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PLANT EXPLORATIONS

**Ornamentals in the Netherlands,
West Germany, and Belgium**

**Agricultural Research Service
U. S. DEPARTMENT OF AGRICULTURE
in cooperation with**

Longwood Gardens of the Longwood Foundation, Inc.

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ACKNOWLEDGMENTS

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Plant materials from private sources, botanic gardens, experiment stations, and arboretums were acquired on an exchange basis. At commercial nurseries materials were purchased.

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CONTENTS

	Page
Map	vii
Collecting localities	viii
Introduction	1
Netherlands	3
Ornamental horticulture in the Netherlands.	4
Nurseries of Boskoop	5
Nursery of K. Edelman, Reeuwijk.	10
Experiment Station, Boskoop.	10
Horticultural College, Boskoop.	11
Nursery of W. Haalboom & Son, Driebergen.	11
Zundert	11
Nursery of Pierre Lombarts, Zundert.	12
Royal Moerheim Nurseries, Dedemsvaart	12
Poort Bulten Arboretum, Oldenzaal.	13
Schovenhorst Arboretum, Putten.	16
C. G. van Tubergen, bulb grower, Haarlem	17
Trompenburg Arboretum, Rotterdam.	17
Gimborn Arboretum, Doorn.	20
Pinetum Blijdenstein, Hilversum	23
Hortus Botanicus, Amsterdam	27
Hortus Botanicus, Leiden	27
Zuider Park, The Hague	29
Hortus Botanicus, Cantonspark, Baarn	31
Belmonte Arboretum, Wageningen.	32
Institute of Horticultural Plant Breeding, Wageningen.	34
West Germany	35
Some aspects of Horticulture and gardening in the West German Republic	36
Botanic gardens of West Germany.	36
German horticultural exhibitions	37
The German 'Kleingarten'	38
Nurseries of northwestern Germany	38
Nursery of Herman A. Hesse, Weener/Ems.	38
Nursery of G. D. Böhlje, Westerstede.	43
Nursery of H. Bruns, Westerstede	44
Rhododendrons at Linswege, Oldenburg	45
Nursery of Joh. Bruns, Bad Zwischenahn	46
Nursery of Joh's Nissen, Aprath.	46
Nursery of Georg Arends, Wuppertal-Ronsdorf.	46
Nursery area of Holstein.	47
Nursery of Timm and Company, Elmshorn.	47
W. Kordes and Son, rose growers, Elmshorn.	48
Nursery of Rudolf Schmidt, Rellingen	49
Tannenhof Arboretum, Holstein.	49
Hannover	49
Berggarten	51

	Page
Park of Wilhelmshöhe, Kassel	54
Forest Botanic Garden, Hann. Münden	58
Palmengarten, Frankfurt am Main	58
Botanic Garden, University of Frankfurt, Frankfurt am Main	59
Botanic Garden, Hamburg	60
Belgium	61
Belgium, Some features of its horticulture and gardens.	62
Nursery of Sander & Fils, Bruges	63
Horticulture Flandria, Bruges	63
Royal Botanic Garden of Belgium, Meise	63
Groenendaal Arboretum, Brabant	64
Kalmthout Arboretum, Kalmthout	65
Enumeration of the introductions.	68
Numerical list of plant introductions	159

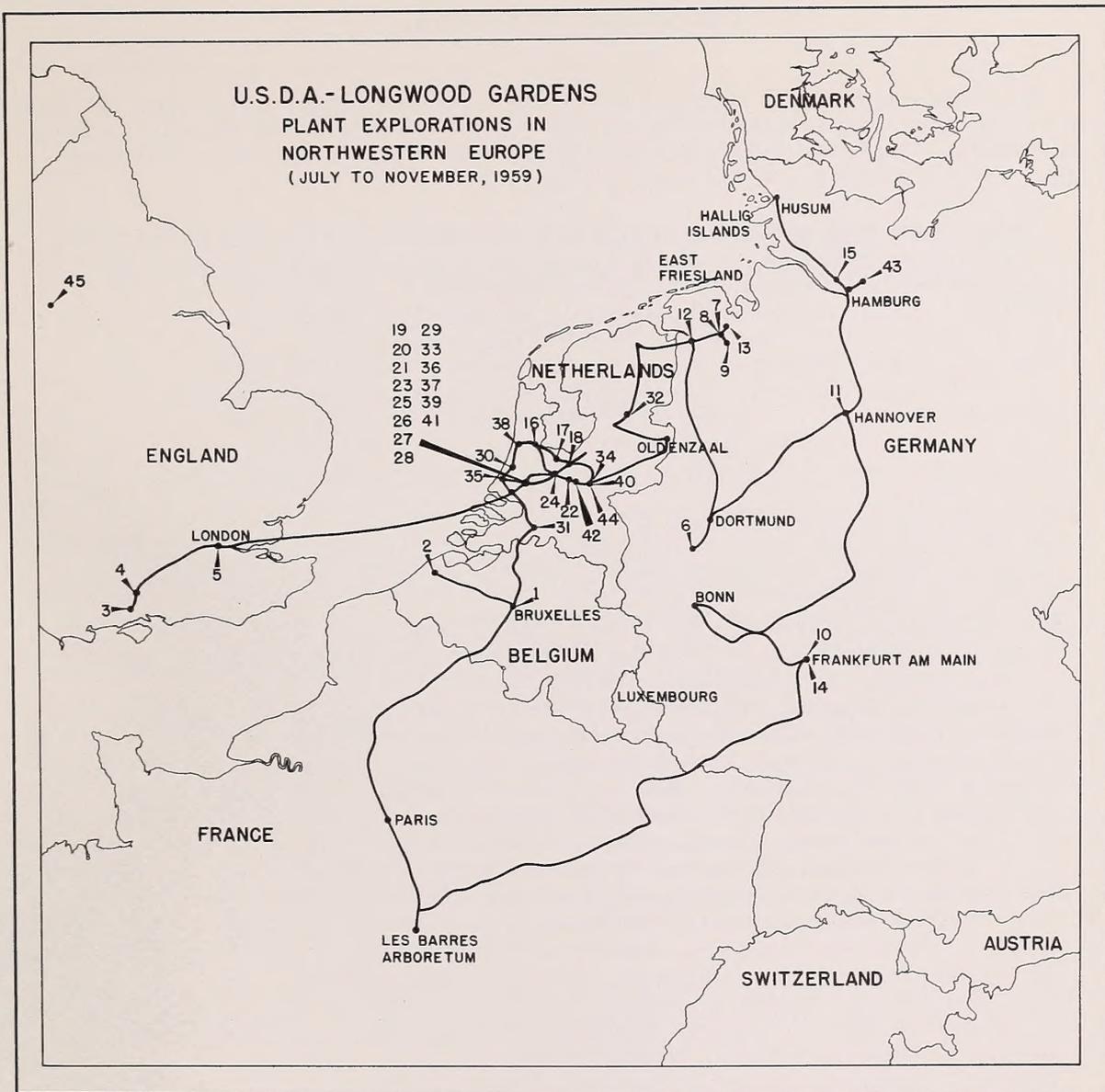


Figure 1. --Map showing localities visited.

COLLECTING LOCALITIES

The following list of collecting localities includes nurseries, botanic gardens, private gardens, experiment stations, and arboretums from which plant introduction materials were obtained. The numbered sequence of collecting localities should be coordinated with the map in Figure 1.

1. Jardin Botanique de l'Etat, Bruxelles, Belgium.
2. Horticulture Flandria, Bruges, Belgium.
3. Exbury Estate, Exbury, Hampshire, England.
4. Hillier & Sons, nursery, Winchester, Hampshire, England.
5. Royal Botanic Gardens, Kew, Surrey, England.
6. Georg Arends, nursery, Wuppertal-Ronsdorf, West Germany.
7. G. D. Böhlje, nursery, Westerstede, Oldenburg, West Germany.
8. H. Bruns, nursery, Westerstede, Oldenburg, West Germany.
9. Joh. Bruns, Bad Zwischenahn, Oldenburg, West Germany.
10. Botanic Garden, University of Frankfurt, Frankfurt am Main, West Germany.
11. Berggarten, Hannover, West Germany.
12. H. A. Hesse, nursery, Weener/Ems, East Friesland, West Germany.
13. Dietrich Hobbie, rhododendrons, Linswege u. Westerstede, Oldenburg, West Germany.
14. Palmengarten, Frankfurt am Main, West Germany.
15. Rudolf Schmidt, nursery, Rellingen, Holstein, West Germany.
16. Hortus Botanicus, Amsterdam, Netherlands.
17. Pinetum Blijdenstein, Hilversum, Netherlands.
18. Hortus Botanicus, Cantonspark, Baarn, Netherlands.
19. K. Edelman, nursery, Reeuwijk, Netherlands.
20. Felix & Dykhuis, nursery, Boskoop, Netherlands.
21. Le Feber & Co., nursery, Boskoop, Netherlands.
22. Gimborn Arboretum, Doorn, Netherlands.
23. F. J. Grootendorst, nursery, Boskoop, Netherlands.
24. W. Haalboom & Son, nursery, Driebergen, Netherlands.
25. Hugo T. Hoofman, nursery, Boskoop, Netherlands.
26. Wm. J. Hoofman, nursery, Boskoop, Netherlands.
27. W. Hoogendoorn & Son, nursery, Boskoop, Netherlands.
28. L. Konijn & Co., nursery, Reeuwijk, Netherlands.
29. M. Koster & Sons, nursery, Boskoop, Netherlands.
30. Hortus Botanicus, Leiden, Netherlands.
31. Pierre Lombarts, nursery, Zundert, Netherlands.
32. Royal Moerheim Nurseries, Dedemsvaart, Netherlands.
33. Old Farm Nurseries, Boskoop, Netherlands.
34. Schiphorst Nursery, Wageningen, Netherlands.
35. Trompenburg Arboretum, Rotterdam, Netherlands.
36. W. J. Spaargaren, nursery, Boskoop, Netherlands.
37. J. Streng, Jr., nursery, Boskoop, Netherlands.
38. C. G. van Tubergen, bulb grower, Haarlem, Netherlands.
39. Vuyk van Nes, nursery, Boskoop, Netherlands.
40. Belmonte Arboretum, Wageningen, Netherlands.
41. P. G. Zwijnenburg, nursery, Boskoop, Netherlands.
42. L. J. J. van Dijk, nursery, Eemnes, Netherlands.
43. Tannenhof Arboretum, Ahrensburg, Holstein, West Germany.
44. Institute of Horticultural Plant Breeding, Wageningen, Netherlands.
45. S. Pedley & Sons, nursery, Newton, Preston, Lancs., England.

PLANT EXPLORATIONS FOR ORNAMENTALS IN THE NETHERLANDS, WEST GERMANY, AND BELGIUM

INTRODUCTION

Since colonial times, Europe has supplied much ornamental plant material for the adornment of American gardens. In fact, Europe still is a potent source of ornamentals and probably will continue to be, especially if one is willing to make a systematic survey, as the writer did, of places where collections of these plants exist. Much may be learned from Europe where the importance of gardening and horticulture long have been recognized in the development of "pure" agriculture. Indeed, gardening and horticulture are deeply seated in the cultural heritage of Europe--beginning with the Italian Renaissance about 500 years ago.

On an extended collecting trip to the Netherlands, Belgium, and West Germany, from July 1 to November 14, 1959, the writer was provided the opportunity to see many outstanding collections of ornamentals in these countries and to make the necessary arrangements for the importation of new or otherwise noteworthy materials not already in cultivation in the United States. The details of this trip are narrated in the pages that follow, with a complete inventory provided at the end of the paper of the materials introduced. As in the previous exploration trip of 1957 to southern Europe and Great Britain,¹ the survey of 1959 was sponsored by the New Crops Research Branch, in cooperation with the Longwood Gardens of Longwood Foundation, Inc., Kennett Square, Pa.

The aims and objectives of this trip were to introduce plant materials not already in cultivation as a source of germ plasm potentially useful for the enrichment of ornamental horticulture in the United States, as--

- Species.
- Élite clones (cultivars) of the simple species.
- Hybrids.
- Species, hybrids, and cultivars rarely grown or lost in cultivation and reintroduced for wider distribution.

Conifers and broad-leaved evergreens were given precedence among the plants introduced, since these groups are well represented in the cultivated flora of the countries visited. Over 1,200 introductions have been received from 45 nurseries, botanic gardens, private gardens, experiment stations, and arboretums.

¹ [Meyer, F. G.] Plant Explorations--Ornamentals in Italy, Southern France, Spain, Portugal, England, and Scotland. U. S. Dept. Agr. ARS 34-9, 180 pp., 1959.

The Netherlands is known the world over for its horticultural products--bulbs, flowers, and nursery stock. This is not a new enterprise, for we are informed that since the end of the 16th century the Netherlands has carried on a flourishing horticultural industry for export purposes. By the time of Rembrandt, the Netherlands had become the center of the bulb trade in Europe. During this period tulip bulbs became so valuable they set off a craze known as tulipomania among wealthy merchants who bought bulbs at fabulous prices for speculative purposes.

Germany, too, long has remained in the forefront in matters horticultural with a heritage in this field quite as old as that of the Netherlands. Elaborate gardens were traditional among the wealthy before World War II, when it was possible to maintain a large estate. Since the last war the small home garden has come into prominence. A horticultural elite long has existed in Germany at a level unknown in the United States. The Deutsche Dendrologische Gesellschaft (German Dendrological Society), through its publications and excursions, exercises considerable influence among dendrologists, foresters, botanists, and others interested in woody plants. Annual field trips continue to be an important undertaking of this society. In spite of the great destruction of property in German cities in World War II, horticultural institutions, botanic gardens, and arboretums have achieved a nearly complete recovery.

In Belgium, horticulture is a traditional pursuit. Since the early part of the 19th century when Ghent became the floral capital of Europe, Belgium has maintained a lucrative horticultural trade. Today, this country is best known in the United States for its tuberous begonias and its fine Indian azaleas.

The many fine botanic gardens, arboretums, private gardens, and nurseries located in countries of western Europe, rich as they are in plant materials of the World, suggests, at least to this writer, the high price European people are willing to pay for a tradition we in this country might well emulate with more determination in helping to build our own cultural image.

NETHERLANDS



BN-16329

Public garden Boskoop.

ORNAMENTAL HORTICULTURE IN THE NETHERLANDS

The indefatigable industry of the Dutch people to recover land from the sea is a source of constant inspiration to all visitors of the Netherlands. The best agricultural soils lie on reclaimed land below sea level. In fact, more than one-third of the country lies below the level of the sea. It is in these areas that the finest horticultural crops are produced. We are informed that as far back as 1573, Boskoop was a horticultural center with a thriving export trade of fruit and ornamental trees to surrounding countries. Of greatest importance today are (1) bulb growing centered around Haarlem and Lisse, (2) the nursery industry at Boskoop, where about 675 nurseries are located, and (3) the cut-flower industry around Aalsmeer. At the bulb research institute at Lisse, the development of new techniques in handling and storing the bulbs is of much practical interest to bulb growers. At the Experiment Station at Boskoop, investigations in plant propagation and the development of new plants are designed to benefit all Dutch nurserymen. All three of the above-mentioned phases of ornamental horticulture are granted government support and the growers themselves contribute liberally to the research program. About 10 percent of the total national income of the Netherlands is derived from the ornamental horticulture trade, largely as an export business. In 1957 the value of ornamental plant crops exported from the Netherlands amounted to over \$37 million for bulbs, over \$26 million for flowers, and over \$7 million for nursery stock.

New hybrids and clonal selections of plants are constantly being developed by the Dutch for the commercial market, thereby maintaining buyer interest in the horticultural products of the country. Nursery stock produced in the Netherlands is known to be nearly free of injurious diseases and insect pests, not a small factor in the success of the export business of plants to at least 40 countries of the world.

Horticulture and gardening at the local level in the Netherlands is not so well developed as one might expect in a country with a rich heritage in these pursuits covering nearly four centuries. In Great Britain, France, Italy, and in other European countries commercial horticulture traditionally is the servant of gardening. In the Netherlands, where the opposite situation prevails, the tradition of commercial horticulture takes precedence over developments in home gardening. But the Dutch people are great connoisseurs of plants and are certainly not averse to gardening. In rural towns, such as Hilversum or Bilt-hoven, well-kept cottage gardens around thatched homes are commonplace, and the many superbly maintained parks in the large towns are ample evidence of good taste in town planning. Nowadays, when there is even less space for a private garden than in the past, more people are growing potted plants. In many towns it is not uncommon to see 25 kinds of plants growing on windowsills along one city block.

The skill of the Dutch in developing selections of trees for parks and streets and for planting along the main road arteries is well known. Along the superhighways, privet (*Ligustrum* spp.) hedges are planted in the parkways as an aid to night driving. Visitors to the Netherlands recognize that in most public places, great attention is given to the planting of flowers which contribute to the general appearance of neatness long associated with this country.

NURSERIES OF BOSKOOP

The Boskoop nursery area near Leiden and Rotterdam is a classic example of the efficient management of land by the Dutch. Indeed, Boskoop is unique among areas devoted to nursery crops. Most impressive are the neatly tended nursery plots, the innumerable canals, and the colorful houses of the nursery owners. In all, approximately 675 nurseries are located on 1,400 acres, once the bed of an ancient lake. The area virtually is a latticework of canals. In fact, canals are the main thoroughfares of trade in this town of more than 8,000 people (fig. 2). Attractive homes of the nurserymen, some with thatched roofs, stand in neat rows, many with lawns and flowerbeds that extend to the edge of the canals, which in summer are infested with duck-weed (Lemna) and mosquito-fern (Azolla).



Figure 2. --View of nurseries bordered by canals, Boskoop. (Courtesy of Experiment Station, Boskoop.)

The Gouwe River, a highly commercial arterial waterway, flows through the area at about 8 feet above the general level of the town and the surrounding nurseries. The rich fen soil, an abundance of water, and a relatively mild climate are conditions copiously available at Boskoop. With a water table that stands at only about 12 inches below the soil surface over much of the area, water becomes almost an insurmountable plague to the nurserymen. In recent

years, however, pumps have been installed as a means of lowering the water table below present levels. Already, nurserymen are finding better growth and root development in nursery stock as a result of this improvement.

A 15-foot layer of fen soil of a peaty, sandy consistency covers the area-- 1/3 humus, 1/3 clay, 1/3 sand--with a pH of 4.5 to 5.5. Loss, on the other hand, of valuable top soil resulting from the tens of thousands of balled plants which leave the nurseries twice each year, is a serious problem at Boskoop. Happily, the natural conditions which prevail for soil recovery is part of the saga related to the continued success of the nursery industry in this area. The superabundance of water, the canals, and especially the floating water plants growing on the canals play favorably into the hands of the nurserymen. Each year after hard frosts have killed the thick green carpet of duck-weed and mosquito fern, very soon, everything settles quietly to the bottom of the canal to decay. The black muck deposit which forms is a natural source of rich organic material valuable for plant growth. Nurserymen allow two or three years to elapse for a build-up of the decayed matter to a depth of several inches. During the summer months the muck is scooped from the bottom of the canals into scows and later transferred into piles on the nursery beds. The slick organic ooze is first allowed to dry out. Later it is incorporated into the nursery beds to replenish the loss of soil from previous years. The ability to recover lost soil in this special way, while not the only natural asset available to Boskoop nurserymen, is basic to their success. This allows the nurserymen to maintain a relatively high fertility level in the nursery soils at little expense, an all important consideration in the overhead costs of any nursery operation.

The nurseries of Boskoop mostly are small one-man operations on 2 to 4 acres of land. The largest consist of about 20 acres. Through efficient land use and good prices for his product, one man can earn a substantial living for his family. A cooperative association among the nurserymen helps to make this possible. Indeed, nursery management at Boskoop rivals the efficiency expected when crops are cultivated under glass (figs. 3, 4).



BN-16330

Figure 3. --Acer palmatum 'Atropurpureum' propagation by layering, Boskoop.



Figure 4. --Rows of cuttings rooted under bell jars in the field, Boskoop. (Courtesy of Experiment Station, Boskoop.)

Plants produced in greatest abundance of Boskoop encompass three major groups--broad-leaved evergreens, deciduous flowering shrubs, and conifers. Of broad-leaved evergreens, the following are important: Rhododendrons and azaleas (Rhododendron), holly (Ilex), and barberry (Berberis). Deciduous flowering shrubs, such as Forsythia, Magnolia, Weigela, Deutzia, and Ligustrum, are grown on an extensive scale. Conifers, especially dwarf-growing kinds, are featured in nearly every nursery. Tall growing sorts, such as the well-known Koster and Moerheim blue spruce (Picea pungens 'Koster' and 'Moerheimii') are still grown at Boskoop in large numbers. Polyantha and floribunda roses are produced on a limited scale, but no hybrid tea roses are grown. Russell lupin (Lupinus), Astilbe, and Salvia × superba are grown extensively by a few nurseries specializing in perennials.

Plants from the Boskoop nurseries are shipped to about 40 countries, with the largest consignments going to England, West Germany, Canada, United States, Sweden, Belgium, and Switzerland, in that order. The nurseries are a hub of activity twice a year, spring and autumn, when shipping is at its peak. Nursery stock is first dug, then loaded on barges anchored in the canal alongside the nursery (fig. 5). Plants are transferred to packing sheds, where they are carefully prepared for shipment by rail, ship, and plane (fig. 6).



Figure 5. --Cargo of living plants ready for shipment, Boskoop. (Courtesy of Experiment Station, Boskoop.)



Figure 6. --Preparing plants for shipment, Boskoop. (Courtesy of Experiment Station, Boskoop.)

For 7 weeks Boskoop was my headquarters, since this was the most practical location from which to undertake exploration work in the western part of the Netherlands. The most profitable plant hunting is to be found among the export nurseries which handle the largest assortment of plant materials. Boskoop nurserymen, we learn, are now growing a larger assortment of plants than at any other time in their history. Out of a total of about 675 nurseries located here, nearly 50 were explored in detail. With a highly competitive system well entrenched among the various growers, the nurserymen are eager to introduce new kinds of plants to the trade. New plants produced by individuals as seedling selections or by hybridization are registered at the Experiment Station at Boskoop, with distribution allowed first to the originator (fig. 7).



BN-16331

Figure 7. --*Hedera helix* 'Arborescens', shrub-ivy 4 to 5 feet tall, in front of town hall, Boskoop.

About 650 introductions were obtained from among the following 13 Boskoop nurseries:

- Felix & Dykhuis (conifers).
- F. J. Grootendorst (conifers, flowering trees, and shrubs).
- Hugo T. Hooftman (conifers).
- Wm. J. Hooftman (conifers, flowering trees, and shrubs).
- W. Hoogendoorn & Son (flowering trees and shrubs).
- L. Konijn & Co. (conifers).
- M. Koster & Son (conifers, flowering trees, and shrubs).

Le Feber & Co. (conifers, flowering trees, and shrubs).
Old Farm Nurseries (conifers, flowering trees, and shrubs).
W. J. Spaargaren (flowering trees and shrubs).
J. Stréng, Jr. (conifers).
Vuyk van Nes (Quercus).
P. G. Zwijnenburg (flowering trees and shrubs).

NURSERY OF K. EDELMAN, REEUWIJK

K. Edelman grows succulent plants in greenhouses in the village of Reeuwijk, 2 miles from Boskoop. This is one of the most comprehensive commercial collections of cacti and other succulent plants in Europe. Each year several million plants are produced largely for export to England, Germany, Switzerland, and other European countries. Crassula × andegavensis (P. I. 259473), a hybrid of C. falcata × C. schmidtii, obtained from this source, is a showy plant with dense heads of dark-red flowers much grown in the early spring months in the Netherlands as a pot plant. A stag-horn fern, Platyserium bifurcatum (P.I. 261068), much grown in the Netherlands as a pot plant, is a sporeling selection with broader fertile fronds than in the form of the plant usually grown.

EXPERIMENT STATION, BOSKOOP

Many years ago the Experiment Station at Boskoop was established by nurserymen for scientific research on practical problems of value to the Dutch nursery trade. Now it is governed by a board, which includes representatives of all Dutch nurserymen's organizations. Close cooperation between the extension service and horticultural education is ensured by the fact that the horticulture advisor serves in dual capacity as director of the research station and as principal of the horticultural college also located in Boskoop. The research station is financed by subscription and by grants from the national organization of nurserymen, the government, the county, and the municipalities.

As an example of the kind of research undertaken at the Experiment Station, a few titles from their 1958 Yearbook are quoted: "Experiments with Cold Grafting Wax"; "Grafting of Blue Spruce under Glass"; "Control of Leaf Spot Disease in Rhododendron"; "Ringspot Virus in Paeonies." Research in plant propagation naturally receives special emphasis at the Experiment Station, since this aspect is of much practical value to nurserymen. The method of rooting cuttings under mist, introduced to the Netherlands a few years ago, is being accepted gradually by Dutch nurserymen, although older techniques of vegetative propagation, such as layering, grafting, and rooting of cuttings under a bell jar in the field are still prevalent in many nurseries.

The reference collections of conifers and shrubs at the Experiment Station are of special interest. Under this program, various groups of plants grown in the Boskoop nurseries are brought together on the grounds of the Experiment Station for screening purposes. This practice aims to bring about uniformity in the identification and in the quality of plant materials grown at Boskoop. In 1959, collections included Potentilla fruticosa, Rosa, Rhododendron, Acer

palmatum, Clematis, Cytisus, Chaenomeles, Hibiscus syriacus, and conifers. These collections are not kept at the Experiment Station indefinitely, only long enough to make observations set by the goals of the screening program. In the United States, a scheme of this scope is precisely the kind of undertaking that might be tried under the auspices of agricultural experiment stations or by the nurserymen themselves.

HORTICULTURAL COLLEGE, BOSKOOP

The Horticultural College at Boskoop, founded in 1890, serves a useful purpose as a teaching center for young students, 16 to 20 years of age, who matriculate in horticulture at the practical level. The study course covers a period of 3 years, during which the student receives a comprehensive horticultural education in arboriculture, tropical agriculture, fruit and flower growing, market gardening, landscape gardening, dendrology, botany, phytopathology, manuring, chemistry, economics, and bookkeeping. Students gain practical experience by working half time in the Boskoop nurseries. Each student is expected to be conversant in three languages. Students specialize in one of three broad fields--arboriculture, floriculture, or landscape gardening. The Experiment Station and the Horticultural College at Boskoop supply the major requirements necessary for training young people in practical horticulture as well as serving the interests of the nurserymen. Many of the most successful nurserymen in the United States are Dutch people trained originally in the mother country, frequently at Boskoop.

NURSERY OF W. HAALBOOM & SON, DRIEBERGEN

The relatively small nursery of W. Haalboom & Son consisting of about 10 acres is located in the upland part of the Netherlands, a few miles east of Utrecht. Haalboom specializes in Berberis, and his collection of hardy Erica is perhaps the most comprehensive in the Netherlands. Barberries of special interest include B. thunbergii 'Firered' ('Vuurrood'), a selection of strict upright habit. The densely leafy twigs in young specimens are barely, if at all, branched, giving to the specimens a brushlike aspect. The leaves are deep green in summer and turn scarlet in autumn. B. candidula 'Haalboom' (P. I. 266479), a selection from this nursery, has larger and more densely toothed leaves than in the phase usually seen in gardens, and its habit is more robust. A snowberry, Symphoricarpos albus var. laevigatus 'Turesson', found in this nursery and now much grown in the Netherlands, is a cultivar with large oval, pure-white fruit, one-half to three-quarters of an inch in diameter. The latter selection is the work of S. G. A. Doorenbos, former director of Zuider Park in The Hague, who raised several new snowberry selections.

ZUNDERT

The Zundert area, near the border of Belgium in the southwestern part of the Netherlands, is known as the second most important nursery center in the country. At Oudenbosch, only a few miles away, the leading tree nurseries of the country are located.

NURSERY OF PIERRE LOMBARTS, ZUNDERT

With a strong interest in dendrology, Pierre Lombarts has brought together an outstanding assortment of flowering trees and shrubs, especially rare kinds seldom found in nursery collections. A recent catalogue lists 31 *Salix*; 20 *Spiraea*; 52 *Quercus*; 64 *Sorbus*; and 35 *Cotoneaster*, an indication of the scope of materials offered by this nursery.

The Lombarts *Sorbus* hybrids developed in recent years as a result of crosses with *S. prattii*, *S. discolor*, and *S. aucuparia* are known for their highly colored fruit clusters in shades of pink, red, and apricot. Outstanding among the named clones are 'Apricot Queen' (P.I. 266690), with glistening apricot-colored fruit; 'Coral Beauty' (P.I. 266691), with coral-red hairy fruit; 'Red Copper Glow' (P.I. 266692), with copperish-red fruit; and 'Vermilion' (P.I. 266693), with vermilion-colored fruit.

Two relatively new cultivars of the English maple, *Acer campestre* 'Elsrijk' and 'Zorgvlied', are Dutch selections with a straight bole and a round-headed crown, developed for street planting.

ROYAL MOERHEIM NURSERIES, DEDEMSVAART

The Royal Moerheim Nurseries, in the northeastern part of the Netherlands at Dedemsvaart, is known as the leading commercial firm in the country for herbaceous plants. The assortment of deciduous and broad-leaved shrubs, however, is nearly as well known to people who are familiar with the productions of this firm. The nursery is favorably situated in an area of deep fertile soils consisting of a large proportion of sand and silt, with a water table about 2 feet below the surface in some parts of the property. For more than 60 years, Messrs. Ruys, owners of the firm, have produced a host of new ornamental plants, both herbaceous and woody, many of which are now widely grown in gardens of Europe and America.

Among the plants that originated in this nursery, the Moerheim blue spruce, *Picea pungens* Engelm. 'Moerheimii', is perhaps the most widely known. This selection, introduced in 1912, long has been a favorite in Europe and in the United States. In 1936 the Moerheim firm introduced the first successful perennial pink-flowered *Delphinium*, a hybrid called *D.* × *ruysii*, derived from *D. elatum* × *D. nudicaule*. The selection, called 'Pink Sensation', has had wide acclaim in Europe, but less so in the United States.

Introductions of merit from this source include *Buddleia crispa* var. *farreri* (P.I. 262244), a first-rate low-growing deciduous shrub, 3 to 4 feet tall with a spreading habit and pale rose-lilac flowers with a yellow throat. This butterfly-bush flowers profusely from early summer to fall. *Buddleia davidii* 'Black Knight' with flowers blackish-violet, and *Kolkwitzia amabilis* 'Rosea' (P.I. 262257), a seedling selection of the beautybush with deep pink flowers, are plants originated by the firm of Moerheim.

A clump-forming bamboo from China, *Sinarundinaria murielae* (P.I. 262266), never before introduced into the United States in a living state, is one of the most important introductions of the 1959 exploration trip (fig. 8). A handsome



BN-16332

Figure 8. --*Sinarundinaria murielae* (P.I. 262266). Clump-forming bamboo probably hardy in the latitude of Washington, D.C. Culms about 10 feet tall, about 1/4 inch in diameter. Royal Moerheim nurseries, Dedemsvaart, Netherlands.

plant, more than 50 years old, in the nursery forms a solid clump about 10 feet in diameter with hundreds of culms 10 feet tall with a graceful arching habit. If this bamboo proves to be fully hardy in the latitude of Washington, D.C., we shall have for the first time a nonrunning bamboo for gardens and for potential economic use in middle latitudes of the United States.

POORT BULTEN ARBORETUM, OLDENZAAL

The Poort Bulten Arboretum--a private arboretum of W. J. H. Gelderman--has been developed to a place of prominence among private arboretums of Europe since it was founded in 1910 by members of the present owner's family. The location, in the upland eastern part of the Netherlands only a few miles from the German border, is favorable for growing flowering trees, shrubs, and conifers to a larger size than is possible in areas with a high water table as in the western parts of the country. The collections, now slightly more than 50 years old, mostly are specimen conifers. Trees in the original pinetum have now reached cone-bearing size, and the deciduous trees and shrubs planted more recently are beginning to take on the appearance of maturity. A 50-foot

specimen of Abies alba 'Pendula' is perhaps the most bizarre and unusual specimen in the collection (fig. 9). A fine Picea pungens 'Glauca' is nearly 40 feet tall. A 20-foot specimen of Chamaecyparis thyoides L. 'Andeleyensis'

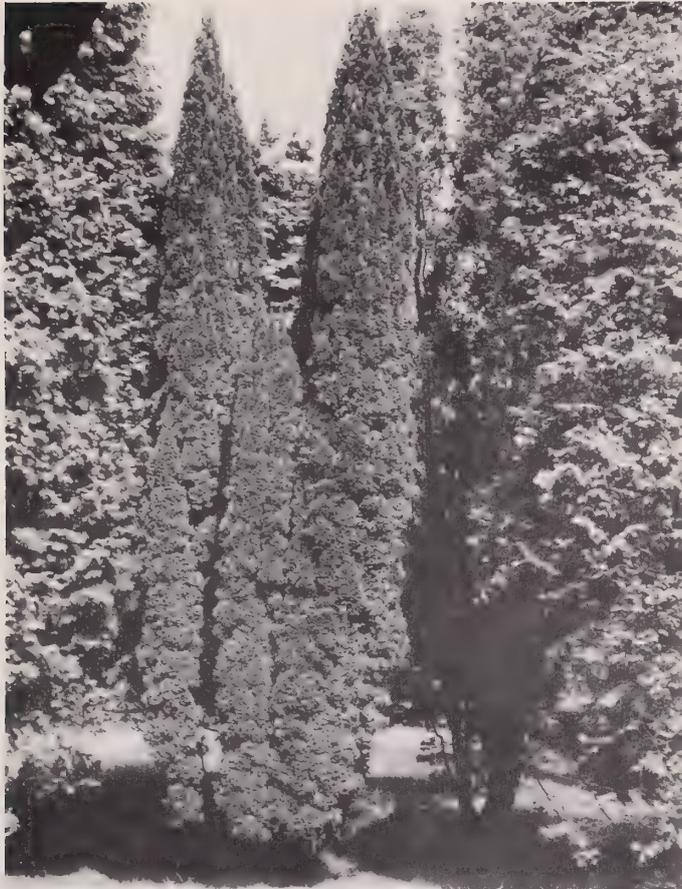


BN-16333

Figure 9. --Abies alba 'Pendula', weeping silver fir. Specimen 40 feet tall in Poort Bulten Arboretum, Oldenzaal, Netherlands.

is a fine example of this selection of the white-cedar (fig. 10). The strongly fastigiata habit and blue-green foliage of the latter selection strongly recommends the cultivar over the wild form of this native American conifer which, as a wild plant, has little to recommend it as a garden plant of merit.

A specimen of Chamaecyparis lawsoniana 'Patula' (P.I. 266405), a beautiful selection of the species with strongly pendulous branches and blue-green foliage, is about 35 feet tall.



BN-16334

Figure 10. --*Chamaecyparis thyoides* 'Andelyensis'. Strongly fastigate phase of the American white-cedar. Poort Bulten Arboretum, Oldenzaal, Netherlands.

The collection of European beech (*Fagus sylvatica*) is the most impressive group among the deciduous trees planted at Poort Bulten. The collection of 19 cultivars provides an unusual opportunity to see most of the named variants of the European beech. Cultivars found here, but rare in the United States, are *F. sylvatica* 'Albovariegata' (P.I. 261185); 'Cristata' (P.I. 261186, 262320); 'Quercifolia' (P.I. 261192); 'Rohanii' (P.I. 261194, 266602); and 'Swat Magret' (P.I. 265250, 266533). Two slow-growing selections are *F. sylvatica* 'Cochleata' (P.I. 265252, 266670) and 'Rotundifolia' (P.I. 261196), both making multitrunked low specimens about 10 feet tall after 25 years of growth. Also in the collection are specimens of *F. engleriana* Seem., a Chinese species, and *F. sieboldii* Engl., a species of Japan.

In his printed catalogue, Mr. Gelderman lists 2,542 kinds of trees and shrubs growing in the Poort Bulten Arboretum.

SCHOVENHORST ARBORETUM, PUTTEN

The Schovenhorst Arboretum, located near the village of Putten, lies only a short distance from the southern end of the Zuider Zee. The total area of about 700 acres is divided into three separate parts--the oldest plantings made by J. H. Schober of Utrecht, beginning in 1848, the second part by J. Th. Oudemans, and the most recent plantings by his son, Th. C. Oudemans.

Upon the death of Schober in 1901, the arboretum became the property of J. Th. Oudemans, zoologist and son-in-law of Schober. Under the able guidance of its new owner, the pinetum was enlarged and many new species were planted for testing. A collection of named cultivars planted at this time near the family home included selections of Picea, Thuja, Chamaecyparis, Juniperus, Pinus, Tsuga, Cryptomeria, Pseudotsuga, Abies Cedrus, and Podocarpus (fig. 11). A 25-foot specimen of Picea abies 'Ohlendorffii', a selection of dense pyramidal growth, and a large specimen of Picea abies 'Pumila' nearly 15 feet wide are outstanding examples among the slow-growing specimen plants in the collection.



BN-16335

Figure 11. --Portion of the pinetum, Schovenhorst Arboretum, Putten, Netherlands.

Th. C. Oudemans, present and third owner of Schovenhorst, is busy planting new introductions and testing seedling selections. He realizes the usefulness of the collection as an educational asset for foresters, dendrologists, botanists, and others to whom the extensive plantings are of interest. The well-planned laboratory and rest house built by Oudemans serve the interests of university students and others who come to Schovenhorst for periods of study.

In the 113 years since the first plantings were made, the overall objective has remained the same--to find conifers of rapid growth and of relatively high wood quality adaptable to the soils and climate of the Netherlands. Of the many species that have been tried, selections of the Douglas fir (Pseudotsuga menziesii) from Oregon are superior for commercial purposes in the Netherlands. Indeed, the arboretum of Schovenhorst is a legacy of three generations of devoted individuals each having fostered an objective of basic importance to the forestry of the Netherlands.

C. G. VAN TUBERGEN, BULB GROWER, HAARLEM

Among bulb growers of the Netherlands, the firm of C. G. van Tubergen maintains an enviable reputation as the leading grower of rare and unusual bulbs in the country. The wide selection of bulbous materials offered represents a copious sampling of many of the most attractive "bulbous" plants known.

A recently developed Brodiaea, B. × tubergenii Hoog (B. laxa × B. peduncularies) is thought to be the first hybrid of the genus ever offered commercially. Scilla tubergeniana Hoog, a species from Iran, first introduced to cultivation by van Tubergen, is considered to be one of the finest of garden scillas. Also, the firm is well known for its many introductions of tulips, daffodils, and hyacinths.

Introductions from this source include a collection of Achimenes (see list under enumeration of introductions); Bessera elegans (P.I. 262339), a handsome plant of Liliaceae with scarlet flowers from Mexico; and Gloxinia maculata 'Insignis' (P.I. 262341), a rarely grown Brazilian plant of the Gesneriaceae with large pouchlike deep lavender flowers of great beauty produced in autumn.

TROMPENBURG ARBORETUM, ROTTERDAM

The Trompenburg Arboretum on the edge of Rotterdam occupies a sheltered site below the level of the sea along the dike by the River Maas. The present garden, owned by J. R. P. van Hoey Smith, has been a thriving family enterprise for more than 140 years and occupies a site dominated by Honingen Castle in medieval times. The central part of the arboretum, dating from 1820, is laid out in the English style. In spite of a relatively high water table, averaging from 2 to 3 feet over most of the property, conifers and most kinds of deciduous trees and shrubs thrive with great vigor in the peaty soils (fig. 12).



BN-16336

Figure 12. --Part of the conifer collection in Trompenburg Arboretum, garden of J. R. P. van Hoey Smith, Rotterdam, Netherlands.

The collection is unusually rich in rare specimen trees. A number of oaks (Quercus), two purple beeches (Fagus sylvatica 'Atropunicea'), and a pair of giant Canadian poplars (Populus × canadensis), 150 years old and 100 feet tall, exist in the oldest part of the plantation.

The 10-acre arboretum contains about 1,000 kinds of trees and shrubs hardy in the maritime climate of the Netherlands. The collection includes about 80 kinds of oaks (Quercus)--a speciality of the present owner. Among these are Q. robur 'Salicifolia' (P.I. 260979), with narrow willowlike leaves; and Q. pontica (P.I. 260695), a handsome low-growing species from the Caucasus. The collection of beech (Fagus) includes 15 kinds; pines (Pinus), 22 kinds; spruce (Picea), 40 kinds; juniper (Juniperus), 43 kinds; yew (Taxus), 18 kinds; false-cypress (Chamaecyparis), 62 kinds; arborvitae (Thuja), 20 kinds. A large Pfitzer juniper (Juniperus × media 'Pfitzeriana'), now 30 years old, measures 105 feet in circumference, 25 feet across, and 9 to 10 feet in height. The finest group of conifers in the arboretum is a planting of Atlantic cedars (Cedrus atlantica Manetti), now 30 feet tall grown from seed planted in 1925.

The western part of the arboretum, designed about 1870 by the well-known landscape gardener Zocker, includes a large specimen about 25 feet tall of Fraxinus xanthoxyloides 'Dumosa', a rarely cultivated North African ash; maples (Acer); several large Irish yews (Taxus baccata 'Fastigiata') in the sunken garden; and a bald cypress (Taxodium distichum) with knees. A 50-foot specimen of Thuja plicata, the giant arborvitae of western United States, also remains from the period of Zocker.

A group of American river birch (Betula nigra L.) trees were recently planted. This tree is ideal for the Dutch climate. A conifer of much merit in the collection is Picea omorika 'Expansa' (P.I. 266785), a seedling selection of the Serbian spruce with a flat spreading habit found originally in a German nursery by Mr. Smith about 1940 (fig. 13).



Figure 13. --Picea omorika 'Expansa' (P.I. 266785). A seedling selection of the Serbian spruce of naturally spreading habit. Garden of J. R. P. van Hoey Smith, Rotterdam, Netherlands. (Courtesy of J. R. P. van Hoey Smith.)

Partial list of outstanding specimen trees in the Trompenburg Arboretum

- Acer palmatum Thunb. 'Crispum', dense growing with crisped leaves, 12 feet tall.
- Alnus glutinosa (L.) Gaertn. 'Imperialis', a selection with deeply cut leaves, 30 feet tall.
- Carpinus betulus L. 'Fastigiata', densely branched pyramidal habit, 15 feet tall (fig. 14).
- Fagus sylvatica L. 'Aureopendula', of weeping habit, leaves yellowish, 25 feet tall.
- Fagus sylvatica L. 'Fastigiata', of columnar habit, 50 feet tall.
- Fagus sylvatica L. 'Rohanii', with deeply cut purplish leaves, 25 feet tall.
- Fagus sylvatica L. 'Rotundifolia', dwarf-growing, with nearly round leaves, 8 feet tall.
- Liriodendron tulipifera L. 'Fastigiatum', of columnar habit, 30 feet tall.
- Quercus phillyraeoides A. Gray, everygreen and hardier than Q. ilex, 25 feet tall.
- Picea breweriana S. Wats., Brewer spruce, with pendulous branches, 20 feet tall.
- Picea glauca (Moench) Voss 'Conica', dwarf Alberta spruce, 8 feet tall, 6 feet wide at the base.



Figure 14. --Carpinus betulus 'Fastigiata'. Very densely branched selection of pyramidal growth habit. Garden of J. R. P. van Hoey Smith, Rotterdam, Netherlands. (Courtesy of J. R. P. van Hoey Smith.)

Pseudolarix kaempferi (Lindl.) Gord., golden larch, deciduous, 25 feet tall.
Tsuga canadensis L. 'Compacta', 8 feet tall, 10 feet wide at the base.

GIMBORN ARBORETUM, DOORN

Among private gardens in the Netherlands, the arboretum of Mr. von Gimborn at Doorn is one of the four or five most important in the country. Since about 1924, when the arboretum was laid out on about 50 acres of flat heathland, the collection of conifers, flowering trees, and shrubs has been enlarged to about 620 kinds. Conifers are grown more extensively than any other group in the arboretum. Soils of the area consist of about 92-percent sand, 4-percent humus, and 4-percent loam, with a water table that lies only 2 or 3 feet below the surface.

