grower with heavy, dark green foliage. September.

Kieffer—Large; golden yellow, often blushed in the sun; juicy and melting. One of the best for canning and preserving; the most profitable to grow. Tree healthy, hardy and vigorous. Does not succeed on quince, therefore no dwarfs should be



DUCHESS

planted. Kieffer receives more praise and condemnation than any other. It is liable to overbear, therefore special pains should be taken to thin the fruit.

Seckel—Small, skin rich, yellowish brown; flesh very fine grained; sweet, juicy and pleasant. Best for its size. September and October.

Sheldon—One of the most delicious eating pears. Should be in every home garden. Tree is vigorous, erect, second rate in productiveness and last to come into bearing. Fruit large, creamy, sweet and aromatic. Thorough fertilizing and cultivation will aid in making this a profitable variety. Season, Oct. and Nov.

PLUMS

The plum delights in a cool, not too dry situation, and good rich soil. Plant trees 10 to 15 feet apart, in rows. The varieties we offer have been thor-

oughly tested, and are standbys. These may be relied upon to furnish crops of this profitable and delicious fruit.

Green Gage (France)—Medium; greenish-yellow; semi-cling; flesh juicy, rich and delicious; one of the best for dessert. Tree slow grower. Sept.

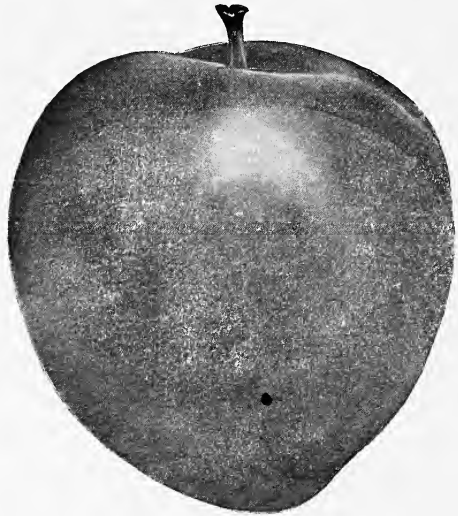
Lombard—Tree vigorous, hardy and productive; fruit of medium size, roundish oval, slightly flattened at the ends; skin of a delicate violet-red, paler in shade; flesh deep yellow, juicy and pleasant. August.

Shropshire Damson—A plum of fine quality. The flesh is amber colored, juicy and sprightly. Very productive and a valuable market variety. Freestone. September.

Yellow Egg—Very large; egg-shaped; excellent for cooking; good and productive; vigorous. Last of August. Splendid variety for nearby market. The Yellow Egg is also called the Gold Drop.

Wild Goose—The most popular fruit with some fruit growers. Tree a vigorous, upright grower; fruit medium to large, rich golden yellow, shaded with red; flesh yellow and juicy; flavor rich and good.

Burbank—Large, nearly globular; clear cherry red with thin lilac bloom;



BLUE PLUM

flesh deep yellow; rich, very sweet, with a peculiar and agreeable flavor. Vigorous and a very early bearer. Last of August.

Haas' Blue Plum—Large blue plum, meat yellow, good bearer, ripens in Aug.-Sept. Absolutely cannot be beat.

CHERRIES

Early Richmond—Everywhere the most popular. Tree strong, thrifty grower, making a large, symmetrical head; fruit medium size, dark red, melting, juicy; sprightly acid flavor and especially valuable for cooking purposes; tree an early and abundant bearer. Season last of May and first of June.

English Morello—Tree moderate grower, hardy; an early and great bearer; the most valuable of the late varieties. Fruit large, round; skin dark red, becoming nearly black when fully ripe; flesh dark red, tender, juicy and of a pleasant sub-acid flavor when fully ripe. July.

Large Montmorency—A fine, large, light red cherry of the Richmond class, but larger and more solid; a more upright grower, equally hardy and productive. Second only to Early Richmond in value. Ripens ten days later.