Hemlocks (Tsuga), spruce (Picea), and some of the pines (Pinus) are the most successful among the conifers growing in the Gimborn Arboretum. The hemlock collection includes nearly all species of the genus with the exception of

one or two from Asia. *Tsuga* × *jeffreyi*, found here, is a reputed natural hybrid of *T. heterophylla* × *T. mertensiana*. A weeping hemlock, *T. canadensis* 'Pendula', trained as a 15-foot columnar specimen with strongly pendulous branches, is one of the most striking conifers in the collection (fig. 15). The Norway spruce (*Picea abies*) is represented by several slow-growing cultivars of this species, including *P. abies* 'Tabulaeformis', about 6 feet tall with a flat arching crown 10 to 15 feet in width. A low-growing seedling selection in the collection of the Douglas fir, *Pseudotsuga menziesii* 'Oudemansii', is a densely branched low-growing tree of pyramidal growth habit, with short needles radially arranged on the branches (fig. 16).



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Figure 15. --*Tsuga canadensis* 'Pendula', 15-foot specimen of the weeping hemlock, Gimborn Arboretum, Doorn.



BN 16338

Figure 16. --Pseudotsuga menziesii 'Oudemansii', a slow-growing selection of the Douglas fir with short radially arranged needles. Gimborn Arboretum, Doorn.

Partial list of outstanding specimen trees in the Gimborn Arboretum

Acer lobelii Ten., a tree of columnar habit, 50 feet tall.

Fagus sylvatica L. 'Castanifolia', 30 feet tall, with chestnutlike leaves.

Picea abies (L.) Karst. 'Hornibrookii', dwarf-growing, 5 feet tall, 12 feet wide.

Picea abies (L.) Karst. 'Maxwellii', of dense pyramidal habit, 20 feet tall, 18 feet wide.

Picea abies (L.) Karst. 'Ohlendorffii', of dense pyramidal habit, slow-growing, 20 feet tall.

Picea abies (L.) Karst. 'Pyramidata' of narrow columnar habit, 30 feet tall.

Picea abies (L.) Karst. 'Remontii', nearly globose habit with numerous terminal leaders, 6 feet tall, 10 feet wide.

Pinus cembra L. 'Compacta Glauca', selection of Swiss stone-pine, habit very compact, 7 feet tall, 8 feet wide.

Pinus koraiensis Sieb. & Zucc., Korean pine, 40 feet tall.

Pinus peuce Griseb., Macedonian pine, 40 feet tall.

Sciadopitys verticillata Sieb. & Zucc., umbrella pine, several specimens, 20 feet tall.

Tsuga canadensis L. 'Parvifolia', leaves half as long as in the typical phase of the species, 15 feet tall.

Tsuga carolinensis Engelm., Carolina hemlock, 20 feet tall.

An extensive heath garden is planted to hardy species and selections of Erica, Calluna, and Doboecia. A water and bog garden with a collection of hardy bamboos includes a fine stand of Arundinaria viridistriata and other ornamental grasses. Gaultheria shallon Pursh, the salal, is naturalized in many parts of the aboretum.

PINETUM BLIJDENSTEIN, HILVERSUM

The small and skillfully maintained Pinetum Blijdenstein at Hilversum was founded in 1911 by Benjamin Willem Blijdenstein on about 5 acres of ground within the corporate limits of the town. The collection consists entirely of conifers, with more selections of garden origin represented than of conifers from the wild. Many of the trees have developed into specimens of elegant proportions (fig. 17, 18).



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Figure 17. --Conifers in Pinetum Blijdenstein, Hilversum.



BN-16340

Figure 18.--*Picea abies* 'Inversa', a selection of the Norway spruce with strongly pendulous branches and the growing tip inverted. Pinetum Blijdenstein, Hilversum.

Partial list of outstanding specimen plants in Pinetum Blijdenstein

- Abies amabilis* (Loud.) Forbes 'Compacta', a low dwarf-growing selection of the lovely fir found originally among seedlings raised in the pinetum (fig. 19).
Abies grandis Lindl., 40 feet tall.
Abies nebrodensis (Lojac.) Mattei, Sicilian fir, 20 feet tall.
Cryptomeria japonica (L. f.) D. Don 'Dacrydioides', 15 feet tall, 15 feet wide.
Ephedra distachya L., used as a groundcover (fig. 20).
Fagus sylvatica L. hedge, 10 feet tall, planted along one side of the pinetum.
Picea abies (L.) Karst. 'Finendonensis', 35 feet tall.
Picea breweriana S. Wats., Brewer spruce, 30 feet tall (fig. 21).
Pinus flexilis James, fox-tail pine, 20 feet tall.
Pinus peuce Griseb., Macedonian pine, 40 feet tall.
Pinus × *schwerinii* Fitsch, a hybrid of *P. excelsa* × *P. strobus*, 40 feet tall.
Podocarpus nivalis Hook. f., a dwarf bush native of New Zealand.
Pseudotsuga menziesii (Mirb.) Franco 'Pendula', 25 feet tall with strongly pendulous branches.
Thuja plicata D. Don, western redcedar, 40 feet tall.
Sequoia sempervirens (Lamb.) Endl., redwood, 20 feet tall.

The pinetum is administered jointly by the municipality of Hilversum and the botanic garden of Amsterdam, under the immediate supervision of G. Bootsman. Its purpose is to provide a living laboratory of conifers for dendrologists, foresters, botanists, and others who have a serious interest in studying this group of plants.



BN-16341

Figure 19. --Abies amabilis 'Compacta' (P.I. 266699), a dwarf-growing selection of the lovely fir, 30 inches tall, 4 to 5 feet wide. Pinetum Blijdenstein, Hilversum.



Figure 20. --Ephedra distachya L., 12 inches tall, used as a ground cover, Pinetum Blijdenstein, Hilversum.

BN-16342

Figure 21. --Brewer spruce (Picea breweriana), 25 feet tall, Pinetum Blijdenstein, Hilversum.



BN-16343

HORTUS BOTANICUS, AMSTERDAM

The botanic garden of Amsterdam, established in 1682 by Jan Commelin as the "Hortus Medicus," is administered by the municipal university of Amsterdam. Under this aegis, the garden and department of botany function jointly as a teaching and research institution. The garden of about 3 acres is divided into a series of greenhouses for tropical plants and outdoor beds where the hardy plants are grown.

Among the collections in the conservatories, the aged cycad plants in giant tubs merit a special note. An old specimen of Encephalartos altensteinii Lehm., over 6 feet in height, thought to be about 600 years old, has been in the garden since its founding in 1682. In the nearly 300 years since this plant was received by Commelin, it has only doubled in height. But cycads are notoriously slow-growing plants. The collection includes a specimen of the rarest of cycads, Bowenia spectabilis Hook, f., native of Queensland, Australia. A special greenhouse is provided for Victoria amazonica (Poeppig) Sowerby, the giant water-platter lily of the Amazon River. The large rose-pink nocturnal flowers, sometimes 12 inches across, are produced on elongated peduncles 6 inches or more above water level; they open on 2 successive days, beginning about 5 p. m. and closing the next morning. The giant leaves with margins turned up at right angles to the water level sometimes attain a diameter of 6 feet. Among the ferns and fern relatives in the collection, one of the most ornamental is Selaginella grandis (P.I. 262374), with stout lustrous green fronds often 12 inches tall.

An important event in the history of the Hortus Botanicus is the role it played in the introduction of the coffee plant (Coffea arabica L.) into the New World, first to Surinam in 1714. Linnaeus, the celebrated Swedish father of botany, visited the garden on his tour of the Netherlands in 1734 and 1736. At the beginning of the present century, Prof. Hugo de Vries worked here on experiments concerning his now well-known mutation theory.

HORTUS BOTANICUS, LEIDEN

Founded in 1587, the Hortus Botanicus at Leiden is the oldest botanic garden in the Netherlands and one of the oldest institutions of its kind in existence. When Carolus Clusius assumed the first professorship in 1594, this was a tiny garden of only 45 by 35 yards. With an apothecary assistant, Clusius planted more than 1,000 species and varieties of plants, predominantly medicinal. From the original garden only one plant remains, a golden-chain tree (Laburnum anagyroides Med.) which flowers profusely every May in the place it has stood since it was planted in the Hortus in 1601. It was Clusius who in 1576 published the earliest known account on the tulip, a plant introduced to Europe by Ogier de Busbecque from Turkey about 1554. A replica of the original garden is located adjacent to the curator's house.

The present garden of 15 acres, with boundaries defined by canals on two sides, consists of many old trees planted more than 100 years ago, plus conservatories for tropical plants. The buildings of the botanical institute of the University occupy a sizable tract on the eastern edge of the Hortus.

Some Historic Trees in the Hortus Botanicus

Crataegus oxyacantha L. 'Rosea', pink hawthorn; planted 1740.

Diospyros lotus L., the date-plum; planted 1830.

Fagus sylvatica L. 'Atropunicea', copper beech, 70 feet tall; planted 1820.

Fagus sylvatica L. 'Laciniata', fern-leaved beech, 40 feet tall with a branch spread of 50 feet; planted 1800.

Fagus sylvatica L. 'Pendula', weeping beech, 45 feet tall with a branch spread of 66 feet at ground level; planted 1830 (fig. 22).



Figure 22. --Fagus sylvatica 'Pendula', the European weeping beech. Specimen 45 feet tall with a branch spread of 66 feet at ground level; planted in 1830. Hortus Botanicus, Leiden, Netherlands. (Courtesy of Ding Hou.)

Ginkgo biloba L., a male specimen, 60 feet tall; planted 1785.

Liriodendron tulipifera L., 40 feet tall; planted 1685.

Pterocarya fraxinifolia (Lam.) Spach, Caucasian wingnut, planted 1818.

Sophora japonica L., Chinese scholar-tree; planted about 1850.

Some Notable Specimen Trees in the Hortus Botanicus

Aesculus turbinata Bl., Japanese horsechestnut, 40 feet tall.

Carpinus betulus L. 'Incisa', leaves deeply cut with a fernlike aspect; 30 feet tall.

Fraxinus angustifolia Vahl, narrow-leaved ash, 50 feet tall.

Juglans regia L. 'Pendula', branches pendulous with a spread of 30 feet.

Juglans sieboldiana Maxim., Japanese walnut, 40 feet tall.

Pyrus nivalis Jacq. (P.I. 265952) snow-pear, 40 feet tall.

Taxodium ascendens Brongn., 35 feet tall.

Taxodium distichum (L.) A. Rich., 35 feet tall.

Sambucus nigra L. (P.I. 262373 and 274265) 'Pendula', elderberry with weeping branches, trained on the wall of the orangery.

Taxus baccata L., 36 feet across, 15 feet tall.

Tilia platyphyllos Scop. 'Laciniata', leaves deeply cut with a fernlike aspect; 30 feet tall.

Zelkova serrata (Thunb.) Mak., an old specimen with seven trunks. 40 feet tall.

Zelkova verschaaffeltii (Dippel) Nichols., (P.I. 274266) leaves dentate; 25 feet tall.

Tropical plants of special interest in the conservatories include Cyperus alternifolius L. 'Variegatus' (P.I. 262352 and 274261), with margins of the leaves and part of the culms white-striped. Neoalsomitra podagrica (P.I. 262363), is a curious climbing podagric plant (a plant with stems swollen at the base for water storage) of the melon family (Cucurbitaceae) with dark-green, swollen spinescent basal stems. The latter species was described as new only a few years ago from the island of Timor. Nearly 50 introductions are expected from this source.

ZUIDER PARK, THE HAGUE

Zuider Park, established in 1930 as a municipal development of The Hague, maintains perhaps the most extensive collection of ornamental trees and shrubs in a public park of the Netherlands. The transformation of the original site of 400 acres from a land of rolling sand dunes and meadows before 1926 to that of the most important park in the city in so short a time is, indeed, a praiseworthy accomplishment. S. G. A. Doorenbos, the energetic and talented former director, was largely responsible for developing the park over a period of 32 years. Through his boundless enthusiasm, a vast collection of trees and shrubs, numbering more than 1,000 kinds, was planted in the park (fig. 23). Over some years, Mr. Doorenbos carried out plant breeding experiments in several woody genera. Among the plant novelties developed by him were flowering dwarf crabapples (Malus). In Symphoricarpos, S. albus 'Turesson'; S. 'Erect'; S. 'Magic Berry'; S. 'White Hedge'; and S. 'Mother of Pearl' are the best known selections. An ash, Fraxinus excelsior 'Doorenbos', is a seedling selection grown as a source of wood of uniform quality for the ski-making industry of the Netherlands. Alnus × elliptica 'Itolanda' is a named selection of the hybrid A. cordata × A. glutinosa found among seedlings in Zuider Park by Mr. Doorenbos; it is a tree of very vigorous growth with leaves that persist until December.

Some Specimen Trees of Special Interest in Zuider Park

Acer × zoeschense Pax 'Annae', (A. campestre × A. lobelii), the new leaves reddish

Alnus glutinosa L. 'Incisa', leaves deeply lobed.

Alnus × spaethii Callier, hybrid of A. japonica × A. subcordata.

Cornus paucinervis Hance, handsome deciduous shrub with lustrous leaves.

Fraxinus excelsior L. 'Elegantissima', with narrow, dark-green leaflets.

Fraxinus mariesii Hook. f., a flowering ash from China.

Fraxinus oxycarpa Willd., a south European ash with an elegant habit.

Fraxinus paxiana Lingelsh., a flowering ash from China.



Figure 23. --Flowering crabapples in Zuider Park, The Hague, Netherlands. (Courtesy of Dienst W. en S. Foto No. 21018, s' Gravenhage.)

Quercus palustris Muenchh. 'Umbraculifera', a seedling selection of the pin oak, with an umbrella-shaped crown.

Quercus petraea (Mattusch.) L. ex Lieblein 'Columna', (P.I. 265643 and 266628) fastigate durmast oak.

Robinia pseudoacacia L. 'Rozynskyana', with very long pendulous leaves.

Salix moupinensis Franch., with lustrous leaves and bright-red shiny buds.

Tamarix juniperina Bunge, summer flowering.

Tilia mongolica Maxim., small-leaved hardy species of elegant habit.

Ulmus davidiana Planch., species of northern China.

Ulmus laciniata (Trautv.) Mayr, species of Japan.

Ulmus wilsoniana Schneid., species of central China.

Zelkova verschaaffeltii (Dippel) Nichols., a small tree with handsome lustrous dentate leaves; rarely grown, and of unknown origin.

HORTUS BOTANICUS, CANTONSPARK, BAARN

Cantonspark is located in a picturesque part of the Netherlands at Baarn. The property was developed between 1905 and 1914 as a private estate of a Mr. Jansen. In 1920, the garden and spacious grounds of about 11 acres were offered to the Dutch government which in turn gave them to the Utrecht State University for use as a botanic garden. Now, the garden functions primarily as an outdoor laboratory for botany students of the University and as an educational asset for visitors.

The Hortus includes many fine aged trees, expansive well-kept lawns, and a large conservatory for tropical plants (fig. 24). A greenhouse range for experimental purposes and a lecture auditorium used for botanical teaching are among



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Figure 24. --Conservatory, Hortus Botanicus, Cantonspark, Baarn.

the newer features of direct interest in academic work. The finest old trees are groups of towering European beech (*Fagus sylvatica*) that stand between stretches of verdant lawn. In keeping with the traditional spirit of a botanic garden, a part of the Hortus is devoted to plants grown in systematic arrangement for botanical study. Herbaceous and woody species are grouped by plant families in beds arranged side by side one after the other. A large rock garden is provided for growing alpine plants.

The warm-climate species under glass includes the following list of special interest: Boeninghausenia albiflora (P.I. 263976), Rutaceae, a Himalayan plant with small white flowers and foliage resembling rue (Ruta); Dioscorea macroura (P.I. 263979), from tropical West Africa, with large pear-shaped leaves nearly 1 foot across with long drip tips, and large brownish air tubers in the leaf axils; Gurania makoyana (P.I. 263981), Cucurbitaceae, a rank climber of the squash family from Central America with handsome somewhat hairy leaves and orange flowers; and Sinningia pusilla (P.I. 263989). Gesneriaceae, a small cormous plant 2 to 3 inches tall with small violet flowers less than 1 inch long. Cephalotus follicularis Labill., the rarely grown Australian pitcher plant, is included among the insectivorous species grown at Cantonspark.

Some Specimen Trees and Shrubs of Special Interest At Cantonspark

- Acer palmatum Thunb. 'Heptalobum', a group of 6 specimens, 30 feet tall.
Acer trautvetteri Medw., 30 feet tall.
Carpinus betulus L. 'Incisa', 25 feet tall, European hornbeam with lobed leaves.
Cladrastis lutea (Michx.) K. Koch, yellow-wood, 20 feet tall.
Cornus kousa Buerg. ex Hance, Japanese flowering dogwood, 20 feet tall.
Fagus japonica Maxim., Japanese beech, 20 feet tall.
Fagus sylvatica L. 'Borneyensis', fastigiate weeping beech, 40 feet tall.
Fothergilla major (Sims) Lodd., 15 feet tall and half as wide throughout its height.
Gleditsia triacanthos L. 'Elegantissima', a low-growing densely branched selection of the honey locust, with smaller fernlike leaflets than in the typical phase of the species; 15 feet tall.
Populus wilsonii Schneid., handsome species from China with very large leaves, 40 feet tall.
Pterocarya fraxinifolia (Lam.) Spach, Cacuasian wing-nut, 30 feet tall.
Quercus castaneaefolia C. A. Mey., oak from Asia Minor, 40 feet tall.
Sassafras albidum (Nutt.) Nees, American sassafras, 20 feet tall.
Taxodium distichum (L.) A. Rich., swamp cypress, 50 feet tall.
Zelkova serrata (Thunb.) Mak., 30 feet tall.

BELMONTE ARBORETUM, WAGENINGEN

The Belmonte Arboretum with its extensive plant collections and laboratory of plant taxonomy and plant geography stands among the older research institutions at Wageningen, where the Dutch government maintains a center for agricultural research very much in the pattern established by the U. S. Department of Agriculture, at Beltsville, Md. The arboretum of about 50 acres derives its name from an old estate called Belmonte, established in 1896, around which the present establishment was founded. The arboretum and the extensive facilities for scientific work are valuable assets to botanists, landscape architects, dendrologists, nurserymen, and students who come for extended periods of study. The scientific laboratories are well equipped with an herbarium of temperate and tropical plants, especially economic and ornamental species, an extensive library, and other facilities for students who matriculate in systematic botany and plant geography. A living collection in the arboretum includes a nearly complete assortment of deciduous trees, shrubs, vines, and broad-leaved evergreen plants cultivated in the Netherlands. Many ornamental trees and shrubs grown here are kinds not often seen in cultivation. An extensive collection of conifers is found in the pinetum. Also, there is a water garden and a rock garden of alpine plants.

Some Specimen Trees of Note in the Belmonte Arboretum

Fagus sylvatica L. 'Aureopendula', a selection with yellowish leaves and weeping habit, 30 feet tall.

Fagus sylvatica L. 'Fastigiata', the fastigate European beech, 60 feet tall.

Prunus serotina Ehrh. 'Pendula', a selection of the American black cherry of weeping habit (fig. 25).



BN-16345

Figure 25. --Prunus serotina 'Pendula'. A selection of the American black cherry of weeping habit. Belmonte Arboretum, Wageningen.

Quercus robur L. 'Filicifolia' (P.I. 265653), a selection with pinnately lobed fernlike leaves and a spreading growth habit.

Robinia pseudoacacia L. 'Myrtifolia', a small-leaved selection of the black locust with elegant lacelike foliage.

Tilia platyphyllos Scop. 'Compacta', a slow-growing selection of the European linden of compact growth habit. The original plant in the arboretum stands about 8 feet tall at an age of about 60 years.

In the pinetum are several garden selections of Taxus baccata, including the Irish yew (T. baccata 'Fastigiata'); Westfelton yew (T. baccata 'Dovastonii'), the largest yew in the arboretum; and T. baccata 'Adpressa', an elegant small-leaved selection of spreading habit. A specimen of Brewer spruce (Picea breweriana S. Wats.), now 25 feet tall, is a rare American plant not uncommonly cultivated in western Europe. Although a native of the Siskyou Mountains of northern California, this tree is extremely rare in cultivation in the United States. A fine 30-foot specimen of the Macedonian pine (Pinus peuce Griseb.), suggests that this attractive 5-needled pine from the Balkan Mountains should be more widely grown in Eastern United States.

At irregular intervals, the arboretum publishes a small journal 'Mededelingen van de Botanische tuinen en het Belmonte Arboretum' ("Communications from the botanic garden and the Belmonte Arboretum").

INSTITUTE OF HORTICULTURAL PLANT BREEDING, WAGENINGEN

Although breeding projects of the Institute of Horticultural Plant Breeding cover mostly fruits and vegetables, research also encompasses the field of ornamental plant crops. B. K. Boom, in charge of the ornamental plant program at the Institute, has been working with succulent plants in recent years with the aim of producing new low-growing, floriferous sorts expressly for the pot-plant trade. The *Crassula picturata* hybrids, developed from several crosses between *C. picturata* × *C. schmidtii*, are low-growing and very floriferous with greenish-red often mottled leaves and flowers ranging from white to red. Several named clones already have been released to the trade in the Netherlands, with indications that some of the selections will be exactly the kind of plant desired by the Dutch people who cherish filling their narrow windowsills with flowering plants of small stature, especially succulent plants.

The books on ornamental plants by B. K. Boom are outstanding among recent horticultural literature in Europe, works that are nearly as useful in America as they are in the Netherlands. The book "Nederlandse Dendrologie," published in 1959, is a comprehensive descriptive work listing the woody plants cultivated in the Netherlands. An earlier work, "Gekweekte Kruidachtige Gewassen," published in 1950, covers the hardy herbaceous plants. Two useful publications by the same author entitled, "Nomenclature, History and Characteristics of some Woody Plants" (Part I, 1957, and Part II, 1959) are technical papers listing the newly developed ornamental plants introduced to Dutch horticulture over the past 35 years.

Many selections and hybrids of potentially valuable plants are under test on the grounds of the Institute, including an extensive collection of hybrid tea roses. A highly useful apparatus possessed by this Institute is a phytotron, a modern research device developed for the study of variables that regulate plant growth.

WEST GERMANY



BN-16346

Specimen conifers, H. A. Hesse Nursery, Weener/Emms.

SOME ASPECTS OF HORTICULTURE AND GARDENING IN THE WEST GERMAN REPUBLIC

The position of horticulture and home gardening in West Germany today enjoys such an aura of prosperity, one wonders what might be the next step forward. Since World War II, eight major horticultural shows called Federal Horticultural Exhibitions (Bundesgartenschau) have been held in as many cities. In scope, these horticultural fairs are unlike anything ever attempted in the United States.

West Germany has a thriving nursery industry, with more than 2,000 nurseries, mostly located in East Friesland in the far northwestern part of the country and in an area around Pinneberg just north of Hamburg. Home gardening has become an integral part of modern life as never before, and the "kleingarten" movement provides recreation which has become traditional among thousands of people. Worth visiting, too, are a few of the old "schloss" parks in various parts of the country, developed by the landed gentry in the 18th and 19th centuries. Such places are the Berggarten and Royal Garden of Herrenhausen at Hannover; the parks of Ludwigsburg; Veitshöchheim; Wilhelmshöhe, near Kassel; and of Sanssouci near Berlin (now in East Germany); and the great English garden and Hofgarten of Nymphenburg at Munich. Others also exist. A modern garden maintained in the grand style is owned by Count Bernadotte on the Island of Mainau in the Bodensee (Lake Constance).

BOTANIC GARDENS OF WEST GERMANY

In Europe the botanic garden carries with it a time-honored tradition in university life dating from the Italian gardens, first at Padua in 1545. In Germany, the earliest botanic garden was established at Leipzig in 1579. Now, nearly 60 botanic gardens are found in the country, including East Germany. The largest and best known are those in Berlin-Dahlem, Bremen, Munich-Nymphenburg, Frankfurt am Main, Darmstadt, Dortmund, Hannover, Essen, Hamburg, and Kiel. The university botanic gardens are designed primarily for academic purposes with little or no emphasis on horticulture at the level of the layman. In contrast, the municipally operated botanic gardens at Frankfurt am Main (Palm Garden), Cologne, and Dortmund are maintained solely for the public with emphasis on horticultural plant materials at the popular level.

Botanic gardens in West Germany definitely are in an era of expansion. Since World War II, the botanic garden in Berlin-Dahlem has undergone much reconstruction as a result of war damage that nearly destroyed the glasshouses, although the arboretum was left intact. In fact, the arboretum of the botanic garden was spared while other parks in the city virtually were denuded of trees for firewood in the perilous winter of 1945-46, the first after the war. In Hannover, the glass houses in the Berggarten have been completely rebuilt to replace the old palm house and its famous collection of palms, all destroyed by war ravage. In Heidelberg, the old garden was abandoned, in favor of a new site across the Neckar River where a completely new garden has been established. The garden in Cologne has been reconstructed; at Dortmund, an ambitious expansion program by the present director, G. Krüssmann, has brought into existence a completely new range of plant conservatories designed solely for exhibition purposes; the new plantings of hardy woody plants in the Dortmund Garden are reputed to be the

largest assortment in West Germany. In the small botanic garden at Kassel, an active program of expansion is under way, and new glass houses have been constructed since the war.

To a botanist, horticulturist, or serious amateur, a visit to a German botanic garden, either municipally or university operated, can be a rewarding experience, if for no other reason than exposure to a sizable segment of the earth's flora in so small a space. Indeed, botanic gardens are a good source of germ plasm for use in a plant introduction program.

GERMAN HORTICULTURAL EXHIBITIONS

Federal Horticultural Exhibitions called Bundesgartenschau held in various cities of West Germany since World War II are the largest ever attempted in the country. These colossal shows are a plan to promote German horticulture at the level of the average home gardener. The results have been extraordinarily successful, if attendance figures are indicative.

These exhibitions run from May 1 to October 31 in odd-numbered years, and require 2 years to prepare. The local municipality sponsoring the show in cooperation with the Central Association of German Horticulture underwrites the entire cost which runs into the millions of dollars. During the show all expense of maintenance is borne by the municipality. The exhibitions usually are held on about 100 acres of relatively undeveloped land, the objective being to establish the area as a permanent park and garden of the city. At the end of the show the municipality purchases plants desired for the permanent plantings.

The exhibitors of these exhibitions consist largely of nurserymen and commercial horticultural sundrymen who contribute all materials. Every aspect of the horticultural trade is represented, including the latest in garden architecture; many gardens are built fully to scale. Rose gardens, rock gardens, heath gardens, and an extensive exhibit of "kleingartens" usually are represented. Cemetery landscaping is featured at some of the shows. New garden machinery, greenhouses, horticultural sundries, and a large horticultural book section are also prominent features.

Popularity of these horticultural fairs is evidenced by the 1959 exhibition at Dortmund which attracted 7 million paid admissions at 50 cents each. This is a city of over a half million persons. Indeed, these garden shows are object examples of what can be accomplished on a national level in an area of interest such as horticulture and gardening, especially when the necessary coordination is available.

Floral festivals at the local level are not uncommon events in a number of German communities. In many cities of West Germany annual garden shows are held, with a scope we find in the larger American cities as a prelude to spring. Dortmund, for example, annually holds a spring show for 10 days in March. As many as 3,000 flowering rhododendrons up to 6 feet tall are brought into these exhibitions. Bremen holds an annual rhododendron show.

THE GERMAN "KLEINGARTEN"

For people living in large cities and industrial areas, the German "kleingarten" movement satisfies the native desire to cultivate the soil. The municipalities provide the land, usually on the edge of the city, and apportion lots, about one-eighth to one-quarter of an acre in size. The aim is to provide gardening space for city dwellers who would not otherwise be able to cultivate their own vegetables and flowers.

The Kleingarten tenant always erects a small house for use on weekends. Indeed, the Kleingarten is treated very much like the cabin at the beach in the United States. Dortmund alone has 70 kleingarten-parks, each with 50 to 100 weekend residents. Competitions are held between cities, and the Golden Harvest Crown is awarded the winner at the end of the season.

NURSERIES OF NORTHWESTERN GERMANY

The Oldenburg area of East Friesland in northwestern Germany ranks second, after the Pinneberg area north of Hamburg, as the most important nursery center in the country. Many first-rate nurseries are located in this intensely farmed area of deep fertile soil and moist cool-temperate climate. The sandy acidic soils with a relatively high organic content are suited for growing nursery crops, especially ericaceous plants and conifers. The climate is strongly influenced by the proximity of the North Sea which lies only a few miles to the north.

NURSERY OF HERMAN A. HESSE, WEENER/EMS

The nursery of Herman A. Hesse, now just over 80 years old, ranks among the oldest and most important establishments of its kind in West Germany. This firm long has maintained an active plant-breeding program, resulting in numerous named selections and hybrids, especially among deciduous and broad-leaved shrubs, vines, and conifers, for which this nursery is well known. This tradition was started by Herman A. Hesse, founder, at the beginning of the present century when George Forrest, E. H. Wilson, Joseph Hers, and others were sending seeds from China.

Many old specimen conifers in the nursery provide an excellent opportunity to see mature plants of elite clones offered by this firm. Many mature specimens of deciduous trees, shrubs, and vines may also be seen. Among the nearly 300 plants introduced from this source, about one third are conifers (figs. 26, 27, 28, 29, 30, 31).



Figure 26. --Group of slow-growing conifers in nursery of H. A. Hesse, Weener/Ems, West Germany.

BN-16347



Figure 27. --*Picea abies* 'Acrocona'. Slow-growing selection of the Norway spruce, densely branched, the cones borne on the branch tips. Nursery of H. A. Hesse, Weener/Ems, West Germany.

BN-16348



BN-16349

Figure 28. --*Picea abies* 'Nidiformis' (foreground), a dwarf-growing selection of the Norway spruce with a flat-topped spreading habit. Nursery of H. A. Hesse, Weener/Ems, West Germany.



BN-16350

Figure 29. --*Cryptomeria japonica* 'Globosa Nana', (middle) a low-growing, densely branched selection, attaining 30 inches tall. Nursery of H. A. Hesse, Weener/Ems, West Germany.



BN-16351

Figure 30. --*Fagus sylvatica* 'Cochleata' (P.I. 265252). Slow-growing shrubby phase of the European beech with thick, deeply dentate leaves. Nursery of H. A. Hesse, Weener/Ems, West Germany.



BN-16352

Figure 31. --*Picea pungens* 'Endtz' (P. I. 266550). Selection of the Colorado blue spruce of dense conical growth habit, with glaucous-blue foliage. Nursery of H. A. Hesse, Weener/Ems, West Germany.

A Few Introductions of Note From the Hesse Nursery

Abies lasiocarpa var. *arizonica* (Merriam) Lemm. 'Compacta' (P. I. 266645), a slow-growing, densely branched and compact selection of Arizona fir; attains a height of 7 feet after many years.

Fraxinus excelsior L. 'Hessei' (P. I. 265620), a monophyllous phase of the European ash raised as a seedling in the Hesse nursery; it is now a highly regarded street tree in West Germany and in the Netherlands.

Picea abies (L.) Karst. 'Mariae-orffiae', a dwarf-growing, compact plant first grown as a seedling selection in the Hesse nursery.

Staphylea × *elegans* Zabel 'Hessei' (P. I. 265674), a hybrid bladdernut (*S. colchica* × *S. pinnata*) with pinkish flowers; originated in the Hesse nursery.

Taxus baccata L. 'Hessei' (P. I. 266557), a compact growing plant of pyramidal habit with dark-green foliage; originated in the Hesse nursery.

NURSERY OF G. D. BÖHLJE, WESTERSTEDE

The nursery of G. D. Böhlje, of about 100 acres, stands among the leading establishments of its kind in the Westerstede area of Oldenburg. Few nurseries are more skillfully maintained. Conifers, heaths, rhododendrons, and other hardy shrubs are grown to perfection in the sandy-loam soils found here. Parts of the property resemble a park more than a commercial nursery, especially the Scotch-pine woodland where rhododendrons and other ericaceous plants are grown. The large specimen trees of noble fir (*Abies procera* Rehd.), many nearly 100 feet high planted in long double rows, are a notable decorative feature of the nursery (fig. 32). This fir of Northwestern United States is perfectly at home in this



BN-16353

Figure 32. --Noble fir (*Abies procera*), specimens 90 feet tall. Nursery of G. D. Böhlje, Westerstede, West Germany.

part of Germany, where it has become a favorite dooryard tree. The deep blue-green colored boughs of this handsome conifer are cut for Christmas greenery and for grave coverings.

The Serbian spruce (*Picea omorika*) is one of the conifers extensively grown as nursery stock. Several old specimens in the nursery nearly 100 feet tall of narrowly slender spirelike habit may be considered as typical of this elegant spruce, a native of Jugoslavia (fig. 33). Large blocks planted with *Picea abies* L. 'Nidiformis' afford an excellent opportunity to observe this handsome dwarf spruce growing under optimum conditions. *Juniperus communis* L. 'Laxa' (P.I. 265034), of columnar habit with the branches pendulous at the tips, is a selection originally grown in the Böhlje nursery. *Thuja plicata* 'Variegata' (P.I. 265041) is an attractive selection of conical habit and yellowish-striped foliage. About a dozen introductions are expected from this source.



BN-16354

Figure 33. --Serbian spruce (Picea omorika)--tall specimens in center of photo. Nursery of G. D. Böhlje, Westerstede, West Germany.

NURSERY OF H. BRUNS, WESTERSTEDE

Mr. Bruns has brought together a first-rate collection of unusual hardy trees and shrubs, a feature for which his establishment has become well known. Rare plants not often seen in cultivation and new cultivars developed by Mr. Bruns are special attractions. Here we see young plants of Picea breweriana × P. omorika (P.I. 265037), a hybrid which arose spontaneously in the nursery. There is a specimen of Nothofagus antarctica (Forst.) Oerst., about 25 feet tall and small specimens of Parrotiopsis jacquemontiana (Decne.) Rehd. Pseudotsuga menziesii 'Brevifolia' is a selection of the Douglas fir with radially arranged short leaves; and there is a good planting of the bigeneric hybrid × Gaulthetia wisleyensis (March.) Rehd. 'Wisley Pearl'. A hedge of Sinarundinaria murielae (P.I. 262266) illustrates one method of using this hardy clump-forming bamboo, a species only now introduced into the United States.

Over several years, Mr. Bruns has produced two new, as yet unnamed, seedling selections of Cornus kousa var. chinensis (P.I. 265028 and 265029). Both are said to be improvements over the plant usually found in gardens. A boxwood found here is Buxus sempervirens 'Heinrich Bruns' (P.I. 260383), a cultivar named on behalf of the nursery where the writer found it. The fastigate habit and brownish twigs are the most distinctive characteristics of this boxwood. Grown as a hedge plant little or no pruning is required. The new twigs are tannish to light rusty brown in contrast with the dark-green leaves found in the lower part of the plant.

RHODODENDRONS AT LINSWEGE, OLDENBURG

The rhododendron hybrids raised by Dietrich Hobbie at Linswege represent an unbroken effort of more than 20 years to produce a new race of hardy plants for the often inclement climate of Germany. The original plan was to produce hardy hybrids with red, pink, yellow, and white flowers derived from less hardy Chinese species, in an effort to eliminate the dominance of rose-purple and mauve colors long associated with the so-called iron-clad hybrids of Rhododendron catawbiense Michx., R. maximum L., and R. ponticum L. Hybrids have been successfully produced by Hobbie in crosses, using the cold-tolerant R. catawbiense and R. metternichii with several of the less hardy species from Asia, such as R. forrestii var. repens, a nearly prostrate plant with red flowers; R. thomsonii Hook. f., a tall growing species with red flowers; R. williamsianum, with pale-rose flowers; R. discolor, with white to pink flowers. Rhododendron wardii, grown by Hobbie under G. Sherriff 5679, is a highly valued parent of a yellow-flowered Chinese species. As a result of hundreds of crosses, some now in the third generation, plants have been produced with characteristics of flower color and hardiness as envisioned by Hobbie from the beginning. The R. forrestii var. repens × R. williamsianum crosses are outstanding hybrids with bright-red, bell-shaped flowers on a plant of dense habit 2 to 3 feet tall. R. forrestii var. repens, a natural dwarf-growing species of southwestern China, has been especially important as a pollen parent in the production of plants with red, bell-shaped flowers.



Figure 34. --Rhododendron williamsianum hybrid (foreground) in Scotch-pine (Pinus sylvestris) woodland. Dietrich Hobbie rhododendron garden, Linswege, Oldenburg, West Germany. (Courtesy of Dietrich Hobbie.)

The first Hobbie hybrids were crosses of R. 'Britannia' × R. williamsianum, which produced the clone called R. 'Ammerlandense'. The hybrid of R. 'Britannia' × R. forrestii var. repens has produced an outstanding clone called R. 'Linswegeanum'. A plant of great beauty is R. 'Isaac Newton', a selection of the hybrid R. catawbiense × R. thomsonii, backcrossed with R. forrestii var. repens.

Rhododendron williamsianum, with pale rose-colored flowers has been freely used in crosses with R. 'Britannia', R. sutchuenense Franch., and other hybrids (fig. 34).

Rhododendrons at Linswege are planted in a parklike woodland of Scotch-pine (Pinus sylvestris), a site admirably suited to the requirements of a breeding program. In the maritime climate, the best of the new productions are performing as well as most of the old iron-clad hybrids. Whether these R. forrestii var. repens, R. williamsianum, and R. wardii hybrids will be hardy in the Eastern United States and in other parts of this country can be decided only by performance of the plants themselves.

NURSERY OF JOH. BRUNS, BAD ZWISCHENAHN

The nursery of Joh. Bruns, established in 1876 at Bad Zwischenahn, is situated in the heart of the nursery area of Oldenburg and stands among the better known nurseries of the region. The deep sandy soils of relatively high organic content are ideally suited to the production of nursery crops of first quality. Conifers and ericaceous plants, such as Rhododendron, Erica, Calluna, Doboecia, and Pieris are grown extensively. Among plants obtained from this source are Rhododendron impeditum 'Bad Zwischenahn' (P.I. 269297), a seedling selection that originated in the Bruns Nursery, said to be more floriferous than the plant usually grown under the species name. Cotoneaster dammeri 'Skogsholmen' (P.I. 269293), is a low spreading plant of Swedish origin with smaller evergreen leaves than in the typical phase of the species. About a dozen introductions are expected from this source.

NURSERY OF JOH'S NISSEN, APRATH

Recently, a series of named seedling selections of the English yew (Taxus baccata L.), all new in cultivation, have been released by Joh's Nissen, nurseryman at Aprath, a small rural community midst the rolling hills near Wuppertal in the Ruhr. After a testing period of about 25 years, the selections most distinctive in habit and color of foliage are now offered to the nursery trade. The following are among the best of the named selections: T. baccata 'Corona' (P.I. 265289 and 266555), with a strongly spreading compact habit--the mother plant measured 69 feet around, 24 feet wide, and 6 feet tall in 1959; T. baccata 'Page' (P.I. 265294), an upright growing plant useful for hedges; T. baccata 'Praesident' (P.I. 265295), of spreading habit with nearly horizontal branches and dark-green foliage--the mother plant measured 70 feet around, 20 feet wide, and 10 feet tall in 1959; and T. baccata 'Regent', which resembles T. baccata 'Corona' but is more vigorous, making a much broader, spreading plant, as wide as tall.

NURSERY OF GEORG ARENDS, WUPPERTAL-RONSDORF

The nursery of Georg Arends was founded by the father of the present owner in 1888. Since that time the firm of Arends has become widely known in Europe for perennial plants, especially new selections and hybrids developed in the nursery. The prodigious efforts of Arends are carefully documented in a book entitled "Mein Leben als Gärtner and Züchter" ("My Life as Gardener and Breeder"), published in 1951. In this little volume we find the details concerning the history

of nearly 300 hybrids and selections developed in a period of 58 years by Arends. The scope of the breeding work covers a wide segment of the genera of herbaceous plants, exclusive of alpiners, hardy in gardens of Germany, such as Aster, Aconitum, Aquilegia, Bergenia, Dianthus, Rhododendron (including azaleas), Astilbe, Calluna, Geum, Hosta, Ranunculus, Phlox, Sempervivum, and Primula, to mention only a few. Many of the plants produced by Arends are now standard items in gardens of western Europe. Astilbes produced by Arends are still the best that are available.

Primroses have been a speciality of this nursery beginning with Primula obconica Hance when it was first brought to Europe from China, during the last quarter of the 19th century. The color range of the flowers in named selections of this primrose developed by Arends are among the best that have been produced in Europe. Some hospitals long have prohibited this plant from sick rooms on account of the poisonous alkaloid primulin found in this species. A hybrid, P. × arendsii 'Multiflora' (P.I. 261294), developed by this firm, closely resembles P. obconica but is nearly free of the alkaloid primulin.

A race of hardy hybrid azaleas, Rhododendron × arendsii, developed in this nursery, are suitable for the harsh upland climate of Germany. These hardy azaleas are derived from R. mucronatum D. Don 'Van Noordtiana' as the seed parent, crossed with cultivars of R. obtusum (Lindl.) Planch., such as 'Hinodegiri', 'Benegiri', 'Hatsugiri', and R. kaempferi Planch, as pollen parents. After 40 years of work, a few selections of R. × arendsii were released for general distribution in 1950, including 'Agger' (P.I. 269228); 'Gloer' (P.I. 269229); 'Lingese' (P.I. 269230); and 'Neye' (P.I. 269231).

Aconitum arendsii (P.I. 261291) is an outstanding new hybrid aconite developed from A. fischeri × A. wilsonii. The large violet-blue flowers, 1 1/2 to 2 inches long, are freely produced in autumn.

NURSERY AREA OF HOLSTEIN

The Pinneberg-Elmshorn-Rellingen area of Holstein, located a few miles north of Hamburg on the main route north to Denmark, comprises the largest nursery region of Europe, larger and with more nurseries than the Boskoop area of the Netherlands. The fertile soils, a mild climate, and a well distributed rainfall favor the growing of superior nursery stock relatively quickly and cheaply. Seedling conifers and deciduous trees for forest-tree planting in various parts of West Germany are produced in great abundance. Also found here is the largest concentration in Germany of nurseries devoted to ornamental plants. From this area lily-of-the-valley (Convallaria majalis L.) pips are shipped to the United States.

NURSERY OF TIMM AND COMPANY, ELMSHORN

Timm and Company is one of the largest and oldest firms in the Holstein area devoted to ornamental trees and shrubs. Established in 1860, the nursery covers more than 200 acres. An arboretum is a special feature where it is possible to see mature specimens of plants offered for sale by this establishment (fig. 35).



BN-16335

Figure 35. --Betula × koehnei C. K. Schn. Hybrid of B. papyrifera × B. pendula. Vigorous deciduous tree, intermediate between the parents. Nursery of Timm & Co., Elmshorn, West Germany.

Two rows of elegant fastigiata European hornbeams (Carpinus betulus 'Pyramidalis') border the road to the entrance of the main nursery. A purple-leaved beech (Fagus sylvatica 'Swat Magret'), a cultivar now much grown in Germany, originated as a seedling selection found in this nursery.

W. KORDES AND SON, ROSE GROWERS, ELMSHORN

Hybrid roses from the Kordes Nursery at Elmshorn are widely grown in Europe and America. A visit to this establishment offered an opportunity to learn something of the production methods used by one of the leading commercial rose growers of Europe. Vast fields of blooming plants are a conspicuous feature, but equally impressive is the experimental work in greenhouses where new roses are produced. Rosa multibracteata Hemsl. & Wils. is an important parent found to be useful in the production of a new race of hybrid garden roses. This pink-flowered species from China has contributed outstanding characteristics in foliage and flower color different from all hybrid roses now in cultivation.

NURSERY OF RUDOLF SCHMIDT, RELLINGEN

Regarded as one of the largest nursery establishments in the Holstein area, the list of plant materials offered by the firm of Rudolf Schmidt includes a wide selection of deciduous and evergreen trees, shrubs, and vines for North Temperate areas. Introductions from this source include Fagus sylvatica 'Cristata' (P.I. 262320), a selection of the European beech with cockscomblike, strongly crisped, and deeply dentate leaves; two rarely grown species of Neillia (Rosaceae), N. affinis (P.I. 262321) and N. thibetica (P.I. 262322); and a species of lilac, Syringa tigerstedtii (P.I. 262326), native of western China, only recently introduced to horticulture in Europe.