Black Tartarian—Very large, bright, glossy black; half tender, juicy, rich and fine. Tree a rapid grower and good bearer. Last of June and first of July.

CHERRY

Governor Wood—Large; light yellow and bright red; nearly tender, juicy, sweet, rich and delicious. Tree vigorous and productive. Middle to last of June.



Windsor—The fruit is large, flesh remarkably firm, sweet and of fine quality. Tree hardy and prolific. Middle of June.

Cherry culture has been a success when proper attention has been given to the selection of varieties and their culture. The hardy, thrifty varieties of the Morello type may be freely planted with confidence of profitable results. The cherry tree should be planted in a naturally dry soil or the soil should be well drained, so that water may not remain near the roots for any considerable time.

These last three varieties of cherries are not so productive in the Terre Haute region as elsewhere.

PEACHES

**J. H. HALE PEACH**

Crawford's Late (F.)—Fruit of the largest size; skin yellow or greenish yellow, with dull red cheek; flesh yellow; productive. One of the finest late sorts. Freestone. Last of Sept.

Salway—Fruit large, roundish, deep yellow, with a rich marble, brownish red cheek; flesh yellow, firm, juicy rich and sugary. An English variety; priced highly as a late, showy market sort.

Stump the World—A showy, white fleshed peach with a bright red cheek. Very large, juicy, sweet and good. Tree is average grade as to vigor and productiveness. Is freestone and ripens near the end of September.

Peach trees should be planted 16 to 18 feet apart. Cut weak shoots back about one-half and strong ones about one-third, but see that there is left a sufficient supply of fruit buds. Sickly and superfluous shoots should be cut out clean. The fruit is borne on wood of last season's growth, hence the necessity of keeping up a good supply of vigorous annual

Blood Cling—Fine, large red meated peach, ripens in Sept. Fine for canning.

Early Elberta—Fine yellow freestone with red cheek, fairly good size and wonderful quality. Ripens in July.

Elberta—The most popular standard market peach ever introduced. Large and showy. Vigorous grower and productive. Does well in all peach growing sections. Middle of September.

J. H. Hale—Popular in most sections. Has not proven so good in this locality. Is undoubtedly self-sterile and requires other kinds well mixed to produce well. Also needs good soil. Size, small to large on same tree. Quality fine. A showy peach where it gets the size.

shoots all over the tree. Young trees should be well mulched every spring.

Alexander (S. C.)—Large size, handsome and regular in form, with deep maroon shade, covered with the richest tint of crimson, rich and good in quality, with a vinous flavor; adheres to the stone. Last of June.

Champion (F.)—The earliest freestone and a first-class shipper. Bears full crops when others fail. In comparison with the bountiful yield of all of the best kinds, it is of all of them the champion. Size large, flavor delicious, juicy, sweet, rich excelling all other varieties; very handsome in appearance, creamy white with red cheek; very hardy; season earliest.

Crawford's Early (F.)—Fruit very large, oblong; skin yellow, with a fine red cheek; flesh yellow, juicy, sweet and excellent. Wonderfully productive and hardy. Freestone. Last of August.

Carman—White flesh. Semi-cling. Elberta type. Large size. Fine flavor. Best, early white peach. Very hardy in the bud. Good shipper.

Captain Ede—A superior variety of the Elberta type but ripening about two weeks earlier. It is a yellow free-stone.

Red Bird (Cling)—A creamy white peach almost covered with red. Large, hardy and good. An extra early cling that gives promise of being a leading commercial variety. July 1-5.

Lemon Cling—Late yellow canning peach, excellent quality, good size. Ripens September.

Heath Cling—Large, oblong, white, slightly tinged with red in the sun. Fruit tender, rich, melting, luscious. September 15.

GRAPES

Annual and careful pruning is essential to the production of good grapes. The roots cannot bring to maturity a fine crop of fruit if they are called upon to carry too much wood. Late in the fall is the best time to prune, when the vines are dormant.

Red Varieties

Agawam—Bunch large, shouldered; berry large, reddish brown, tender vinous and of excellent flavor. Very vigorous and productive. Vine hardy and one of the best of its class.

Catawba—Bunches large and loose; berries large, of coppery red color, becoming purplish when well ripened; vinous rich; requires the most favored soils and situations, good culture and warm seasons to mature perfectly in Western New York. R

Black Varieties

Concord—One of the most popular and reliable varieties we possess; bunch large, compact and shouldered; berry large, round, almost black with

APRICOTS

Moorpark—The largest of fall Apricots; orange in color with a red cheek. More money is made from these than from any other variety. Flesh is firm, juicy and very fine. Moorpark ripens in August.

QUINCES

Orange—Large, roundish; yellow; cooks tender and is of excellent flavor. Valuable for preserves and flavoring. Productive. September and October.

Flue bloom; juicy, buttery and very sweet.

Moore's Early—A large grape, ripening a week earlier than Concord; good grower; berries large, good quality, and makes a moderate yield; very valuable as an early grape.

Warden—Seedling of the Concord, which it greatly resembles in appearance and flavor, but the berries are larger. The fruit is said to be better flavored and to ripen several days earlier. These qualities will give it the foremost rank among native grapes.

White Varieties

Moore's Diamond—Bunch large, compact; berry medium size; color greenish white with a yellow tinge; juicy and almost without pulp; vigorous and productive. W.

Niagara—Occupies the same position among the white varieties as Concord among the black. Bunch and berries large, greenish white, changing to pale yellow when fully ripe. Skin thin but tough, quality much like the Concord.

RASPBERRIES

Plant three and a half feet apart in rows four feet apart. Thin to four or five good canes in a hill; cut out old canes as soon as through fruiting.

Red Varieties

"The Miller"—One of the best red raspberry in cultivation.

Black (Black Caps)

Cumberland—Large, good quality, hardy and productive; mid-season.

BLACKBERRIES

Early Harvest—The earliest blackberry and consequently valuable for market.

Eldorado—A valuable blackberry for our northern climate. The berries are large, jet black, ripen well together and are borne in large clusters; they are sweet and delicious, have no hard core, and keep well after picking.

GOOSEBERRIES

Downing—Fruit almost round, large, and juicy. Best quality. Whitish green color. Does especially well in the North.

Houghton. Round, dark red when ripe; juicy, sweet. Thin, smooth skin. Medium size. The bush is hardy, very productive, free from mildew, and the best for general purpose in this section.

RHUBARB

Myatt's Linneaus—Leaf stalks large, tender, juicy; early.

STRAWBERRIES

Champion—A more recent addition of the ever-bearer. Likely to prove more profitable than the Progressive. Is certainly worth a trial in all berry localities.

Senator Dunlap (S)—This berry is of the Warfield type, has a perfect blossom is hardy, productive, a splendid keeper and able to hold its own under any "rough and tumble" methods of culture to which it is likely to be subjected. It is a very heavy bearer of good size, even fruit, of a very beautiful dark red color. It is a berry to grow for either home use or market.

Gibson—This is the most popular strawberry extant today. Best for market and best for the home garden. Berry large; dark glossy, red, nearly round, very productive. Plant Gibson and success will be yours.

ASPARGUS

Palmetto—Large, thick, dark green shoots.

CURRENTS

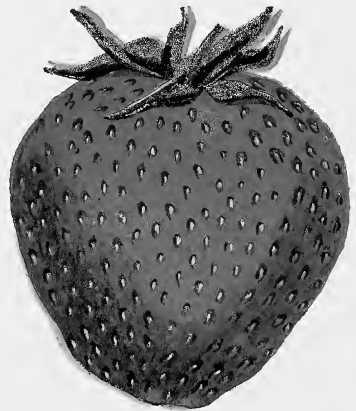
The currant is one of the most valued of the small fruits. They mature just before Raspberries and can be used either raw or cooked. Being very hardy, they do not winter-kill and are easy of cultivation, requiring little care. They can be grown in any good garden soil.