TANNENHOFT ARBORETUM, HOLSTEIN

The Tannenhof Arboretum, in the village of Schmalenbeck near Ahrensburg, a few miles north of Hamburg, was developed as a private country estate between 1910 and 1916. The extensive plantings consist principally of conifers, especially spruce (Picea), fir (Abies), arborvitae (Thuja), and yew (Taxus). The deciduous trees of most importance are cultivars of maple (Acer) and oak (Quercus), but specimen plants of Betula, Fagus, Alnus, Tilia, Populus, Prunus, Salix, and of some other genera are to be seen in the arboretum.

Cultivars of Quercus petraea, the durmast oak, include 'Falkenbergensis' (P.I. 272069) with leaves often 6 inches long and more deeply lobed than in the typical phase of the species; 'Giesleri' (P.I. 272070) with uniformly lobed yellowish-green leaves 3 to 4 inches long; and 'Muscaviensis' (P.I. 272071), a selection with uniformly lobed leaves, 6 to 7 inches long. Quercus robur 'Cucullata' (P.I. 262074) is a selection of the English oak, with cucullate (hood-shaped) leaves smaller than in the typical phase of the species.

In the collection are several rarely grown cultivars of the sycamore maple, including Acer pseudoplatanus 'Aureovariegatum', with yellow-margined leaves; 'Insigne', with leaves at first reddish, later white-powdery; and 'Simon Louis Frères', with leaves blotched white. A rarely cultivated selection of the Norway maple found here is A. platanoides 'Walderseer' with whitish flecked leaves. Acer negundo 'Crispum' is a selection of the American boxelder with strongly crisped leaves produced on a tree of dense habit with a round crown.

Associated with the arboretum is the Institute for Forest Genetics and Forest Tree Research (Institut für Forstgenetic und Forstpflanzenzüchtung), a government organization devoted to studies in plant breeding of forest trees.

HANNOVER

The Berggarten and the Royal Garden of Herrenhausen are legacies of Hanoverian kings and electors from the days when Hannover was an independent German state and center of cultural life. The spacious and elaborately ornamented Royal Garden of Herrenhausen, although originally designed for court functions, was the first garden of its kind in Europe to be opened to the public. This was in the early part of the 18th century (figs. 36, 37, 38). The Berggarten, located

nearby, also was developed under royal patronage, but as a botanic garden for scientific purposes.



Figure 36. --The grand "Allée of Herrenhausen," 1-1/4 miles long, planted in 1727 with 1,316 lime trees (*Tilia platyphyllos* Scop.). Royal Garden of Herrenhausen, Hannover, West Germany. (Courtesy of Ernst Bartens.)



BN-16356

Figure 37. --View of Royal garden, Herrenhausen, Hannover, West Germany, showing pleached lindens (*Tilia* sp.); *Agapanthus* sp. in tubs.



BN-16357

Figure 38. --Baroque garden, enclosed by hedge of European hornbeam (Carpinus betulus). Royal Garden of Herrenhausen, Hannover, West Germany.

BERGGARTEN

The Berggarten, founded in 1666, became well known as a botanical and horticultural institution, especially during the long tenure of the Wendland family, beginning in 1778 with Johann Christof, followed by his son Heinrich Ludolf, and ending with the grandson Herman, who died in 1903. The era of the Wendlands at the Berggarten is an illustrious chapter in the annals of European botany and horticulture, comparable to the four generations of the De Candolle family of botanists who lived at Geneva over much the same period. Herman Wendland, especially, is well known for his many technical publications, especially on the palms. He traveled widely over the world in search of plants to cultivate in the Berggarten. Several introductions grown in this garden have become well known in Europe and America (fig. 39).

Plants Cultivated for the First Time in the Berggarten

Anthurium scherzerianum Schott (Araceae), now much grown as a pot plant in western Europe. Introduced from Costa Rica by Herman Wendland in 1857.

Chamaedorea ernestii-augusti H. Wendl. (Palmae). A palm from Mexico, named by Herman Wendland for Ernest Augustus, elector of Hannover (1679-98).

Costus malortieanus H. Wendl. (Zingiberaceae). Handsome plant of the ginger family. Introduced by Herman Wendland from Costa Rica in 1857.



Figure 39. --View of the new conservatory of the Berggarten, Hannover, with tropical plants.
(Courtesy of Ernst Bartens.)

Philodendron wendlandii Schott (Araceae). An aroid collected in Costa Rica by Herman Wendland in 1857.

Mormodes wendlandii Reich. f. (Orchidaceae). An orchid named for Herman Wendland from material collected by him in Costa Rica in 1857.

Saintpaulia ionantha H. Wendl. (Gesneriaceae), the African violet. Introduced first to the Berggarten in 1891 from the Usambara Mountains of northeastern Tanganyika.

Solanum wendlandii Hook. f. (Solanaceae). One of the handsomest of ornamental climbing solanums collected by Herman Wendland in Costa Rica in 1857 and named for him by Joseph Hooker at Kew Gardens in England.

Zygopetalum wendlandii Reich. f. (Orchidaceae). An orchid collected by Herman Wendland in Costa Rica in 1857.

The Berggarten was the first place on the continent of Europe to cultivate Victoria amazonica (Poeppig) Sowerby, the giant water-platter lily from the Amazon River, grown from seeds received from Kew Gardens in 1850.

Some Specimen Trees in the Berggarten

Acer campestre var. austriacum (Tratt.) DC. A geographical variant of the English maple from southeastern Europe with a straight bole forming a roundheaded tree, 40 feet tall.

Acer saccharinum L. (Syn. A. dasycarpum Ehrh.), 50 feet tall. Friedrich Ehrhardt, a Swiss botanist who came to the Berggarten in 1779, based the type of A. dasycarpum on a tree which still exists in the Berggarten. Although Ehrhardt's name long has been relegated to synonymy, A. dasycarpum is still used among nursery people in western Europe as the Latin name of the American silver-maple.

Cercidiphyllum japonicum Sieb. & Zucc., kadsura tree. A pistillate specimen alleged to be the oldest in Europe.

Corylus colurna L., Turkish hazelnut. A specimen with a 30-foot branch spread and 30 feet tall (fig. 40).



BN-16358

Figure 40. --Corylus colurna, the Turkish hazelnut, a specimen 30 feet tall with a 30-foot branch spread, Berggarten, Hannover, West Germany.

Ginkgo biloba L. 'Fastigiata'. A specimen of fastigate habit, 60 feet tall.

Ginkgo biloba L. 'Pendula'. A selection with strongly pendulous branches, espaliered on a garden wall; planted in 1848 (fig. 41).

Pinus strobus L., eastern American white pine; planted in 1760, 40 feet tall.

Sophora japonica L. 'Columnaris'. A selection of fastigate habit, 40 feet tall.



Figure 41. --Ginkgo biloba 'Pendula', with strongly pendulous branches, espaliered on a garden wall; planted in 1848. Berggarten, Hannover, West Germany. (Courtesy of Ernst Bartens.)

Sophora japonica L. 'Pendula'. A large specimen grafted on a standard stem 15 feet tall, the pendulous branches with a 25-foot spread.

Sophora japonica L. 'Tortuosa'. The type tree of this selection, planted in 1763; now much grown in European nurseries and gardens.

Taxodium distichum (L.) A. Rich., swamp cypress, 60 feet tall.

Since World War II, a heath collection has been added to the Berggarten where Erica, Calluna, Daboecia and related plants of Ericaceae are grown.

PARK OF WILHELMSHÖHE, KASSEL

The park of Wilhelmshöhe with its extensively landscaped and highly ornamented gardens is one of the noblest examples of 18th century baroque landscaping in Germany. Formerly, Wilhelmshöhe was used as a summer residence of the German Kaiser. The "schloss," or castle, built by Kaiser Wilhelm I in the middle of the 18th century, dominates the lower stretches of the property around which formal gardens and an extensive collection of trees are planted. The renowned cascades and the monument to Hercules are well-known architectural features of Wilhelmshöhe. Much of the property consists of picturesque hills of beech-elm-Norway spruce-oak woodland, which rise nearly 800 feet above the valley of the Fulda River and the city of Kassel nestled at the foot adjacent to the park.

The flower gardens and spacious lawns adjacent to the schloss are in the English style. The woody plant collections, also centered in the area near the schloss, consist of about 1,000 species, varieties, and garden selections of deciduous trees and shrubs, broad-leaved evergreen shrubs, and conifers.

The towering specimens, 100 feet tall, of fastigate English oak (Quercus robur L. 'Fastigiata') (fig. 42) are thought to be the tallest in Europe. Beech



BN-16359

Figure 42. --Fastigate English oak (Quercus robur 'Fastigiata').
Specimens 100 feet tall, park of Wilhelmshöhe, Kassel, West
Germany.

(Fagus sylvatica) trees are found in many parts of the arboretum; a fine specimen of the fern-leaved beech (F. sylvatica 'Laciniata') is about 60 feet tall, (fig. 43), and an unusually large specimen of F. sylvatica 'Bornyensis' is about 75 feet tall. In habit, the latter plant is strongly fastigate, with pendulous branches nearly parallel to the main trunk, giving to the tree a bizarre aspect remindful of a waterfall.



Figure 43. --*Fagus sylvatica* 'Laciniata', a large specimen of the fern-leaved beech, botanic garden, Dortmund, West Germany.

Other Specimen Trees of Note at Wilhelmshöhe

Acer × *coriaceum* Tausch, a hybrid of *A. monspessulanum* × *A. pseudoplatanus*; 30 feet tall.

Acer platanoides L. 'Stollii', a rarely grown selection with bizarre misshapen leaves; 30 feet tall.

Aesculus hippocastanum L. 'Laciniata', the fern-leaved horsechestnut; 40 feet tall (fig. 44).

Aesculus hippocastanum L. 'Memmingeri', with leaves white-blotched when young; 50 feet tall.

Fagus sylvatica 'Tortuosa', a selection with contorted branches; 25 feet tall (fig. 45).



BN-16361

Figure 44. --Aesculus hippocastanum 'Laciniata'. Selection of the horsechestnut with deeply cut, fernlike leaflets. Park of Wilhelmshöhe, Kassel, West Germany.

of Kassel, is the earliest published account about the trees at Wilhelmshöhe. In this small volume, Moench listed 478 kinds of trees and shrubs growing in the park when the work was written. In 1955, Oswald Sauer published "Die Wilhelmshöher Parkgehölze," an annotated list of the plants now growing in the park. The text of Moench's 18th century work has been reproduced as part of this most recent work.

Figure 45. --Fagus sylvatica 'Tortuosa'. Naturally occurring phase of the European beech of slow growth and with contorted branches. Park of Wilhelmshöhe, Kassel, West Germany. (Courtesy of Oswald Sauer.)



Fraxinus spaethiana Lingelsh, a Japanese ash with petioles much swollen at the base; 30 feet tall.

Juglans regia L. 'Laciniata', the leaves laciniately lobed and fernlike; 50 feet tall.

Larix decidua L., European larch, 70 feet tall.

Liriodendron tulipifera L. 'Mediopictum', the leaves yellow-variegated; 30 feet tall.

Pinus ponderosa Dougl., western yellow pine, 60 feet tall.

Quercus castaneaefolia C. A. Mey., native of Asia Minor; 60 feet tall.

Quercus macranthera Fisch. & Mey., Persian oak, 50 feet tall.

A little book entitled "Verzeichniss ausländischer Bäume und Stauden des Lustschlosses Weissenstein bei Cassel," published in 1785 by Conrad Moench, professor of the Karolinum Institute

FOREST BOTANIC GARDEN, HANN. MÜNDE^{..}N

The Forest Botanic Garden (Forstbotanischen Garten) and forest institute at Hann. Münden is a research center primarily devoted to investigations on forest trees as related to the commercial production of timber, pulp, and related products. The gardens and collections of plants are maintained by the local municipality; the forest institute is a branch of the University of Göttingen.

Hermann Zabel was the founder of the garden and its first director from 1869 to 1895. During these years, he assembled the basic collections, many of which still exist. The plants mostly are hardy temperate species in Geneva, such as Betula, Carpinus, Ostrya, Populus, and Pyrus. Zabel was best known for the many hybrids produced at Hann. Münden during his long tenure at the forest garden. Several of his Spiraea hybrids, for example, are grown in Europe and America. Among these are S. × arguta Zab.; S. × revirescens Zab.; S. × blanda Zab.; and S. × difformis Zab.

A research project underway in the forest institute endeavors to find a practical method for grafting clonal selections of conifers in quantities for commercial planting. In modern reforestation work an important objective is to try to harvest marketable timber of uniform size. Trees grown from seedlings are not wholly satisfactory for this kind of work. When a suitable understock has been found experimentally, it may then become practicable to graft superior selections of pine, spruce, fir, and other conifers for commercial production.

PALMENGARTEN, FRANKFURT AM MAIN

From a small planting begun in 1869 by the citizens of Frankfurt am Main through their Palm Garden Society, the Palmengarten has grown into a major botanic garden of international repute. Since 1931, it has been under the supervision of the municipality of Frankfurt.

The garden of about 45 acres consists of an arboretum and plantings of hardy perennial and annual plants in the outdoor section; also, there is a lake and a rock garden. In a series of large conservatories, Fritz Encke, director, has brought together a first-rate collection of tropical plants admirably grown and splendidly displayed. The large palm house, built in 1869, is an imposing structure 156 feet long, 90 feet wide, and 50 feet high (fig. 46). Separate houses are provided for orchids, begonias, marantaceous plants, succulents, and water plants. An exhibition hall adjacent to the palm house is used for special showings, such as the display of fungi held in the autumn. This exhibition draws thousands of school children and adults out of a natural interest German people manifest in wild fungi as food.

Plants of special interest introduced from the Palm Garden include Erica 'Evening Glow' (P.I. 274445), allegedly a hybrid of E. cerinthoides L. with an unknown second parent; the tubular flowers, 1/2 to 1 inch long, which open white and change to rose as the flower ages, are produced in September and October. Typhonodorum lindleyanum (P.I. 265944) is a giant aquatic aroid from Madagascar. Ficus cannonii (P.I. 262355) is a handsome species of fig with papery thin, reddish leaves from the southwestern Pacific area.



Figure 46. --Inside the large palm house, Palmengarten, Frankfurt am Main, West Germany.
(Courtesy of Max Göllner.)

BOTANIC GARDEN, UNIVERSITY OF FRANKFURT, FRANKFURT AM MAIN

The botanic garden of the University of Frankfurt is a relatively new garden of about 20 acres on gently undulating terrain adjacent to the Palm Garden. A series of rock gardens have been constructed primarily for academic use in teaching of plant ecology. For example, an alpine garden simulates a habitat of the high European alps. Plants as well as stones, were brought from native habitats in an attempt to reproduce the original setting.

In the small conservatory, plants of special interest include Lycopodium hippuris (P.I. 274434), an epiphytic species from Java with leafy stems 2 feet or more long; and Selaginella grandis (P.I. 274437), a species from Borneo with thick, broad, lustrous-green fronds about 12 inches long. Insectivorous plants of more than passing interest are Nepenthes x dormanniana (P.I. 274435), a hybrid with pitchers 3 to 4 inches long, green and heavily spotted with red; and Roridula gorgonias Planch., from South Africa, a seldom-cultivated plant related to Drosera, with stems 12 to 15 inches tall and linear-lanceolate leaves covered with viscid glandular hairs efficaceous in catching small insects.

BOTANIC GARDEN, HAMBURG

The Botanic Garden of Hamburg with its verdant green canopy of large trees and pleasant walks is a welcome oasis for thousands of busy city people who use the garden daily for relaxation and inspiration about plants. Indeed, botanic gardens often serve this purpose in Germany. The garden in Hamburg, founded in 1810, is maintained by the municipality. The large building of the botanical institute located in the grounds is a part of the University, and students freely use the facilities for experiment and study. Conservatories full of tropical plants, a special greenhouse for the water-platter lily (*Victoria amazonica*), an extensive rock garden full of alpine plants, and a lake are the principal architectural features. Specimen trees are found in all parts of the garden. Several swamp cypress (*Taxodium distichum*) trees, 40 to 50 feet tall, are planted around a small pond to simulate a cypress swamp; some of the specimens already have developed knees. A fine specimen of *Fraxinus angustifolia* 'Lentiscifolia', a selection of the European narrow-leaved ash, with pendulous leaves about 10 inches long, grows near the railway station entrance to the garden. Beech (*Fagus sylvatica*) trees are numerous and include not only the wild green-leaved form but also several cultivated varieties. A specimen of the copper beech (*Fagus sylvatica* 'Atropunicea'), reputedly 125 years old, is now 60 feet tall with a branch spread of equal width. A columnar beech (*Fagus sylvatica* 'Fastigiata') is 40 feet tall. *Fagus sylvatica* 'Ansorgei' (P.I. 265249) is the rarest of the named selections of this tree found in Europe. The deep bronze-green linear-lanceolate leaves are about one-half inch wide and 4 to 5 inches long. This dwarf-growing selection arose as a seedling in the nursery of C. Ansorge, near Hamburg, in 1891. The old specimen in the botanic garden forms a large bush about 8 feet tall and nearly as wide (fig. 47).



BN-16362

Figure 47. --*Fagus sylvatica* 'Ansorgei'. Slow-growing phase of the European beech with linear-lanceolate leaves. Botanic Garden, Hamburg, West Germany.

BELGIUM



BN-16363

Noble Laurels (*Laurus nobilis*), specially trained for use in public doorways, Sander & Fils, nursery, Bruges.

BELGIUM

SOME FEATURES OF ITS HORTICULTURE AND GARDENS

Belgium long has maintained an enviable position in the production of ornamental plant crops, dating back to the early years of the 19th century when Louis van Houtte, Ambroise Verschaffelt, and J. J. Linden were leading names in the horticulture of this country with headquarters in Ghent. Belgium still ranks among the most important centers on the Continent for the commercial production of ornamental plants. For example, nearly 60 percent of the tuberous begonias imported into the United States come from Belgium, and vast quantities of Indian azaleas supply the European market with the best that is produced of this product. The city of Ghent ranks high among the flower capitals of Europe, for it was here that the first floral exhibition on the Continent was held in 1809. The Ghent Floralties, held every 5 years, is an exhibition of first importance in the great tradition established 142 years ago by this city.

Old gardens of the classical period of the 17th and 18th centuries are located in various parts of the country. The great park of Beloeil is an outstanding example of a classical garden in the Italian style. Peter Paul Rubens, the painter, built a garden around his villa in Antwerp about 1620. Part of the estate still exists much as the master designed it in the 17th century.

Modern private gardens, which skillfully incorporate features of the classical period with aspects of the modern era, abound in Belgium. Indeed, this country is highly sensitive to gardening in the tradition we learn to associate with European horticultural institutions (fig. 48).



BN-16364

Figure 48. --Large test plantings of *Thuja occidentalis* (right of roadway) in Terveuren Arboretum, near Bruxelles, Belgium.

NURSERY OF SANDER & FILS, BRUGES

The nursery of Sander & Fils is an old nursery long known for the production of orchids and other greenhouse plants, especially bromeliads (Bromeliaceae). Laurel trees (Laurus nobilis L.) are grown in the conventional way as globes on straight standards for use in hotel doorways and in bizarre shapes, with spirally coiled stems or with stems twisted in the form of a heart. There still remains a considerable demand for these plants on the European market.

HORTICULTURE FLANDRIA, BRUGES

Horticulture Flandria is a nursery devoted mostly to greenhouse plants, especially bromeliads (Bromeliaceae), ferns, various aroids (Araceae), and other foliage plants. Of special interest are Dracaena deremensis 'Flandria', a selection of the species with pink-variegated leaves; Ficus elastica 'Decora Variegata', a color mutant of F. elastica 'Decora' with pink- and white-variegated leaves; and Aristolochia arborea, a shrubby erect species from Guatemala.

ROYAL BOTANIC GARDEN OF BELGIUM, MEISE

The new national botanic garden of Belgium under development at Meise is located about 5 miles north of Bruxelles. It replaces the old botanic garden located in the heart of the Belgian capital for over 100 years. When completed, the new garden with its many expanded facilities will become one of the most elaborate botanic institutions of Europe. The spacious grounds at Meise covering 225 acres were given by the Royal family of Belgium for a national botanic garden. It is an imposing site where large specimen trees abound and verdant lawns provide sweeping vistas for some distance. An avenue of towering old beech trees (Fagus sylvatica) greets the visitor at the entrance to the property. An ancient chateau dating from A.D. 1130 stands on a small peninsula in the lake. At the water's edge at the opposite end of the same body of water is a fine group of cypress trees (Taxodium distichum) with well-developed knees. An extensive range of tropical conservatories called the Palais des Plantes will include separate departments for plants of Africa, Asia, America, and Australia, and there will be a large house for aquatics with a mangrove swamp and plants of Victoria amazonica, the water-platter lily of the Amazon river.

The collections under glass are rich in species from the Congo, and in ornamentals developed long ago in Belgium, many of which have all but disappeared from cultivation. Introductions from this source include a collection of croton (Codiaeum variegatum var. pictum) cultivars that originated in Europe; Chlorophytum alismaefolium (P.I. 275876), C. mannii (P.I. 275878), C. orchidastrum (P.I. 275879), C. macrophyllum (P.I. 275877), C. ukambense (P.I. 275880)--all species from the Congo region; Eugenia guilleminiana (P.I. 275917), a handsome foliage plant of the Myrtaceae; Eulophia horsfallii (P.I. 275918), a giant orchid from Mt. Ruwenzori in Africa; and Bignonia uncata 'Rodigasiana' (P.I. 275875), a handsome foliage climber with pewter-colored leaves with green edges.

The new garden at Meise is being developed by Walter Robyns, authority on the flora of the Congo and director of the garden.

GROENENDAAL ARBORETUM, BRABANT

The Groenendaal Arboretum located in pleasant countryside at Brabant about 10 miles south of Bruxelles was established in 1897. Here the Belgian government maintains a forest research station for investigations in silvicultural practices and breeding of forest trees. The arboretum is administered through the Ministry of Water and Forests of the Department of Agriculture.

Much of the research work concerns conifers, although soft-wood deciduous trees are studied for use in pulpwood, matches, and for other domestic purposes. The arboretum of about 26 acres is planted with a diversified collection of North Temperate Zone deciduous trees; the conifers are grouped together in a pinetum (fig. 49); a smaller fruticetum was created in 1916. A nursery of several acres



BN-16365

Figure 49. --Portion of the pinetum. Groenendaal Arboretum, Brabant, Belgium.

is used for experimental work by the research staff. The publication entitled "Catalogue de l'Arboretum de Groenendaal," by A. Galoux, published in 1955, gives a short history of this institution with climatic and meteorological data of the area. Trees listed in the inventory are accompanied by notes that indicate the rate of growth and other characteristics for each introduction as a potential forest tree for Belgium.

KALMTHOUT ARBORETUM, KALMTHOUT

The Kalmthout Arboretum, located along the main rail route about 20 miles north of Antwerp, stands among the most important private establishments of its kind in Europe. The older part of the collection dates from 1857, when Charles van Geert acquired the property for nursery purposes. For nearly a half century thereafter, this nursery was renowned in Europe as a source of exotic trees, shrubs, and selections of Indian azaleas (*Rhododendron indicum* Sweet), known as van Geert azaleas. From 1900 to 1951 the nursery was administered by the Societe Horticole under the management of Antoine Kort.

The de Belder family acquired the property in 1951 and quickly restored the derelict nursery of about 20 acres. Many old specimen trees exist throughout the property; around these, new introductions are constantly being added. An avenue of tall conifers (fig. 50), originally planted as a nursery row during the days of



Figure 50.--Avenue of conifers originally planted as a nursery row about 80 years ago. Kalmthout Arboretum, Kalmthout, Belgium (Courtesy of Lod. Severin.)

van Geert, is a prominent feature among the old trees. Some of the woody collections reputedly originated from introductions brought from Japan, about 1860, by the German-Dutch botanist and plant explorer, Philipp Franz von Siebold. There is a good collection of hardy bamboo at Kalmthout. A rare conifer in the collection is Pinus nigra 'Aurea', a selection of the Austrian pine with yellow-tipped leaves. A picturesque specimen of Stewartia koreana Rehd., about 15 feet tall, is divided into six large stems near the base. A seedling selection of Japanese maple, Acer palmatum 'Autumn Glory', originally raised at Kalmthout, is known for its brilliant yellow autumn leaves. Two selections of witch-hazel, Hamamelis × intermedia 'Jelena' (P.I. 261840), a hybrid with dull orange and yellow-edged petals, and H. × intermedia 'Ruby Glow' (P.I. 266603), with dark orange-red flowers, originated at Kalmthout. Each year a printed list of seeds available for exchange is sent to persons in Europe and abroad.



Carpinus betulus 'Pendula'. Plant 50 to 60 years old, 120 feet in circumference with a branch spread of 30 feet. Siebenbergen, Karlsau, Kassel, West Germany.

BN-16366

Taxus baccata 'Fastigiata Robusta' (P.I. 266556).

Vigorous, fast-growing fastigate plant of the English yew, with dark-green foliage. Young plants shown in nursery of Herman Zulauf, Schinznach-dorf, Switzerland, where this cultivar was originally produced. (Courtesy of Herman Zulauf.)





BN-16367

Quercus × turneri 'Pseudoturneri' (P.I. 261218); a hybrid oak allegedly of Q. ilex × Q. robur, half evergreen, with handsome dark-green leaves. Royal Botanic Gardens, Kew, Surrey, England.



Abies pinsapo 'Pyramidalis'. Branches ascending, forming a plant of pyramidal growth habit. Arboretum des Barres, Nogent, sur-Vernisson, Loiret, France.

BN-16368

ENUMERATION OF THE INTRODUCTIONS

Seeds and some cuttings were dispatched by the writer during the course of the exploration, but all other materials obtained as plants from nurseries or botanic gardens were shipped from the source. Arrangements for shipping the living materials was an important technical aspect of the trip. The Plant Quarantine Division of the U. S. Department of Agriculture made special dispensation in permitting materials to be established in sphagnum moss at the source before being shipped from Europe. In some instances material was grown in sphagnum moss for 12 months before shipment to the United States. This method was especially important to the survival of clonal selections of conifers and broad-leaved evergreens, such as Pinus, Abies, Ilex, and Berberis, plants notoriously difficult to import bare-root.

The enumeration of the introductions that follows is arranged alphabetically by genus and species. The plant name follows the Plant Introduction (P. I.) number and in some instances by the field number of the writer in parentheses.

An index listing Plant Introductions (P.I.) in numerical sequence follows the alphabetical list, p. 159.

Plants found in Europe and described by the writer as cultivars new in cultivation are as follows: Abies × vasconcellosiana Franco 'Amaral Franco' n. cv.; Buxus sempervirens L. 'Heinrich Bruns' n. cv.; Chamaecyparis lawsoniana (A. Murr.) Parl. 'Pena Park' n. cv.; Crataegus monogyna Jacq. 'Pink Corkscrew' n. cv.; Erica 'Evening Glow' n. cv.; Taxus baccata L. 'Amersfoort' n. cv. These plants have been described in accordance with Article 15, International Code of Nomenclature for Cultivated Plants, June 1961, with publication in the journal BAILEYA, vol. 9, p. 126. (1961).

* * * * *

Note to readers: In the list of introductions below, a number at the end of each plant description indicates the origin of the introductions, viz. 261178 Abelia chinensis. Plants from 4. (Locality number 4 is Hillier & Sons, Winchester, England. See reference list of collecting localities, page vii.)

A

ABELIA CHINENSIS R. Br. Caprifoliaceae
261178 Deciduous shrub, 3' to 4'
tall; leaves about 1" long; flowers
white, fragrant, abundantly
produced. China. Plants from 4.

ABELIA FLORIBUNDA (Mart. & Gal.) Decne.
261179 Evergreen shrub, 6' to 10'
tall; leaves small, shiny; flowers
pendulous, rose-red, 1 1/2" to 2"
long, the largest of the genus.
Mexico. Tender plant. Plants from
4.

ABELIA GRAEBNERIANA Rehd. 'VEDRARIENSIS'

261180 Selection of garden origin
that differs from the typical
phase of the species in having
larger leaves and flowers with
larger and darker flecks. A decid-
uous shrub, to 10' tall; flowers
1" long, pink with a yellow throat.
A Chinese species. Plants from 4.
ABELIA SCHUMMANNII (Graebn.) Rehd.
261181 Deciduous shrub; differs
from A. graebneriana in smaller
nearly entire obtusish leaves and

the deeper colored flowers. China.
Plants from 4.

ABELIA SERRATA Sieb. & Zucc.

261182 Deciduous shrub, 3' to 4' tall; flowers white, sometimes yellowish or pinkish. Japan. Not the most attractive of the genus, but quite hardy and possibly a useful plant in breeding work. Plants from 4.

ABIES ALBA Mill. Pinaceae.

Lofty evergreen tree of the mountains of central and southern Europe. Marked by the pectinately arranged leaves white underneath and the nonresinous buds. Much planted in western Europe for ornament. Several cultivars are grown. 280465 'PENDULA'. Weeping silver fir. Branches strongly pendulous; trunk erect. A fine specimen, 30' tall, exists in the Poort Bulten Arboretum, Oldenzaal, Netherlands. Plants from 12.

'PYRAMIDALIS'. Sentinel silver fir. Branches strongly ascending, forming a pyramidal-shaped, densely branched tree.

266389 Plants from 33.

266698 Plants from 28.

ABIES AMABILIS (Loud.) Forbes

'COMPACTA'

266699 Dwarf habit, 2' to 3' tall, with a densely tufted crown of horizontally spreading branches, forming a rather dense bush. Origin in Pinetum Blijdenstein, Hilversum, Netherlands, as a chance seedling. Plants from 28.

ABIES BALSAMEA (L.) Mill.

Balsam fir. A widely distributed evergreen tree from the mountains of West Virginia northward to Canada and Labrador. Fairly successful in northern Europe, but hardly worth growing in the United States except in areas where it is a native plant. Several cultivars are grown in Europe.

266783 f. HUDSONIA (Bosc ex Jacques) Fern. & Weatherby. Dwarf, slow-growing wild phase; all aspects of the plant abbreviated, ultimately forming a specimen 2 1/2' tall; differs from A. balsamea 'Nana' in having the

leaves laterally flattened on the branches. Much grown in Great Britain and in gardens of northern Europe. Plants from 29.

266590 'NANA'. Not strikingly distinct from f. hudsonia, but it differs in the radially disposed leaves on the stems and twigs. The two are of the same habit. Plants from 23.

ABIES CEPHALONICA Loud. 'NANA'

280134 Dwarf Greek fir. Dwarf, slow-growing cultivar, with very abbreviated parts. Rare in European collections. Plants from 28.

ABIES CILICICA (Ant. & Kotschy) Carr.

265027 Cilician fir. Lofty tree eventually to 90' tall; closely related to the Nordmann fir. Native of Cilician Taurus mountains of Turkey. Hardy in North-eastern United States. Plants from 7.

ABIES CONCOLOR (Gord.) Hoopes

Handsome tree of Western United States with distinctive usually strongly glaucous, long needles. Native of Colorado, New Mexico to California. Much grown in many parts of western Europe. Several cultivars are known.

266700 'COMPACTA'. Dwarf, slow-growing cultivar, irregular in shape, forming a dense bush 2' to 3' tall. Rare in European collections. Plants from 28.

266701 'VIOLACEA'. Purplecone white fir. Foliage bluish-white. Fairly common in cultivation in northern Europe. Plants from 28.

ABIES FAXONIANA Rehd. & Wils.

266460 Faxon fir. A lofty tree upward of 100' tall in the wild state. Western Szechwan, China, alt. 8,000 to 11,000'. Introduced to cultivation originally by E. H. Wilson. Plants from 12 and 17.

ABIES FORRESTII Craib

262882 Forrest's fir. Close relative of A. delavayi Franch. Mature trees to 65' tall; a remarkably handsome plant when young, with brilliant, dark-green leaves above and with nearly pure-white stomatic bands beneath. Yunnan and Szechwan, China. Plants from 32.

ABIES × INSIGNIS Carr. ex Bailly

Hybrid of A. nordmanniana × A. pinsapo. This hybrid fir has arisen at separate places in Europe at different times. One of the best selections for ornamental use is the following: 266463 'PARDEI'. Parde fir. Densely branched and forming a gradually tapering specimen about 40' to 50' tall; leaves shorter than in other selections of the hybrid, radially arranged on the branches and branchlets, very deep-green, lustrous. Long of uncertain affinity, but now we have an accounting of this plant in the critical monograph of the firs cultivated in Portugal, entitled ABETOS, by J. do Amaral Franco, in Anais do Instituto Superior do Agronomia, Vol. XVII (1950). Plants from 17.

ABIES KAWAKAMII (Hayata) Ito

269328 Formosan fir. Lofty evergreen tree, over 50' tall in Formosa. Closely related to the Japanese A. mariesii Mast. from which it differs in the longer cones and black seeds; less hardy than the Japanese tree. Plants from 4.

ABIES KOREANA Wils. 'NANA'

266702 Korean fir. Evergreen tree more dwarf than the type. Handsome plant, especially in the young state when the erect violet-blue cones often are produced in abundance on trees no taller than a man. Hardy in Northeastern United States. Highly prized plant in northern Europe. Plants from 28.

ABIES LASIOCARPA var. ARIZONICA

(Merriam) Lemm.

Arizona fir. The phase of the species native of Arizona is indeed closely related to the typical phase found in the mountains of Northwestern United States, but said to differ mainly in the thicker, spongier, and lighter colored bark. Mountains of northern Arizona and possibly adjacent areas.

265208 'ARGENTEA'. Selection with very silvery twigs. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

266645 'COMPACT'. Seedling selection forming a dense, regular, broadly conical plant, almost as wide as tall, with extremely silvery-blue foliage. Origin in nurseries at Boskoop, Netherlands about 1938. Plants from 26.

ABIES MARIESII Mast.

265209 Maries fir. Large tree closely related to A. veitchii Lindl., differing in the soft-pubescent shoots and shorter very blunt leaves. Mountains of central Honshu, Japan. Plants from 12.

ABIES MOROCANA Trabut

266461 Morocco fir. Closely related and by some authors only a geographical variant of A. pinsapo, but the bracts of the cone are not exerted in the Moroccan species. Native of Morocco, alt. 5400'. Probably as hardy as A. pinsapo. Plants from 17.

ABIES NEBRODENSIS (Lojac.) Mattei

266462 Sicilian fir. Close relative of A. alba and A. cephalonica but confined to a very small area in the mountains of Sicily, now nearly extinct. Fine specimens exist at Arboretum des Barres, Nogent-sur-Vernisson, France. Plants from 17.

ABIES NORDMANNIANA (Steven) Spach

Caucasian fir. A lofty, elegant tree reaching 100' tall in well-developed specimens with glossy-green, relatively broad leaves. Native of Asia Minor, Caucasus, and Greece. Several cultivars are grown in Europe. A much-esteemed tree in cultivation.

266703 'AUREOSPICATA'. Cultivar with leaves golden-yellow tipped. Selection originally from H. A. Heese Nursery, Weener/Ems, W. Germany. Plants from 28.

ABIES PROCERA Rehd.

Noble fir. Syn. A. nobilis Lindl. A handsome species in the mountains of Washington and Oregon with glaucous-blue leaves and whitish

- bark. The cones, often 6" long and half as wide, are the largest of all the true firs. Much cultivated in northern Germany where it grows with the vigor of a native plant. A particularly fine planting is located in the nursery of G. D. Bohlje, Westerstede, Oldenburg, W. Germany.
- 266704 'PROSTRATA'. Plant variable as to habit, sometimes grafted on a standard and the branches pendulous, or when grown on its own roots the branches are horizontally spreading, making a plant about 5' in diameter. The leaves are very glaucous. A fine specimen exists in the Pinetum Blijdenstein, Hilversum, Netherlands. Plants from 28.
- ABIES RECURVATA Mast.
- 266705 Distinct species with the needles often 2" long and very much recurved. A very large tree in the wild, over 100' tall. Western Szechwan, China. First introduced to cultivation by E. H. Wilson in 1910. Plants from 28.
- ABIES SACHALINENSIS (Fr. Schmidt) Mast.
- 266464 Sakhalin fir. Large tree related to A. sibirica Ledeb. with needles about 1 1/2" long and cones about 3" long. New twigs subject to frost damage since this species tends to make new growth early in spring. Northern Japan, Sakhalin, and Kurile Islands. Plants from 17.
- ABIES x VASCONCELLOSIANA Franco
- 'AMARAL FRANCO' (Meyer) in BAILEYA vol. 9, p. 127 (1961).
- 277743 (7421) Pena fir. Natural hybrid of A. pindrow (pistillate) x A. pinsapo (staminate). Evergreen tree 40' or more tall, of pyramidal habit, more densely branched than either parent. Leaves 3/8" to 1 1/4" long in the hybrid vs. 1 1/4" to 2 3/4" long in A. pindrow and 1/2" to 3/4" long in A. pinsapo. Leaf tips obtuse in the hybrid vs. emarginate in A. pindrow and somewhat acute in A. pinsapo. Specimen now about 55 years old. Named for Prof. João do Amaral Franco of the Instituto Superior de Agronomia, Lisbon, Portugal, who described this hybrid in Portugaliae Acta Biologica (B) 2: fasc. 1/2, pp. 141-156 (1946). Plants from Parque da Pena.
- ABIES x VILMORINII Mast.
- 265210 Hybrid of A. cephalonica x A. pinsapo. Origin at Vilmorin Arboretum, Verrieres, France in 1868. Plants from 12.
- ACER AMPLUM Rehd. Aceraceae.
- 277744 Large tree with smooth gray bark; leaves 3- to 5-lobed; twigs green and white punctate. Yunnan, Hupeh, and Kiangsi, China. Plants from 4.
- ACER CAMPBELLII Hook. f. & Thoms. ex Brandis
- 269605 Campbell's maple. Tree with large, prominently veined 5- to 7-lobed leaves. Young growth reddish. Handsome maple, probably hardy only in mild temperature areas. Native of eastern Himalayas. Plants from 4.
- ACER CAMPESTRE L.
- English maple, hedge maple. This European species, long cultivated in American gardens, is one of the most versatile of hardy ornamental trees. It is still not widely grown. At least two distinct geographical variants are known in wild populations, namely the western Europe phase which produces a shrubby small tree, and the phase of southeastern European forming a straight boled tree to 30' tall. More than a dozen cultivars of this species are grown on the Continent.
- 265582 'PULVERULENTUM'. Low-spreading tree with leaves strongly white-speckled. Useful as a foliage plants for contrast. Plants from 12.
- 277745 'SCHWERINII'. Young leaves blood-red, changing to dull-red, and to blackish-green in summer. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 4.
- ACER CAPPADOCICUM Gleditsch
- Deciduous tree; leaves 5- to 7-lobed, 3" to 6" across, smooth, the lobes broadly triangular; flowers in corymbs about 2" long, yellow.

- Much grown in Europe, Caucasus, and Asia Minor.
- 266591 'AUREUM'. Tree to 50' tall, with a straight bole and round-headed crown; leaves of the twigs yellowish through the growing season. Origin in Germany about 1914. A good specimen plant grows in the Royal Moerheim Nursery, Dedemsvaart, Netherlands. Plants from 23.
- 277746 f. TRICAUDATUM (Rehd.) Rehd. Leaves smaller than in the typical phase and 3-lobed. A wild variant introduced from west Hupeh, China in 1901. Plants from 4.
- ACER CAUDATUM var. MULTISERRATUM (Maxim.) Rehd.
277747 Tree to 30' tall; leaves 5- to 7-lobed, glabrous beneath. A variant of the species from southwestern China. Plants from 4.
- ACER FLABELLATUM Rehd.
277748 Closely allied to A. campbellii of the Himalayas and should be considered to be geographically distinct from it. Deciduous tree to 30' tall; twigs with smooth white-striped bark; leaves about 6" wide, usually 7-lobed, the veins prominent; handsome maple still barely known in cultivation, but growing in British gardens as a result of Forrest's introductions from Yunnan, China. Material from Caerhays Castle, Cornwall, England being propagated by 4.
- ACER FRANCHETII Pax
277749 Deciduous tree, about 20' tall, with large 3-lobed leaves, the blades 3" to 5" long and as wide, hairy beneath. Handsome species. Central China. Plants from 4.
- ACER GROSSERI var. HERSII (Rehd.) Rehd.
260743 Tree, 20' tall, with spreading to arching branches; the variety differs from the typical phase in having leaves with elongate-acuminate lateral lobes as long as the middle lobe. Now grown rather widely in western Europe. Native of Honan, Hupeh, Anhwei, and Chekiang, China. Seeds from Arboretum des Barres, Nogent-sur-Vernisson, France.
- ACER HENRYI Pax
277750 Tree to 30' tall; leaves trifoliolate; fruit red, in pendulous racemes 6" to 9" long. Distinct among the trifoliolate maples in having toothless leaflets; foliage in autumn crimson. Plants from 4.
- ACER HOOKERI Miq.
277751 Closely akin to A. davidii and probably only a geographical variant of it. Native of the eastern Himalayas. Plants from 4.
- ACER JAPONICUM Thunb. 'AUREUM'
266483 Selection with pale golden-yellow leaves throughout the growing season; branches erect and rather densely branched. Makes a compact bush. Much grown in western Europe. Plants from 27.
- ACER LAEVIGATUM Wall.
269626 Tree, 15' to 20' tall, with semievergreen coriaceous leaves 3" to 6" long, toothless, prominently netveined. Eastern Himalayas and widespread in southwestern China. In Europe grown only in the mildest parts of the British Isles. Plants from 4.
- ACER LAXIFLORUM Pax
265583 Deciduous tree, to 40' tall in the wild, in cultivation usually a large shrub with reddish twigs and white-striped bark. Now rather widely cultivated in western Europe. Yunnan and Szechwan, China. Plants from 12.
- ACER LOBELII Tenore
266471 Lobels maple. Deciduous tree 50' to 60' tall, with ascending branches giving a fastigate aspect to the tree. Leaves palmately 5-lobed with the aspect of A. platanoides. Southern Italy. Plants from 42.
- ACER NEGUNDO L.
This native eastern American maple is one of the most widely grown ornamental trees in Europe. The great variability of this plant is expressed in the fact that at least 37 cultivars are grown on the Continent from material selected almost entirely in European gardens.

'AURATUM' (pistillate). Syn. A. negundo 'Odessanum'. Leaves uniformly golden yellow throughout the growing season. Much grown in gardens of Europe. First grown in Germany about 1891.

261827 Plants from 36.

265585 Plants from 12.

266484 Plants from 41.

'AUREOVARIEGATUM'. Leaves blotched yellow. Much grown in Europe; known first in Belgium about 1859.

261826 Plants from 36.

266516 Plants from 21.

'ELEGANS'. Syn. A. negundo 'Aureo-marginatum'. Leaves yellow-margined. Much grown in Europe. Origin in Germany about 1885.

265584 Plants from 12.

277752 Plants from 4.

266650 'LOMBARTS'. Leaves white-striped. Now widely grown in the Netherlands and adjacent areas of Europe. Origin at Pierre Lombarts Nursery, Zundert, Netherlands.

Plants from 31.

277753 var. VIOLACEUM (Kirsch.)

Jaeg. Differs from the typical phase in the glaucous, glabrous branchlets. Native of the northern Great Plains, U.S.A. Plants from 4.

ACER OPALUS Mill.

Italian maple. Deciduous tree, 30' to 50' tall, of rounded habit, sometimes only a large bush; leaves 2 1/2" to 4 1/2" wide, shallowly 5-lobed. An elegant maple noted for the clear yellow flowers and attractive foliage.

Southern and central Europe.

Widely grown in Europe.

265586 'AURATUM'. Selection with yellowish new leaves on the twigs. Plants from 12.

ACER OSMASTONII Gamble

Deciduous tree, to 90' tall in the wild. Closely akin to A. laevigatum and A. campbellii. Sikkim Himalaya, 6,000' to 7,000' alt.

269607 Plants from 4.

277754 Plants from 4.

ACER PALMATUM Thunb.

Japanese maple. Much grown in western Europe and in the British Isles. A very good collection of

cultivars is growing at the Experiment Station, Boskoop, Netherlands. Another old collection is at the Arboretum Kalmthout, Kalmthout, Belgium.

266651 'AUTUMN GLORY'. Leaves in autumn golden yellow. Originated at Arboretum Kalmthout, Kalmthout, Belgium, Plants from 31.