Red Cross—The largest of all red currants; berries sometimes more than one-half inch in diameter; bunches short; plant very vigorous and productive when grown on good soil and well cultivated.

Perfection—Bright red, and of a size larger than the Fay; size of berries is maintained to end of bunch. It is one of the most productive Currants. Rich, mild, sub-acid flavor and having plenty of pulp with few seeds. You can pick Perfections fast as cherries.

White Grape—Very large, yellowish white; sweet, or very mild acid; excellent for the table. The finest of the white sorts, very productive.

Wilder—Very large; bright red and attractive; a splendid sort; not so acid as most. Bush very productive; large bunches; ripens rather early, fruit keeps well.



USEFUL HINTS ON MISCELLANEOUS SUBJECTS

Why Nurserygrown Forest Trees Excell Wild Forest Trees

It is the belief of many people that it is foolish to buy trees when one can go to the woods and obtain a tree, apparently of the same quality as the one bought at the nursery. However, let us consider this.

There are two great factors in the solving of this problem as to why nursery-grown forest trees excell wild trees in durability and practical use.

First, the roots of the nursery-grown forest tree have been pruned almost yearly until the tree is mature, thus establishing an extraordinary fibrous root system. This is highly essential since they are as much to the tree as our lungs are to us. That is, they also carry nourishment from the ground into the tree.

On the other hand, the roots of trees grown in a wild state have never been pruned and therefore the root system is not well enough developed to furnish the tree with sufficient nourishment after transplanting to keep the tree alive.

Secondly, cultivated trees have been transplanted often so as to locate the trees in the direct rays of the sun. Therefore when a tree is taken from the nursery and planted alone, it is able to withstand intense heat and grow successfully. However, the tree taken from the woods has always been more or less shaded by other trees and when it is taken from here it is unable to live under the direct rays of the sun.

Thus the excellence of the nursery-grown tree in comparison with the wild tree can easily be seen.

Names of the Various Plants, Etc., Most Subject to Disease

Plum Trees	Scale
Peach	Peach Borers on roots
Maple	Borers on body
Japanese Rugosas	San Jose and Oyster Shell Scale
Lilac	San Jose and Oyster Shell Scale
Currant	San Jose and Oyster Shell Scale
Japonica	San Jose and Oyster Shell Scale
Dogwood	San Jose and Oyster Shell Scale
White Pine	Aphis

Every person having any of the above varieties of plants on their premises should keep on the lookout and spray immediately for these pests, and prevent them from migrating upon other trees and plants.

**QUICK REFERENCE LIST OF TREES AND PLANTS
FOR SPECIAL PURPOSES**

Plants That Color in the Fall

Red Branched Dogwood
Barberry
Sugar Maple
Snowball
Bridal Wreath
Tulip Poplar
Sumac

**High Bush Cranberry
Attractive of Bark and Berry**

Snowberry
Coralberry
High Bush Cranberry
Red Branched Dogwood
Euonymus
Barberry
Privets
Sumac
Kerria
Bush Honeysuckle
Elder

Woody Plants for Partial Shade

Boxwood
Hemlock
Junipers
Japanese Yew
Mugho Pine
Euonymus
Barberry
Dogwood
Red Bud
Hypericum
Privets
Snowberry
Witch Hazel
Coralberry
Weigelia
Golden Bell
Snowball
Kerria
Calycanthus (Sweet Scented Shrub)
Mock Orange
Aralia

Trees for Quick Effect

Catalpa Speciosa
Russian Mulberry
Weeping Willow
Silver Maple
Lombardy Poplar
Oriental Plane
American Sycamore
Box Elder (Ash Leaf Maple)
Umbrella Tree

Foundation or Base Plantings.

Note descriptions for height. Those suited for "Front Line Planting."

Japanese Barberry
Spirea Thunbergii
Spirea Anthony Waterer
St. John's Wort
Deutzia Gracilis
Globe Arbor-Vitae
Mugho Pine
Japanese Plume Cypress
Virginia Cedar
Subina Juniper
Pfitzer's Juniper
Japanese Yew

For Intermediate

Spirea Van Houtti
Spirea Reevesiana
Hydrangea
Golden Bell
Weigelia
Calycanthus
Kerria
Snowberry
Abor-vitae in variety
Japanese Cypress in variety
Junipers in variety
Holly leaved Mahonia
Japanese Snowball

**Taller Growing for Heavy Planting
or Corners**

African Tamarisk
Amoor River Privet
Regal's Privet
High Bush Cranberry
Altheas
Mock Orange
Spirea Van Houtti
Bush Honeysuckle

For Street or Avenue Planting

Sugar Maple
Norway Maple
Oriental Plane
American Sycamore
Silver Maple
Schwedler Maple
Box Elder (Ash Leaf Maple)
Catalpa Speciosa
Tulip Tree (Yellow Poplar)

Trees That Flower

- Catalpa Speciosa
- White Flowering Dogwood
- Red Flowering Dogwood
- Red Bud (Judas Tree)
- Horse Chestnut
- Magnolia
- Tulip Tree (Yellow Poplar)
- Bechtel's Flowering Crab
- Red Flowering Crab
- Red Flowering Peach
- White Flowering Peach
- Flowering Cherry
- Paul's Scarlet Thorn

For Moist Places

- Birches
- Maple
- Oriental Plane
- American Sycamore
- Japanese Cypress
- Willow
- Tulip Tree (Yellow Poplar)
- Lombardy Poplar
- Red Branched Dogwood
- Douglas' Spirea
- Elder
- Hemlock
- Arbor Vitae
- Snowball
- Tamarisk

For Screen Planting

- Lombardy Poplar
- Willow
- Practically All Shade Trees
- Norway Spruce
- Hemlock
- Pines
- Bush Honeysuckle
- Altheas
- Deutzia
- Mock Orange
- Snowballs
- Privets

For Dry Places

- Junipers in variety
- Mugho Pine
- Aralia
- Barberry
- Privets
- Bush Honeysuckle
- Yucca
- Deutzia
- Sumac
- Coralberry
- Paul's Scarlet Thorn
- Tamarisk
- Tree of Heaven
- Catalpa Speciosa
- Umbrella Tree
- Lilacs

Table of Distances at Which Various Trees Should Be Planted.

- APPLES—Standard, 30 to 40 ft. each way.
- APPLES—Dwarf, 15 ft. each way.
- PEARS—Standard, 20 to 25 ft. each way.
- PEARS—Dwarf, 15 ft. each way.
- CHERRIES—18 to 20 ft. each way.
- PLUMS—16 to 18 ft. each way.
- PEACHES—16 to 18 ft. each way.
- APRICOTS—16 to 18 ft. each way.
- QUINCES—12 ft. each way.
- CURRENTS—3 to 4 ft. each way.
- GOOSEBERRIES—3 to 4 ft. each way.
- RASPBERRIES—5 to 6 ft. each way.
- BLACKBERRIES—6 to 8 ft. each way.
- STRAWBERRIES—1 to 3 ft. each way.
- GRAPES—8 to 10 ft. each way.

Number of Trees or Plants to Acre

2 ft. each way.....	10 890	15 ft. each way.....	194
3 ft. each way.....	4,840	18 ft. each way.....	135
4 ft. each way.....	2,723	20 ft. each way.....	110
5 ft. each way.....	1,742	25 ft. each way.....	70
6 ft. each way.....	1,210	30 ft. each way.....	48
8 ft. each way.....	681	33 ft. each way.....	40
10 ft. each way.....	430	40 ft. each way.....	28
12 ft. each way.....	302		



SPRAYING

Spraying is a vital necessity if money is to be made from fruit. It doesn't pay to miss one season, even if enemies are not visible. Spraying has an invigorating effect on trees, besides controlling enemies.