277755 'CRIPPSII'. Dwarf-growing plant, 3' to 4' tall, of twiggy habit; leaves clustered at the branch ends. Curiosity only. Origin in England. Plants from 4.

266706 'DECOMPOSITUM'. Plant dwarfish, about 6' tall; petioles reddish; leaves more or less clustered at the branch ends. Plants from 28.

266711 'DISSECTUM PAUCUM'. Leaves finely dissected. Plants from 28.

266391 'DISSECTUM RUBRUM'. Plant dwarfish, about 5' tall, spreading; leaf margins bronzy; petioles red. Mature specimens at Experiment Station, Boskoop, Netherlands. Plants from 33.

266712 'DISSECTUM VARIEGATUM'. Low-growing, 4' to 5' tall; twigs green; leaves nearly all green, except some of the margins white-variegated and a few leaves with reddish margins. Grown in the Netherlands. Specimens at Experiment Station, Boskoop, Netherlands. Plants from 28.

266392 'DISSECTUM VIRIDIS'. With finely dissected fernlike foliage, light green throughout. Grown in the Netherlands. Plants from 33.

266710 'ELEGANS PURPUREUM'. Large shrub 15' tall, spreading habit; leaves purplish above, dull, greenish beneath and lustrous; twigs green. Grown in the Netherlands. Specimens at Experiment Station, Boskoop, Netherlands. Plants from 28.

265211 'FREDERICI-GUILELMI'. Leaves dissected to the petiole and then again deeply pinnatifid and lacinate; new growth deep red on upper side; plants with the normal habit of A. palmatum. Origin in Belgium. Plants from 12.

266707 'NICHOLSONII'. Very similar to *A. palmatum* 'laciniatum', but the lowest pair or leaflets horizontally spreading and cordate (in 'laciniatum' the base straight), the blades reddish. Plants from 28.

266708 'RIBESIFOLIUM'. Hardly, if at all, distinct from 'Septemlobum' or 'Osakazuki', although the lobing of the leaves is slightly deeper in 'Ribesifolium'. Grown in the Netherlands. Plants from 28.

266390 'RUBRIFOLIUM'. Leaves deeply dissected, purplish-red. Plants from 33.

266709 'RUFESCENS'. Shrub 12' tall, spreading, of rather open habit; leaves green, the petioles reddish. Grown in the Netherlands. Mature specimens at Experiment Station, Boskoop, Netherlands. Plants from 28.

265212 'SCHWERINII'. Leaves dissected to the petiole; new growth reddish. Origin in Germany. Plants from 12.

277756 'SENKAKI'. Coralbark maple. Upright growing habit with superb golden-yellow autumn foliage; winter twigs coral-red. Japanese origin. Plants from 4.

ACER PLATANOIDES L.

Norway maple. Native of Europe to the Caucasus. Widely planted, especially in northern Europe, as a street and park tree. Its variability has produced a large number of cultivars, at least 43 are currently in cultivation on the Continent.

266652 'DRUMMONDII'. Leaves with wide white margins and green centers, of normal size for the species. One of the most attractive maples with variegated leaves. Much planted in Europe. Origin in England about 1903. Plants from 31.

266592 'REITENBACHII'. Leaves of the new twigs purplish on upper side, green beneath, becoming much redder in summer and continuing into autumn. Grown rather widely in western Europe. Origin in Germany. Plants from 23.

265587 'STOLLII'. Tree to 30' tall; leaves irregularly shaped, some stunted and others less deeply lobed than in the normal type. Good specimens exist in Park of Wilhelmshöhe, Germany. A curiosity. Plants from 12.

ACER PSEUDOPLATANUS L.

Sycamore maple. Occurs widely over Europe to western Asia. It is one of the commonest of street trees on the Continent and it makes outstanding specimens in many parks. It is a very variable plant, especially in the lobing of the leaves and in leaf pigmentation from those all green to those developing purple coloration on the underneath side. At least 54 cultivars of the Sycamore maple are known on the Continent.

261828 'BRILLIANTISSIMUM'. Very similar to *A. pseudoplatanus* 'Prinz Handjery' but the underside of leaves green, not red, at first golden-yellow, later bright green flecked; tree dwarfish. Origin in England. Plants from 36.

266593 'SPAETHII'. Wineleaf sycamore maple. Leaves beneath purplish-crimson all summer. Plants from 23.

ACER RUBRUM L.

American red maple. Widely grown in Europe as a street tree and in parks. It colors quite well some years. At least 16 cultivars are known on the Continent, including several recently introduced ones of American origin.

265588 'WAGERI'. Branches pendulous; leaves larger than in the typical phase. Plants from 12.

ACER RUFINERVE Sieb. & Zucc.

'ERYTHROCLADUM'

262242 Twigs reddish and also the nerves of the leaves beneath. The normal phase of the species produces green twigs. Origin in Royal Moerheim Nursery, Dedemsvaart, Netherlands. Plants from 32.

ACER SACCHARINUM L.

American soft maple. In Europe this is a favorite and well-known ornamental tree, having been grown since the 18th century. Natural variation in this species has been

- long recognized by Europeans, resulting in numerous cultivars now found in parks, along streets, and in gardens, with 29 listed in *Handbuch der Laubehölze* by G. Krüssmann, 1959.
- 266653 'ASPLENIFOLIUM'. Leaves very finely cut and fernlike, more so than in A. saccharinum 'Laciniatum'. Of Dutch origin, about 1925, now much grown in the Netherlands. Plants from 31.
- 266654 'MONSTROSUM'. Branches often compressed and twisted, with abbreviated twigs more or less stunted in growth. Grown in Europe before 1893. Plants from 31.
- ACER TARONENSE Hand.-Mazz.
269608 Syn. A. laxiflorum var. longilobum Rehd. Deciduous tree about 30' tall with smooth blackish-brown bark; leaves 5-lobed, triangular-ovate or ovate-oblong in outline, 2 1/4" to 6" long, 1 1/2" to 3 1/2" wide, doubly serrate, cordate or nearly so at base, glabrous above, paler beneath, densely rufous pubescent on nerves while young; flowers in racemes 2 1/2" to 3 1/4" long. Closely related to A. laxiflorum and A. forrestii Diels. Grown under Forest 9059, western flank of Shweli-Salween divide, alt. about 9,000', Yunnan, China. Plants from 4.
- ACER TRUNCATUM Bunge 'ALBOVITTATUM'
265589 Small tree about 20' tall; leaves white-bordered, the lobes often entirely white. A distinctive species with truncate leaves. Origin in Germany. Plants from 12.
- ACER VELUTINUM Boiss.
277758 var. VANVOLXEMII (Mast.) Rehd. A wild variant of the species with leaves to 12" across. Remarkable for the large leaves. Caucasus. May be hardier than the typical phase of the species. Plants from 4.
- ACER VILLOSUM Wall.
277757 Tree; leaves 3- to 5-lobed, 6" to 8" across, hairy beneath. Himalayas. Plants from 4.
- ACER WILSONII Rehd.
277759 Large tree, 30' to 40' tall; leaves 3-lobed, sometimes with small basal lobes, 3" to 4" across. Distinct and attractive. Hupeh, China; introduced first to cultivation by E. H. Wilson in 1907. Plants from 4.
- ACER x ZOESCHENSE Pax 'ANNAE'
Hybrid of A. campestre x A. lobelii. New foliage reddish, with somewhat the aspect of A. platanoides 'Schwedleri'. Origin in Germany about 1908, in recent years much grown in the Netherlands.
265590 Plants from 12.
266485 Plants from 27.
266655 Plants from 31.
- ACHIMENES. Gesneriaceae.
The cultivated achimenes include hybrids and species of mixed origin. The present group of introductions include a suite of cultivars with brilliantly colored flowers of outstanding ornamental merit. The following collection from 38.
262329 'AMBROISE VERSCHAFFELT'. Flowers white with petunia-purple veins; stems short. Originated in the 19th century in Europe.
262330 'LEONORA'. Flowers large, entrance of the throat marked with bronze yellow. Origin by C. G. Van Tubergen, Haarlem, Netherlands.
262331 'LITTLE BEAUTY'. Flowers clear cerise-pink; stems short.
262332 'MADUNA'. Flowers violet-pink with a white throat; leaves strongly dark-veined. Strong grower with rigid, erect stems. Blooms late. Partially derived from A. grandiflora DC.
262333 'MAGNIFICENT'. Flowers petunia-purple; leaves bronzy.
262334 'MASTER INGRAM'. (syn. A. 'Milton') Flowers large, strawberry-red with orange center and a long tube. Very distinct. Perhaps derived from A. heterophylla DC.
262335 'MAUVE QUEEN'. Flowers deep-blue, throat with bronze shading. With the aspect of A. longiflora.

- 262336 'PAUL ARNOLD'. (syn. A. grandiflora) Somewhat like A. longiflora, but the flowers quite reddish and long-pedicellate; leaves rusty beneath.
- 262337 'PURPLE KING'. Flowers petunia-violet; leaves bronzy; plants dwarf and compact. Blooms early.
- ACHIMENES LONGIFLORA DC. 'MARGARITA'
262338 Flowers pure white; leaves oval or ovate-oblong, toothed. The species is from Guatemala. Plants from 38.
- ACONITUM × ARENDSII Arends
Ranunculaceae.
261291 Hybrid of A. fischeri × A. wilsonii. Vigorous perennial about 30" tall, with thick tuberous roots; leaves deep-green, glossy; flowers 1 1/2" to 2" long, violet-blue. Origin about 1945, in Arends Nursery, Wuppertal-Ronsdorf, W. Germany. Plants from 6.
- ADIANTUM POIRETII Wikstr.
Polypodiaceae.
263974 Densely tufted plant, with black stipes 12" to 15" long. Plants from 18.
- AEONIDIUM ARBOREUM (L.) Webb & Berth.
'MOORKOP'. Crassulaceae.
259952 Selection with very dark-purple leaves. A subshrub 2' to 3' tall, branches ending in a dense rosette. Origin at Institute of Experimental Plant Breeding, Wageningen, Netherlands. Plants from 44.
- AESCLUSUS × CARNEA Hayne
Hippocastanaceae.
Hybrid of A. hippocastanum × A. pavia. Usually develops as a tree with the habit of A. hippocastanum; flowers vary in color from deep rose-pink to light-pink. Numerous named selections are grown in Europe.
265591 'AUREOMARGINATA'. Selection with yellow-margined leaves. Origin in Europe. Plants from 12.
265592 'PLANTIERENSIS'. Flowers whitish, suffused with pink. Origin 1843 in France. Plants from 12.
- AESCLUSUS CHINENSIS Bunge
255993 Chinese horsechestnut. Tree to 80' tall in the wild; usually less in cultivation; leaves of 5 to 7 leaflets, each 5" to 8" long; flowers white, 1/2" to 3/4" long. Related to A. indica and A. californica Nutt. Northern China. Plants from 4.
277760 Plants from 4.
- AESCLUSUS HIPPOCASTANUM L.
Native of n. Greece and Albania. About 15 cultivars grown in western Europe.
265593 'MEMMINGERI'. Selection with the leaves in spring white-flecked. Grown first in Germany, 1855. Tree of normal habit. Plants from 12.
- AESCLUSUS INDICA (Cambess.) Hook.
261214 (7380) Deciduous tree, to 100' tall in the wild, reaching 70' in England where it regularly flowers and fruits. Excellent examples exist in the Royal Botanic Gardens, Kew, England. Leaves composed of 5 to 7 leaflets; panicles of flowers to 12" or even to 16" long, white. In flower 2 weeks after A. hippocastanum, and quite as beautiful. Northwestern Himalayas. Should succeed in the latitude of Washington, D.C. Seeds from 5.
- AESCLUSUS × NEGLECTA Lindl.
'ERYTHROBLASTOS'
265594 Hybrid of A. octandra × A. sylvatica. Tree to 60' tall; young expanding leaves various shades of rose to salmon-pink, later becoming yellowish-green. Known in Europe at least since 1826. Striking plant in spring. Plants from 12.
- AESCLUSUS TURBINATA Bl.
261267 (7239) Japanese horsechestnut. Deciduous tree to 100' tall in wild plants, similar to A. hippocastanum, but in flower later and with fruits that resemble A. pavia L. Not so handsome as the common horsechestnut. Japan. Seeds from Arboretum des Barres, Nogent-sur-Vernisson, France.
- AESCLUSUS WILSONII Rehd.
277761 Tree, closely related to A. chinensis, differing in technical characters, with panicles somewhat longer and the individual

flowers larger. Central and west China. Plants from 4.

AGAPANTHUS CAULESCENS Spreng.

Liliaceae.

275866 Evergreen perennial similar to A. africanus (L.) Hoffmgg. but differs in the leaves that arise from a distinct stem several inches long; flowers blue-violet. Grown first in nursery of Sprenger at Naples in 1890's from imported seeds from Transvaal. Combines characters of both sections of the genus and may be a hybrid. Not known in the wild. (cf. Jour. Roy. Hort. Soc. 79: pt. 1. p. 25.) Plants from 1.

AGLAOMORPHA HERACLEUM (Kunze) Copel.

Polypodiaceae.

262379 Rhizomatous; fronds 3' to 6' long, often 2' wide, the upper part of rachis broadly winged. Java and Philippines. Plants from 30.

ALANGIUM PLATANIFOLIUM (Sieb. & Zucc.)

Harms. Alangiaceae.

265213 Syn. Marlea platanifolia Sieb. & Zucc. Deciduous large shrub to small tree with very pithy and slightly downy branches; leaves simple, cordate-orbicular, 4-angled, palmately 3- to 5-lobed; flowers white, about 1" long, produced in leaf-axils of current growth. Japan and China. Plants from 12.

ALNUS INCANA (L.) Moench

Betulaceae.

Gray alder. Deciduous tree, the young shoots covered with a short gray down. Europe to the Caucasus, naturalized in Northeastern U.S. 266594 'AUREA'. Young shoots and leaves yellow throughout the growing season. Plants from 23. 266393 'PINNATA'. Syn. A. incana 'laciniata'. Thorn-leaved alder. Leaf blades pinnately divided into 6 to 8 pairs, the most attractive of the cut-leaved alders. Plants from 21.

ALNUS MAXIMOWICZII Callier

265595 Shrub to small tree, with gray bark; leaves 2" to 4" long, broadly ovate, cordate, with slender fringelike teeth. Mountains of Japan. Plants from 12.

ALNUS X SPAETHII Callier

266472 Hybrid of A. japonica x A. subcordata. Tree to 60' tall; leaves ovate-lanceolate, 3" to 6" long, sharply toothed. Of very rapid growth and a handsome tree. Origin at Spaeth Nursery, Berlin, Germany in 1908. Plants from 42.

ALNUS TENUIFOLIA Nutt. 'AUREA'

266517 Tree or shrub, to 30' tall; foliage of the new shoots yellow. Selection of this western American alder originating in Europe. Plants from 21.

ALOCASIA KORTHALSII Schott. Araceae.

265914 Syn. A. thibautiana Mast. Leaf blades peltate-ovate, to 14" long, deep olive grayish-green, with many gray veinlets from the grayish-white midrib, purple beneath; petioles 12" to 18" long; grown for the attractive foliage. Borneo. Plants from 14.

ALOCASIA MICHOLITZIANA Hort. ex Rev.

265915 Leaf blades sagittate, with wavy margins, dark-green above, main veins pale, midrib white, pale-green beneath; petioles 8" to 12" long, dark-green, with irregular brown zones; grown for the attractive foliage. Philippines. Plants from 14.

ALPINIA RAFFLESIANA Wall. Zingiberaceae.

262349 Plant about 6' high; leaves linear-lanceolate, about 18" long, smooth above, rather downy beneath; flowers relatively small, golden-yellow with red tips. Malaya. Plants from 30.

ALSOMITRA SARCOPHYLLA M. Roem.

Cucurbitaceae.

262350 Climbing shrub with tendrils; leaves fleshy, 2 1/2" long. Interesting subject for a warm greenhouse. Burma and Thailand. Plants from 30.

AMELANCHIER 'PUMILA'. Rosaceae.

265596 Low, bushy shrub with slender, smooth, red-brown branches and thickish, green leaves. Origin at H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

x AMELASORBUS JACKII Rehd. Rosaceae.

266486 Bigeneric hybrid of Amelanchier florida x Sorbus scopulina). Differs from either

parent in the intermediate nature of partly incomplete pinnate leaves and the paniculate inflorescence. A natural hybrid found in 1918 on Elk Butte, Clearwater County, Idaho. Plants from 27.

AMORPHA FRUTICOSA L. 'CRISPA'

Leguminosae.

265597 Deciduous shrub, to about 12' tall; selection with margins of the leaves curled. Origin in Europe. Plants from 12.

ANGIOPTERIS HYPOLEUCA Devries

Marattiaceae.

265055 Very large, robust fern with fronds 5' to 6' long, with the habit of A. evecta Hoffm., but differing in the pinnules white-waxy beneath, subsessile, lanceolate-oblong, more or less falcate, 6" long, about 2" wide. A very handsome plant. Java. Plants from 5.

ANREDERA CORDIFOLIA (Ten.) Steen.

Basellaceae.

263975 Syn. Boussingaultia cordifolia Ten.; B. baselloides H. B. K. Madeira vine. The name of this plant as cited above is brought into line with the account by C. G. G. J. van Stennis in Flora Malesiana, 53: Sec. 1, 302 (Mar. 1957). Ecuador. Plants from 18.

ANTHURIUM sp. Araceae.

265917 Epiphytic; leaves about 2' long, strongly pendulous, the blades linear, about 14" long, about 2" wide, bullate, with a strong midnerve, the petioles half as long; inflorescence inconspicuous, the spathe greenish, contorted, the spadix whitish, long, becoming twisted. Handsome. Costa Rica. Grown at Palmengarten, Frankfurt am Main, W. Germany from material sent by Dr. Mueller, in Costa Rico. Plants from 14.

ANTHURIUM HARRISII (Graham) Endl.

261112 Leaf blades lanceolate-oblong, 1 1/2' to 2' long, shiny-green above, paler beneath, midrib prominent; petioles shorter than the blades, bent at apex; variable. Brazil. Plants from 16.

ANUBIAS AFFINIS De Wild. Araceae.

275867 Rhizomatous perennial; leaves 6" to 8" long, petioles half as long, the blades ovate to oblong, cuneate at the base, green with darker spots. Grown as a foliage plant; flowers inconspicuous. Congo. Plants from 1.

ANUBIAS CONGENSIS N. E. Br.

275868 Rhizomatous; leaves erect, the blades 6" to 8" long, 2" to 4" wide, oblong to oblong-lanceolate, acute, more or less cordate at base, irregularly light green mottled on upper surface. Congo. Attractive foliage plant. Plants from 1.

APHELANDRA AURANTIACA (Schiedw.) Lindl.

Acanthaceae.

275869 Subshrub about 3' tall; leaves elliptic, blackish-green to violet-purple, often mottled-white on midrib and veins, purple beneath; flowers scarlet-red, the petals about 3/4" long. Mexico. Plants from 1.

APHELANDRA AURANTIACA var. ROEZLII (Carr.) Nichols.

275870 Flowers orange-scarlet; leaves twisted, with a silvery hue between the veins. Mexico. Plants from 1.

APHELANDRA 'FRITZ PRINSLER'

265920 Hybrid of A. squarrosa var. leopoldii × A. 'Louisae'. With the habit of A. squarrosa var. leopoldii, remaining as small, but can be brought into flower in a shorter time and more floriferous and striking than in A. 'Louisae' and with greater assurance of flowering than in var. leopoldii. Origin by F. Prinsler in Germany, 1938. Plants from 14.

APHELANDRA FUSCOPUNCTATA Markgr.

265919 Shrubby, 1 1/2' to 3' tall; leaves ovate to narrowly so, about 6" long and 3" wide; flowers about 3" long, brownish with smaller dark brown spots and flecks. Colombia. Plants from 14.

APHELANDRA TETRAGONA (Vahl) Nees

265918 An erect shrub, 3' or sometimes more tall, woody at base; leaves elliptic or elliptic-ovate, 6" to 12" long, often slightly

- undulate; inflorescence an erect terminal cluster of spikes, the central one 6" to 8" long; flowers scarlet, crowded. Very showy for tropical environment. Northern South America.
265918 Plants from 14.
275871 Plants from 1.
- ARALIA ELATA** (Miq.) Seem. Araliaceae. Japanese angelica tree. Large deciduous shrub, to about 20' tall with prickly stems; leaves large, 12" to 30" long, bipinnate, the leaflets ovate, 2" to 4" long; inflorescence terminal, much-branched, 12" to 18" long; flowers white. Handsome, late-summer flowering. The following cultivars with variegated leaves are grown in Europe.
266394 'AUREOVARIEGATA'. Selection with the leaflets irregularly bordered with deep yellow. Origin in the Netherlands, about 1870. Plants from 33.
266395 'VARIEGATA'. Leaflets irregularly bordered with creamy white. Origin in nurseries at Boskoop, Netherlands, about 1885. Plants from 33.
- ARISTOLOCHIA LEUCONEURA** Linden Aristolochiaceae.
265921 Strong climber; leaves with white veins. Plants from 14.
- ARMORACIA RUSTICANA** G., M., & Sch. 'ALBOVARIEGATA'. Umbelliferae.
261065 Leaves strongly white variegated, especially the new leaves in spring, at this time very decorative. Originally found in an old farm garden in the Netherlands. Plants from private garden of B. K. Boom, Wageningen, Netherlands.
- ARUNDINARIA** sp. Gramineae (Bambusae).
266713 Rhizomatous; culms 3' to 5' long; leaves strongly yellowish variegated. Plants from 22.
- ARUNDINARIA VARIEGATA** (Sieb.) Makino
261155 (6573a) Dwarf whitestripe bamboo. Culms 2' to 3' tall; leaves conspicuously white striped. An attractive groundcover; also useful as pot-grown specimen. Unknown in the wild, originally known from material cultivated in Europe. Plants from 30.
- ARUNDINARIA VIRIDISTRATA** (Reg.) Makino (syn. Pleioblastos viridistriata Reg.). Culms 3' to 4' long, thin, dark reddish-green, when pot-grown the plants very dwarf; leaves 4" to 8" long, 1/2" to 1 1/2" wide, green, and golden-yellow striped, the underside soft-hairy. Japan.
263985 Plants from 18.
268116 Plants from 31.
- ASYSTASIA VOGELIANA** Benth. Acanthaceae.
275872 Shrub; leaves about 7 1/2" long, 2 1/4" wide, narrowed to each end; inflorescence terminal, branches lax, 6" to 18" long; corollas pale-purple to white, the tube 2" long. Nigeria, Cameroons, Fernando Po. Plants from 1.
- ATHYRIUM FILIX-FEMINA** (L.) Roth Polypodiaceae.
Ladyfern. Tufted, with fronds 1' to 3' long, 6" to 12" wide, with many pinnae, dull-green to yellowish-green, the pinnules incised-pinnatifid; deciduous. Extremely variable and widespread over the boreal regions of the North Temperate Zone. The European phase differs as a geographical segregate, but not appreciably in morphology from the phase known in North America. In Europe, mainly Great Britain, many of the most beautiful variants have been grown in gardens especially since the 19th century. A very hardy species, best suited to shaded woodland garden. The cultivars are reputedly as hardy as the type. A good account of the cultivated sorts is Lowe's, "Our Native Ferns," 1876, and Druery's, "British Ferns and their Varieties," 1911.
265214 'BISFURCATUM'. The pinnae bifurcate and gently crested at the tips. Plants from 12.
265215 'FRIZELLIAE'. The pinnae rounded to globose or half-moon shaped, with the lobes very close together, in outline like a string of beads. Found by Mrs. Frizell in

Wicklow, Ireland in 1857. Plants from 12.
 265216 'GRAMINICON'. Pinnules somewhat more crisped than in the normal phase, giving to the fronds a more congested aspect. Plants from 12.
 265217 'MONSTROSUM'. Pinnae strongly crested at the tips and especially at the apex of the frond. Plants from 12.
 265218 'MULTIDENTATUM'. Pinnules more finely cut, giving a feathery aspect to the fronds. Plants from 12.
 265219 'PSEUDOVICTORIAE'. Pinnae bifurcate to crested at the tips, but not as strongly so as in A. filix-femina 'Monstrosum'. Plants from 12.

B

BEGONIA sp. Begoniaceae.

274440 Rhizomatous; leaves nearly orbicular, 8" to 10" wide, fleshy, deep-green and hairy above, red velvety-hairy beneath; foliage striking. Brought from San Salvador to England by Maurice Mason and then to Germany. Plants from 14.

BEGONIA 'COLONEL SIX'

275873 Plants from 1.

BEGONIA CRISPULA Brade

Dwarfish plant with handsome, nearly orbicular leaves, 3" to 4" long, strongly plaited above, lustrous-green. Espirito Santo, Brazil.

265922 Plants from 14.

275874 Plants from 1.

BEGONIA LINDLEYANA Walp. 'EPPLES FINDLING'

274438 Rhizomatous; young growth brown-woolly; leaves 6" to 8" long, silvery above with darker green veins, purplish between the green veins beneath; flowers white. Species of Southern Mexico and Central America; this selection made by Epple of Germany. Plants from 14.

BEGONIA PAULENSIS A. DC.

261305 Rhizomatous; leaves to 1' across; peltate, more or less

oblique, the upper surface light-green, the veinlets depressed with ridges between, reddish; flowering scapes 12" to 18" long; flowers white, red-hairy on back; fruit red-hairy. Striking. Brazil. Plants from a public flower market, Oporto, Portugal.

BEGONIA RAJAH Ridley

265923 Rhizomatous; leaves somewhat oblique, undulate-margined, the surface reddish-plaited, the veins green, the petioles 6" to 8" long; flowers pink. Striking foliage plant. Malaya. Plants from 14.

BEGONIA SERRATIPETALA Irmscher

274439 Fibrous-rooted perennial, much branched from the base; leaves 3" to 4" long, undulate-crispate, deep bronze-green above, reddish beneath. Outstanding foliage plant. New Guinea. Plants from 14.

BERBERIS CANDIDULA (Schneid.) Schneid. Berberidaceae.

An evergreen, low-growing shrub of dense globose habit, reaching 2' to 3' high and as much in diameter; leaves dark shining green above, vividly glaucous-blue beneath, 1/2" to 1 1/4" long, oblong or narrowly oval. A fine ornamental species valuable in the garden. China.

266478 'GRACILIS'. Densely branched, low, evergreen shrub, about 2' tall, with the twigs more slender than in the normal phase and the plants taller. Originated as a seedling in nursery of W. Haalboom & Zonen, Driebergen, Netherlands. Plants from 24.

'HAALBOOM'. Differs from the phase usually grown as B. candidula in the more robust habit, the larger more densely toothed leaves, with a bright green upper side. Origin in nursery of W. Haalboom, Driebergen, Netherlands.

266479 Plants from 24.

266519 Plants from 21.

BERBERIS DIELSIANA Fedde 'COMPACTA'

265598 Evergreen shrub, about 8' tall; leaves ovate to ovate-elliptic, 1" to 1 1/2" long, sparsely spine-toothed, lustrous-green

- above, glaucous-green below. Of very compact habit, desirable as a hedge plant. Plants from 12.
- BERBERIS GIRALDII Hesse
265599 Deciduous shrub to about 6' tall; leaves rhombic-ovate or oblong-ovate, 1 1/2" to 4" long, dark-green above; racemes to 4" long, pendulous; flowers pale-yellow; fruit purple. Similar to B. mitifolia Stapf, but the leaves and racemes larger. North-central China. Introduced to cultivation about 1900. Plants from 12.
- BERBERIS HOOKERI Lem.
Evergreen shrub, to about 3' tall; leaves elliptic, about 2 1/2" long, coarsely toothed, lustrous-green above, white-pruinose beneath. Himalaya. Introduced to cultivation about 1850.
266488 Plants from 27.
266646 Grown as B. wallichiana DC. 'Purpurea'
Plants from 26.
- BERBERIS X HYBRIDO-GAGNEPAINII Sur.
Hybrid of B. gagnepainii X B. verruculosa. Originated in the nursery of R. Chenault, Orléans, France in 1926. The seedling population was divided, a part going to nurseries in the Netherlands, and the remaining retained by Mr. Chenault. Three clones have been named from this original group of seedlings: 'Terra Nova' by Keessen of Aalsmeer; 'Tottenham' by Ruys of the Moerheim nurseries, both in the Netherlands; and 'Chenault' grown by the Chenault Nursery at Orléans.
266480 'CHENAULT SELECT'. Seedling selection of the well-known Chenault barberry with a more compact habit than in the typical phase. Origin in nursery of W. Haalboom, Driebergen, Netherlands. Plants from 24.
266487 'TERRA NOVA'. Selection with a dense, low habit, about 30" tall; leaves about 1 1/2" long, 3/4" wide, with 2 to 5 teeth on each side, dull. Grown by Keessen of Aalsmeer, Netherlands. Plants from 27.
- BERBERIS JULIANAE Schneid. 'LOMBARTS RED'
266656 Selection with the leaves purple beneath. A worthy new selection with colored foliage of this well-known and very useful hardy evergreen barberry. Origin in nursery of Pierre Lombarts, Zundert, Netherlands. Plants from 31.
- BERBERIS LINEARIFOLIA Phil. 'ORANGE KING'
262243 Evergreen shrub, 3' to 4' tall; selection with more vigorous growth, narrower leaves and more orange-red flowers. Origin in England. A Chilean species of great merit for gardens, reliably hardy in Zone VI or warmer. Plants from 32.
- BERBERIS X MEDIA Grootend.
'PARKJUWHEEL'
Alleged hybrid of B. candidula X B. thunbergii. Semievergreen shrub with a dense habit, to 3' tall; leaves oval, 1/2" to 1 1/4" long, 1/4" to 1/2" wide, acute, very short petiolate, margins slightly revolute, with 1 or 2 teeth, dark and glossy green above, glaucous beneath; flowers few, pale-yellow; fruit unknown. Originated in seedbed of B. thunbergii with plants of B. candidula nearby, in nursery of W. H. van Eck, Boskoop, Netherlands. One of the best new barberry hybrids, makes a good hedge plant.
266489 Plants from 27.
266520 Plants from 21.
- BERBERIS MORRISONENSIS Hayata
266481 Deciduous spiny shrub, about 3' tall, with dark-red shoots; leaves in clusters of 3 to 8, obovate, 1/2" to 1" long, bristly toothed, slightly glaucous beneath; flowers pale-yellow. Autumn foliage turns scarlet and gold. Mountains of Formosa to 13,000' alt. Plants from 24.
- BERBERIS MOUILLACANA Schneid.
265600 Deciduous shrub, about 8' tall, with purplish to reddish shoots; leaves narrowly obovate, lustrous-green beneath. Related to

B. silva-taroucana Schneid. W. Szechwan, China. Plants from 12.

BERBERIS × OTTAWENSIS Schneid.

Hybrid of B. thunbergii × B. vulgaris. Generally an improvement upon either parent in habit and when in flower. A deciduous shrub with mostly obovate often entire or sometimes serrulate leaves, about 1" long; flowers umbellate or in racemes, bright-yellow. The hybrid was produced from artificial crosses made at the Experiment Station, Ottawa, Canada, about 1917. It has occurred spontaneously also in Europe and in this country.

266657 'GOLDEN RING'. Selection with leaves purplish and narrowly yellowish edged. Origin in nursery of Pierre Lombarts, Zundert, Netherlands, about 1950. Plants from 31.

266658 'LOMBARTS PURPLE'. Selection with dark-purplish leaves; flowers in 2 or 3 superimposed whorls. Origin in nursery of Pierre Lombarts, Zundert, Netherlands, about 1953. Plants from 31.

BERBERIS PRATTII Schneid.

266398 Syn. B. aggregata var. prattii (Schneid.) Schneid. Deciduous shrub, to about 9' tall; differs from B. aggregata Schneid. in the longer, usually obovate, often entire leaves, about 1 1/4" long and longer panicles, 1 1/2" to 2 1/2" long, sometimes to 4" long; flowers pale-yellow. Western China. Plants from 33.

BERBERIS × RUBROSTILLA Chitt.

Hybrid involving B. aggregata × B. prattii or B. wilsoniae Hemsl. & Wils. or perhaps some other species. A long series of named cultivars of this hybrid have appeared in recent years in British gardens, having come principally from the Royal Horticultural Society's Garden, Wisley and often referred to as the "Wisley Barberry Hybrids." The B. aggregata parentage is strongly evident in most of the best named sorts, as indicated by the

characteristic masses of coral-red to pink fruit.

266396 'BARBAROSSA'. Semievergreen shrub; berries oblong- to globose-ovoid, scarlet. Origin at nursery of Watson & Sons, Killiney, Dublin, Ireland. Plants from 33.

266397 'BUCCANEER'. Semievergreen; berries globose, somewhat glaucous, ultimately geraniumlike in color. The parentage of this cultivar is alleged to be B. aggregata Schneid. with either B. subcaulialata Schneid. or B. jamesiana Forrest and W. W. Sm. Origin at nursery of Watson & Sons, Killiney, Dublin, Ireland. Plants from 33.

266518 'PIRATE KING'. Deciduous shrub; panicles sessile or nearly so as in B. aggregata; stems pale-yellow; leaves entire; berries globose, pale-scarlet. Origin Waterer & Sons & Crisp, England. Plants from 21.

BERBERIS THUNBERGII DC.

Perhaps the most widely grown barberry in both Europe and America, especially for hedges. It is a variable plant with many cultivars. Japan and China.

266473 'SPECIAL'. Selection with the branches strict, hardly branched in young specimens, and densely leaved radially; leaves thicker than in the typical phase of the species, dark-green; stems brownish-red, green at the growing tips. Unusual and worth wider trial.

Originated in nursery of Keessen, Aalsmeer, Netherlands. Plants from 42.

266521 'ROSY GLOW'. Deciduous shrub with spreading twigs and branches, densely branched; leaves mottled white to pink and red, especially the new foliage, the older foliage purplish. Origin at Boskoop, Netherlands as a seedling selection. Plants from 21.

BERBERIS VEITCHII Schneid.

265220 Evergreen spiny shrub, arching in habit; leaves lanceolate, 2" to 4" long, spiny-serrate, coriaceous, dark-green above, lighter beneath. In the same section of the

- genus as B. julianae, but may not be quite as hardy. Central China. Introduced in 1900. Plants from 12.
- BERTOLONIA MARMORATA (Naud.) Naud.
'AENEA' Melastomataceae.
274441 Perennial, about 6" tall; with fleshy stems; selection with the leaves uniformly purplish-metallic on upper side, with few or no spots, the petioles reddish; flowers pink. The species is Brazilian. Elegant pot plant. Plants from 14.
- BESSERA ELEGANS Schult. f. Liliaceae.
262339 Bulbous; flowers in loose umbels on 20" scapes, bell-shaped, orange-red outside, orange inside with broad creamy stripes on the petals. A striking plant. Mexico. Bulbs from 38.
- BETULA ALBOSINENSIS Burk. Betulaceae.
266490 Deciduous tree; bark bright-orange or orange-red; branches glabrous, sometimes glandular; leaves ovate to ovate-oblong, 1 1/2" to 2 1/2" long, the veins sparsely silky or nearly glabrous. Central and Western China. The var. septentrionalis Schneid. is the phase usually grown in this country. Plants from 27.
- BETULA COSTATA Trautv.
266491 Deciduous tree, to about 50' tall, with glabrous or finely villous shoots; bark grayish-brown, exfoliating; leaves narrowly ovate oblong, 2" to 3" long, acuminate, very finely double serrate. Northeastern Asia. Plants from 27.
- BETULA DAVURICA Pall.
266474 Deciduous, single-trunked tree, about 60' tall; bark pale-gray, splitting and exposing the many layers, the free ends of which become rolled and form shaggy masses; leaves rhombic-ovate or narrow-ovate, 2" to 4" long. Resembles the American B. nigra L. in habit and nature of the bark. Northeastern Asia and Japan. Plants from 42.
- BETULA MEDWEDIEWII Reg.
266399 Tree, but often only a shrub in cultivation, about 12' to 15' tall; leaves ovate to nearly orbicular, 2" to 4" long, 1" to 3" wide, rounded to subcordate at base, regularly toothed, sometimes nearly doubly serrate; strobils large, 1" to 1 1/2" long, cylindrical-oblong. Handsome. Transcaucasus. Plants from 33.
- BETULA NANA L.
265601 Dwarf bush, 2' to 4' tall, with downy shoots; leaves orbicular, sometimes wider than long, 1/4" to 1/2" long, toothed, glossy-green above. A widespread birch of far northern regions of North America, Asia, Greenland, Alaska, Northern and Central Europe. Plants from 12.
- BETULA PENDULA Roth
Syn. B. verrucosa Ehrh. European birch. Deciduous tree, to 60' tall, with white exfoliating bark; branches usually pendulous; leaves and habit of the plant very variable. The most commonly cultivated birch in northern areas of Europe and America. Several garden selections cultivated.
266400 'DALECARLICA'. Swedish birch. Leaves deeply lobed, irregularly serrate-acuminate, the lobes coarsely toothed. Branches and leaves pendulous. Found in 1767 in southern Sweden. Plants from 33.
266522 'PURPUREA'. Leaves purplish in spring and summer, becoming dark bronze in autumn. Plants from 21.
- BETULA PLATYPHYLLA var. SZECHUANICA (Schneid.) Rehd.
266475 Tree; leaves ovate to rhombic-ovate, rounded to broadly cuneate at base, short-acuminate, dentate-serrate, dull-green above, densely glandular-dotted beneath. Remains green until very late in autumn. Western China. Plants from 42.
- BETULA POTANINII Batal.
265602 Deciduous shrub, to about 9' tall, the branches often prostrate; leaves ovate or oblong-ovate, 1" to 2" long, acute. Distinct shrubby plant best marked by

- the very short petioles and the many nerved leaves, which, like the branchlets, are clothed beneath with brownish silky hairs. Western Szechwan, China. Plants from 12.
- BETULA PUBESCENS Ehrh.
European white birch. Deciduous tree, 50' or more tall, with white, peeling, papery bark; leaves broadly ovate, 1 1/2" to 2 1/2" long, 1" to 2" wide. Widespread tree of northern Europe to Siberia, very variable, with at least 7 cultivars and varieties grown on the Continent. Most closely related to B. pendula from which it differs in the downy, not warted twigs. Not so useful an ornamental as B. pendula, and prefers more moisture.
265603 'AUREA'. Leaves yellow when young; shoots very downy. Plants from 12.
- BETULA x PURPUSII Schneid.
266659 Natural hybrid of B. glandulifera x B. lutea. Differs from B. x sandbergii in the lower stature, grayer bark, and the twigs with the flavor of wintergreen; leaves with 5 to 7 pairs of veins; fruiting catkins as of B. lutea Michx.; scales as in B. glandulifera (Reg.) Butler, but much larger. Tamarack (Larix) bogs of northeastern Canada to Michigan, Indiana, and Minnesota. Plants from 31.
- BIGNONIA UNCATA (Andr.) Sprag. & Sandw. 'Rodigasiana'. Bignoniaceae.
275875 Shrub with clambering young new shoots; leaves plane or undulate on margins, with the middle part silvery, green on the periphery. Introduced to Belgium about 1890 and described from cultivated material. Plants from 1.
- BOENNINGHAUSENIA ALBIFLORA (Hook.) Reichenb. Rutaceae.
263976 Subshrub; leaves glaucous-gray, pinnately divided, 3" to 6" long; leaflets with oil glands that emit a disagreeable odor when crushed; flowers small, white. Plant resembles Ruta to which it is related. Attractive pot plant. Himalayas. Plants from 18.
- BOLBITIS CUSPIDATA (Presl) Ching Polypodiaceae.
260003 Densely tufted with fronds 4' to 5' long, pinnately divided, the pinnae about 4" long, long-tapering, undulate-toothed, dull-green. Spores from 16.
- BUDDLEIA CRISPA var. FARRERI (Balf. & W. W. Sm.) Hand.-Mazz. Loganiaceae.
262244 Low-growing deciduous shrub, 3' to 4' tall, spreading; leaves 3" to 12" long, coarsely toothed, white-tawny to tomentose beneath; panicles 7" to 8" long; flowers pale rose-lilac with a yellow throat. Very floriferous; outstanding and worth much wider cultivation. Kansu, China. Plants from 32.
- BUDDLEIA DAVIDII var. NANHOENSIS (Chitt.) Rehd.
265221 Deciduous shrub, 3' to 4' tall, with slender spreading branches; leaves about 4" long; flowers violet-purple, strongly perfumed. A wild variety from Nanhotal, Kansu, China; a smaller plant than the typical phase of the species. Plants from 12.
- BUDDLEIA DAVIDII Franch. 'VEITCHIANA'
265222 Vigorous deciduous shrub, more robust than in the type, with large spikes of mauve-colored flowers with an orange eye. Grown first by Messrs. Veitch, London, England, about 1902 from seeds received from central China and awarded at that time a First Class Certificate, Royal Horticultural Society, London. Plants from 12.
- BUDDLEIA x PIKEI Fletcher 'HEVER'
262883 Hybrid of B. alternifolia (male) x B. caryopteridifolia (female). Less lax than B. alternifolia Maxim. and more open and vigorous than B. caryopteridifolia W. W. Sm. Shrub, 6' tall; leaves alternate and opposite, ovate to oblong, to about 6" long, 2 1/2" wide, irregularly lobed and toothed in lower half; inflorescence 24" long; flowers in axillary clusters on current year's growth, scented; limb of flowers rose-purple, the

throat bright indian-orange. Received an A. M., Royal Horticultural Society, London, 1953. Origin at Hever Castle, Kent, England. Although the female parent from Yunnan, China is tender, the hybrid is reported to be as hardy as B. alternifolia. Plants from 32.

BUXUS SEMPERVIRENS L. (unnamed cultivar) Buxaceae.

269609 (7352) Small-leaved; leaves ovate-acuminate, 1/2" long, dark-green. Forms a round bush, 4' to 5' tall, in garden of Myddleton House, Enfield, Herts, England. Cuttings from this source through 4.

BUXUS SEMPERVIRENS L. 'HEINRICH BRUNS' (Meyer) in BAILEYA, vol. 9, p. 129 (1961)

260383 Selection distinguished by the fastigate habit, stiff branches, and the new twigs tannish to light rusty-brown. Leaves thick-coriaceous, about 1" long, cuneate at base, rounded to emarginate at the tip. Useful as a hedge plant. Originally from Détriché Nursery, Angers, France. Grown at H. Bruns Nursery, Westerstede, Oldenburg, W. Germany. Cuttings from 8.

BUXUS SEMPERVIRENS L. 'MYRTIFOLIUM' 269610 (7353) Erect plant, about 15' tall, dense, small-leaved, deep-green, with the ends of the branches pendulous. In garden of Myddleton House, Enfield, Herts, England. Cuttings from this source through 4.

C

CALATHEA CHANTRIERI (André) Bailey
Marantaceae.

265924 Vigorous, erect perennial, 6' to 7' tall, with 3 or 4 leaves per stem; leaf blades while young pale yellowish-green with a dark-green irregular marginal band, purplish-red beneath, later becoming dark-green on both sides. Brazil. Plants from 14.

CALATHEA ILLUSTRIS (Linden) Correa
265925 Plant 6" to 9" tall; leaf

blades oblique, ovate, 4" to 6" long, 2" to 5" wide, upper side lustrous; olive-green with a bluish-metallic luster, the midrib on both sides and the margins silvery-feathered, dull purplish-red beneath; flowers white, the petaloid stamens purple-blotched. A striking plant. Ecuador. Plants from 14.

CALATHEA LINDENIANA (O. Ktze.) Wallis
265926 Leaves elliptic-oblong, about 12" long, deep-green above, with an olive-green zone either side of the midrib, the under side also with purplish zones. Brazil. Plants from 14.

CALATHEA WARSCEWICZII Koern.
274433 Leaves about 2' long, oblong-lanceolate, purple beneath, dark velvety-green above, the midrib broadly feathered with yellow green. Costa Rica. Plants from 10.

CALOCEDRUS DECURRENS (Torr.) Florin
'AUREOVARIEGATA' Cupressaceae.
266742 Syn. Libocedrus decurrens Torr. Selection with some of the branchlets golden-yellow, but not uniformly so over the entire plant. Grown in Europe before 1896. Plants from 28.

CAMELLIA JAPONICA L. (variegated)
Theaceae.
261306 (7416) Leaves white-edged; flowers deep-pink, opening flat, single. In flower November 12th. Cuttings from Park da Pena, Sintra, Portugal.

CAMPISIS RADICANS (L.) Seem. 'YELLOW TRUMPET' Bignoniaceae.
266523 Syn. C. radicans 'Flava'. Selection with burnished-yellow flowers, otherwise the plant with the same habit as the typical phase. European origin. Plants from 21.

CARAGANA ARBORESCENS Lam. 'LORBERGII'
Leguminosae.
266595 Selection with linear leaflets, 3/4" to 1" long; standard and wings narrower. Deciduous shrub, 10' to 15' tall, of upright habit, with fernlike, feathery foliage. Origin in Germany about 1884. Plants from 23.

CARAGANA FRANCHETIANA Komar.

266660 Deciduous shrub, to about 10' tall; leaflets 8 to 10, narrowly obovate to lanceolate; flowers yellow, about 1" long. Yunnan, China. Plants from 31.

CARAGANA FRUTEX (L.) K. Koch

Syn. *C. frutescens* DC. A deciduous shrub, to about 10' tall, with compound leaves and bright-yellow flowers, 3/4" to 1" long. A pretty shrub of a neat graceful habit, especially when young; unarmed. Southern U.S.S.R. thenceward across Asia.

266661 'ANGUSTIFOLIA'. Selection with the leaflets narrower than in the typical phase. An upright deciduous shrub, about 10' tall; flowers bright-yellow. Origin in Europe. Plants from 31.

266662 'SYLVATICA'. Selection with more erect branches and the leaves darker green than in the typical phase of the species. Origin in Europe. Plants from 31.

CARLUDOVICA PLICATA Klotsch 'PICTA'

Cyclanthaceae.

265927 Stem thick, woody, erect, about 1' tall, leafy at top; leaves 3' to 4 1/2' long, deeply 2-cleft, the segments ovate-lanceolate, acute or rounded at apex, plaited at base. Brazil and Colombia. Plants from 14.

CARPINUS BETULUS L. Betulaceae.

European hornbeam. Deciduous tree, 30' or more tall, pyramidal when young, but forming a roundheaded tree at maturity; leaves ovate to ovate-oblong, cordate or rounded at base; trunk gray and often fluted. Resembles the American *C. caroliniana* L., but larger in all respects. Much planted in Europe and often employed as a tall hedge plant. About 15 cultivars are grown on the Continent. 266663 'CORDATA'. Selection with leaves strongly cordate. Plants from 31.

'PURPUREA'. Young leaves intensely purplish-red, later turning green. Grown in Europe before 1873.

261829 Plants from 36.

266664 Plants from 31.

CASSINIA FULVIDA Hook. f. Compositae.

261830 Evergreen shrub, to 6' tall, erect, with viscid and yellowish-downy branches when young; leaves very small, 1/3" or less long, dark-green and glabrous above, yellowish-downy beneath; flower heads white, very small, numerous. New Zealand. Plants from 36.

CASTANEA SATIVA Mill. Fagaceae.

European chestnut. Often a very lofty tree, 50' or more tall, often with a wide-spreading crown in specimen plants. Native of southern Europe, N. Africa, and Asia Minor. Much cultivated, with about 12 cultivars grown on the Continent.

'ARGENTEOVARIEGATA'. A periclinal chimera. Leaf blades sometimes irregular in shape, the margins variously streaked with white. Well-grown specimens are very beautiful. Known in Europe since 1755.

266492 Plants from 27.

266493 Plants from 41.

266494 'HETEROPHYLLA'. Leaves variously shaped on the same tree, some of them narrowly linear with part of the blade missing and only the threadlike midrib long-excurrent, sometimes the leaves nearly of normal size, but all of them always green. Plants from 27.

CATALPA BIGNONIODES Walt. 'AUREA'

Bignoniaceae.

266596 Selection with the leaves yellowish from the start, the color increasing in intensity as the season advances. A tree to be used in the landscape where contrast in foliage color is a desirable factor. Origin in England, about 1870. Plants from 23.

CATALPA FARGESII f. DUCLOUXII (Dode)

Gilmour

265604 Deciduous tree, 20' to 30' tall; differs from the typical phase of the species in being glabrous throughout; leaves broadly ovate, 2" to 6" long, long taper-pointed; flowers 1 1/4" long, lilac-pink with numerous deeper spots. Yunnan, China. Plants from 12.

CEANOTHUS 'BRILLIANT' Rhamnaceae.

262246 Evergreen; flowers dark-blue. Plants from 32.

CEANOTHUS 'LUCIE SIMON'.

262249 Flowers flax-blue. Said to be hardy at Washington, D.C. Plants from 32.

CEANOTHUS x DELILIANUS Spach

Hybrid of C. americanus x C. coeruleus. Semideciduous or evergreen shrub; leaves elliptic-ovate to oblong-ovate 1 1/2" to 3" long, dark-green and slightly pubescent above, pubescent or sometimes nearly tomentose beneath; flowers pale- to deep-blue. A range of plants of this hybrid shows fairly wide variation in hardiness, flower color, and habit depending upon the intensity of the C. americanus L. parentage (a native eastern American species) vs. C. coeruleus Lag. (a tender mountain species of Mexico). The C. delilianus hybrids arose in France, mostly before 1890, the first ones about 1830. Ceanothus x delilianus 'Gloire de Versailles' is the commonest cultivar of the hybrid grown in this country. In western Europe about 15 named cultivars are grown.

262247 'CHARLES DÉTRICHÉ'. Syn. 'Conrad de Bossuet'; 'Albertii'. Flowers blue. Origin in nursery of Chenault, Orléans, France. Plants from 32.

262248 'INDIGO'. Flowers indigo-blue. Origin in nursery of Chenault, Orléans, France. Plants from 32.

262251 'TOPAZ'. Flowers indigo-blue; leaves similar to 'Indigo' but the plant a better grower, Origin in nursery of Lemoine, Nancy, France. Plants from 32.

CEANOTHUS x PALLIDUS Lindl. 'MARIE SIMON'

262250 Alleged hybrid of C. delilianus x C. ovatus. Cultivar with flowers pale fuchsine-pink. Relatively small, upright, deciduous shrub, with wine-red young stems; leaves elliptic, 1 1/2" to 2" long. Outstanding and usually a very profuse bloomer. Has been grown previously on Pacific coast; hardy

at Washington, D.C. Origin in nursery of Simon-Louis Frères, France. Plants from 32.

CEDRUS DEODARA (Roxb.) Loud. Pinaceae.

Deodar cedar. Large evergreen tree, very handsome when young, with strongly pendulous branches, and of rapid growth; leaves strongly glaucous-green. Not so much grown on the Continent as C. libani Rich., probably because it is somewhat less hardy than the Lebanese species. At least a half dozen cultivars are grown in Europe.

266524 'ALBOSPICATA'. Selection with the new growth white-tipped and pendulous. Young trees are particularly handsome. Origin in England, 1899. Plants from 21.
280466 'HE SSE'. Plant very dwarf, 12" to 14" tall, of dense habit. Origin at H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

CEDRUS LIBANI subsp. STENOCOMA (Schwarz) Davis

Growth slenderly pyramidal, almost like Norway spruce, branches horizontally spreading; leaves and cones intermediate between C. atlantica and C. libani. Cilician Taurus Mountains, Turkey.

262884 Plants from 32.

280467 Plants from 12.

CELASTRUS ROSTHORNIANA Loesn.

Celastraceae.

265605 Deciduous scandent shrub, to 20' long, with very slender shoots; leaves 1 1/2" to 3 1/2" long, lustrous, oval-lanceolate to ovate, finely toothed; fruit orange-yellow with a scarlet aril. Central and western China. Plants from 12.

CELTIS AUSTRALIS L. Ulmaceae.

Lofty deciduous tree, 50' or more tall, with gray, smooth, beechlike bark; leaves lanceolate or ovate-lanceolate, 2" to 5" long, long-tapering at the apex. South Europe to Asia Minor. Tree for semiarid Mediterranean-type climate. Should make a useful street tree.

266401 Plants from 33.

266495 Plants from 27.

CELTIS LABILIS Schneid.

259462 Deciduous tree, about 30' tall; leaves ovate-elliptic, 2" to 4" long, short-acuminate, unequally rounded at base, crenate-serrate above the middle. Easily marked by the fruiting branches that drop off in autumn or winter. Central China. Good example in Zuider Park, The Hague, Netherlands. Seeds sent from this locality.

CERCIDIPHYLLUM JAPONICUM var. SINENSE

Rehd. & Wils. Cercidiphyllaceae.

265606 Tree, 50' or more tall, usually with a single trunk; leaves somewhat hairy on the veins beneath. Central and western China. The counterpart in Japan usually produces a multitrunked tree. Plants from 12.

CHAENOMELES x SUPERBA (Frahm) Rehd.

Rosaceae.

Hybrid of C. japonica x C. lagenaria. The hybrid resembles C. speciosa (Sweet) Nakai, but the young branches at first hairy; leaves similar to C. japonica (Thunb.) Lindl., but larger and more sharply toothed. Originated in Europe, 1900. Multitudes of cultivars of this hybrid have been raised and offered in Europe and in the United States.

261831 'ETNA'. Low-growing; flowers large, vermilion, half-opening. Plants from 36.

261832 'FIRE DANCE'. Derived from C. x superba 'Simonii'; growth broad-bushy; flowers signal-red. Received a First Class Certificate, Royal Horticultural Society, London. Grown by K. Verboom, Boskoop, Netherlands, 1953. Plants from 36.

'HOLLANDIA'. Derived from C. x superba 'Simonii'; growth high-bushy; flowers large, along the branches to the tip, scarlet. Received an Award of Merit, Royal Horticultural Society, London. Grown by K. Verboom, Boskoop, Netherlands, 1953.

261833 Plants from 36.

266525 Plants from 21.

261834 'VESUVIUS'. Flowers scarlet,

very large. Grown first in the Netherlands. Plants from 36.

CHAMAECYPARIS LAWSONIANA (A. Murr.)

Parl. Cupressaceae.

Lawson's cypress, Port Orford cedar. Native of the coastal mountains of southwestern Oregon, extending to northwestern California. In Europe, this tree apparently was first cultivated in Scotland from seeds sent in 1854 from Oregon. One of the most handsome of conifers, with about 125 cultivars grown in gardens of Europe, (cf. G. Krüssmann, "Die Nadelgehölze," 1960). 266526 'BRUINII'. Selection with intense bluish-glaucous foliage and a pyramidal habit, otherwise similar to C. lawsoniana 'Triomphe de Boskoop'. Origin in nursery of W. de Bruin, Boskoop, Netherlands. Plants from 21.

280135 'CAUDATA'. Dwarf, with very crowded branches, bearing at the tips dense tufts of foliage like a witches' broom. Distinct type found originally in nurseries of Boskoop, Netherlands. Plants from 28.

280136 'COLUMNARIS'. Selection with an erect habit and deep glaucous-blue foliage; an improved C. lawsoniana 'Alumnii'. Origin in nursery of Jan Spek, Boskoop, Netherlands. Plants from 28.

266714 'DARLEYENSIS'. Smith's new silver cypress. Pyramidal tree, with the habit of the typical phase, differing in the more compact silvery glaucous-blue foliage. Origin in England. Plants from 28.

266402 'DEPKENII'. Selection with a slender pyramidal habit, to 30' tall, sparsely branched, twigs pendulous, with finely dissected branchlets, strongly bluish, in winter almost green. Origin in Germany. Plants from 33.

266527 'DRUMMONDII'. Broadly pyramidal, 10' to 15' tall, with flat branches, twigs very numerous, thin, dark-green. Origin in the Netherlands. Plants from 21.

'ERECTA BLOM'. Tree, 6' to 7' tall, of very compact habit, with vivid-blue foliage, with the aspect of

C. lawsoniana 'Alumii', but much slower growing. Origin in nursery of Adr. Blom, Boskoop, Netherlands.

266409 Plants from 33.

266786 Plants from 39.

280137 'ERICOIDES'. Foliage uniformly juvenile, very glaucous beneath; leaves scalelike, minute, much crowded on the branchlets and overlapping, giving to the plant a heathlike aspect. Origin in the Netherlands. Plants from 28.

266599 'FILIFORMIS COMPACTA'

Dwarf plant forming a dense ball with the appearance of a wet mop; branches threadlike; leaves scaly. Grown in Europe before 1891. Plants from 23.

280138 'FILIFORMIS ERECTA'

Plants from 28.

266720 'FILIFORMIS GLAUCA'. Syn.

'Filifera Glauca'. Plant with a broad conical habit, 10' to 15' tall; branches pendulous, threadlike; leaves dark blue-green.

Plants from 29.

280139 'FLETCHERI REUTHE'

Originated in nursery of C. Reuthe, Kingston, England. Plants from 28.

266715 'FRASERI'. Plant columnar of habit, up to 30' tall, resembles 'Alumii', but the main axis and branches thicker, more dark blue, and the growth somewhat broader. Origin in Europe before 1891. Plants from 28.

266403 'GIMBORNII'. Very compact, round bush, slow-growing, reaching about 3' tall after many years; young foliage characteristically purplish-blue, a distinctive aspect of this cultivar. Grown first at Gimborn Arboretum, Doorn, Netherlands. Plants from 33.

265224 'GLAUCA ARGENTEA'. Pyramidal, 15' to 30' tall, the foliage with a bluish-white bloom. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

266784 'GLAUCA BOOTH'. Upright tree, coarser than in the typical phase of the plant, somewhat

rounded, gray-green, with a bluish-green sheen. Plants from 29.

280140 'GLAUCA LOMBARTS'. Conical-shaped, 15' to 30' tall; trunk irregular; foliage blue above, glaucous beneath. An elegant plant. Origin in nursery of Pierre Lombarts, Zundert, Netherlands. Plants from 29.

266600 'GLAUCA SPEK'. Pyramidal, 15' to 30' tall, with light silvery-blue foliage; grown as an improvement over *C. lawsoniana* 'Triomphe de Boskoop'. Origin in nursery of Jan Spek, Boskoop, Netherlands. Plants from 23.

266597 'GLOBOSA'. Low-growing, ball-shaped, 2' to 3' tall, with green foliage. Origin in the Netherlands. Plants from 23.

262885 'GREEN HEDGER'. Erect, with ascending branches, of a dense habit; foliage deep-green. Selection useful as a hedge; responds well to clipping. Origin in Royal Moerheim Nurseries, Dedemsvaart, Netherlands. Plants from 32.

266722 'HOGGER'. Pyramidal habit, 15' to 30' tall, growth regular, open-branched, foliage glaucous-blue, somewhat pendulous. Origin in England. Plants from 28.

266716 'KRAMERI'. Globose habit, about 3' tall, with very irregular and some contorted branches; branchlets cordlike. Origin in Europe before 1909. Plants from 33.

266410 'LUTEA'. Golden cypress. Of compact habit, 15' to 30' tall, with golden-yellow foliage. Grown in Europe before 1891. Plants from 33.

280141 'LUTEA NANA'. Plants from 28.

266411 'LUTEOCOMPACTA'. Pyramidal growth habit, 15' to 30' tall, very compact, with golden-yellow foliage; similar to *C. lawsoniana* 'Stewartii'. Origin in Gimborn Arboretum, Doorn, Netherlands. Plants from 33.

266404 'LYCOPODIOIDES'. Very dwarf, with much twisted and contorted main branches; only scalelike leaves developed, the lateral fernlike branchlets wholly suppressed,

these glaucous-blue, the under-
side of leaf tips very white.
Origin in the Netherlands about
1893. Plants from 33.

280142 'MAAS'. Plants from 28.

266717 'MINIMA'. Dwarf, globose
dense habit, 30" to 40" tall,
very slow growing. Differs from
C. lawsoniana 'Nana' in the
branchlets which are inclined to
twist so that the branchlet sprays
are set edgeways; foliage green.
Origin in England before 1878. A
favorite dwarf conifer of Dutch
nurserymen. Plants from 29.

266718 'MOERHEIMII'. Pyramidal,
15' to 30' tall, twigs bright-
yellow on upper side, yellowish-
green at the base and underside.
Origin at Royal Moerheim Nursery,
Dedemsvaart, Netherlands.

'NANA ROGERSII'. Dwarf plant, of
globose habit, about 3' tall, with
green foliage turning soft blue.
Origin in Rogers Nursery, England.

266412 Plants from 33.

266723 Plants from 28.

280143 'NIVEA'. Pyramidal habit,
foliage bluish-white. Grown in
Europe before 1891. Plants from
29.

266405 'PATULA'. Pyramidal habit,
to 30' tall, with dark-green
foliage, and slender twigs. One
of the best of the large-growing
kinds. Grown in Europe before
1900. Plants from 33.

269611 and 277765 'PENA PARK'
(Meyer) in BAILEYA, vol. 9, p.
129 (1961). Low multitrunked,
spreading plant of dense habit.
The mother plant in the Parque da
Pena, Sintra, Portugal measures
105' around, 25' wide, and about
7' tall at an age of about 80
years. This plant is split into 3
principal parts at the base with
branches each measuring 1' in
diameter. The foliage is green.
Cultivar named after the forest
preserve where the plant is cul-
tivated. Plants from Parque da
Pena via 4.

280144 'PENDULA'. Narrow, erect
growth habit, 30' tall or more,
with strongly pendulous branches

and dark-green foliage. Grown in
Europe before 1891. Plants from
29.

'PENDULA VERA'. Differs from C.
lawsoniana 'Pendula' in the spread-
ing pendulous habit. Plants are
most effective when propagated on
a standard. Origin in H. A. Hesse
Nursery, Weener/Ems, W. Germany.
Plants from 28.

266774 'POTTENII'. Narrow colum-
nar bush, about 6' tall, with
thick branches, and gray-green,
partially juvenile foliage. Origin
in Hillier Nursery, Winchester,
England. Plants from 37.

280145 'PRES. ROOSEVELT'. Raised
first by the late J. Hogger of
Hogger's nurseries, Ltd., East
Grinstead, Sussex, England, about
1945-46. Plants from 37.

280146 'PULCHERRIMA'. Pyramidal,
to 15' tall, densely branched,
the new growth sulfur-yellow, in
winter darker. Grown in Europe
before 1909. Plants from 29.

266598 'PYGMAEA ARGENTEA'. Back-
house silver-cypress. Dwarf, very
slow growing, globose, 24" to 30"
tall, with silvery-white new twig
growth, becoming greenish later.
Perhaps most dwarf of Lawson's
cypress cultivars. Known in Europe
before 1891. Plants from 23.

266721 'ROBUSTA GLAUCA'. Syn. C.
lawsoniana 'Robusta Glauca
Elegans'. Erect vigorous tree,
about 50' tall, with ascending
branches, the twigs pendulous,
gray-blue. Grown in Europe before
1891. Plants from 28.

266719 'ROSENTHALII'. Pyramidal,
to 30' tall; trunk erect, branches
ascending, twigs bright-green.
Grown in Europe before 1885. Plants
from 28.

265223 'SCHONGARIANA'. Pyramidal,
15' to 30' tall, branches and
twigs ascending; twigs vigorous,
dark-green on upper side, glau-
cous blue-green and with white
streaks beneath. Grown in Europe
before 1909. Plants from 12.

280147 'TRIOMPHE DE LOMBARTS'.
Pyramidal-shaped, 15' to 30' tall,
rapid-growing, branches and twigs

erect, the twigs yellowish-green. Origin in nursery of Pierre Lombarts, Zundert, Netherlands. Plants from 28.

266406 'VEITCHII'. Pyramidal in habit with vivid-blue foliage; branches and twigs ascending. Grown first by the firm of Veitch in England. Plants from 33.

280148 'WINSTON CHURCHILL'. Raised first by the late J. Hogger of Hogger's nurseries, Ltd., East Grinstead, Sussex, England, about 1945-46. Plants from 37.

266407 'WISSELLII'. Narrowly columnar habit, 15' to 30' tall, with crowded branches and glaucous-blue foliage. Origin in the Netherlands. Plants from 33.

266408 'YOUNGII'. Pyramidal growth habit, 15' to 30' tall, with dark-green foliage. Very attractive. Grown in Europe before 1909. Plants from 33.

CHAMAECYPARIS NOOTKATENSIS (D. Don)

Sudw.

Nootka cypress, yellow cedar, Alaska cedar. Originally discovered on Vancouver Island, British Columbia in the 1790's by Archibald Menzies on the voyage of Capt. George Vancouver. It was introduced into England about 1853.

266787 'LUTEA'. With the growth habit of the species; the twigs bright yellow, later bright-green. Grown in Europe before 1891. Plants from 23 and 39

280149 'AUREOVARIEGATA'. The young foliage yellow-variegated. Plants from 28.

265225 'VIRIDIS'. Growth habit as in the typical phase, foliage shiny fresh green. Origin in the Netherlands. Plants from 12.

CHAMAECYPARIS OBTUSA (Sieb. & Zucc.)

Endl.

Hinoki cypress. Often reaching over 100' tall as a forest tree of Japan. Foliage bright-green, glossy. Used widely in Japan as an ornamental and a favorite in the production of bonsai. In Europe, grown first in 1861 in the Netherlands and simultaneously

in England, it is one of the most highly esteemed of cultivated conifers in northern Europe, with probably 40 cultivars grown on the Continent.

266725 'ALBOSPICATA'. Slow-growing, conical in shape, to about 6' tall, densely branched, the young shoots at first creamy-white, changing later to pale-green. Grown in Europe before 1891. Plants from 28.

266726 'AUREOSPICATA'. The young shoots at first yellow-tipped. Plants from 28.

266413 'CONTORTA'. Conical-shaped, to 6' tall, the twigs much contorted and threadlike, bright-green. Origin in Old Farm Nursery, Boskoop, Netherlands. Plants from 33.

266414 'CORALLIFORMIS'. Dwarf-growing, bushy habit, 1 1/2' tall; with slender, overhanging, threadlike, twisted branchlets, the leaves closely appressed to the branchlets, brownish with lighter brown spots. Origin in Europe before 1909. Plants from 33.

280150 'LYCOPODIOIDES'. Of dwarf habit, to about 6' tall, often ball-shaped; branches ascending, sometimes irregular, nearly terete, dark-green; leaves very crowded and disposed in more than 4 ranks. Grown first by the firm of Veitch in England about 1861. Plants from 33.

280151 'LYCOPODIOIDES AUREA'. A sport of *C. obtusa* 'Lycopodioides' with bright-yellow leaves. Origin in the Netherlands before 1909. Plants from 33.

266601 'MARIESII'. Compact-growing dwarf plant, forming a conical or pyramidal bush, with whitish twigs in summer turning yellow-green in winter. Origin in Europe before 1909. Plants from 23.

266417 'NANA' (true). Very slow growing dwarf plant, with spreading, rather flat top, and short, straight, somewhat horizontal branches, and very dense branchlets. One of the smallest of dwarf conifers. Plants from 33.

266727 'NANA HAGE'. Dwarf plant, 2' to 3' tall, densely branched, spreading, with bright-green foliage. Origin in Hage Nursery, Boskoop, Netherlands. Plants from 28.

266528 'NANA KOSTERI'. Dwarf plant, intermediate between *C. obtusa* 'Nana' and *C. obtusa* 'Pygmaea'; foliage brownish-green. Origin in M. Koster Nursery, Boskoop, Netherlands. Plants from 28.

266415 'NANA PYRAMIDALS'. Conical bushy habit, otherwise the same as *C. obtusa* 'Nana Gracilis' from which this cultivar was raised in the Old Farm Nursery, Boskoop, Netherlands. Plants from 33.

266416 'NANA SMITH'. Plants from 33.

266724 'NANA TEMPELHOF'. Selection originated at Tempel nurseries of L. Konijn & Co., Reeuwijk, Netherlands. Plants from 28.

266728 'NANA TONIA'. In growth habit resembles *C. obtusa* 'Nana Gracilis', from which it has been derived as a sport with white-variegated twigs. Origin in Hage Nursery, Boskoop, Netherlands about 1930. Plants from 28.

280152 'PYGMAEA AURESCENS'. Very dwarf, old plants rarely more than 18" to 24" tall; branches fan-shaped, spreading close to the ground, almost horizontal; foliage bronze-gold, especially well marked in winter. Origin in Wezelenburg Nursery, Boskoop, Netherlands. Plants from 33.

CHAMAECYPARIS PISIFERA (Sieb. & Zucc.)
Endl.

Sawara cypress. Extremely variable and valuable as an ornamental. Native of Japan where it may reach 150' tall. Innumerable cultivars of this plant are grown in Japanese gardens, also in Europe and America. At least 30 cultivars are grown in continental European gardens. Often, but incorrectly, referred to as *Retinospora* by nurserymen.

265227 'ARGENTEOVARIEGATA'. With the habit of the typical phase of

the species, the new twigs somewhat white-tipped. Grown in Europe before 1909. Plants from 12.

265226 'DWARF BLUE'. Dwarf in habit, 2 1/2' to 3 1/2' tall, with thick, twisted branches and bluish foliage. Plants from 12.

266419 'NANA AUREOVARIEGATA'. Dwarf bunshaped plant making a very dense cushion, the foliage golden-variegated, with a golden sheen throughout. Closely related to *C. pisifera* 'Compacta Variegata'. Grown in Europe before 1891. Plants from 33.

CHAMAECYPARIS THYOIDES (L.) B. S. P.

White-cedar. An eastern North American evergreen tree, to about 75' tall, often found in swampy ground from Maine to Florida and to Mississippi. It has been grown in Europe since 1736, but the tree is not a favorite in European gardens. The cv. 'Andelyensis' is the most attractive and worthwhile of the cultivars commonly grown.

266775 'ANDELYENSIS AUREA'. Habit of *C. thyoides* 'Andelyensis', but the foliage yellowish. Grown in Europe before 1890. Plants from 37.

265228 'ATROVIRENS'. Growth habit of the wild type; foliage very dark green, darker than in the normal phase, and lustrous. Grown in Europe before 1890. Plants from 12.

266729 'AUREA'. Growth habit like the wild type, the foliage golden-yellow. Grown in Europe before 1891. Plants from 28.

266788 'CONICA'. Dwarfish, conical in habit, with juvenile foliage, very dense and slow-growing. Origin in Konijn Nursery, Reeuwijk, Netherlands. Plants from 39.

266730 'VARIEGATA'. Selection with the foliage yellow-variegated; habit of the wild phase of the species. Plants from 28.

CHLOROPHYTUM ALISMAEFOLIUM Bak.

Liliaceae.

275876 Densely tufted; leaf blades lanceolate, 4" to 6" long; leaves with the petioles 12" to 13" long, rather lax; racemes rather lax,

unbranched; flowers white. Tropical Africa. Plants from 1.

CHLOROPHYTUM BICHETII (S. Karrer)

Backer

265916 Tuberos-rooted, densely tufted perennial, usually 5" to 6" tall; leaves grasslike, linear-lanceolate, 4" to 8" long, striped with yellowish-white, particularly along the margins; inflorescence lax, shorter than the leaves; flowers white. Attractive pot plant. Native of Gabon. Plants from 14.

CHLOROPHYTUM MACROPHYLLUM (A. Rich.)

Aschers.

275877 Densely tufted; leaves 4 to 5 on a stem, 1 1/2' to 2 1/2' long; blades lanceolate, glabrous, 1 1/2' long, 2" to 3" wide, white striped down the middle, lax; racemes simple or branched. Tropical East Africa. Plants from 1.

CHLOROPHYTUM MANNII Bak.

275878 Densely tufted; leaves about 5 to a stem; petioles 6" to 8" long; blades thin, glabrous, 6" to 8" long, about 1" wide; racemes unbranched, very lax, 6" to 8" long. Gabon and tropical Africa. Plants from 1.

CHLOROPHYTUM ORCHIDASTRUM Lindl.

275879 Leaves spatulate, tufted, the petioles furrowed, orangish-green, the blades dark-green. Tropical Africa. Plants from 1.

CHLOROPHYTUM UKAMBENSE Bak.

275880 Densely tufted, from a globose tuber; leaves 6 to 9 on a stem, oblong-lanceolate, glabrous, 5" to 6" long, about 1" wide; racemes 3, lax; perianth greenish. British East Africa. Plants from 1.

CHRYSANTHEMUM ARCTICUM L. Compositae.

261066 Rhizomatous perennial, 9" to 12" tall; leaves wedge-shaped, toothed near tip; flower heads with white rays often tinged pink, about 1" long. Japan northward to Alaska. Flowers in October. Plants from B. K. Boom, Wageningen, Netherlands.

CISSUS CRAMERIANA Schinz. Vitaceae.

274442 Tree, to about 12' tall, branched, with thick fleshy stems;

bark pale-yellow, in old plants peeling and papery; leaves ternately divided. Plants deciduous during dry season. Desert plant of southwestern Africa. Plants from 14.

CLEMATIS HERACLEAEFOLIA DC.

265229 Deciduous subshrub, to about 3' tall, with herbaceous stems; leaflets 3; flowers 3/4" to 1" long, tubular, in short axillary clusters with blue sepals. Related to but stouter than *C. stans* Sieb. & Zucc. China. Late-summer flowering. Plants from 12.

CLEMATIS INTEGRIFOLIA L. Ranunculaceae.

264571 Subshrub, to about 3' tall, with herbaceous stems; leaves undivided, 2 1/2" to 4" long, ovate, entire; flowers solitary, usually blue to violet or occasionally white. Southern Europe. Plants from 12.

CLEMATIS KOREANA Komar.

265230 Deciduous low-growing shrub; leaflets 3, cordate-ovate, 1 1/2' to 3 1/2' long, the middle leaflet 3-foliolate, coarsely toothed, scattered-hairy; flowers yellow or reddish to pale-violet, solitary. Korea. Plants from 12.

CLEMATIS LASIANDRA Maxim.

265607 Vigorous deciduous climber, 10' to 15' long; leaves ternate or doubly ternate, 3" to 8" long; flowers axillary, 1 to 3, bell-shaped, dull-purple, 1/2" long. Autumn flowering. Japan and China. Plants from 12.

CLEMATIS MONTANA f. RUBENS (Ktze.)

Rehd.

Vigorous deciduous climber, 20' to 30' long, very profuse flowering; leaflets ternate, ovate to lanceolate, toothed, 1 1/2" to 4" long; flowers solitary on a stalk, although borne in axillary clusters, rose-red. The more hairy and purplish leaves and flower color distinguish this, the Chinese phase of Western Hupeh and Szechwan, from the typical white-flowered phase of the Himalayas. One of the showiest of climbers. Several cultivars are grown in European nurseries.

- 273691 'GRANDIFLORA'. Flowers rose-colored, 2 1/2" across. Plants from 12.
- 266637 'ODORATA'. Flowers rose-colored, fragrant. Plants from 25.
- 266638 'PINK PERFECTION'. Flowers deep-rose. Plants from 25.
- CLEMATIS 'SUPERBA'
- 264347 Alleged hybrid of *C. montana* f. *rubens* x *C.* 'Mrs. Geo. Jackman'. Flowers white, somewhat larger than in typical *C. montana*. Plants from Homestead Nursery, Boskoop, Netherlands.
- CLEMATIS x VEDRARIENSIS Vilm. 'ROSEA'
- 266639 Syn. *C. spooneri rosea* Mottet. Hybrid of *C. chrysocoma* x *C. montana* f. *rubens*; flowers 2" to 2 1/4" across, mauve-pink or rose-colored. Origin in France, before 1912, at nursery of Vilmorin. Plants from 25.
- CLERODENDRUM NUTANS Wall. Verbenaceae.
- 267926 Glabrous shrub, 2' to 4' tall, with 4-angled shoots; leaves opposite or in 3's, oblong-lanceolate, 5" to 7" long; flowers white, 1" across, unscented, in panicles 6" to 12" long. India to Burma. Plants from 5.
- CLUSIA FLUMINENSIS Pl. & Tr.
Clusiaceae.
- 265928 Evergreen tree; leaves thick, leathery, lustrous deep-green, obovate, cuneate at the base. Brazil. Plants from 14.
- CLUSIA OVIGERA Pl. & Tr.
- 275881 Vigorous evergreen shrub, 10' to 12' tall; leaves ovate-oblong, 6" to 8" long, obtuse to acuminate; cymes terminal, 3-flowered on long pedicels. Handsome tropical shrub, with very glossy, coriaceous leaves. Mexico. Plants from 1.
- CODIAEUM VARIEGATUM var. PICTUM (Lodd.) Muell.-Arg. Euphorbiaceae.
- Tropical foliage shrub, with multicolored coriaceous leaves, called "croton" in cultivation. Leaves variable in shape, broadly ovate to linear, entire or lobed, sometimes spirally twisted, variegated in shades of red, green, and yellow. Widely cultivated in all warm areas and common as pot plants in Europe. Following is a collection introduced from 1.
- 275882 'APPENDICULATUM'. Leaves green, narrow, constricted to the midrib, or the midrib prolonged, sometimes hornlike at the tip.
- 275883 'B. COMTE'. Leaves large, 2 1/2" to 7" long, reddish-green with red blotches.
- 275884 'BARON JAMES DE ROTHSCHILD'. Leaves 2 1/2" to 7" long, green with yellow veins, reddish beneath in young leaves, green with red veins in old leaves.
- 275885 'BRITISH EMPIRE'. Leaves more or less 3-lobed, the middle lobed twice as long as the lateral lobes; veins red on dark reddish-green background.
- 725886 'CARRIEREI'. Leaves narrowly lanceolate to oblong, 1 1/2" to 11" long, 1/2" to 1" wide, the margins, midrib, dots, and some of the veins yellow.
- 275887 'DAME MELANIE'. Leaves 8" to 10" long, 2" wide, oblong, green-spotted on outer two-thirds, the midrib reddish with a band of white.
- 275888 'FREDERIC SANDER'. Leaves 3-lobed, with a yellow central area and bright green edges; stems yellow. Origin about 1910.
- 275889 'GLACE'. Leaf blades panduriform with orange-red margins and reddish lateral veins, the middle of the blades greenish-red, the petioles green.
- 275890 'L'AURORE'. Leaves narrowly lanceolate, green with white to pinkish midveins, whitish-mottled margins, and pink on the edges.
- 275891 'L'IDEAL'. Leaves oblong-ovate, green with red petioles.
- 275892 'MAJESTICUM'. Leaves linear, about 15" long, yellow background with red margins, midrib, and mottling.
- 275893 'MAURICE ROUVIER'. Leaves long-petiolate, green with whitish midveins and yellowish laterals; blades oblong, 5" to 6" long.

275895 'MME. DE SOLIGNAC'. Leaves narrowly oblong, 8" to 10" long, 1 1/2" wide, the veins red, the blades dark-green suffused with red.

275894 'MLLE. ETIENNE JORIS'. Similar to 'Glacé', but the veins yellow on green background.

275896 'MR. GEORGES TRUFFAUT'. Leaf blades somewhat panduriform to 3-lobed, green with reddish (similar in this respect to 'British Empire'), but the leaf blades uniformly colored.

275897 'MR. PEETERS'. Leaves with green veins, the blades whitish to rose-pink, sometimes dark-green, oblong.

275898 'NEGLECTUS'. Leaves long-lanceolate, sometimes crisped or undulate in middle portion, mid-rib yellowish, the blades green with occasional yellow spots.

275899 'OSTERSII'. Leaves linear-lanceolate, yellow-spotted, 8" to 10" long, 1 1/2" wide.

275900 'PRESIDENT CHARLES'. Leaves narrowly lanceolate, reddish-green, with red veins and red margins.

275901 'PRINCE OF MANACO'. Leaves narrowly lanceolate-oblong, green with yellow blotches.

275902 'QUADRICOLOR'. Leaves reddish-green above, lighter beneath with green veins, the petioles red.

275903 'SOUVENIR DE LAEKEN'. Leaves predominantly white, with light-green markings. Excellent.

275904 'SUNBEAM'. Leaves 8" to 10" long, oblong, red with green markings.

COLEUS BLUMEI var VERSCHAFFELTII Lem.
Labiatae.

Annual or short-lived perennial herb, thought to be of hybrid origin, from material described originally from Java. Bud sports have contributed to a multitudinous array of color mutants. The list of cultivars that follow are from material selected by a specialist in these plants in England. Collection from 45.

249769 'AFTERGLOW'. Leaves shallowly scalloped with brownish-

orange; centers of young leaves purplish-red, edges chartreuse.

249770 'AUTUMN'. Leaves shallowly scalloped, deep purplish-red to reddish-brown, lightly flecked with deep-pink and greenish-yellow spots.

249771 'BEAUTY'. Leaves moderately scalloped, center dark-maroon, with wide margin of dark reddish-purple to purplish-red.

249772 'BECKWITH'S GEM'. Leaves shallowly scalloped; center dark purplish-red bordered by lighter purplish-red, with mottled-green to light-yellow edging.

249773 'BLACKBURN'. Leaves crinkled, linear, purplish-red, edged and tipped with dark-green to yellow.

249775 'CAMPFIRE'. Leaves shallowly scalloped, irregularly blotched with yellow, red, green, purplish-red appearing almost black.

249777 'CRIMSON VELVET'. Leaves deeply scalloped, edges crinkled, dark purplish-red with lighter purplish-red areas throughout. Rich velvety.

249778 'CRISTATA'. Leaves doubly and deeply scalloped, crinkly edged, with a pale-yellow to cream-yellow to cream central zone, bordered by a green band, margins yellow and green.

249779 'DOMINANT'. Leaves shallowly scalloped, blotched with areas of deep purple, purplish-red to reddish-brown, and pale yellow to light green, edged with light green to pale yellow.

249780 'DORIS'. Leaves shallowly scalloped, basal veins and margins creamy-white, predominantly purplish-pink, bordered by dark yellowish green.

249781 'ETNA'. Leaves shallowly scalloped, the central portion deep reddish-black with red edging.

249782 'EXCELLENT'. Leaves shallowly scalloped, central area reddish-purple, bordered by maroon, edge with green.

249783 'FRECKLES'. Leaves shallowly scalloped, blotched in shades of reddish-brown to pale yellowish-green.

- 249784 'GLITTER'. Leaves shallowly scalloped, central zone purplish-red, bordered by dark reddish-green areas, green-edged.
- 249785 'GLORY OF LUXEMBOURG'. Leaves deeply scalloped, slightly crinkled, rich velvety purplish-red, pale greenish-yellow edged.
- 249786 'HARLEQUIN'. Leaves shallowly scalloped, mottled in shades of red, bluish-red, yellow, and green.
- 249787 'LAING'S CROTON'. Leaves scalloped and crinkled, linear, variously colored from almost solid red, green or yellow to combinations of these colors.
- 249788 'LORD FAIRMOUTH'. Leaves shallowly scalloped, central zone purplish-red, bordered by a band of maroon and green, green-edged.
- 249790 'PAISLEY SHAWL'. Leaves very like 'Harlequin', a Paisley Print or Cashmere Shawl, various shades and gradations of red, yellow, and brownish.
- 249791 'PEGASUS'. Leaves shallowly scalloped, relatively broad, predominantly purplish-red with green undertones, with edge of similar color and broad lateral areas of yellow flecked with green.
- 249792 'PICTURATUM'. Leaves shallowly scalloped, central zone purplish-red, bordered by dark-maroon, edged in green.
- 249794 'POYNTON'. Leaves shallowly scalloped, central zone purplish-red, bordered by dark-maroon, edged in green. Green and cream blotches at random over entire area.
- 249795 'RED CROTON'. Leaves scalloped, crinkled, linear, central zone red, bordered by dark maroon.
- 249797 'RUSSET'. Leaves shallowly scalloped, central zone pale-pink to red, bordered by brownish red, pale green on margin.
- 249796 'RUST'. Leaves moderately scalloped, slightly crinkled, entire surface rugose, main veins and small basal area, pale-yellow, remainder of leaf pale-pink to salmon, pale green in patches.
- 249798 'SALMON CROTON'. Leaves scalloped, crinkled, linear, pale salmon-pink with green edging.
- 251601 'SCARLET RIBBON'. Leaves moderately scalloped, slightly crinkled, central zone deep maroon and green, bordered by scarlet, golden yellow to green on margin.
- 249799 'SKYLARK'. Leaves shallowly scalloped, purplish-red ground flecked with dark maroon and pale greenish yellow.
- 249800 'SUNBEAM'. Leaves shallowly scalloped, main veins reddish, central zone creamy-white, bordered by pale greenish-yellow, thin line of maroon edging.
- 249802 'SUNSET'. Leaves shallowly scalloped, purplish-red with an undertone of green, flecked with pale-green and yellow spots. Appears luminous when well grown.
- 249803 'TAPESTRY'. Leaves doubly scalloped, edges crinkled, areas variable in color, red, green, yellow, and maroon.
- 249806 'VESUVIUS'. Leaves shallowly scalloped, red, marked with dark area, edged in golden yellow to pale green.
- 249807 'WHITE GEM'. Leaves shallowly scalloped, rugose, central vein pinkish, central zone creamy-white to pale-yellow with green flecks and edging.
- COLUTEA ORIENTALIS Mill. Leguminosae. 261835 Deciduous shrub, of dense habit, about 6' tall; leaves pinnate, 3" to 4" long, the leaflets 1/4" to 5/8" long, rounded at tip; flowers in a small cluster, brownish-red or copper-colored. Distinctive for the ornamental glaucous foliage. Asia Minor. Plants from 36.
- CORDYLINAE TERMINALIS (L.) Kunth Liliaceae. Evergreen, erect shrub, with canes about 10' long, and closely contiguous leaves borne in a dense terminal cluster; leaves thickish, elliptic or elliptic-lanceolate, 1' to 2' long, 2" to 4" wide,

green; cultivars with brilliantly colored leaves in various shades of red to purplish are widely grown; flowers in dense panicles, white to lilac or reddish; berries bright-red. India, Malaysia to Polynesia. Much grown in Europe, especially those with colored leaves. The well-known "Ti" plant belongs to this species. Following is a collection from 1.

275905 'ECKHOUTEI'. Leaves narrowly linear-lanceolate, green.

275906 'KAISER WILHELM'. Leaves oblong-acuminate, green, suffused with red; petioles reddish.

275907 'MARGUERITE STORY'. Leaves pink with red splashes on a green to coppery-red background.

275908 'MME. CHARRON'. Leaves oblong-acuminate, green, suffused with red; petioles reddish.

275909 'MR. RUSSEL'. Leaves narrowly oblong, green, with the periphery red, and the petioles reddish.

CORIARIA TERMINALIS Hemsl.

Coriariaceae.

262252 Subshrub, 2' to 4' tall, spreading by rhizomes, the tops produced each season and dying to the ground; leaves ovate, 1" to 3" long, with 5 to 7 strong veins; racemes terminal, 6" to 9" long; flowers greenish at first, becoming thick and fleshy at maturity; fruit black. Sikkim, southwestern China, and Tibet. Plants from 32.

CORNUS ALBA L. Cornaceae.

Deciduous shrub, wide-spreading, ultimately about 10' tall; bark of the young shoots deep red in autumn and winter; leaves opposite, ovate to oval, usually 2" to 4" long, dark green above, glaucous beneath; flowers small, yellowish-white, in cymes 1 1/2" to 2" across; fruit whitish or tinted with blue. Siberia to northern China. Widely grown in Europe with 8 to 10 cultivars.

265610 'ALBOMARGINATA ELEGANS'. Leaves white-variegated. Differs from other white-variegated culti-

vars in the whiter markings. Plants from 12.

261836 'GOUCHAULTII'. Leaves variegated, margined with yellow and stained with rose. Differs from C. alba 'Spaethii' in the duller leaves with more green and rose in the center. Origin about 1885 in France. Plants from 36.

262253 'WESTONBIRT'. Selection with vivid-scarlet bark; berries pale-blue. Origin at Westonbirt Arboretum in England. Plants from 32.

CORNUS ALTERNIFOLIA L. 'ARGENTEA'

266420 Selection with white-variegated leaves. Deciduous shrub or small tree, to about 20' tall, flat-topped with horizontal branching; leaves alternate, 2" to 5" long, 1" to 1 1/2" wide. Origin in U.S.A. about 1900. Plants from 33.

CORNUS KOEHNEANA Wanger.

265611 May be synonymous with C. coreana Wanger. Tree, to 50' tall; leaves elliptic to elliptic-ovate; flowers small, white. Shensi, China. Plants from 12.