There are three classes of enemies spraying will control—chewing insects, sucking insects, and fungi. Each class requires a different remedy, but the remedies can be combined most of the time.

Spraying during the dormant period is distinctly different from spraying on foliage. Materials several times as strong can be used and are needed to control the scales.

CROP	PESTS	SPRAY OR CONTROL MEASURES
Apple, Peach, Plum, Grape, Can Fruits and all Shrubs	San Jose Scale. Aphid Eggs.	Concentrated lime-sulphur, 1-7, or Miscible oils, 1-15.
	Peach Leaf Curl.	Concentrated lime-sulphur, 1-9.
	Mite Eggs.	Miscible oils, 1-15.
Apple, Pear	Codling Moth, Curculio, Leaf Spot Diseases, Scab, Black Rot.	Lime-sulphur, 1-40 or 5 qts. to 50 gals. plus 1½ lbs. arsenate of lead powder.
	If Aphids are present	Add 40% nicotine sulphate at rate of ¾ pt. to 50 gals. of spray.
	Bitter Rot.	Susceptible varieties should be sprayed.
	Woolly Aphis on roots.	8% Pine Tar Creosote Emulsion.
	Round Head Borer.	Remove with wire and knife.
Peach, Plum	Peach Tree Borer.	Remove with wire and knife until 3 yrs. old then use Paradichlorobenzine, ½ to 1 ounce per tree.
	Curculio, Brown Rot, Scab.	Bordeaux Mixture, 4 lbs. and Arsenate of Lead, 2 lbs. to 50 gals.
Cherry	Leaf Spot, Brown Rot.	Concentrated lime-sulphur, 1-40.
Currant, Gooseberry	Worms.	1 lb. arsenate of lead powder in 50 gals.
	Mildew.	Liver of Sulphur, 1 oz. to 2 gals.
Grape	Rose Bugs, Flea Beetle.	1½ lts. arsenate of lead plus 1 gal. of molasses to 50 gals. water.
	Black Rot, Downy Mildew	Bordeaux Mixture.
Strawberries	Weevil or Clipper.	85% hydrated lime and 15% arsenate of lead dust mixture.
Asparagus	Beetles.	Arsenate of lead powder 1½ lts. to 50 gals. water plus 2 lbs. soap.

SPRAYING

On account of the life-habits of enemies, often only two to seven days are available for any one spraying. Do the work then. Put the material on with force and cover every inch of bark and leaf.

The following program is proportioned for the control of insects and pests for Orchardists. It is also applicable for the small garden by using the proportion and reducing the quantity.

FIRST	SECOND	THIRD	FOURTH	REMARKS
When Apple and Peach trees are dormant. Before buds begin to swell.				Delay spraying as late as possible on apple to control Aphids.
When buds show pink.	Within 1 week after petals have fallen.	10 days later.	July 1-10.	Aug. 1-15.
Add to above spray.				
with Bordeaux, 4-5-50, every two weeks, beginning with July 1.				
June	September			
May-June				
September 15-October 15				
When buds are pink	When shucks crack.			Repeat every 4 weeks until 2 weeks before ripening; omit arsenate of lead powder in last spray. Atomic sulphur better for last spray. For blossom blight spray when buds are pink and again as soon as petals fall.
Just after the petals fall.	3 weeks later.			2 weeks before picking.
Spray when worms appear.	Repeat at 2 week intervals on susceptible varieties until 5 or 6 applications are made.			Use Hellebore, 1 oz. to 2 gals. water if necessary.
When leaves first appear.				
When Beetles first appear on buds.				
Just before blossoming.	Just after fruit has set.	When grapes are size of peas.	3 wks. later but in wet seasons every 10 days.	
When buds first push out.	Maintain a coating until buds open.			Usually 2 or 3 applications necessary.
Allow shoots to grow up every 100 ft. Keep these coated with spray; cut all others closely.	After cutting is over.			Spray in the bed as often as necessary to control larvae.