CORNUS KOUSA Bueg. ex Hance. Deciduous small tree, to about 20' tall;

leaves ovate, pointed, 1 1/2" to 3" long; flowers small, crowded in a buttonlike head, this surrounded by 4 white bracts, each 1" to 1 1/4" long. Highly esteemed for the attractive white involucre bracts which appear in June. Japan. Several cultivars are grown in Europe.

266421 'XANTHOCARPA'. Selection with yellow fruit. Origin in the Netherlands. Plants from 22.

CORNUS KOUSA var. CHINENSIS A. Osborn

Differs from the Japanese phase of the species in the leaves without or with inconspicuous axillary tufts of hairs beneath, usually larger and more pubescent, and the involucre bracts longer. China.

265028 'BRUNS TYPE I'. Seedling selection with leaves 3" to 3 1/2" long, smaller than in 'Bruns Type II', and incurved. Origin in nursery of H. Bruns, Westerstede, Oldenburg, W. Germany. Plants from 8.

- 265029 'BRUNS TYPE II'. Seedling selection; leaves 3" to 5" long, thicker and darker green than in 'Bruns Type I', and flat. Origin in nursery of H. Bruns, Westerstede, Oldenburg, W. Germany. Plants from 8.
- CORNUS PAUCINERVIS Hance
259461 (6407) Deciduous shrub, 4' to 10' tall; leaves lustrous, narrowly oval, tapering at both ends, 1 1/2" to 4" long, veins strong, in 2 or 3 pairs; flowers small creamy-white, the clusters about 3" across. Distinctive species of ornamental merit. Western Hupeh and W. Szechwan, China. Cuttings from Zuider Park, The Hague, Netherlands.
- CORNUS WALTERI Wanger.
261268 Deciduous tree, to 30' tall, to 14" in diameter at the base, with fissured gray bark; leaves elliptic to oblong-elliptic, 2" to 4 1/2" long, long-acuminate; fruit black. Grown under E. H. Wilson 375. Western Hupeh and W. Szechwan, China. Seeds from Arboretum des Barres, Nogent-sur-Vernisson, Loiret, France.
- CORYLUS AVELLANA L. 'AUREA'
Betulaceae.
261837 Selection with leaves and shoots permanently yellowish. As the new growth appears, this cultivar assumes its most beautiful proportions. Growth weaker than in the green phase. Grown in Europe since about 1864. Plants from 36.
- COSTUS sp. 'ALBOVARIEGATA'
Plants, 2' to 3' tall; leaves light-green and white-striped.
274443 Plants from 14.
275911 Plants from 1.
- COSTUS AFER Ker-Gawl. Zingiberaceae
275910 Rhizomatous perennial, 2' or more tall; stems clustered, erect, unbranched, sheathing the whole length; leaves about 9" long, ovate-elliptic; corolla white, tinged with yellow. Traditionally used among natives to relieve nausea. Sierre Leone. Plants from 1.
- COSTUS IGNAEUS N. E. Br.
265929 Stout herb, about 15" tall, with succulent stems; leaves oblong or oblong-lanceolate, 3" to 6" long, deep green above, reddish beneath; flowers 2" to 3" in diameter, bright-orange, appearing singly and very ephemeral. Grown for the showy flowers. Brazil. Plants from 14.
- COTONEASTER CONSPICUA Marq. 'DECORA'
Rosaceae.
262254 Syn. C. conspicua 'Nana'. Strongly decumbent mostly evergreen shrub, eventually 30" high and 6' to 7' across, the main branches prostrate toward the tip; leaves elliptic-oblong, 1/8" to 1/4" long; fruit scarlet. Originally grown in England from seeds collected in Tibet by F. Kingdon Ward. Reproduces true from seed. Described originally from material (P.I. 64253) grown at Plant Introduction Station, Glenn Dale, Md. Now widely cultivated in Europe, sometimes erroneously as C. conspicua 'Nana'. Plants from 32.
- COTONEASTER DAMMERI Schneid.
'SKOGSHOLMEN'
269293 Selection with somewhat smaller leaves than in the typical phase of the species, 1/2" to 3/4" long, elliptic. An evergreen shrub, usually wide-spreading, useful as a ground cover; fruit coral-red. The species is Chinese. Origin in Sweden. Plants from 9.
- COTONEASTER DAMMERI x C. SALICIFOLIA
'SAKDAN'
265612 Hybrid with the leaves of C. salicifolia and habit of C. dammeri; branches creeping along the ground; fruit orange-red. Origin in nursery of Timm & Co., Holstein, W. Germany. Plants from 12.
- COTONEASTER HORIZONTALIS Decne.
Deciduous shrub, of low, flat habit, rarely more than 2' or 3' tall, the branches spreading horizontally; fruit bright-red. One of the most successful of the low-growing cotoneasters, much grown in Europe. China.
265232 'SAXITILIS'. Selection with

leaves 1/4" to 1/2" long, half as wide, with a fernlike arrangement on the branches. Habit wide-spreading, low-growing. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

265233 'VARIEGATA'. Selection with the leaves white-pointed and variegated and the margins more undulate, otherwise the plant with the characters of the typical phase of the species. Grown first in England about 1922. Plants from 12.

COTONEASTER MICROPHYLLA Wall. ex Lindl.

An evergreen low-growing shrub, spreading and often prostrate, rarely more than 2' or 3' tall unless trained; leaves 1/4" to 1/2" long; flowers white; fruit red. Himalayan species much esteemed as a garden plant, with several cultivars grown in Europe.

261838 'COCHLEATA'. Syn. C. microphylla melanotricha of gardens in Europe, not C. melanotricha of Hand.-Mazz. Prostrate evergreen shrub, branches along the ground, often rooting; leaves obovate to nearly oval, rounded or emarginate, margins revolute, with scattered long white hairs beneath; berries red. W. Szechwan, China. Plants from 36.

COTONEASTER PRAECOX Vilm.-Andr. ex Bois. & Berth. 'HESSEI'

265030 Syn. C. adpressa var. praecox (Vilmor.) Bois. & Berth. Selection more dwarf and slower growing than in the typical phase of the species and the leaves smaller. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

COTONEASTER SALICIFOLIA Franch.

Half-evergreen or evergreen shrub, to 15' tall, with spreading branches; fruit bright-red. An attractive species widely grown in Europe; at least two geographical varieties and several cultivars are grown in gardens.

265031 'PARKTEPPICH'. Evergreen shrub, low, spreading habit, nearly

prostrate; leaves about half as wide as in the typical phase of the species. Selection from J. Hackmann Nursery, Holstein, W. Germany. Plants from 7.

266496 'PERKEO'. Selection growing about 3' tall, evergreen, with the habit of C. salicifolia var. floccosa Rehd. & Wils. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 27.

COTONEASTER STERNIANA (Turr.) Boom

265032 Syn. Cotoneaster 'Gloire de Versailles'. Deciduous shrub, 6' to 9' tall, somewhat stiff; branches ascending, sometimes tomentose, densely leafy; leaves elliptic, 1" to 1 1/4" long, dark green above, glabrous, white tomentose beneath; flowers white to rosy; fruit bright-red. Southeastern Tibet and northern Burma. Plants from 7.

COTONEASTER X WATERERI Exell

Represented by this hybrid are a number of named cultivars that originated first in England as hybrids of C. salicifolia and C. rugosa E. Pritz. with C. frigida Wall. ex Lindl. In general, these hybrids are very vigorous, large evergreen shrubs or small trees, 20' or taller, and as much in width; fruit scarlet. No cotoneaster has showier fruit than some of the best of the named cultivars of this hybrid. The hybrids are mostly tender outside of southern and warmer areas of the United States.

'EXBURIENSIS'. Syn. Cotoneaster x watereri 'Rothschildiana'. Evergreen shrub, about 15' tall, the branches spreading and arching; berries yellow, in large clusters. Worthy on account of the yellow fruit. Origin in Rothschild garden at Exbury House, Exbury, England, about 1930.

261183 Plants from 4.

266647 Plants from 26.

'HERBSTFEUER'. Seedling selection that forms large carpets over the ground; branches creeping and rooting at every node; habit like that of C. dammeri, but more robust and taller; leaves oval, 1 1/2" to 2 1/2" long, 1/2" to 3/4" wide, glossy dark-green, somewhat rugose

above, papillose beneath; fruit red. Origin in nursery of H. Bruns, Westerstede, Oldenburg, W. Germany. 265033 Plants from 1. 266648 Plants from 26.

CRASSULA sp. Crassulaceae.

Large genus of desert succulents, shrubs or herbs, largely confined to South Africa, but occurring also into tropical Africa and Madagascar. Following is a collection consisting entirely of wild material collected in South Africa and sent to the Institute of Horticultural Plant Breeding, Wageningen, Netherlands. The following introductions were sent as cuttings from the mother plants at Wageningen.

259942 Wild material from Barydale, South Africa, Higgins 2247 (England). Wageningen acc. n. 1696.

259943 Wild material from van Rijnsplas near van Rijnsdorp, South Africa, Herre 5877 (Stellenbosch). Wageningen acc. n. 1270.

259944 Wild material from Little Karroo, South Africa, Herre 5456 (Stellenbosch). Wageningen acc. n. 696.

259945 Wild material from Sendlingsdrift, Southwest Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 1204.

259946 Wild material from Bergville, Natal, South Africa Dr. Rehm, s.n. Wageningen acc. n. 1252.

259947 Wild material from Moissabis, Rigttersveld, South Africa, Herre 6313 (Stellenbosch). Wageningen acc. n. 1278.

259948 Wild material from Prins Alfred Pas, van Rynsburg, South Africa, Herre 4451 (Stellenbosch). Wageningen acc. n. 1273.

CRASSULA ACUTIFOLIA Lam.

259897 Stem woody, erect or decumbent, branched; leaves fleshy, 1" to 1 1/4" long, glabrous, acute; flowers in terminal cymes, white, very small. Wild material from East Cape Province, South Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 1264. Plants from 44.

CRASSULA × ANDEGAVENSIS Boom

259473 Hybrid of C. falcata × C. schmidtii. Succulent perennial,

10" to 12" tall; flowers in a dense head, dark-red, showy. Plants are vegetatively propagated from ones superior in flower color. Most closely resembles the C. falcata Wendl. parent. Handsome pot plant flowering over a long period, particularly in the early spring months. Origin probably in Europe, known about 1900. Plants from K. Edelman, Reeuwijk, Netherlands.

CRASSULA ANOMALA Schoenl. & Bak. f. 259898 and 259899 Branched fleshy herb or subshrub, to about 1' tall; leaves at the base spreading, fleshy, somewhat flat, blunt, glabrous. Wild material from South Africa, Herre 8006 (Stellenbosch). Wageningen acc. n. 1287. Plants from 44.

CRASSULA BAKERI Schoenl.

Small shrub; stems erect, fleshy, densely hairy, usually globose, sometimes flattened on one side; leaves about 1/4" long, ashen-gray to white-hairy, persistent. The following introductions are from 44. 259900 Wild material from Kommaggas, South Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 1210. 259901 Wild material from Rigttersveldt, South Africa, Herre 10 (Stellenbosch). Wageningen acc. n. 755.

CRASSULA BREVIFOLIA Harv.

259902 Small bush, 1' or more tall, with woody stems and short, thick leaves, about 1/2" to 3/4" long, about 1/6" wide, very blunt; flowers white. Wild material from Calitzdorp, South Africa. Higgins 2154. (Wageningen acc. n. 1390.) Plants from 44.

CRASSULA CEPHALOPHORA L. f.

259903 Stems short, nearly naked, branching; leaves crowded, convex on both sides, 1" to 3" long, glaucous; flowers white. Wild material from Willowmore, South Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 1255. Plants from 44.

CRASSULA DASYPHYLLA Harv.

259904 Often misnamed in cultivation as C. corallina L. f. Small plant, about 2" to 3" tall, glabrous, procumbent, with flexuous branches; branches jointed; leaves subglobose or ellipsoidal, fleshy,

punctate, very obtuse. Wild material from Rigtersveld, South Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 1201. Plants from 44.

CRASSULA DECEPTRIX Schoenl.

Dwarf succulent shrub, slightly branched at base and tufted; stem 1 1/2" to 2" long or more, thickly squarrose-leaved; leaves thick, imbricate on the stem, about 1/2" long, deltoid-rounded, lower side strongly keeled, whitish-gray or green, strongly warty. Plants from 44.

259905 Plant whitish-gray. Wild material from Riethuis, Kommaggas, South Africa, Herre s.n. (Stellenbosch). Waggeningen acc. n. 1221. 259906 Plant green. Wild material from van Rijnsdorp, South Africa, Herre 6433 (Stellenbosch). Wageningen acc. n. 1222.

CRASSULA DECEPTRIX X C. FALCATA

259939 Hybrid originated by Morgan in California. Wageningen acc. n. 2209. Plants from 44.

CRASSULA DELTOIDEA L. f.

259907 Stem very short, 2" to 3" long, branching from the crown; covered with imbricate, fleshy, decussate, short leaves; leaves united at base, very thick, tapering, gray-green and mealy; flowers white. Wild material from Bullspoort, Naukluft, South Africa. Wageningen acc. n. 1225. Plants from 44.

CRASSULA DUBIA Schoenl.

Related to C. cephalophora Thunb. Leaves obliquely obovate, 1" long, about 3/4" wide, about 1/4" thick, green, very finely hairy, the margins red, with white hairs. Plants from 44.

259908 and 259912 Wild material from Oudtshoorn, Cloete, South Africa, Herre 6579 (Stellenbosch). Wageningen acc. n. 1244.

259909 Wild material from Brakfontien, Rigtersveld, South Africa, Herre 8003 (Stellenbosch). Wageningen acc. n. 6187.

259910 Wild material from 6 miles south of Witputs, South Africa, H. Kinges s.n. Wageningen acc. n. 1192.

259911 Wild material from Barrydale, South Africa, Herre 5031 (Stellenbosch). Wageningen acc. n. 1285.

CRASSULA GRISEA Schoenl.

259913 Plant small, shrubby, about 6" tall; stem fleshy, branched from the base, rather thickly leaved; leaves spreading, lanceolate, about 1 1/4" long, about 1/2" wide, about 1/4" thick, lower side rounded-keeled, grayish; flowers small, white. Wild material from Rigtersveld, South Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 1229. Plants from 44.

CRASSULA HETEROTRICHA Schinz

259914 Succulent perennial, 6" to 8" tall; leaves thick, linear-oblong, 2 1/2" to 6" long, about 1/2" wide; flowers white on heads, about 4" across. Previously confused with C. perfoliata L., but distinct from it (See Succulenta, n. 3, p. 32. 1958). Wild material from Zoeloeland, Natal, Herre 5922 (Stellenbosch). Wageningen acc. n. 745.

CRASSULA HYSTRIX Schoenl.

259915 Very low subshrub, about 1" tall; leaves ovate, about 1/4" long, less wide, about 1/8" thick, very fleshy, glaucous and white-hairy. Wild material from Sandberge, Kommaggas, South Africa, Herre 7973 (Stellenbosch). Wageningen acc. n. 1216. Plants from 44.

CRASSULA LYCOPODIOIDES Lam.

Stems 1' to 2' long, often decumbent and rooting at the nodes along the ground, brittle; leaves minute, scalelike, densely covering the fleshy more or less 4-sided stem, bright-green. An extremely variable species found widely in the southernmost part of South Africa. Plants from 44.

259916 Wild material from Riethuis, Kommaggas, South Africa, Herre 7987 (Stellenbosch). Wageningen acc. n. 1199.

259917 Wild material from Steinkopf, South Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 1193.

259918 Wild material from Touwsrivier, South Africa, H. Human

- s.n. (Stellenbosch). Wageningen acc. n. 1190).
259919 and 259920 Wild material from Prins Alfred Pas, between Avontuur and Knysna, South Africa, Herre 4057 (Stellenbosch). Wageningen acc. n. 1218.
- CRASSULA MARNIERIANA (hybrid)
Hybrid of C. brevifolia or C. rupestris (male) × C. marnieriana (female). Origin in succulent collection at Institute of Experimental Plant Breeding, Wageningen, Netherlands. Plants from 44.
259940 Selection of the hybrid.
259941 Selection of the hybrid.
- CRASSULA NAMAQUENSIS Schoenl. & Bak. f.
Closely related to C. tecta Thunb. Small succulent shrub, about 4" tall; leaves thick, short, densely papillose; flowers in a terminal head, white.
259921 and 259922 Wild material from Stinkfontein, Rigttersveld, South Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 1267. Plants from 44.
- CRASSULA NUDICAULIS L.
259923 Stem short or none, densely leafy; leaves nearly rosulate, nearly round, acute, sparsely hairy; petals white. Wild material from Namaqualand, southwestern Africa, Herre 14 (Stellenbosch). Wageningen acc. n. 744. Plants from 44.
- CRASSULA OBVALLATA L.
259924 Stem fleshy, 3" to 6" long, covered with leaves; leaves 2" to 2 1/2" long, 1/2" to 3/4" wide, rigid, dark green with a reddish tinge; panicle much branched, many flowered; flowers small, white, in a roundhead. Wild material from the Karroo, South Africa, Herre 4451 (Stellenbosch). Wageningen acc. n. 1274. Plants from 44.
- CRASSULA PACHYSTEMON Schoenl. & Bak. f.
259925 Small, branched, succulent subshrub, about 8" tall; leaves somewhat connate, more or less flat on top, arched on back, blunt, about 3/4" long, white-hairy; flowers white. Wild material from Willowmore, South Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 1198. Plants from 44.
- CRASSULA PERFOSSA Lam.
Stems shrubby, erect, branching from the base, 1' to 2' tall; leaves perfoliate, ovate, pointed, 3/4" to 1" long, 1/2" to 3/4" wide, very fleshy, entire, glaucous, reddish-dotted; flowers small, yellowish.
259926 Wild material from Grahams-town, South Africa, Herre 6724 (Stellenbosch). Wageningen acc. n. 750.
259927 Wild material from between Fraserburgweg and Sutherland, South Africa, Dr. Scheickerdt 15. Wageningen acc. n. 1275. Plants from 44.
- CRASSULA RADICANS D. Dietr.
259928 Syn. C. radicans Harv. Shrubby, spreading or ascending, 12" to 15" tall, the lateral branches often take root; leaves about 1" long or less, fleshy, connate, glabrous; flowers white. Wild material from Farm Morgenster, Heidelberg, Cape Province, South Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 1224. Plants from 44.
- CRASSULA RUBELLA Compton
259929 Wild material from Namaqualand, southwestern Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 742. Plants from 44.
259930 Wild material from Namaqualand southwestern Africa. Wageningen acc. n. 1277. Plants from 44.
- CRASSULA RUPESTRIS L. f.
Stem decumbent, woody at base, branched; leaves united in pairs, triangular, concave, keeled beneath, very thick, glaucous, reddish on margins; flowers small, white or pink. Plants from 44.
259931 Wild material collected in semishade in association with Aloe, a few miles out of Steytlerville, South Africa, via Vera Higgins, England. Wageningen acc. n. 1393.
259932 Wild material from Ceres, Karroo, South Africa, Herre 2240 (Stellenbosch). Wageningen acc. n. 1396.

259933 Wild material from Sutherland, South Africa, Herre 15 (Stellenbosch) Wageningen acc. n. 748.

CRASSULA SERICEA Schoenl.

Small subshrub; stems of old plants sometimes woody and leafless; leaves borne at the ends of the branches, spreading, flat, rather blunt, silky, white-hairy. Plants from 44.

259934 Wild material from Knersvlakte, near van Rijnsdorp, South Africa Herre 5434 (Stellenbosch). Wageningen acc. n. 747.

259935 Wild material from Noemies, Rigersveld, South Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 1215.

CRASSULA SUBAPHYLLA (E. & Z.) Harv.

259936 Stems 12" to 14" tall, branched near base, with simple flexuous branches; leaves very small, fleshy; flowers whitish. Wild material collected on Swartberge, Ladysmith, South Africa, Herre 5782 (Stellenbosch). Wageningen acc. n. 746. Plants from 44.

CRASSULA TETRAGONA L.

259937 Shrubby, 1' to 2' tall, glabrous; leaves narrow, round or squarrose in cross section, tapering, about 1" long, curved upward; flowers small, white. Wild material from eastern Cape Province, South Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 759. Plants from 44.

CRASSULA TOMENTOSA L. f.

259938 Plant densely covered with bristly hairs; stems 1' to 2' tall, robust, branched; leaves crowded around base. Wild material from Steinkopf, Breekpoort, South Africa, Herre s.n. (Stellenbosch). Wageningen acc. n. 1226. Plants from 44.

CRATAEGUS × GRINGNONENSIS Mouillef.

Rosaceae.

266422 Hybrid of C. crus-galli × C. pubescens. Deciduous tree, to about 20' tall, not or sparsely spiny; leaves obovate, about 3" long, glossy green above, downy beneath, deeply lobed on young

shoots; fruit reddish with gray dots. Found at Grignon, France in 1873. Plants from 33.

CRATAEGUS MONOGYNA Jacq.

Hedge-row thorn. The hawthorn of Europe much planted in hedgerows. A deciduous tree, to 35' tall or usually smaller, very thorny; leaves deeply 3- to 7-lobed; fruit containing 1 stone. At least 18 cultivars are grown in Europe.

The closely related C. oxyacantha has 2 stones in each fruit, is less thorny with smaller, less deeply lobed leaves.

266731 'COMPACTA'. Growth broad and spreading with very short, thick, thornless branches; sparsely flowered. A smaller plant than in the typical phase, forming a neat compact specimen. Origin in nursery of Spaeth, Berlin, in 1907. Plants from 28.

261839 'PINK CORKSCREW' (Meyer) in BAILEYA, vol. 9, p. 129, (1961). Branches spirally twisted; flowers pink. Makes a bizarre, slow-growing plant. Origin in Spaargaren Nursery, Boskoop, Netherlands. Plants from 28.

CRATAEGUS × MORDENENSIS Boom 'TOBA'

266665 Hybrid of C. oxyacantha 'Pauls Scarlet' (pistillate) × C. succulenta (staminate). Small glabrous tree or large shrub, with short spines; leaves 2" to 2 1/2" long, 2" to 2 1/4" wide, 3-lobed, finely serrate, and often again lobed; flowers double, white at first, soon changing to light rose. The hybrid has the general habit of a robust form of C. oxyacantha with larger leaves and much larger flowers. Raised in 1935 at the Experimental Farm at Morden, Manitoba with the objective of producing a hardy pink-flowered hawthorn for the colder areas of Canada. Plants from 31.

CRATAEGUS OXYACANTHA L.

Flowering-hawthorn. Deciduous tree, 15' to 20' tall, with thorns about 1" long; leaves mostly obovate, 3- to 5-lobed, 1/2" to 2 1/4" long, glabrous (on new shoots the lobing is much deeper);

flowers white to deep rose, single or double in some cultivars; fruit red or sometimes yellow. The Paul's Scarlet hawthorn is perhaps the best known of the ornamental haws, much planted, especially in Great Britain and also on the continent of Europe. Perhaps a dozen cultivars are grown in western Europe. 'GIREOUDII'. Leaves at first green, the later ones mottled with pink and white. Found in 1890 and later offered by Spaeth Nursery, Berlin, Germany.

266497 Plants from 41.

266666 Plants from 31.

CRINUM CONGOLENSE De Wild.

Amaryllidaceae.

275912 Leaves about 17 per bulb, about 2 1/2' long, about 2 1/2" wide; peduncles as long as the leaves; flowers 5 to 6 in a group, umbellate; perianth segments about 4" long and 2" wide, white. Congo. Plants from 1.

CROCOSMIA MASONORUM (L. Bolus) N. E.

Br. Iridaceae.

262340 Plant with flaming orange flowers an inch across, closely disposed on the leafy stems. One of the most striking of the so-called garden montbretias, makes a plant 3' tall. Natal, South Africa. Corms from 38.

CROCUS CLUSII J. Gay Iridaceae.

261307 (7382) Corms about 1/2" across; leaves barely appearing at anthesis; flowers conspicuous, 2" to 4" long, rose-violet, rarely almost white. On top of the hills, alt. about 900', above the Douro River, 30 miles east of Oporto, Portugal. In flower November 8th. An attractive plant, variable in flower color. Corms from the above source.

CRYPTOMERIA JAPONICA (L. f.) D. Don

Taxodiaceae.

Cryptomeria is one of the lofty forest trees of Japan where it grows wild and is extensively cultivated except in Hokkaido. The tree often makes witches' brooms from which dwarf cultivars have arisen. At least 20 cultivars are grown in Europe.

265237 'ARAUCARIOIDES'. Growth habit like the normal phase, the branches deflexed with long distantly placed pendulous branchlets giving to the tree the aspect of Araucaria excelsa R. Br. Grown in Europe before 1865. Plants from 12.

266529 'COMPRESSA'. Conical, slow-growing very compact, much branched, making only 1" to 2" of growth per year, the twig ends crisped, the leaves shiny dark-green. Introduced to cultivation in Europe through importation from Japan by Blaauw Nursery, Boskoop, Netherlands. Plants from 21.

266423 'CRISTATA'. Syn. 'Sekka-Sugi' in Japan. Somewhat slower growing than the normal phase, with a pyramidal habit, the ends of the branches often appearing as cockscombelike contortions. A monstrous sort, to be grown only for the bizarre growth habit. Plants from 33.

280153 'GLOBOSA'. Round spreading bush, 3' to 3 1/2' tall, very densely branched, foliage blue-green. Origin in Lombarts Nursery, Zundert, Netherlands. Plants from 28.

265234 'PUNGENS'. Conical in habit, densely branched; leaves dark-green, stiff, pointed, laterally compressed. Grown in Europe before 1867. Plants from 12.

265235 'PYRAMIDATA'. Pyramidal in habit, about 30' tall, compact, resembling Sequoiadendron giganteum. Plants from 12.

265236 'VIMINALIS'. Slow-growing, making a low, rather loose shrub with long lateral snakelike branches and few or no side branchlets. Grown in Europe before 1900. Plants from 12.

CUPRESSUS ARIZONICA Greene 'NANA'

Cupressaceae.

277766 Very dwarf plant making a compact bush with adult glaucous blue-green scalelike appressed foliage. Origin probably in England. Plants from 4.

CYCLANTHUS CRISTATUS Kl. Cyclanthaceae.

265930 Leaves 3' long, the deeply 2-lobed spadix 7" to 8" long, 2"

across in fruit. Colombia. Plants from 14.

CYPERUS ALTERNIFOLIUS L. 'VARIEGATUS'
Cyperaceae.

262352 and 274261 Leaves and stems mottled and white-striped, sometimes wholly white. Plants from 30.

CYTISUS X DALLIMOREI Rolfe

Leguminosae.

264521 Hybrid of C. multiflorus X C. scoparius 'Andreanus'. Tall shrub, 8' to 9' tall, suggesting C. scoparius. Standard petal rose-pink, wing-petals crimson. Origin at Royal Botanic Gardens, Kew, England in 1900. Plants from 33.

CYTISUS ELONGATUS Waldst. & Kit.

264517 Deciduous shrub, to 6' tall, erect, with hairy shoots; leaves 3-foliolate, the leaflets oblong-obovate or elliptic-oblong, 1/4" to 1" long, hairy on both sides; flowers bright-yellow. Southern France, Hungary, and the Balkans. Plants from 39.

CYTISUS HYBRIDS

A new hybrid group developed at the Horticultural Experiment Station, Boskoop, Netherlands using a combination of crosses involving C. scoparius, C. dallimorei, and C. X praecox. The objective was to develop clones with red and purple flowers.

259896 Seeds of C. 'Hollandia' from Veerman, Boskoop, Netherlands.

'HOLLANDIA'. Habit of C. X praecox Bean but stiffer; branches deeply furrowed; leaves lanceolate, 1/4" to 1/2" long; flowers usually solitary; petals about 1/2" long, purplish, the keel with a whitish edge.

259141 Cuttings from Veerman Nursery, Boskoop, Netherlands.

264527 Plants from 23.

'ZEELANDIA'. Similar to 'Hollandia', but the plant smaller, petals smaller, the standard somewhat shorter, lilac outside, cream-colored inside, the wings pinkish, the keel cream-colored.

259142 Cuttings from Veerman Nursery, Boskoop, Netherlands.

264537 Plants from 23.

CYTISUS NIGRICANS L.

264518 Deciduous shrub, 3' to 5' tall, erect, branches downy; leaves trifoliolate, the leaflets 1/2" to 1" long, obovate to oval, with scattered hairs beneath; flowers yellow, in terminal racemes on the current year's growth. Attractive floriferous species of central and southeastern Europe, long cultivated in western Europe. Plants from 39.

CYTISUS SCOPARIUS (L.) Link

Scotch-broom. Deciduous shrub, 5' to 10' tall, the stems and branches deep green throughout the year; branches erect, prominently angled; leaves 3-foliolate at base of shoot, with only 1 leaflet near the ends; flowers usually deep-yellow, but garden cultivars are grown with white, to almost red and pink flowers. At least 60 known cultivars are grown in Europe. Native of western Europe, from Great Britain south to the western Mediterranean. Following is a collection from 33.

264519 'CRITERION'. Standard petal brownish-purple, wing petals light-brown with yellow. Origin at Burkwood and Skipworth Nursery, England.

264520 'DAISY HILL SPLENDENS'. Syn. 'Newryensis'. Standard petal cream, wing petals carmine and light-yellow. Origin at Smith & Sons Nursery, Matlock, England.

264522 'DONARD SEEDLING'. Flowers grayish-white, reverse lilac. Origin at Donard Nursery, County Down, Northern Ireland.

264523 'DRAGONFLY'. Standard petal deep-yellow, wing petals brown. Origin at Smith & Sons Nursery, Matlock, England.

264524 'FULGENS'. Standard petal orange-yellow, wing petals brown.

264525 'GOLDEN SUNLIGHT'. Flowers golden-yellow. Origin at K. Wezelenburg & Zonen Nursery, Boskoop, Netherlands.

264526 'GOLDFINCH'. Standard petal cream-colored, reverse rose, wing petals deep-red. Origin in Burkwood & Skipworth Nursery, England.

264528 'JUBILEE'. Standard petal

carmine-red, wing petals vermilion. Origin at Smith & Sons Nursery, Matlock, England.

264529 'KILLINEY RED'. Flowers uniformly clear-red. Origin at Watson's Nursery, Killiney, County Dublin, Ireland.

264530 'LORD LAMBOURNE'. Standard petal cream, wing petals brown-red. Origin at Watson's Nursery, Killiney, County Dublin, Ireland.

264531 'MOONLIGHT'. Syn. 'Pallidus' and 'Sulphureus'. Standard petal sulfur-yellow, wing petals yellow.

264532 'NEWRY GOLD'. Flowers uniformly yellow. Considered one of the best of the yellow-flowered cultivars. Origin at Smith & Sons Nursery, Matlock, England.

264533 'NEWRY SEEDLING'. Standard petal light-yellow, wing petals rosy-red. Origin at Smith & Sons Nursery, Matlock, England.

264534 'QUEEN MARY'. Standard petal light-yellow, wing petals orange-brown.

264535 'RED WINGS'. Standard petal purple-red, reverse yellow blotch, wing petals red with yellow edges, keel white-rose. Origin at De Jong Nursery, Boskoop, Netherlands, 1953.

264536 'WINDLESHAM RUBY'. Standard petal light purple-red, wing petals deep red.

CYTISUS SESSILIFOLIUS L.

266498 Deciduous bushy shrub, 5' to 6' tall; leaves 3-foliolate, the leaflets obovate to oval, 1/4" to 3/4" long, pointed; flowers in short racemes, bright-yellow, 1/2" long. Southern Europe and northern Africa. Plants from 41.

D

DACRYDIUM CUPRESSINUM Sol. ex Lamb.

Taxaceae.

Rimu. Evergreen tree, with long, pale-green, drooping branches; bark somewhat exfoliating, whitish; leaves of young trees mostly awl-shaped, about 1/4" long, becoming scalelike in age; nutlet ovoid, about 1/8" long in a cup-

like disk. New Zealand. Beautiful tree hardy in nearly frost-free areas.

261308 (7415) Old specimen, 30' tall, in Parque da Pena, Sintra, Portugal. Cuttings from this source.

261309 (7398) Old specimen, 40' tall, in Quinta de Monserrate, Sintra, Portugal. Cuttings from this source.

DECAISNEA FARGESII Franch.

Lardizabalaceae.

261215 Deciduous shrub, 6' to 15' tall; leaves pinnate, 2' to 3' long, consisting of 6 to 12 pairs of leaflets, these ovate, entire, 3" to 6" long, glaucous beneath; flowers in a loose drooping panicle, yellowish-green; fruit 3" to 4" across, blue. The fruit is handsome. Western China. Seeds from 35.

DENNSTAETIA OBTUSIFOLIA (Willd.)

Moore Polypodiaceae.

263977 Fronds about 3' long, about 12" wide, much divided; rhizomatous. Tropical America. Plants from 18.

DERMATOBOTRYIS SAUNDERSII Bolus

Scrophulariaceae.

263978 Small, epiphytic, deciduous shrub; leaves 2" to 6" long, somewhat fleshy, ovate or oblong, coarsely toothed; flowers 2" long, drooping, in whorls below the new leaves, pale-red, tubular. Although epiphytic in the wild, it may be grown in cultivation in a well-drained peaty soil. Natal and Zululand. Plants from 18.

DEUTZIA COREANA Lévl. Hydrangeaceae.

265613 Deciduous shrub, 5' to 6' tall; distinct from all other species as characterized by the solitary flowers that originate from axillary leafless buds on the branches of the previous year. Leaves elliptic-oblong to lanceolate, 1 1/2" to 2 1/2" long. Korea. Plants from 12.

DEUTZIA GRACILIS Sieb. & Zucc.

Deciduous shrub, usually about 4' tall in gardens; leaves lanceolate, 1" to 3" long, deep-green; of much merit for the bountiful, pure-white flowers. A Japanese species long grown in Europe and America.

265614 'AUREA'. Leaves yellowish throughout the season. Plants from 12.

DIOSCOREA MACROURA Harms
Dioscoreaceae.

263979 Large, vigorous climber, with large dark-brown air tubers in leaf axils; leaves nearly 1' across in well-developed specimens, bright-green, with a deeply grooved long drip tip, a characteristic aspect of leaves in rain-forest plants. Tropical West Africa. Tubers from 18.

DORSTENIA ARGENTEA Hook. f. Moraceae.

260731 Erect herb, with a downy purple stem; leaves elliptic or oblong-lanceolate, 3" to 5" long, dark green on margins with a broad silvery band along the mid-vein. Handsome foliage plant. Southern Brazil. Seeds from 14.

DRACAENA RUBROAURANTIACA De Wild.

Liliaceae.

275913 Stem about 6' tall; leaves lanceolate, rigid, sessile, about 4' to 5' long; panicles about 1 1/2' long; flowers in glomerules, about 1 1/2" long, white, the segments about as long as the tube. Islands of the Congo River. Related to *D. fragrans* Ker-Gawl. Plants from 1.

DRACAENA UMBRACULIFERA Jacq.

275914 Treelike, 3' to 10' tall, unbranched with densely crowded leaves at the top; leaves 2' to 3 1/2' long, 1 1/2" to 2" wide, horizontally spreading, somewhat recurved at the tip; flowers white, tinged with red, about 2" long. Mauritius, Mascarene Islands. Plants from 1.

DROSERA PYGMAEA DC. Droseraceae.

274444 Minute plant, annual or perennial barely 1" tall; leaves in a tuft, about 1/2" in diameter, rounded. Southeastern Australia. Plants from 14.

DRYNARIA SPARSISORA (Desv.) Moore

Polypodiaceae.

262353 Rhizomatous evergreen fern, with fronds 30" long; blades deeply pinnatifid, the lobes 6" to 7" long, long-attenuate, dark-green; sori scattered. Tropical Asia. Plants from 30.

DRYOPTERIS FILIX-MAS (L.) Schott

Polypodiaceae.

Male-fern. Tufted plant, with fronds 2' to 3' long, 8" to 12" wide, the pinnae lanceolate, 4" to 6" long, cut nearly to the rachis into close subentire lobes. Widespread species in the North Temperate Zone and cultivated in Europe, with numerous cultivars which differ mostly in the size and shape of the pinnae and pinnules. Collection from 12.

265238 'DAEDALEA'. Fronds robust, deep-green, the pinnae somewhat crested at the apex.

265239 'EROSACRENATA'. Pinnae diffuse, the pinnules cut nearly to the rachis and again shallowly pinnatifid.

265240 'FURCANS'. Resembles *D. filix-mas* 'Daedalea', differing in the narrower pinnae and lighter green fronds, the pinnae crested at apex.

265241 'LINEARIS POLYDACTYLON'. A selection with monstrous pinnules reduced almost completely to mere remnants on the rachis, the pinnae crested at the apex.

265243 'SUBINTEGRA'. Pinnae 3 1/2" long in the longest, slightly crested; pinnules more heavily toothed at apex than below.

DRYOPTERIS PALEACEA (Moore) Hand.-Mazz.

'POLYDACTYLA'

265242 Fronds subcoriaceous, deep-green, dull, the pinnae 3" to 4" long in the longest, bifurcate and crested at the apex. Plants from 12.

E

EPHEDRA EQUISETINA Bunge Ephedraceae.

266465 Shrub, upright or ascending, about 6' tall; branches, rigid, grayish green or glaucous, smooth or slightly rough. Plants with a broomlike habit. Turkestan to Mongolia and northern China. Plants from 17.

EPHEDRA FRAGILIS Desf.

265244 Much branched erect shrub, sometimes prostrate, with naked green stems; branches fragile,

- straight or flexuose; leaves scale-like. Mediterranean region. Plants from 12.
- EPHEDRA FRAGILIS var. CAMPYLOPODA (C. A. Mey.) Stapf
265245 Habit more or less climbing; branches more slender than in the typical phase and less fragile. Well-grown specimens are handsome when growing over a bank or bush. Mediterranean region. Plants from 12.
- EPHEDRA GERARDIANA Wall. ex Stapf
265246 Low shrub, 1' or more tall in cultivation, less in the wild, forming a spreading close mat; branchlets slender, erect. An attractive ground cover. Himalayas. Plants from 12.
- EPHEDRA GERARDIANA var. SIKKIMENSIS Stapf
A geographical variant of the species with taller stems than in the typical phase and more robust. Himalayas.
265247 Plants from 12.
266466 Plants from 17.
- EPIPREMNUM MIRABILE Schott Araceae.
275915 Tonga plant. Vigorous climber; leaves pinnatisect (in mature plants), large, deep-green, entire in young plants. Fiji. Plants from 1.
- ERANTHEMUM NIGRUM Linden Acanthaceae.
275916 Glabrous leafy shrub; leaves 4" to 6" long, ovate or oblong, acuminate, very dark red-purple and shining above, pale green tinged with purple beneath; flowers white, rose at base, 1" long, in panicles 6" long. Solomon Islands. Plants from 1.
- ERICA 'EVENING GLOW' (Meyer), in BAILEYA, vol. 9, p. 131, (1961). Ericaceae.
274445 An alleged hybrid of *E. cerinthoides* L. with an unknown second parent. An evergreen shrub; flowers tubular, 1/2" to 1" long, opening white then changing to rose. Very decorative. Used for display purposes in Palmengarten, Frankfurt am Main, W. Germany. Plants from 14.
- ERICA MAMMOSA L.
261113 Evergreen shrub; leaves in 4's or scattered, linear, 1/4" to 3/8" long; flowers pendulous, tubular, 2 to 2 1/2" long, scarlet. Flowers very attractive. Southern Africa. Plants from 16.
- EUCOMIS UNDULATA Ait. Liliaceae.
262344 Selection with white flowers in a dense raceme about 6" long; scape about 1' long. Normally the flowers are green. Bulbs from 38.
- EUGENIA GUILLEMINIANA Hort. ex Gentil Myrtaceae.
275917 Evergreen shrub, with small leaves and gracefully arching lax fernlike branches, the twigs pinkish at the tip. Described from plants in botanical garden, Bruxelles, Belgium from material received originally from Brazil. Plants from 1.
- EULOPHIA HORSFALLII (Batem.) Summerhay. Orchidaceae.
275918 Ground orchid, with giant leaves 6' to 8' long; flowers white and pink or purple. Material originally collected from middle elevations on Mt. Ruwenzori, Congo. Plants from 1.
- EUONYMUS EUROPAEUS L. Celastraceae.
European spindletree. Deciduous shrub or small tree, 10' to 25' tall, forming a spreading, bushy head; leaves narrowly oval to obovate, 1" to 3 1/2" long, 1/3" to 1 1/4" wide, acuminate, minutely toothed; fruit red. Widely grown in Europe where it is a native plant. Formerly the wood was used for making spindles. Selections of this species are grown in gardens for the attractive foliage and fruit. About 12 cultivars are currently grown in western Europe. 265615 'ARGENTEOVARIEGATUS'. Selection grown for the white-variegated leaves. Grown in Europe since about 1862. Plants from 28.
- EUONYMUS PHELLOMANUS Loes.
266530 Deciduous, glabrous shrub; branches 4-angled with corky wings; leaves oblong-ovate to oblong-lanceolate, 2" to 4 1/2" long, strongly veined beneath; fruit 4-lobed, 1/2" wide, rosy-red, the seedcoat deep-red. Northern and

F

western China. Very attractive for the large red fruit, and now much grown in western Europe. Plants from 21.

277768 Plants from 4.

EUONYMUS SANGUINEUS Loes.

266733 Deciduous shrub, 6' to 10' tall, glabrous, the young shoots reddish; leaves ovate, oval, or obovate, 1 1/2" to 4 1/2" long, 3/4" to 2 1/4" wide, finely toothed; fruit red, when split then showing the yellow-coated seeds. Central and western China. Plants from 28.

EUONYMUS VERRUCOSUS Scop.

266734 Deciduous shrub, 6' to 8' tall, shoots densely warty; leaves ovate to ovate-lanceolate, 1" to 2 1/2" long, 1/2" to 1" wide, finely toothed; flowers purplish-brown; fruit about 1/2" across, yellowish. Eastern Europe to western Asia. Plants from 28.

EUPHORBIA CARACASANA (Kl. & Bke.)

Boiss. 'SANGUINEA' Euphorbiaceae.

274446 Shrub; leaves about 4" long, the petioles half as long, the blades thin, broadly ovate, about 1 3/4" wide, subobtusate to acute, glaucous beneath, nearly scarlet above, with strong veins. Very attractive foliage plant. Species of Venezuela. Plants from 14.

EUPHORBIA XYLOPHYLOIDES Brongn. ex Lem.

261067 Shrubby; branches flat, brownish-green. Madagascar. Plants from 19.

EUPTELEA PLEIOSPERMA Hook. f. & Thoms. Trochodendraceae.

265248 Deciduous large shrub or small tree; leaves nearly orbicular, 3" to 5" long, abruptly acuminate, sharply serrate, subtruncate at base, somewhat glaucous beneath. Eastern Himalayas to W. Szechwan, China. Plants from 12.

EURYCLES SYLVESTRIS Salisb.

Amaryllidaceae.

262354 Bulbs tunicated; plants 1' to 2' tall; leaves very broad, cordate; flowers in a many flowered umbel, white. Amboina, Indonesia. Bulbs from 30.

FAGUS JAPONICA Maxim. Fagaceae.

266531 Deciduous tree, often multi-trunked from the base; leaves ovate or elliptic-ovate, short-acuminate, 2" to 3" long, slightly sinuate-crenate or nearly entire. Japan. Plants from 21.

FAGUS LUCIDA Rehd. & Wils.

Deciduous tree, about 30' tall, with gray bark; leaves ovate to elliptic-ovate, 2" to 4" long, acute or short-acuminate, lustrous green above, yellowish green beneath, serrate-dentate. Hupeh and Szechwan, China.

266532 Plants from 21.

266667 Plants from 31.

FAGUS SYLVATICA L.

European beech. One of the noblest deciduous trees of Europe, everywhere planted in northern, western, and central Europe, also much grown in Great Britain. The tree reaches its maximum dimensions in about 200 years, when the tree attains 100' in height. Mature specimens are common in many parks; in the Netherlands and Belgium this tree is a favorite for planting along roadways. In the wild this species is considered to be indigenous only on calcareous soils, but in cultivation acid soils are not to its unliking. A variable plant with at least 30 cultivars now grown in Europe.

'ALBOVARIEGATA'. In well grown specimens most of the leaves are variously white-variegated, usually the blades assume a somewhat deformed aspect, 2 1/4" to 3 1/2" long, some of the leaves develop normally and green, with the habit of the typical phase. Several fine old specimens exist in the Park of Wilhelmshöhe, Kassel, W. Germany.

261185 Plants from 4.

266673 Plants from 31.

'ANSORGEI'. Shrub, to about 8' tall, very densely branched, compact in growth; leaves linear-lanceolate, 2 1/2" to 5" long,

1/2" to 3/4" long, irregularly sinuate on the margins, short-petiolate, long-tapering to the tip, deep bronze-green above, light-green beneath. Slow-growing shrubby selection. Origin about 1891 in garden of C. Ansoerge, near Hamburg, Germany.

265249 Plants from 12.

280154 Plants from 35.

266669 'ATROPURPUREA MACROPHYLLA' Leaves deep-purplish, but larger than 'Atropunicea'. Grown first in Germany about 1884. Plants from 31.

'AUREOPENDULA'. Slender weeping growth habit, the trunk erect, the branches strongly pendulous and more or less parallel with the trunk; leaves broadly ovate, 2 1/2" to 3 1/2" long, 1 1/2" to 2 1/2" wide, thin, yellowish. An attractive cultivar when grown in shade, the leaves burn in sunlight. A good specimen exists in the Belmonte Arboretum, Wageningen, Netherlands. Origin in the Netherlands in 1900.

261190 Plants from 4.

266668 Plants from 31.

266671 'CASTANIFOLIA'. Tree, sparsely leaved; leaves mostly in tufts on the widely spaced short shoots, narrowly to broadly elliptic, 2 1/2" to 4 1/2" long, irregularly dentate, irregularly shaped. Cultivar with abnormally formed leaves, not one of the most attractive. Some confusion exists as to correct identity of this plant, but it compares more favorably with the European beech rather than with the American counterpart (F. grandifolia Ehrh.) as European authors often wish to call it. Plants from 31.

'COCHLEATA'. Syn. F. sylvatica 'Undulata'. Dwarf and slow-growing cultivar forming a densely branched multitrunked bush; leaves mostly elliptic, 1 1/2" to 3 1/2" long, 3/4" to 1 1/2" wide, cuneate, entire at base, deeply dentate, toothed in upper part, sometimes somewhat oblique at the tip, somewhat concave-convex, thicker than

in the typical phase of the species. A 50-year old specimen in Arboretum Poort-Bulten, Oldenzaal, Netherlands is now about 8' tall. Origin in Europe about 1864.

265252 Plants from 12.

266670 Plants from 31.

'CRISTATA'. A cultivar with monstrous leaves; leaf blades sessile, with the midrib absent, thus causing the blades to be strongly contorted on the branchlets, and the blades deeply lobed and undulate-sinuate. Known first in England, about 1836.

261186 Plants from 4.

262320 Plants from 15.

266424 Plants from 33.

265251 Plants from 12.

266672 Plants from 31.

261187 'FAUX DE VESEY'

When grafted upon a standard, plants develop horizontally spreading branches from the crown, these somewhat pendulous at the tips. Leaves subcoriaceous, broadly ovate, 2" to 3 1/4" long, acute to short-acuminate, strongly veined. Plants from 4.

261188 'GRANDIDENTATA'. Stately tree, to about 60' tall; leaves green, somewhat bullate, upper surface somewhat concave, about the same size as in the normal phase; similar to but not as deeply dentate as in F. sylvatica 'Quercifolia'. Known first in Germany about 1810. Plants from 4.

265616 'HORIZONTALIS'. Branches horizontally spreading, slow-growing, the twigs somewhat pendulous; leaves green, broadly ovate, 2 1/4" to 3 1/2" long, 1 1/2" to 2 1/2" wide. The finest specimens are produced when grafted on a standard stem. Plants from 12.

280155 'INTERRUPTA'. Seedling selection of F. sylvatica 'Rohanii' with the leaves much divided, sometimes only the midrib remaining with a portion of the blade at the tip; leaf-blades green. Origin from a seedling selection in garden of J. R. P. van Hoey Smith,

"Trompenburg," Rotterdam, Netherlands. Plants from 35.
 280156 'INTERRUPTA PURPUREA'. Resembles P.I. 280166 in every respect, except the leaves are purplish. Plants from 35.
 261189 'NORWEIGIENSIS'. Plants from 4.
 261191 'PURPUREOPENDULA'. Selection with leaves deep purple throughout the summer and the branches strongly pendulous; leaves elliptic to ovate, 2" to 4" long, acute. The finest specimens are produced when grafted on a standard stem. Plants from 4.
 'QUERCIFOLIA'. Spreading tree, about 35' tall and as wide; leaves green, not obviously bullate, but the dentations somewhat upturned, elliptic, 1 3/4" to 3 1/2" long, 1/2" to 1 1/2" wide, deeply and regularly toothed, entire at base. Origin in Germany about 1860.
 261192 Plants from 4.
 280157 Plants from 35.
 'ROHANII'. Tree, 40' or more tall, forming a densely branched round-headed crown; leaves purplish, mostly elliptic, 2 3/4" to 5" long, pinnatifid to deeply dentate, occasionally interrupted on some of the lobes (i.e. the lateral veins protruded, naked for part way, with a vestige of the blade at tip). Origin in Austria about 1894.
 261194 Plants from 4.
 266602 Plants from 23.
 266534 Plants from 21.
 280158 Plants from 35.
 261195 'ROSEOMARGINATA'. Tree, 40' or more tall, with the habit of the typical phase but less densely branched; leaves uniformly purplish with irregular pink and white markings on margins and along the veins, ovate, often irregularly so, 1 3/4" to 3 1/4" long. Grown first in France about 1883. Plants from 4.
 'ROTUNDIFOLIA'. Slender 40' or more tall, with spreading branches ascending at the tip; leaf blades suborbicular, green, 3/4" to 1 3/4" long, about as wide, short-

petiolate. Graceful tree with leaves the smallest of known cultivars of the European beech. Known first in England about 1872.
 261196 Plants from 4.
 266499 Plants from 27.
 'SWAT MAGRET'. Tree, 40' or more tall, with the habit of the typical phase of the species; leaves to be compared with *F. sylvatica* 'Atropunicea', but darker purple and the leaves stiffer. Seedling selection originally from nursery of Timm & Co., Elsmhorn, W. Germany about 1895.
 265250 Plants from 12.
 266533 Plants from 21.
 'ZLATIA'. Golden-beech. New leaves of the tip growth yellowish, remaining so throughout most of the season. Habit of the plant like the typical phase of the species. Found originally as a wild plant in Serbia about 1890.
 261197 Plants from 4.
 266425 Plants from 33.
 266535 Plants from 21.
 FESTUCA SCOPARIA Hook. f. Gramineae.
 265617 Densely tufted, about 2" tall; leaves needlelike, bright-green. Excellent rock-garden plant. Pyrenees. Plants from 12.
 FICUS CANNONII (Bull.) N. E. Br.
 Moraceae.
 262355 Tree; leaves simple and cordate, somewhat oblique, sometimes lobed, 8" to 12" long, rather abruptly narrowed and long-caudate at tip, bronzy-crimson, tinted purple and glossy above, reddish beneath. Elegant foliage plant. Society Islands. Plants from 30.
 FICUS PREUSSII Warb.
 262356 Evergreen tree; leaves obovate, 6" to 12" long, cuspidate, deep lustrous-green. Cameroons. Plants from 30.
 FICUS ROSTRATA Lam.
 275919 A scandent or creeping rarely erect shrub; leaves 2" to 9" long, glabrous, shining above. Himalayas to Burma and Malaya. Plants from 1.
 FORSYTHIA SUSPENSА (Thunb.) Vahl
 'ATROCAULIS NYMANS'. Oleaceae.

262255 Selection with larger primrose-yellow flowers than F. suspensa 'Atrocaulis'. Vigorous and tall-growing plant with slender drooping branchlets, purplish young shoots, and dark-purple branches. Origin in Nymans garden, Handcross, England. Plants from 32.

FRAXINUS ANGUSTIFOLIA Vahl. Oleaceae.

Narrow-leaved European ash. Deciduous tree, 60' to 70' tall, sometimes taller; young shoots and leaves glabrous; leaves 6" to 10" long, pinnate, the leaflets 7 to 13, lanceolate, 1" to 3" long, rather coarsely toothed, long-pointed at tip. Elegant tree of southern Europe and northern Africa, easily distinguished from the common ash of Europe in being glabrous throughout. A few cultivars are grown.

268117 'PENDULA'. Trunk erect; ends of the branches and twigs strongly pendulous; leaves simulating those of F. angustifolia 'Lentiscifolia'. Grown first in Germany about 1889. A fine specimen exists in the Botanical Garden, Hamburg. Plants from 31.

FRAXINUS EXCELSIOR L.

European ash. Large deciduous tree, one of the most lofty of the native trees of Europe, sometimes over 100' tall with a roundheaded crown; bark strongly fissured, gray; buds black; leaves 10" to 12" long, pinnate, the leaflets 9 or 11, sometimes fewer, rachis usually with brownish down. A variable tree with many selections grown in cultivation, some for improved qualities of the wood and others for the handsome leaves. Over 20 cultivars are grown in Europe.

268114 'AUREA'. Young shoots yellow and the older bark yellowish, especially prominent in winter; leaves at first yellow-green, turning golden-yellow by midsummer. Grown first in the Netherlands about 1807. Plants from 33.

265618 'CRISPA VARIEGATA'. Syn. F. excelsior 'Concavifolia'. Leaves with white blotches. Plants from 12.

268115 'DIVERSIFOLIA'. Syn. F. excelsior 'Veltheimii'. One-leaved ash. The terminal leaflet only developed, oval or ovate, 2 1/2" to 4" long, sometimes longer, long-petiolate, coarsely toothed, the lateral leaflets suppressed. Grown first in England about 1788. Plants from 33.

'DOORENBOS 5'. (Pistillate) Selection known for the outstanding qualities of the wood esteemed by woodworkers. One of a series of selections made by S. G. A. Doorenbos, The Hague, Netherlands from old well-known specimen trees long used for special purposes, especially by the ski-making industry at The Hague.

265619 Plants from 12.

268111 Plants from 33.

265620 'HESSEI'. Selection similar to F. excelsior 'Diversifolia', differing in the spreading habit, the leaves nearly always simple remaining green until autumn. Frequently planted in Germany and the Netherlands. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

268112 'JASPIDEA'. Strong-growing tree with remote buds; branches often striped yellow and yellowish-green; leaves yellow in summer and autumn, petioles white. Often confused with F. excelsior 'Aurea' also with leaves yellow in summer, but the buds are more closely set and the branches are yellow in 'Jaspidea'. Grown first in France about 1802. Plants from 33.

268118 'PENDULA'. Weeping ash. Several forms of the species exist with pendulous branches, differing for the most part, in the degree the branches exhibit the pendulous habit. Most satisfactory when grafted on a standard stem. Grown first in England about 1725. Plants from 31.

268119 'PENDULA VARIEGATA'. Selection with leaves white-flecked; branches pendulous. Origin in nursery of Pierre Lombarts, Zundert, Netherlands. Plants from 31.

268113 'WESTHOF'S GLORY. (Staminate) A selection grown largely in the Netherlands for the superior qualities of the wood and as a tree for roadways. Origin in the Netherlands. Plants from 33.

FRAXINUS OXYCARPA Willd.

26812 Tree, to about 30' tall, with olive-green branches; winterbuds dark-brown; leaflets mostly 7 to 9, sessile, ovate-oblong to lanceolate, acuminate. Southeastern Europe to Asia Minor and Iran. Plants from 31.

FRAXINUS POTAMOPHILA Heder

265621 Tree, to about 30' tall, with green glabrous shoots; leaves 4" to 12" long, pinnate, the leaflets 9 to 11, 1" to 3" long, serrate. Turkestan and western Asia. Plants from 12.

FRAXINUS SPAETHIANA Lingelsh.

260721 Tree, about 30' tall; leaves large, to about 18" long; leaflets 5 to 9, elliptic to oblong, 4" to 8" long, 1 1/2" to 2" wide, deep green above, pale beneath, toothed; petioles strongly swollen at the base, more or less overlapping with the adjacent ones, a distinctive character of this species. Japan. Seeds from Park of Wilhelmshöhe, Kassel, W. Germany. Plants from 31.

G

GASTROCHILUS ANGUSTIFOLIA Hallier

Zingiberaceae.

262351 Herb, about 1 1/2' tall; leaves about 12" long, 2 1/2" wide; corolla tube 2" long; flowers white to purplish. Sumatra. Plants from 30.

GASTROCHILUS PANDURATA (Roxb.) Ridl.

262357 Rhizomes short, aromatic; leaves tufted, about 5, elliptic-lanceolate, 3" to 10" long, 2" to 3 1/2" wide, the petioles 5" long; spikes 2" long; corolla white or pink, the tube 1 1/2" long, the lip saccate, oblong,

white, spotted pink. Known only from gardens in Malaya and thence introduced to greenhouses of Europe. Plants from 30.

GEITONOPLESIMUM CYMOSUM A. Cunn.

Liliaceae.

263980 Woody, climbing and twining perennial; leaves linear to ovate, 2" to 3" long; flowers purplish-green, 1/8" long, in a cymose-panicle. Southeastern Australia. Plants from 18.

GENISTA LYDIA Boiss. Leguminosae.

262886 Shrub, about 2' high, the flowering shoots spine-tipped; leaves simple, linear-elliptic or linear-obovate, about 3/8" long; flowers in subterminal racemes, bright-yellow. Eastern and southeastern Europe to Syria. Plants from 32.

GINKGO BILOBA L. 'PENDULA'

Ginkgoaceae.

265253 The branches horizontally spreading, pendulous at the tip, although different plants vary in this respect, depending upon the way in which young plants are trained, whether grafted on a standard or allowed to develop on their own roots. Plants from 12.

GLEDITSIA TRIACANTHOS L. 'PENDULA'

266476 Leguminosae. Syn. G. triacanthos 'Bujotii'. The branches pendulous. Plants from 42.

GLOBBA WINITII C. H. Wright

Zingiberaceae.

265057 Plants of gingerlike habit, about 30" tall, with oblong-lanceolate leaves; panicles axillary, lax, sparsely branched, with conspicuous magenta-colored bracts and small, yellow, waxy flowers. Flowered Royal Botanic Gardens, Kew, England, 1925 for the first time in cultivation. Siam. Plants from 5.

GLORIOSA HOMBLEI De Wild. Liliaceae.

275920 Stems erect, about 30" long; leaves 8 to 10 on the stems, sessile, ovate-elliptic, developing a tendril at the tip; flowers

terminal, pedunculate, yellow and red with erect segments about 2" long, 3/4" wide. Katanga, Congo. Plants from 1.

GLOXINIA MACULATA L'Herit. 'INSIGNIS' Gesneriaceae.

262341 Thick, tuberous-rooted perennial, 2' to 2 1/2' tall, with thickish deep-green leaves; flowers bell-shaped, about 1" long, lilac and crimson. Flowers in October. Brazil. Very attractive greenhouse plant. Roots from 38.

GURANIA MAKOYANA (Lem.) Cogn. Cucurbitaceae.

263981 Rank climber with tendrils; leaves simple, pointed at the tip; flowers about 1 1/4" long. Central America. Plants from 18.

GURANIA MALACOPHYLLA Barb.-Rodr.

265931 Monoecious; stems hairy when young; leaves broadly ovate, deeply 3- or sometimes 5-lobed, minutely toothed; male flowers reddish, in a globose head; female flowers stalked, solitary or in groups of 2 or 3. A showy tropical vine. Upper Amazon River. Plants from 14.

GYMNOSTACHYUM CEYLANICUM Arn. & Nees Acanthaceae.

262358 Rhizomatous; leaves oblong-elliptic, about 2 1/2" long, petiolate, the midrib dark-green and main veins banded white; flowers yellow. Attractive stove-house species. Ceylon. Plants from 30.

H

HAEMANTHUS KATHERINAE Bak.

Amaryllidaceae.

262342 Bulbous; flower heads dense, 6" to 7" wide; flowers deep-red, 2 1/2" long, on scapes about 12" long. A striking plant, flowering in autumn. Natal, South Africa. Bulbs from 38.

HALIMODENDRON HALODENDRON (Pall.) Schneid. Leguminosae.

266500 Deciduous shrub, 4' to 6' tall, with very spiny spreading, somewhat angular grayish branches, covered with a fine down

when young; leaves pinnately divided; flowers purplish-pink. Very hardy attractive shrub. Siberia. Plants from 27.

HAMAMELIS × INTERMEDIA Rehd. Hamamelidaceae.

Hybrid of *H. japonica* × *H. mollis*. Strong-growing shrub, sometimes to 12' tall, spreading; leaves obovate, 4" to 6" long, similar to *H. mollis*, but narrower and less hairy; flower deep-yellow to red, the petals less crisped than *H. japonica* Sieb. & Zucc, only twisted at the tip. Originated first in Arnold Arboretum in 1929 spontaneously from plants of *H. mollis* and *H. japonica* growing together.

261840 'JELENA'. Syn. *H. mollis* 'Copper Beauty'. Leaves oval to more or less obovate; petals spreading, about 1/2" long, dull-orange with a narrow yellow edge, coppery to orange from a distance. Origin at Kalmthout Arboretum, Kalmthout, Belgium. Plants from 36.

266603 'RUBY GLOW'. Selection with ovate to obliquely elliptic leaves (broader than in those of *H. intermedia* 'Jelena') and dark orange-red flowers; petals with dark veins and a very narrow yellow edge; from a distance the flowers appear dark purplish. Origin in Kalmthout Arboretum, Kalmthout, Belgium. Plants from 23.

HAMAMELIS MOLLIS Oliv.

Deciduous shrub, very downy when young; leaves roundish or broadly obovate, unequally cordate at base, 3" to 5" long, nearly as wide, shallowly toothed; flowers golden-yellow, sometimes reddish at the base; petals about 1/2" long. Some plants hold the dried brownish leaves over winter, others are completely deciduous. Several cultivars are grown in Europe. Introduced to European gardens from China in 1879 by Maries.

266604 'BREVIPETALA'. A cultivar with flowers in fascicles of 5 to 12, the petals shorter than in the

typical phase of the species and the leaves persistent over winter. Grown first in Europe in 1949. Plants from 23.

266640 'DONKER'. Plants from 25.

265254 'FEUERZAUBER'. Seedling selection with the petals uniformly wine-red. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany and first offered in 1958. Plants from 12.

HAMAMELIS VERNALIS Sarg. 'LOMBARTS WEEPING'

266674 Seedling selection with strongly pendulous branches. Origin in nursery of Pierre Lombarts, Zundert, Netherlands, about 1954. Plants from 31.

HEBE PINGUIFOLIA (Hook. f.) Cockayne & Allan 'PAGEI'. Scrophulariaceae.

261841 Low shrub, ultimately exceeding 3' across, usually under 12" tall; stems at first purplish-glaucous becoming greener, the nodes persistently purple; leaves spreading to somewhat reflexed, elliptic-obovate, about 1/2" long, obtuse; flowers in axillary spikes, white. An excellent edging plant; male sterile. Plants from 36.

HEDERA COLCHICA K. Koch Araliaceae.

High climbing vine; leaves very large, ovate or cordate, entire or sometimes slightly lobed, 3" to 7" across, up to 10" long. Distinct from *H. helix*, especially in the much larger leaves. Asia Minor, Caucasus, to Iran.

266537 'AMURENSIS'. The best cultivar of *H. colchica*, according to W. J. Bean, "Trees and Shrubs Hardy in the British Isles." Plants from 21.

266536 'ARBORESCENS'. The mature phase of the species making a shrubby erect bush when propagated on its own roots. Plants from 21.

HEDYSARUM MULTIJUGUM Maxim.

Leguminosae.

266735 Deciduous shrub, 3' to 5' tall, of open habit and with downy young branches; leaves 4" to 6" long, pinnately divided, with 17 to 29 leaflets; racemes 6" to 12" long, the flowers pea-shaped, rose-magenta, 3/4" long.

Summer-flowering. Mongolia. Plants from 28.

HEMIGRAPHIS REPANDA Hall. f.

Acanthaceae.

262359 Trailing or prostrate, with long slender stems; leaves narrowly linear, about 4" long in the longest, serrate-dentate, reddish-purple beneath, green above; flowers in short, conelike spikes, white. Attractive for a hanging basket. Malaya. Plants from 30.

HERACLEUM MANTEGAZZIANUM Somm. & Levier. Umbelliferae.

265622 Gigantic perennial, up to 12' tall, with coppery-red stems. Leaves 3' long, forming a tuft up to 12' across, deeply cut into oblong lobes; flowers white in terminal umbels, 4' to 4 1/2' across. A striking plant, grown for bizarre effect in European parks. Caucasus. Plants from 12.

HIBISCUS SYRIACUS L. Malvaceae.

Rose-of-Sharon, shrub-althea. Deciduous shrub, to 12' tall; leaves 3-lobed or toothed, 2" to 4" long, petiolate; flowers 2 1/2" to 4" across or sometimes more in some cultivars, rose or purple to white and bluish, often double. China, introduced in Japan. Long grown in western Europe; mentioned by Gerard in his herbal of the early 17th century.

259143 'ADMIRAL DEWEY'. Flowers pure-white, double. Plants from T. Westdijk, Boskoop, Netherlands. 266605 'ADMIRAL DEWEY'. Plants from 23.

266501 'BOULE DE FEU'. Syn. 'Compte de Flandre'. Flowers deep-red with white stripes, double. Grown in Europe before 1856. Plants from 27.

259144 'DUC DE BRABANT'. Flowers red, double. Known before 1872 in Europe. Cuttings from T. Westdijk, Boskoop, Netherlands.

259474 'DUC DE BRABANT'. Plants from 23.

266502 'LEOPOLDII'. Flowers white with a rose tint, deep rose in the middle, double; similar to 'Lady Stanley' but the leaves more deeply

- cut and growth of the young plants stronger. Plants from 27.
259476 'LUTEUS PLENUS'. Plants from 33.
'MONSTROSUS'. Single flowers, white with a maroon center. Grown in Europe before 1873.
259145 Cuttings from T. Westdijk, Boskoop, Netherlands.
266606 Plants from 23.
259475 'SOUVENIR DE CHARLES BRETON'. Flowers magenta, with a dark-red spot at base of the petals. Grown in Europe before 1886. Plants from 33.
- HITCHENIOPSIS KUNSTLERI (Valeton)
Ridl. ex Valeton. Zingiberaceae.
262380 Rhizomatous; leaves ginger-like, 18" to 24" long; flowers white and yellow. Indonesia. Plants from 30.
- HOSTA ALBOMARGINATA (Hook.) Ohwi
'ALBA'. Liliaceae.
263122 Syn. H. minor (Bak.) Nakai 'Alba'. Scapes 18" to 24" tall, light-green; leaves 8" to 12" long, light-green, spreading; flowers nearly white. Plants from 40.
- HOSTA CRISPULA Maekawa
263123 Scapes 18" to 30" tall; leaves 12" to 14" long, white-margined and crispate, dull-green. The white part of the leaf does not fade or discolor in full sunlight. Plants fertile. Plants from 40.
- HOSTA DECORATA L. H. Bailey
263124 Scapes 12" to 18" long; flowers dark-purple; leaves 10" to 12" long, blunt; inflorescence bracts persistent; flowers narrow, campanulate, rather dark-violet; plants fertile. Plants from 40.
- HOSTA ELATA Hyl.
263125 Scapes 20" to 24" long; leaves 14" to 20" long, light-green to yellowish, dull. Plants fertile. Described from cultivated material growing in Swedish gardens by N. Hylander. Plants from 40.
- HOSTA FORTUNEI (Bak.) Bailey
Syn. H. sieboldiana var. fortunei (Bak.) Aschers. & Graebn. Leaves less glaucous than in H. sieboldiana, cordate-ovate, blades 5" to 8" long; flowers pale-lilac. Japan. Now widely grown in Europe and in America. The following cultivars are from the collection at the Belmonte Arboretum, Wageningen, Netherlands.
263126 'ALBOPICTA'. Scapes 14" to 24" tall; leaves lighter green in the middle than on the margins, otherwise like H. fortunei 'Albopicta Viridis'; flowers lavender, mostly sterile. Plants from 40.
263128 'ALBOPICTA AUREA'. Leaves 12" to 14" long, overall greenish-yellow in spring, veins remaining green; flowers lavender, mostly sterile. Origin from cultivated plants in Europe. Plants from 40.
263127 'ALBOPICTA VIRIDIS'. Scapes 18" to 30" tall; leaves 18" to 24" long, thinner than in the other cultivars of H. fortunei at Wageningen; flowers lavender, mostly sterile. Described from cultivated material in Sweden. Plants from 40.
263129 'HYACINTHINA'. Scapes 14" to 18" tall; flowers purplish-blue, the bracts purplish; leaves 12" to 14" long, with 7 to 10 pairs of lateral nerves. Plants mostly sterile. Plants from 40.
263130 'MARGINATO-ALBA'. Plants robust; scapes 18" tall; leaves 12" to 18" long, white-margined; flowers lavender. Plants from 40.
263131 'OBSCURA'. Leaves 18" to 24" long; scapes 24" to 30" tall. Plants mostly sterile, as are all known forms of H. fortunei. Described by Hylander from cultivated material in Sweden. Plants from 40.
- HOSTA LANCIFOLIA Engl.
263134 Leaves 12" to 14" long, uniformly dark-green, lustrous; scapes 14" to 18" long; flowers lavender. Plants sterile (material in cultivation perhaps from a single clone). Introduced to Europe by von Siebold. Plants from 40.
- HOSTA SIEBOLDIANA (Lodd.) Engl.
263132 'ELEGANS'. Scapes 18" to 30" tall; leaves 18" to 24" long; flowers light-lavender. Possibly a hybrid of H. sieboldiana typica x H. takudama. Origin at Georg Arends Nursery, Wuppertal-Ronsdorf, W. Germany about 1905. Plants fertile. Plants from 40.

263133 'SIEBOLDIANA'. A wild phase of the species with less glaucous leaves more acuminate at the tip than in the common garden H. sieboldiana 'Elegans'. Plants fertile. Introduced first to Europe by von Siebold. Plants from 40.

HOSTA TARDIFLORA (Irving) Stearn
263135 Plants low and spreading; leaves 12" long, the petioles reddish-maculate, the blades thick-coriaceous; flowers pale-purple, Sept.-Oct. Introduced to Europe about 1895. Plants from 40.

HOSTA TOKUDAMA Maekawa
263136 Plant low; leaves cordate-orbicular, abruptly acuminate, glaucous and rugose above; scapes as long as the leaves or slightly longer; flowers purplish to white. A plant said to be much cultivated in Japan and perhaps also to be found wild there. Plants from 40.

263137 'AUREONEBULOSA'. Leaves light green-maculate in the middle portion of the blades, the margins dark-green, otherwise like typical H. tokudama. Plants fertile. Plants from 40.

HOSTA UNDULATA (Otto & Dietr.) L. H. Bailey

A polymorphic poorly understood plant producing several variants of importance in gardens, all sterile. Known only in cultivation, and probably of hybrid origin.

263138 'ALBOMARGINATA'. Scapes 24" to 30" tall; leaves 12" to 14" long, white-margined; flowers lavender. Of Japanese origin. Plants from 40.

263139 'ERROMENA'. Scapes 24" to 30" tall; leaves 12" to 18" long, dull-green, long-pointed and wavy-margined; flowers lilac. Plants from 40.

263140 'UNDULATA'. Scapes 14" to 30" tall; leaves undulate on margin and at the tip, the margins mostly green-maculate, the blades 1/2 to 2/3 white; plants shorter than in H. undulata 'Univittata'. Introduced to Europe from Japan by von Siebold, about 1830. Plants from 40.

263141 'UNIVITTATA'. Scapes 14" to 18" tall, reddish-maculate at base; leaves 8" to 12" long with rather flat margins, the tips undulate and twisted. This cultivar more green than in the typical phase of the species. Introduced to Europe by von Siebold from Japan. Plants from 40.

HOSTA VENTRICOSA (Salisb.) Stearn
263142 Scapes 24" to 30" tall; leaves 12" to 14" long, rather lustrous, uniformly green; flowers deep-purple, fertile; fruit white, the bracts soon withering. Native of China. Introduced to Europe in 1790. Plants from 40.

263143 'AUREOMACULATA'. With the characters of the typical phase but the foliage white-variegated. Introduced to Europe from Japan by von Siebold. Plants fertile. Plants from 40.

HOYA MULTIFLORA Bl. Asclepiadaceae.
265932 Stout climber; leaves linear-oblong, acute; flowers yellowish and white, buff at the tip, silky within. Malacca. Plants from 14.

HYDRANGEA ACUMINATA × H. MACROPHYLLA 'HORTENSIA'. Hydrangeaceae.
261292 Hybrid originating from nursery of Georg Arends, Wuppertal-Ronsdorf, W. Germany. Plants from 6.

HYDRANGEA HETEROMALLA D. Don
261842 Syn. H. bretscheideri Dipp. Deciduous shrub, about 10' tall, of spreading habit, shoots loosely downy at first, older bark peeling; leaves 3" to 5" long, oblong to ovate; corymbs 4" to 8" wide, the sterile flowers white, turning rosy; fertile flowers dull-white. West central to northeastern China and the Himalayas. Plants from 36.

HYDRANGEA MACROPHYLLA (Thunb.) Ser. 'BELZONII'
261843 Leaves verticillate as well as opposite; flowers in a flat-topped corymb, blue. A plant of Japanese origin. Plants from 36.

HYMENOCALLIS SENEGAMBICA Kunth & Bouche. Amaryllidaceae.
275921 Leaves sessile about 2'

long, 1 1/2" to 2" wide; flowers 6 to 8 in umbels, sessile, the tube slender, 5" to 6" long. West Tropical Africa. The only species in the Old World. Plants from 1.

I

ILEX AQUIFOLIUM L. Aquifoliaceae. Evergreen large shrub or tree, native of Great Britain to middle and southeastern Europe.

265255 'HANDSWORTHENSIS' (staminate). Syn. *I. aquifolium* 'Spinossissima' (Hesse). Leaves ovate, 1 1/2" to 2 1/2" long, sharp spine-tipped, irregularly ciliate-toothed, sometimes entire, lustrous deep-green above; stems purplish. Garden origin. Plants from 12.

265256 'PLANIFOLIA'. Leaves relatively small, dark-green, with nearly entire margins, especially on lower half and on those of the growing tips. Origin at H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

ILEX FARGESII var. *SCLEROPHYLLA* Loes.

269621 Evergreen large shrub; leaves narrowly oblong, 2" to 3" long, 1/2" wide. Leaves narrower than in the typical phase of the species. China. Plants from 4.

ILEX GEORGEI Comber

269622 Evergreen, small single-trunked tree, 15' tall; fruit red. The leaves resemble those of *I. pernyi* Franch., the plant is less hardy. Yunnan, China. From a plant at Caerhays Castle, Gorran, near St. Austell, Cornwall, England, grown from seed originally sent by George Forrest from China. Probably from the same plant as P.I. 243014. Plants from 4. 277771 Plants from 4.

ILEX MELANOTRICHIA Merr. (pistillate)

261216 Small tree, 10' to 12' tall, with a single trunk and smooth bark; leaves coriaceous, dull deep-green, elliptic to oblong, 3" to 4" long, 1" to 1 3/8" wide, acuminate, finely toothed; fruit orange-red in axillary clusters. Grown under G. Forrest 25069. N'Maikha-Salwin

divide, northeastern Upper Burma, alt. 10,000' to 11,000'. Seeds from garden at Exbury House, Exbury, Hants, England.

ILEX PEDUNCULOSA var. *CONTINENTALIS* Loes.

265257 Evergreen tree; leaves ovate to oblong, 2" to 4" long, 1" to 3" wide, lustrous green above, finely serrate on the upper half. Differs from the phase in Japan by the serrate and larger leaves. China. Plants from 12.

ILEX PERADO Ait.

Evergreen small tree, about 20' tall, with slightly ascending branches; leaves 3" to 5" long, often as wide, sparsely toothed or nearly entire, dull-green. Azores. 261441 From Quinta de Monserrate, Sierra da Sintra, near Lisbon, Portugal. Seeds from this place. 269620 Staminate. Cuttings from Parque da Pena, Sierra da Sintra, near Lisbon, Portugal.

ILEX PLATYPHYLLA Webb. & Berth.

269623 Evergreen tree, 30' tall or more; leaves 3" to 6" long, 2" to 3 1/2" wide, stiff with spiny or entire margins, dullish dark-green; fruit deep-red.

Canary Islands. Plants from 4.

IMPATIENS NIAMNIAMENSIS Gilg

Balsaminaceae.

265933 Suffrutescent herb, to 6' tall; leaf blades oval to oblong-elliptic or elliptic, 2 1/2" to 8" long, 1" to 4" wide, crenulate; inflorescence axillary; flowers red to yellow, about 1/2" long, on pedicels 1/4" to 2" long. Mountains of the Congo. Plants from 14.

IMPATIENS WALLERIANA Hook. f. (received as var. *BERGERIANA*)

265096 Herbaceous; leaves broadly ovate-acuminate, 2" to 3" long, coarsely serrate; Tropical Africa. Plants from 5.

INDIGOFERA POTANINII Craib

Leguminosae.

262256 Deciduous shrub, 4' to 6' tall; leaves pinnate, 3" to 6" long, with 5 to 9 leaflets; flowers rose-pink 3/8" long, pea-shaped in axillary racemes 2" to 5" long. Attractive free-flowering shrub. Kansu, China. Plants from 32.

IRIS LAEVIGATA Fisch. 'VARIEGATA'

Iridaceae.

267658 Similar to I. kaempferi Sieb., differing chiefly in the leaves without a midrib and white-margined. Prefers constantly wet situations. Plants from 35.

J

JASMINUM FLORIDUM Bunge Oleaceae.

261200 Nearly evergreen shrub of rambling habit; leaves composed of 3 leaflets, sometimes 5; flowers yellow in terminal cymose clusters. Closely allied to J. humile var. revolutum. North and central China. Plants from 4.

JASMINUM HUMILE L.

Nearly evergreen shrub, 3' to 4' tall, glabrous; flowers yellow. A widely distributed and variable plant, occurring from the western Himalayas to northwestern China.

261201 var. GLABRUM (DC.) Kobuski Branches strongly angled; leaflets 7 to 13, ovate to lanceolate, 3/4" to 2" long, acute to acuminate; inflorescence 1- to 3-flowered; flowers yellow. Nepal. Plants from 4.

261202 var. REVOLUTUM (Sims) Kobuski. Nearly evergreen shrub of lax and spreading habit; leaves composed of 3 to 5 leaflets or sometimes 7, these oval or ovate, tapering at both ends, the terminal up to 2" long, the laterals shorter, very dark-green; flowers yellow, fragrant, in terminal heads of 6 to 12 or more. Afghanistan to western Himalayas. Plants from 4.

JASMINUM PARKERI Dunn

261203 Evergreen shrub, of a dense tufted habit, 8' to 12' tall; leaves pinnate, 1/2" to 1" long, the leaflets 3 to 5, oval or ovate, small; flowers solitary, terminal or axillary, yellow, 1/2" to 3/4" long, 1/2" wide. Northwestern India. Plants from 4.

JUNIPERUS CHINENSIS. L. Pinaceae.

Chinese juniper. Tree to 60' tall,

with ascending branches, forming a pyramidal head. Native of southern China. The typical phase likely does not occur in Japan. Much confusion exists over the identification of this tree in nurseries of Europe and America. The nomenclature of J. chinensis and its segregates in the present list follows the classification of P. J. Van Melle, "Review of Juniperus chinensis et al.," published by the New York Botanical Garden in 1947. In this work, Van Melle interprets the Juniperus chinensis complex of gardens as including four entities, viz. J. chinensis, J. sphaerica Lindl., J. sheppardii, and J. X media.

266426 'BLAAUWS VARIETY'. Dwarf-growing shrubby habit of very dense compact growth, the branches ascending and numerous with grayish-blue scalelike leaves. Introduced from Japan by J. Blaauw Nursery, Boskoop, Netherlands in 1924. Plants from 33.

266608 'OLYMPIA'. Syn. J. chinensis 'Chugai'. Pyramidal habit with a self-supporting leader; leaves intense blue. Origin in Chugai Nursery, Yamamoto, near Kobe, Japan as a seedling selection and distributed by F. J. Grootendorst, Boskoop, Netherlands, 1956. Plants from 23.

JUNIPERUS COMMUNIS L.

Common juniper. Upright shrub or tree, to 40' tall, sometimes a prostrate shrub in high altitudes and latitudes. Occurs widely in Europe and in Eastern and Western United States. It also occurs in Japan and in Asia. It has been long cultivated in Europe, at least since the middle of the 16th century. Over 30 cultivars of this species are grown in European gardens.

266737 'CANDELABRIFORMIS'. Not J. communis 'Candelabrica' (Leusch). Pyramidal habit with candelabri-form branching; twigs ascending and the top pendulous. Found in the wild and first offered by

H. A. Hesse Nursery, Weener/Ems, W. Germany in 1938. Plants from 28.

266736 'CRACOVIA'. Polish juniper. Erect, bushy tree, with grayish-green foliage and branchlets pendulous at the tips. Brought into cultivation about 1880 from wild plants found near Krakow, Poland. Plants from 28.

265260 'HILS FREIBURG'. Seedling selection not of creeping habit, but low and of slower growth than in the typical phase; tips of the new growth ascending, the leaves white beneath. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany in 1952. Plants from 12.

266538 'HORNIBROOKII'. Plant develops as a prostrate mat, with more or less layered glaucous or green branches. Origin from a wild plant originally found by Murray Hornibrook in County Galway, Ireland, about 1923. Plants from 21.

265034 'LAXA'. An erect bushy tree, of columnar habit with yellow-green coarse leaves; tips of the branchlets pendulous. Origin in nursery of G. D. Böhlje, Westerstede, W. Germany, about 1930. Plants from 7.

266612 'MAYER'. Plants from 23.

266738 'PROSTRATA' (pistillate). Plant forms a round tablelike mat, usually not exceeding 1' tall with the leaves silvery white-striped, green on the edges, green underneath. Selection from wild plants found in Germany, similar to *J. communis* 'Hornibrookii' but faster growing. Plants from 33.

266431 'REPANDA'. Creeping, flat-growing bush, about 4' wide and 1' tall, with green and white-striped leaves. Origin at M. Koster Nursery, Boskoop, Netherlands, 1934. Plants from 33.

JUNIPERUS COMMUNIS var. *DEPRESSA*

Pursh

265258 Syn. *J. communis* 'Intermedia'. The native phase of the species in eastern North America forms a low shrub about 3 1/2' tall, wider than tall, with light-

green leaves. Plants from 12. 'DUMOSA'. Dwarf, spreading, broad habit, 2' to 3' tall, the branches ascending, the top somewhat reclining. Origin in Gimborn Arboretum, Doorn, Netherlands. Plants from 33.

JUNIPERUS COMMUNIS var. *NIPPONICA*

(Maxim.) Wils.

280159 Procumbent shrub with yellowish-brown branchlets and lustrous green leaves deeply concave and whitish on upper side. Alpine zone of Hokkaido and Honshu, Japan. Plants from 23 and 28.

JUNIPERUS COMMUNIS var. *SAXATILIS*

Pall.

266777 A wild variety of arctic regions and high mountains of Europe and North America, often prostrate, rarely over 2' tall; leaves green, crowded. The present material is of European origin. Plants from 37.

JUNIPERUS COXII A. B. Jacks.

280160 Coffin juniper. Evergreen tree, recorded as attaining over 80' tall in Upper Burma where it is native. It produces a single trunk with graceful weeping branches. Probably hardy only in warmer areas. Plants from 37.

JUNIPERUS DAVURICA Pall.

Dahurian juniper. A poorly understood juniper, rarely is it sold in nurseries under this name, but rather as *J. chinensis* var. *japonica* Lav. The Dahurian juniper is Siberian and probably is most closely related to *J. sabina* in the more westward and Siberian part of the distribution. In Korea and Japan, which represents the plant in cultivation, the species comes in close contact with *J. sheppardii*.

266427 'PARSONII'. Syn. *J. chinensis* var. *japonica* Lav.; *J. chinensis* 'Expansa'. With very rigid main branches, not decumbent; branchlets on adult limbs long and filiform. Highly desirable garden plant, but frequently confused with *J. chinensis* in nurseries. Korea and Japan and probably in cultivation in Europe in

the early 19th century. Plants from 33.

JUNIPERUS 'GREY OWL'

266614 An alleged hybrid of *J. X media* 'Pfitzeriana' x *J. virginiana*. In growth it is similar to *J. X media* 'Pfitzeriana' but less dense; tips of the branchlets purplish in winter; leaves glaucous. Origin in Caam Bros. Nursery, Oudenbosch, Netherlands, 1938 and distributed by F. J. Grootendorst Nursery, Boskoop, Netherlands in 1949. Plants from 23.

JUNIPERUS MACROCARPA Sibth. & Smith

265259 Plum juniper. Closely related to *J. oxycedrus* L., differing in the larger more glaucous berries, and longer leaves and the plant smaller. Mediterranean region from Spain to Syria. Plants from 12.

JUNIPERUS X MEDIA van Melle

Hybrid of *J. sabina* x *J. sphaerica*. In "Review of *Juniperus chinensis* et al.," by P. J. van Melle, 1947, the author proposes that the plants grown in gardens as varieties *arbuscula*, *pfitzeriana*, *globosa*, and *plumosa* in fact, are of hybrid origin and not varieties of *J. chinensis*.

266607 'BLUE CLOUD'. Plant vase-shaped, 5' to 6' tall, foliage glaucous-blue. Seedling selection. Origin at F. J. Grootendorst Nursery, Boskoop, Netherlands. Plants from 35.

266611 'FAIRVIEW'. Selection with upright habit and steel-blue leaves. Plants from 23.

266429 'GLOBOSA'. Syn. *J. chinensis* f. *globosa* (Hornibr.) Rehd. Without a main axis, irregularly spreading, with light-green to bright olive-green plumose foliage. Originally introduced from Japan to European gardens. Plants from 23.

266609 'GLOBOSA CINEREA'. Syn. *J. chinensis globosa* f. *cinerea* Hornibr. Without a main axis, forming a bushy shrub with light-green plumose branches. Plants from 23.

266776. 'MATHOT'. Selection with regular growth habit, and awl-shaped blue-green foliage. Origin at nursery of Mathot, Boskoop, Netherlands. Plants from 37.

266610 'OLD GOLD'. Very compact growth habit; leaves bright-yellow in summer, bronze-golden in winter. Origin in F. J. Grootendorst Nursery, Boskoop, Netherlands, about 1948. Plants from 23.

266789 'PLUMOSA ALBOVARIEGATA' The foliage interspersed with whitish leaves often reverting to the green phase. A sport of *Juniperus X media* 'Plumosa'. Presumably of Japanese origin. Plants from 39.

266790 'PLUMOSA AUREOVARIEGATA' The foliage interspersed with yellowish leaves, often reverting to the green phase, and with more juvenile foliage than in the typical phase. Presumably of Japanese origin. Plants from 39.

JUNIPERUS SABINA L.

Savin juniper. A widely distributed evergreen shrub, usually 3' to 5' tall, but some phases attain 10' to 15' tall, with a stiff and spreading habit. Native of central and south Europe on mountains eastward to Asia Minor and Siberia. Long cultivated in Europe as an esteemed conifer, with more than a dozen cultivars now grown in Continental gardens. 266539 'BLUE DANUBE'. Of a bushy spreading habit and glaucous-blue foliage. Plants from 21.

280162 'FASTIGIATA'. Branches all ascending, and the plant strongly fastigiate; foliage dark-green. Plants from 28.

266430 'HICKSII'. Upright spreading habit with grayish-blue foliage. Introduced to European nurseries from America in 1940. Plants from 33.

280161 'VARIEGATA'. The leaves yellowish-white tipped. Plants from 28.

JUNIPERUS SARGENTII Takeda ex Koidz.

266791 Often confused with *J. chinensis*, but probably distinct.

Shrub with short-creeping stems and ascending or suberect branches; forms densely creeping mats in mountains of southern Japan and along seashores in northern Japan and in Kuriles and Sakhalin. Material in cultivation probably grown from seed collected by Sargent in Hokkaido. Plants from 39.

JUNIPERUS SCOPULORUM Sarg. 'SKYROCKET' 280163 Syn. *J. scopulorum* 'Pilaris'. Branches and branchlets strongly ascending, the plant fastigiate; leaves strongly glaucous-blue. Grown first in the Schuel Nursery, South Bend, Indiana in 1949 and under the above cultivar name in 1956 by F. J. Grootendorst Nursery, Boskoop, Netherlands. Plants from 33.

JUNIPERUS SQUAMATA Buch.-Ham. ex Lamb. (typical phase) 266740 Shrub, with long decumbent branches spreading over the ground, the branchlets ascending; young branches green. Introduced into European gardens about 1836. Native of the Himalayas and China. Plants from 28.

266613 'LODERI'. Columnar in shape, very dense, with blue foliage, thought by van Melle to be synonymous with *J. squamata* 'Wilsonii'. Raised first in England by Sir Edmund Loder. Plants from 23.

280164 var. WILSONII Rehd. Forms a conical bush, multistemmed, the short crowded branchlets usually recurved at the tips. Grown under Forrest 30809 and Forrest 30804. Plants from 37.

JUNIPERUS VIRGINIANA L.

The well-known redcedar of Eastern United States has been cultivated in Europe since the middle of the 17th century. The great variability of this species has contributed to a large number of cultivars, at least 30 are grown in Europe at the present time.

266741 'KOSTERI'. Low-growing habit, similar to *J. x media* 'Pfitzeriana' but not as densely branched; branches spreading;

leaves spreading; leaves slightly bluish. Seedling selection originating in nursery of M. Koster, Boskoop, Netherlands in 1880. Plants from 28.

K

KALANCHOE PUMILA Bak. Crassulaceae. 259949 Spreading succulent perennial; leaves glaucous-green. Madagascar. Cuttings from 44.

KOELREUTERIA PANICULATA Laxm. 'FASTIGIATA'. Sapindaceae. 261204 Deciduous tree, with ascending or strict branches, forming a narrow columnar specimen. Plants from 4.

KOLKWITZIA AMABILIS Graebn. 'ROSEA' Caprifoliaceae. 262257 Seedling selection with flowers deeper pink than in the typical phase usually grown in gardens. Origin in Royal Moerheim Nurseries, Dedemsvaart, Netherlands. Plants from 32.

L

LABURNUM CARAMANICUM (Boiss.) Benth. & Hook. f. Leguminosae. 261205 Erect shrub, about 6' tall, glabrous throughout; leaves 3-foliolate, leaflets very small, gray-green; flowers in erect racemes, 2" to 6" long, yellow, 3/5" long. Greece to Asia Minor. Plants from 4.

LARIX POTANINII Batal. Pinaceae. 265261 Chinese larch. Deciduous tree, 60' to 70' tall in the wild; leaves 1" long; cones about 1 1/2" long. The leaves produce a strong aromatic and distinctive odor when crushed. Said to yield excellent timber in parts of western China, where it is native. Plants from 12.

LAVANDULA OFFICINALIS Chaix Labiatae. Syn. *L. spica* L.; *L. vera* DC.; *L. angustifolia* Mill. 280165 'HIDCOTE'. Dwarf-growing, 10" to 12" tall, silvery-gray. Plants from 33. 261844 'MIDDACHTEN'. Of very compact growth habit, about 18" tall.

A selection grown for the very dark lilac-colored flowers. Origin in the Netherlands. Plants from 36.

LEPTOCHITON QUITOENSIS (Herb.) Sealy
Amaryllidaceae.

262310 Bulbous, 1-flowered; flower with a green tube, 3 1/2" to 5" long, curved at top, the segments linear, 3" to 4" long, greenish-white outside; corona large, broadly funnel-shaped, nearly as long as the segments. Cultivation as for Hymenocallis. Ecuador. Bulbs from 38.

LEUCOTHOE FONTANESIANA (Steud.)

Sleumer 'ROLLISONII' Ericaceae.

266675 Syn. L. catesbaei (Walt.) Gray; L. editorum Fern. & Schub. Selection with smaller, narrower leaves, 2" to 4" long, 1/2" to 3/4" wide. Origin in Germany about 1903. Plants from 31.

LIGUSTRUM OVALIFOLIUM Hassk.

'ARGENTEUM' Oleaceae.

265262 Leaves bordered with creamy white. Known first in cultivation in England about 1914. Plants from 12.

LIGUSTRUM SINENSE Lour. 'PENDULA'

266676 Deciduous shrub, 12' to 20' tall. Selection with pendulous branches. Plants from 31.

LIGUSTRUM STRONGLYOPHYLLUM Hems1.

265263 Evergreen shrub, of loose habit; leaves nearly oval or ovate, 1/3" to 3/4" long, dark glossy-green; flowers white in a terminal pyramidal panicle, 2" to 4" long. China. Plants from 12.

LIMNOCHARIS FLAVA (L.) Buchenau

Butomaceae.

261114 Syn. L. emarginata H. B. K. Erect, standing 1' to 2' or more above water; leaf blades large, lanceolate-ovate, on petioles 1" to 2" long; flowers yellow, bordered white, about 1" wide, in 2- to 12-flowered umbels. West Indies to Brazil. An attractive plant for shallow water. Plants from 16.

LIQUIDAMBAR ORIENTALIS Mill.

Hamamelidaceae.

277773 Deciduous tree, up to 100' tall; leaves 2 1/2" to 3 1/2" wide and nearly as long, 5-lobed. Of

pyramidal growth habit, often very densely branched. The leaves and fruit are smaller than in L. styraciflua. Asia Minor. Plants from 4.

LIRIODENDRON TULIPIFERA L.

Magnoliaceae.

Highly esteemed deciduous tree, much planted in western Europe in parks and gardens. Apart from the typical phase of the species, which is most commonly grown, about a half dozen cultivars are found in collections.

266540 'AUREOMARGINATUM'. Leaves edged yellow. Tree of normal growth habit. Plants from 21.

280166 'HELTORF'. Lateral lobes of the leaves 3-lobed. Found in the neighborhood of Düsseldorf, W. Germany by J. R. P. van Hoey Smith of Rotterdam, Netherlands. Plants from 35.

280167 'MEDIOPICTUM'. Syn.

'Aureomaculatum'. Leaves blotched with yellow in the center. Tree of normal growth habit. Plants from 31.

LIRIOPE GRAMINIFOLIA var. DENSIFLORA
Bak. Liliaceae.

261206 Syn. L. muscari (Decne.) Bailey. With more numerous flowers more closely arranged on the stem than in the typical phase. Plants from 4.

LONICERA ALSEUOSMOIDES Graebn.

Caprifoliaceae.

265264 Evergreen climber; leaves narrowly oblong, 1 1/4" to 2" long; flowers terminal on the shoots, forming a short broad panicle, the corolla purple within, yellow outside, funnel-shaped, 1/2" long; fruit globose, small, black covered with a purple bloom. China. Plants from 12.

LONICERA x BROWNII (Reg.) Carr.

'FUCHSIOIDES'

265035 Hybrid of L. hirsuta x L. sempervirens. The hybrid resembles L. sempervirens L., but with a corolla distinctly 2-lipped and the tube slightly gibbous at base; leaves sometimes sparingly ciliate and slightly pubescent beneath and the petiole sparingly glandular.

- Selection with scarlet flowers outside. Plants from 7.
- LONICERA MYRTILLUS Hook. f. & Thoms.
265624 Small deciduous shrub, with slender branches, of dense compact habit, 3' or 4' tall; leaves oval to ovate, 1/3" to 1/2" long, about 1/4" wide, dark green above, somewhat glaucous beneath; flowers pinkish-white, fragrant; fruit orange-red. Himalayas to Afghanistan. Plants from 12.
- LONICERA OBOVATA Royle ex Hook. f. & Thoms.
265623 Deciduous shrub, about 6' tall, glabrous throughout; leaves obovate, less than 1/2" long, whitish beneath; flowers about 1/2" long, whitish; fruit blue-black. Himalayas and Afghanistan. Plants from 12.
- LONICERA PILEATA Oliv.
Semievergreen shrub, 4' to 6' tall; leaves oblong-lanceolate, 1/4" to 1 1/2" long, the veins beneath scarcely visible or slightly impressed. Hardier than the closely related *L. nitida* Wils. Central and western China. Following are two cultivars raised from seedlings now rather widely grown in parts of western Europe.
266504 'GRAZIOSA'. Plant dense, about 30" tall, later with arching branches; leaves about 1/2" long, about 1/8" wide. Origin by Mr. Jürgl at Sürth (near Cologne), W. Germany. Plants from 27.
266505 'HOHENHEIMER FINDLING'
Forms a dense, robust, broad shrub, 3' to 4' tall; leaves 1/2" to 3/4" long, about 1/4" wide. Origin at Agricultural Academy at Hohenheim near Stuttgart, W. Germany. Plants from 41.
- LONICERA PROSTRATA Rehd.
265625 Prostrate deciduous bush, of rounded habit; young shoots slightly hairy and purplish; leaves oval to ovate, 3/4" to 1" long, ciliate; flowers pale-yellow, not fragrant, in pairs from leaf axils; fruit reddish. Western China. Plants from 12.
- LONICERA THIBETICA Bur. & Franch.
266792 Deciduous shrub, about 3 1/2' tall, with arching branches; young shoots purplish, downy; leaves often in 3's, oblong-lanceolate, 1/2" to 1 1/2" long, dark-glossy green and smooth above, densely white-felted beneath; flowers dark-pink to lilac-colored, fragrant, about 1/2" long; fruit red. Western China and Tibet. Plants from 39.
- LUCULIA GRANDIFOLIA Ghose. Rubiaceae.
273264 Small spreading shrub, 5' to 6' tall; leaf blades 10" to 15" long, 6" to 10" wide, broadly elliptic, cuspidate at the apex, entire; reddish flowering corymbs about 12" in diameter, rather laxly arranged, sweet-scented; corolla snow-white, the tube about 2 1/2" long, the limb 5-lobed, fimbriate. Eastern Bhutan. Decorative species described first in 1952. Plants from 5.
- LUDOVIA CRENIFOLIA Drude
Cyclanthaceae.
262360 Large coarse perennial, with 2-ranked leaves, closely set, about 18" long, dark-green, obovate-lanceolate, leathery. Amazon region. Plants from 30.
- LYCOPODIUM sp. Lycopodiaceae.
265935 Epiphytic; stems slender, sparsely branched, rattailike, the scalelike leaves crowded on the branches, light-green. Himalayas. Plants from 14.
- LYCOPODIUM HIPPURIS Desv.
274434 and 274447 Epiphytic; stems erect, 2' or more tall, several times divided toward base with sporophylls at the tip; leaves bright lustrous-green, about 1" long. Java. Plants from 10.
- LYCOPODIUM SQUARROSUM Forst.
265934 Epiphytic; stems 12" to 16" long, often pendulous; leaves congested, acicular, the branches often forked. India and Assam. Plants from 14.

M

X MACLUDRANIA HYBRIDA André

Moraceae.

265265 Bigeneric hybrid of Cudrania tricuspidata x Maclura pomifera. Tree; branches dark-brown with short straight spines. Origin in France before 1905. Plants from 12.

MAGNOLIA STELLATA (Sieb. & Zucc.)

Maxim. Magnoliaceae.

265266 'ROHRBACH'. Selection with pink buds, remaining pink at anthesis. Origin in Germany. Plants from 12.

MAHONIA AQUIFOLIUM (Pursh) Nutt.

Berberidaceae.

Oregon grape. Evergreen shrub, 3' to 6' tall, with pinnately divided leaves. Western United States. Much grown in western Europe; several cultivars are offered in the trade for gardens and parks.

262258 'VICARII'. Leaves with narrower segments giving to the plant a fernlike appearance, reddish in youth becoming green in age. Plants from 32.

MAHONIA PINNATA (Lag.) Fedde

262259 Syn. M. aquifolium var. fascicularis Bean. Upright evergreen shrub, to 12' tall; leaflets 7 to 13, ovate to ovate-lanceolate, sinuately spine-toothed, slightly lustrous above (much less so than in M. aquifolium); flowers in racemes 2" to 3" long. Southwestern United States and northern Mexico. Plants from 32.

MANDEVILLA SANDERI (Hemsl.) Woods.

Apocynaceae.

265056 Evergreen climber, twining; leaves thick, opposite, oblong, about 2" long, slender-pointed; flowers rose, with yellow throat, about 3" across. Brazil. Plants from 4.

MARCGRAVIA POLYANTHA Delp.

Marcgraviaceae.

260004 Scrambler with dimorphic leaves, the juvenile nearly oval, the mature ones lanceolate; flowers greenish on mature branches. Tropical America. Plants from 16.

MELASTOMATACEAE (undet.)

260989 Epiphyte; leaves dark-green, pubescent; flowers pink, 1" across. Congo. Plants from 1.

MICROGLOSSA ALBESCENS (DC.) C. B.

Clarke Compositae.

265267 Shrubby perennial, about 3' tall, with alternate lanceolate leaves, 2" to 5" long, entire or minutely toothed; flower heads pale-blue or whitish, asterlike, small, numerous, in terminal corymbs 3" to 6" across. A hardy floriferous shrub. Himalayas and China. Plants from 12.

MICROLEPIA SPELUNCAE (L.) Moore

Polypodiaceae.

263982 Fern with strong stipes 1' to 1 1/2' long; fronds pale-green, papery, 3' to 6' long, 1' to 2' wide, somewhat triangular, 3- to 4-pinnatifid. Tropical. Plants from 18.

MICROSTYLIS COMMELINIFOLIA Zoll. &

Mor. Orchidaceae.

275922 Forms a dense, creeping mat, 3" to 4" tall, with reddish stems; leaves cordate, 1/2" to 1" long, resembling small Tradescantia leaves; flowers small, purple-violet on a terminal short spike. Java. Plants from 1.

MISCANTHUS SINENSIS Anderss.

Gramineae.

Densely tufted grass, about 3' high, widely cultivated for ornament in western Europe with several cultivars rather widely grown. Japan and China.

274448 'STRICTUS'. More robust and the leaves erect, white-margined and striped. Plants from 14.

MONTBRETIA 'EMILY MCKENZIE' Iridaceae.

262343 Flowers widely expanded, 2 1/2" to 2 3/4" wide, orpiment orange, 3 of the segments with a central blotch of chrysanthemum crimson; spikes 2' long. Received an Award of Merit, Royal Horticultural Society, London, 1954. Corms from 38.

MUSA HALABANENSIS W. Meijer Musaceae.

262361 Large robust plant, to about 27' tall; leaves to 18' long, and nearly 3' wide; female flowers about 1" long; ripe fruit

about 2 1/2" long, terete with a beaked apex; seeds relatively small as compared with other species of Musa, globular-pyramidal; male bud ovoid, broader than in M. sumatrana Becc., inner side of bracts yellow-ochre, outer side dark-violet; male flowers about 2" long. Forest on Mt. Sago, western Sumatra, about 3,000' alt. Meijer 7463. A new species only recently described. Plants from 30.

MYRIOCARPA DENSIFLORA Benth.

Urticaceae.

265936 Large herb or shrub, dioecious; leaves usually large, rather strongly 3-nerved, pubescent beneath; flowers minute, very numerous. Attractive foliage plant for the stovehouse. Peru. Plants from 14.

MYRMECODIA TUBEROSA Jack Rubiaceae.

262362 Syn. M. armata DC. Base of plant much swollen and tuberous-like, smooth and prickly, also roughened; leaves clustered near tips of the branches; flowers small, white. The curious swollen base serves as a nesting place for ants in the native habitat, hence the name "myrmecophilous", the term which describes this class of plant. Should be grown as an epiphyte. Indonesia. Plants from 30.

N

NEILLIA AFFINIS Hemsl. Rosaceae.

262321 Deciduous shrub, to 6' high, with glabrous angled branches; leaves ovate to ovate-oblong, 2" to 3 1/2" long, long-acuminate, cordate or subcordate, often with a pair of lobes at base; flowers pink in dense racemes 1 1/4" to 3" long. Western China. Plants from 15.

NEILLIA THIBETICA Franch.

262322 Deciduous shrub, to 6' tall, similar to N. affinis, but young branches nearly terete, pubescent; leaves doubly serrate and lobulate, pubescent beneath. Western China. Plants from 15.

NEOALSOMITRA PODAGRICA van Steenis

Cucurbitaceae.

262363 Scrambling podagric plant with a fleshy spinescent (cactoid) cucumber-shaped stem at base, deeply ribbed and dark-green; climbing stems often many feet long; upper leaves with 3 leaflets, the lower ones pedately 5-foliolate, the leaflets entire, glabrous, obovate, 1 1/4" to 4 1/4" long, 1" to 2 1/2" wide. Curious plant. Known to occur only on Timor. Plants from 30.

NEOMARICA CAERULEA (Seub. ex Hook. f.)

Sprague Iridaceae.

262311 Perennial with irislike evergreen leaves 3' to 6' long; flowers sky-blue, with yellowish claws with transverse brown bands. Brazil. Plants from 38.

NEPENTHES X DORMANNIANA Williams ex

Mast. Nepenthaceae.

Hybrid of N. rafflesiana X N. sedenii. Leaves broadly lanceolate, acute, finely ciliate; petioles 6" long, 3" wide, flask-shaped; ground color of pitcher green, heavily spotted with deep-red blotches. Handsome. Of garden origin in Europe. Plants from 10. 274435 Plants from 10.

274449 Plants from 14.

NEPENTHES GRACILIS Korth.

274263 Slender plant; leaves sessile, elliptic; pitchers few, 2" to 4" long, 1/2" to 1" wide, pale-green with small purple spots, the rim narrow, green. Malaya, Borneo, and Sumatra. Plants from 30.

NEPENTHES SPECTABILIS Danser

274264 Stems climbing; pitchers 6" to 10" long, about 1 1/2" wide, with 2 prominent ribs, light green or somewhat bluish outside, with numerous longitudinal dark violet-brown stripes and spots, the peristome green and dark-brown spotted; inner surface of the pitcher pale bluish-green. Mountains above 5,400' alt. in Sumatra. Plants from 30.

NEPTUNIA PROSTRATA (Lam.) Baill.

Leguminosae.

Syn. N. oleracea Lour. Remarkable

for the sensitive leaves and aquatic habit; the lower portion of the stems become spongy white enabling the plants to float; flowers yellow. Grown as a shallow-water aquatic. Tropical regions of Old and New Worlds.

260732 Seeds from 14.

261116 Plants from 16.

262364 Plants from 30.

NERINE Amaryllidaceae.

Collection of modern hybrids obtained from Edmund de Rothschild, Exbury, England. Hybrids of these autumn flowering bulbs from South Africa were first created in England during the last half of the 19th century. With the introduction of *N. bowdenii* W. Wats. to cultivation in 1900, the advent of the garden nerines was underway. The leading parents involved in these modern hybrids have been *N. curvifolia* var. *fothergillii* Bak., *N. flexuosa* (Jacq.) Herb. 'Alba'; *N. sarniensis* (L.) Herb. and a few others. The great brilliance in color of the flowers and the long lasting qualities when cut recommend these plants for wider cultivation in this country.

259964 'BAGDAD'. A diploid hybrid of *N. fothergillii* × 'Edith Amy'. Flowers scarlet. Raised by L. de Rothschild, 1933.

259965 'BEN HILLS'. Flowers vivid-pink.

259963 'BLENHEIM'. Flowers pale-mauve, tipped pink, with red veins.

259967 'CARITA'. Flowers pale-pink.

259968 'CARMINATA'. Flowers pale-pink flushed blue. Raised by L. de Rothschild, 1933.

259966 'CARYTID'. Flowers mandarin-red, about 17 in a truss. Received an Award of Merit, Royal Horticultural Society, England, 1947.

259969 'CERISE'. Flowers cerise.

259970 'DESDEMONA'. Flowers deep-pink.

259971 'EDDY'. Flowers scarlet.

259973 'HORSA'. Flowers bright-pink.

259974 'INCHMERY'. Flowers scarlet.

259975 'KING OF BELGIANS'. Flowers pink. Diploid. Introduced to cultivation by Chapman.

259976 'LEO'. Flowers red.

259978 'MISS MOORE'. Flowers bright-pink.

259977 'MRS. H. J. ELWES'. Flowers pale-pink. Diploid.

Introduced by Barr and Co.; and received Award of Merit, Royal Horticultural Society, England, 1918.

259980 'OCTOBER DAVID'. Flowers dark-crimson.

259979 'OPTOMIST'. Flowers red.

259981 'QUEEN MARY'. Flowers salmon-pink. Triploid. First grown at Exbury.

259982 'RUTH'. Flowers deep-pink.

259983 'SOLENT SWAN'. Flowers white.

259984 'SPITFIRE'. Flowers crimson.

259972 'VIVID'. Flowers brilliant-red.

O-P

PANDANUS GRAMINIFOLIUS Kurz

Pandanaceae.

262365 Much branched evergreen shrub; leaves 1" wide, long-attenuate, the margins saw-toothed. Burma. Plants from 30.

PARTHENOCISSUS TRICUSPIDATA (Sieb. & Zucc.) Planch. 'BEVERLEY PARK'

Vitaceae.

266541 Resembles *P. tricuspidata* 'Veitchii', but differs in the smaller leaves. Origin in England. Plants from 21.

PASSIFLORA × COLVILLEI Sweet Passifloraceae.

263983 Hybrid of *P. caerulea* (male) × *P. incarnata* (female). Vigorous climber intermediate between the parents. Origin in Colvill Nursery, London, England, about 1825.

PERISTROPHE SPECIOSA (Roxb.) Nees

Acanthaceae.

265097 Herb or subshrub, with ashen-gray stems; leaves elliptic; flowers violet-purple, nearly 2" long in clusters of 2 or 3 in axils of leafy bracts. Subtropical Himalaya. Plants from 5.

PEROVSKIA ABROTANOIDES Karel.

Labiatae.

265268 Suffrutescent perennial, 3' to 4' tall; much branched, covered with white or gray stellate hairs; leaves linear-oblong, 1" to 2" long, deeply cut; flowers bright-blue in panicles. Attractive in summer, stands much heat. Afghanistan to Tibet. Plants from 12.

PEROVSKIA ATRIPLICIFOLIA Benth.

265269 Suffrutescent perennial, 3' to 5' tall with a sagelike odor; shoots and inflorescence with close white down; leaves 1" to 2 1/2" long, coarsely toothed, gray-green; flowers violet-blue in terminal erect panicles. Attractive in late summer. Afghanistan to Tibet. Plants from 12.

PHILADELPHUS DELAVAYI L. Henry

'NYMANS' Hydrangeaceae.

262260 Deciduous shrub, to 15' tall; seedling selection with large strongly scented flowers in flattened corymbose inflorescences; petals pure-white; calyx and pedicels plum-purple. A species of southwestern China. Selection by Nyman's Garden at Handcross, Sussex, England. Received an Award of Merit, Royal Horticultural Society, London, June 18, 1935. Plants from 32.

PHILADELPHUS LEWISII Pursh

Deciduous shrub, to 12' tall, with drooping glabrous young branches; leaves ovate to ovate-oblong, 1" to 2 1/2" long. Montana, Washington, Oregon, and California.

266677 'WATERTON'. Selection with white flowers 1" to 1 1/2" across, star-shaped; small young branches red-brown. Raised by Grootendorst Nursery, Boskoop, Netherlands. Plants from 31.

PHILADELPHUS 'SILVER RAIN'

('SILBERREGEN')

266615 Dwarf shrub, with single widely spreading white flowers borne in great profusion. Origin in Germany. Plants from 23.

PHLEBODIUM AUREUM (L.) R. Br.

'CRISPUM' Polypodiaceae.

262367 Syn. Polypodium aureum L. Pinnae of the fronds strongly crispate on the margins. Plants from 30.

PHOTINIA sp. Rosaceae.

261207 Evergreen large shrub; probably a species from southwestern China. Plants from 4.

PHOTINIA PRIONOPHYLLA (Franch.) C. Schneid.

277776 Evergreen shrub, to 6' tall, with the young shoots downy; leaves hard and leathery, obovate to oval to nearly orbicular, 1" to 3" long, margins spine-toothed; For mild areas. China. Plants from 4.

PHOTINIA VILLOSA (Thunb.) DC.

Deciduous shrub or small tree; leaves obovate to oblong-obovate 1 1/4" to 3 1/4" long, acuminate. Japan, Korea, and China. 266542 var. MAXIMOWICZIANA Lév. Differs from the typical phase in the subcoriaceous strongly veined obovate leaves mostly rounded or nearly truncate at the apex. Korea. Plants from 21.

PHRYNIUM BRACHYSTACHYUM Koern.

Marantaceae.

275924 Perennial, 6' to 8' tall; leaves oblong, glabrous, 8" to 15" long, 4" to 8" wide, rounded at the base; flowers small; fruit globose, bright-red. West tropical Africa. Plants from 1.

PICEA ABIES (L.) Karst. Pinaceae.

Norway spruce. Lofty forest tree, sometimes reaching 150' tall in the wild; native of mountainous parts of central and northern Europe. It is extensively used for afforestation purposes throughout northern Europe and in Great Britain. Over 100 cultivars are known of this tree in gardens of the Continent.

280168 'ACROCONA'. Semidwarf tree, about 15' tall, densely branched, the cones borne on the branch tips. Cones much smaller than in the normal phase of the species and lighter in color. Origin in

Sweden before 1890. Plants from 28.
280471 'ARGENTEOSPICA'. Young growing twigs white-tipped, later turning green. Plants from 12.
266743 'AUREOSPICATA'. Tips of the young branchlets yellowish. Plants from 28.
269294 'COLUMNARIS'. Columnar tree with very short horizontal branches. Found wild in Europe; grown since 1855. Plants from 9.
'CRANSTONII'. Vigorous tree, of grotesque habit; sparsely branched, the branches mostly at right angles to the trunk; leaves twice as long as in the normal phase of the species and radially arranged on the branchlets. More curious than beautiful, although in the correct position it makes an outstanding subject. Origin by Cranston in Herefeld, England, about 1889.
266543 Plants from 21.
266744 Plants from 28.
266746 'FINEDONENSIS'. Tree, to 50' tall, with a conical crown; new growth pale-yellow at first, changing to bronzy brown and finally green later in the summer. Origin at Finedon Hall, England, about 1891. Plants from 28.
266432 'HIGHLANDIA'. Dwarf slow-growing plant with a domelike spreading habit. Origin in Highland Park, Rochester, N. Y., 1926. Plants from 33.
'HORNIBROOKII'. Dwarf, compact-growing, about 3' tall and as much wide, horizontally spreading. Closely related to P. abies 'Procumbens'. Found by Murray Hornibrook in Europe about 1937.
266433 Plants from 33.
280169 Plants from 28.
265270 'PARVIFORMIS'. Low-growing of pyramidal habit with thin regular branchlets and very short pungent leaves. Origin in Europe before 1891. Plants from 12.
266544 'PUMILA GLAUCA'. Dwarf, very slow growing, forming a low, round bush, flat-topped in old specimens; similar to P. abies 'Pumila', but with glaucous foliage.

Grown in Europe before 1909. Plants from 21.
266545 'PYGMAEA'. One of the smallest and most dense growing cultivars of P. abies, very slow-growing, making a compact conical bush with very irregular branchlets. A specimen 100 years old may not be much more than 4' tall. Origin in England. Plants from 21.
266793 'SARGENTII'. Low-growing habit densely branched, the branches oblique; leaves pectinate or radial, round, 5/16" long, with an abrupt blunt soft tip. Grown first by Spaeth Nursery, Berlin, Germany then sent to Arnold Arboretum in 1902 thence to England where it was named by Hornibrook as a distinct cultivar. Plants from 39.
265271 'TABULAEFORMIS'. Prostrate habit, with slender branches horizontally spreading over the ground. Origin in Europe before 1865. Plants from 12.
266747 'VIMINALIS'. Broadly pyramidal tree, to 60' tall, with the branches in remote whorls, almost horizontal, with very long slender branchlets. Grown in Europe before 1870. Plants from 28.
266546 'VIRGATA'. Snake spruce. So called on account of the nature of the long and slender sparse branches destitute of branchlets, usually the lower branches pendulous. Grown in Europe before 1854. Plants from 21.

PICEA ASPERATA Mast. 'GLAUCA'
265272 Selection with vigorous and regular growth, with remarkably strong blue-gray needles, otherwise like the species. Origin at H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

PICEA BREWERIANA × P. OMORICA
265037 Natural hybrid originated in nursery of H. Bruns, Westerstede, Oldenburg, W. Germany. Plants intermediate between the parents. Plants from 8.

PICEA GLAUCA (Moench) Voss 'ECHINIFORMIS'
Dense, flat-topped, dwarf bush wider than tall, forming a low

- cushion, with ascending branches; leaves very dense, fine, glaucous. One of the most desirable of dwarf spruces. Origin probably in France before 1855.
- 266616 Plants from 23.
266649 Plants from 26.
280170 Plants from 28.
- PICEA JEZOENSIS** (Sieb. & Zucc.) Carr.
280468 Yeddo spruce. Syn. *P. ajanensis* Fisch. Lofty evergreen tree of northern Japan, Sakhalin, and Manchuria.
'AUREA'. Selection with glistening golden-tipped twigs.
280171 Plants from 22.
280469 Plants from 12.
280470 'NYMPHENBURG'. Selection of slender habit and very blue foliage. Origin in botanic garden, Munich-Nymphenburg, W. Germany. Plants from 12.
- PICEA LIKIANGENSIS** (Franch.) Pritz.
265273 Likiang spruce. Evergreen tree, to about 90' tall in the wild; young shoots brown, often bristly; leaves green beneath, with 2 white bands above; cones about 2" long. Western China. Plants from 12.
- PICEA LIKIANGENSIS** var. **BALFOURIANA** (Rehd. & Wils.) Cheng
266748 Very tall spirelike tree, said to be one of the tallest of Chinese spruces, rising to 120' in the wild; branches densely villous; cones violet-purple when young. Western China. Plants from 28.
- PICEA MARIANA** (Mill.) B. S. P.
Black spruce. Mostly a small evergreen tree, but sometimes of larger proportions, with slender, often pendulous branches; leaves dull dark- or bluish-green, glaucous, especially on upper side, 1/4" to 3/4" long. Labrador to Alaska, south to Wisconsin and Michigan, and in mountains of West Virginia. Rather widely cultivated in western Europe, with about 10 cultivars known.
280472 'BEISSNERI'. Selection of much slower growth than in the typical phase, with ascending crowded branches, wide-spreading at the base, compact growth, and light bluish-green leaves. Very similar to *P. mariana* 'Doumetii'. Origin in Europe before 1915. Plants from 12.
266749 'NANA'. Very slow growing, of globose dwarf habit with foliage somewhat lighter blue-green than in the typical phase. Grown in Europe before 1909. Plants from 28.
- PICEA X MARIORIKA** Boom
265036 Hybrid of *P. mariana* x *P. omorika*. Habit much like that of *P. omorika* but of a somewhat broader pyramidal habit. Origin in nursery of H. Bruns, Westerstede, W. Germany. F₁ seedling plants from 8.
- PICEA OMORIKA** (Pancic) Purkyne
Serbian spruce. Usually a narrow, short-branched tree, forming in old specimens a beautiful spire, over 100' tall. Adaptable for dry areas in more temperate areas; it has grown well in most places where it has been tried in Eastern United States, except in the deep south where the summers are too hot and moist. It is widely grown in northern Europe, especially in Germany where it thrives; outstanding specimens are not uncommon in parts of the Oldenburg and Hamburg areas. The variability of the species has produced several cultivars now grown in Europe.
266641 Seedling selection of rapid growth and elegant habit; grafted on the roots of unselected seedlings. Plants from 25.
266785 'EXPANSA'. Spreading Serbian spruce. Trunk not developed, only the lateral branches at ground level widely spreading with ascending branchlets. Seedling selection from Böhle Nursery, Westerstede, W. Germany. The original plant in Trompenburg Arboretum, Rotterdam, Netherlands, now 15' wide and 30" tall. A superior selection. Plants from 29.
'NANA'. Dwarf growing, making a round, very dense bush, 5' to 6' tall, the blue-white stomatic bands very conspicuous, giving a glaucous aspect to the whole plant. Origin in Boskoop, Netherlands, before 1938.

266617 Plants from 23.

280473 Plants from 12.

PICEA ORIENTALIS (L.) Link

Oriental spruce. A beautiful tree with dense dark-green foliage and compact growth, making under favorable circumstances a lofty specimen of over 50' tall; branchlets characteristically pendulous; leaves shorter than in most species of spruce, 1/4" to 2/5" long, dark-green, shining, densely crowded. Caucasus and Asia Minor. About a half dozen cultivars are grown in western Europe.

'ATROVIRENS'. Syn *P. orientalis*

'Nigra'. Selection with leaves very dark-green and lustrous.

Origin at Boskoop, Netherlands.

266547 Plants from 21.

266642 Plants from 25.

266750 Plants from 28.

'AUREOSPICATA'. Selection with leaves of the new growth golden-yellow. Handsome. Grown in Europe before 1909.

266548 Plants from 21.

266751 Plants from 28.

266752 'NANA'. Dwarf habit with broad conical to rounded growth and white to shining brown branches; leaves radial, thick, dark-green, blunt. Grown in Europe before 1891. Plants from 28.

280474 'NUTANS'. Selection with pendulous branches, the growth irregular and sparse. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

PICEA POLITA (Sieb. & Zucc.) Carr.

Selection of the species with pendulous twigs (other plants in the nursery not doing this), not growing as rapidly as the normal phase. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany.

265274 Plants from 12.

280475 Plants from 12.

PICEA PUNGENS Engelm.

Colorado blue spruce. A well-known cultivated tree native of Wyoming, Colorado, Utah, and New Mexico. Mostly the wild phase is green, with a tendency of some trees to develop strongly glaucous foliage. Much selection is practiced

in western Europe for forms with blue leaves; differences in habit also occur. About 25 cultivars of this plant are currently cultivated in western Europe.

280173 'BISMARCK'. Selection with the branches tiered in well-proportioned whorls along the trunk of the tree; leaves strongly glaucous-blue. Origin about 1887 in Schloss Garden of Pillnitz near Dresden, Germany. Plants from 28.

266550 'ENDTZ'. Conical growth habit, thick-branched, 25' tall, with glaucous-blue foliage. Origin at Boskoop, Netherlands. Very close to *P. pungens* 'Kosteri', which has bright-blue glaucous foliage. Plants from 21.

266549 'GLOBOSA'. Dense-growing, dwarf plant, to about 3' tall, with glaucous-blue foliage. Origin in nursery of Le Feber & Co., Boskoop, Netherlands. Plants from 21.

PICEA SCHRENKIANA Fisch. & Mey.

280476 Large evergreen tree, to about 100' tall in the wild, with more or less pendulous branches and coarse, rather widely spaced radially arranged leaves. Handsome spruce. Native of central Asia. Plants from 12.

PICEA SPINULOSA (Griff.) Henry

266467 Sikkim spruce. Tree, to 150' tall in the wild, with spreading branches and slender pendulous branchlets; leaves spine-tipped; cones 2" to 4" long. Handsome and desirable spruce. Plants from 17.

PICEA WILSONII Mast.

265275 Wilson spruce. Pyramidal tree, to 80' tall, with short, dense horizontal spreading branches with leaves about 1/2" long, spine-tipped; cones 2" to 4" long, persistent for a year or more following maturity. Central and western China. Plants from 12.

PIERIS FORMOSA var. *FORRESTII* (Harrow ex W. W. Sm.) Airy-Shaw 'WAKEHURST'
Ericaceae.

262887 The new shoots deep-crimson. The best form known in cultivation, awarded a First Class Certificate by the Royal Horticultural Society,

- London. Origin at Wakehurst Place, Sussex, England. Plants from 32.
- PIERIS JAPONICA* (Thunb.) D. Don
Evergreen large shrub of densely bushy habit. Much grown in Eastern United States and on Pacific coast, and a favorite in gardens of western Europe. Native of Japan. Several selections are grown.
261845 Selection with a compact growth habit. Plants from 36.
269253 'NANA COMPACTA'. Low slow-growing plant of dense habit and slow to flower. Garden origin. Plants from 12.
- PILEA ELEGANS* Wedd. Urticaceae.
275925 Erect, branched shrub with glabrous branches; leaves lanceolate to ovate-lanceolate, 1 1/4" to 3 1/2" long, 1/2" to 1 1/2" wide, long-acuminate, serrate-dentate, trinerved. Martinique. Plants from 1.
- PILEA GLOBOSA* Pavon ex Wedd.
259951 Plant branched, erect, fleshy; leaves minute, translucent on the underside, upper side with cystoliths. Interesting curiosity. Colombia. Plants from 44.
- PINGUICULA CAUDATA* Schlecht.
Lentibulariaceae.
274436 and 274450. Acaulescent; leaves in a dense rosette, fleshy, mucilaginous, obovate; flowers on long scapes, 4" to 5" long, deep-carmine. Handsome. Should be grown like an insectivorous plant. Mexico. Plants from 10.
- PINUS CEMBRA* L. Pinaceae.
Swiss stone pine. Tree sometimes to 75' tall, 5-needled, the leaves 2" to 3" long. Hardy in Northern United States. In the wild it occupies two distinct areas, one in the central European Alps to the Carpathians at high altitudes, and a second area from northeastern Russia through Siberia. This tree becomes more dwarf as the eastern edge of the distribution is approached, so that in Japan this plant becomes *P. pumila*. The variability of this plant has given rise to several cultivars grown in western Europe.
280174 'GIMBORN NO. 2'. Very compact, low-growing, about 10' tall and 9' wide. Origin in Arboretum Gimborn, Doorn, Netherlands from a seedling selection. Plants from 22.
266780 'FASTIGIATA'. Branches all ascending and the tree fastigiate. Plants from 37.
266506 'NANA'. Dwarf, slow-growing, 3' to 3 1/2' tall; leaves green with white lines. Origin in Germany before 1910. Plants from 28.
'PYGMAEA'. Makes a small bush, 18" to 24" tall, dense, with spreading and pendulous branches. Origin in Europe before 1855.
266778 Plants from 12.
280481 Plants from 12.
- PINUS CEMBRA* var. *SIBIRICA* Loud.
265038 Geographical variant of the species of a taller habit than in the typical phase and with shorter leaves and large cones. Northeastern Russia and Siberia. Plants from 8.
- PINUS DENSIFLORA* Sieb. & Zucc.
280478 'PUMILA'. Dense, slow-growing plant, conical in shape, with bright-green foliage. Origin in Europe. Plants from 12.
- PINUS HELDREICHII* var. *LEUCODERMIS* (Ant.) Markgraf ex Fitch.
266434 The variety is a smaller tree than the typical phase with smoother more whitish bark. Makes a handsome specimen 30' to 40' tall in cultivation, one such plant exists in the Pinetum Blijdenstein, Hilversum, Netherlands. Balkan Peninsula and southern Italy. Plants from 33.
'AUREOSPICATA'. Seedling selection with the tips of the leaves yellowish. Plants dwarfish, to about 9' tall. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany.
265276 Plants from 12.
208479 Plants from 12.
- PINUS MUGO* Turra
Mountain pine. A low usually multi-branched shrub of dense growth, forming a compact, spreading bush. A single-trunked variety is known among the four distinct geographical variants usually recognized.

Best known is P. mugo var. mughus which has contributed perhaps a dozen named cultivars grown in western Europe. The species is native of the mountains of central Europe.

280480 'HESSE'. A compact low dense bush 3' to 3 1/2' tall with dark-green foliage. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

PINUS MUGO var. MUGHUS (Scop.) Zenari
A geographical variant of the species from the Balkan Peninsula. Selections of it are grown widely in Europe where low-growing pines are desired for ornament.

266435 'GNOM'. Seedling selection of a very dense habit, making a bush about 4' to 5' tall after 30 years. A much favored cultivar in western Europe. Origin in Old Farm Nurseries, Boskoop, Netherlands. Plants from 33.

266643 'KOBALT'. Of dense growth habit, but somewhat more open than in P. mugo var mughus 'Mops'. Foliage very dark-green. Origin in the Netherlands. Plants from 33.

266644 'MOPS'. Very dwarf and slow-growing, of compact growth, 2' to 3' tall after several years. Origin in nursery of Hugo T. Hoofman, Boskoop, Netherlands. Plants from 25.

269295 'NANA TYPE I'. Very compact dwarf habit, which in 10 years from seed attains a height of about 8" and as much wide; foliage very dark-green. Seedling selection in nursery of J. Bruns, Bad Zwischenahn, Oldenburg, W. Germany. Plants from 9.

269296 'NANA TYPE II'. Seedling selection, not so compact as Type I, at 10 years of age 10" tall and 18" wide. Origin in nursery of J. Bruns, Bad Zwischenahn, Oldenburg, W. Germany. Plants from 9.

PINUS NIGRA Arnold

Austrian pine. A very variable pine, widespread throughout middle and southeastern Europe to Asia Minor. In Eastern United States, this is the most widely planted of cultivated pines.

266437 Seedling selection of the species with a habit more dense than in the typical phase. Plants from 20.

280175 'AUREA'. Habit like the normal phase, but the needles the first year golden-yellow, turning green the second year. An old specimen exists in the Arboretum Kalmthout, Kalmthout, Belgium.

Origin in Europe. Plants from 37.
266779 'AUREOSPICATA'. The tips of the leaves yellowish. Plants from 37.

PINUS PARVIFLORA Sieb. & Zucc.

Japanese white pine. Large tree of picturesque habit, with wide-spreading branches and very dark-green foliage; bark of old trees fissured into thin flaky scales; leaves 5 in a fascicle. The typical phase is often cultivated in western Europe.

266753 'BREVIFOLIA'. Habit like that of the typical phase, but slow-growing, broadly pyramidal, and the leaves much shorter, about 1" long, as compared with typical phase with leaves 3" long. Origin at Orléans, France, about 1905. Plants from 12.

280176 GIMBORN'S IDEAL NO. 1'. Seedling selection of very dense compact habit, about 20' tall, the branches all ascending, making a globose plant. Origin in Arboretum Gimborn, Doorn, Netherlands. Plants from 22.

280177 'GLAUCA'. The leaves deep glaucous-blue. Plants from 28.

PINUS PUMILA (Pall.) Reg.

Closely related to P. cembra, but differs in the dwarf habit and in the shorter obscurely serrulate leaves and usually marginal resin-ducts, the cones are shorter. Northeastern Siberia and Japan.

- Often cultivated in western Europe.
- 266436 'DWARF BLUE'. Seedling selection with deep glaucous-blue foliage forming a plant about 30" high and 7' wide at an age of about 30 years. Origin in Arboretum Trompenburg, Rotterdam, Netherlands. Plants from 33.
- PINUS STROBUS L.
Eastern white pine. Sometimes planted in western Europe, but it rarely makes the kind of specimen known for this tree in America. About a dozen cultivars are grown in western Europe.
- 265277 'NIVEA'. Habit of the tree like that of the typical phase, but the leaves white-tipped. Origin in Europe. Plants from 12.
- PINUS YUNNANENSIS Franch.
266468 Tree, to 100' tall in the wild, the bark broken into large plates; leaves 2 to 3 in a fascicle, 6" to 9" long; cones 2" to 4" long. Western China. Plants from 17.
- PIPER CROCATUM R. & P. Piperaceae.
265937 Strong climber; leaves strongly pinkish along the veins on upper side, reddish beneath. Peru. Plants from 14.
- PIPER ORNATUM N. E. Br.
263984 Climber; leaves with a background of green, the veins carmine. Handsome foliage species. Celebes. Plants from 18.
265938 'TYPICUM'. Differs from P. ornatum as usually grown in cultivation by the leaves not or only slightly pinkish above. Plants from 14.
- PIPER PORPHYROPHYLLUM (Lindl.) N. E. Br.
274451 Climber; leaves dark olive-green with salmon-pink spots along the principal veins of the upper surface, purple beneath. India. Plants from 14.
- PITTIOSPORUM HUTTONIANUM T. Kirk
Pittosporaceae.
261442 Small evergreen tree, to 20' tall; leaves green above, whitish below. Seeds from Park da Pena, Sierra da Sintra, Portugal.
- PLATANUS × ACERIFOLIA (Ait.) Willd.
Platanaceae.
London plane. Hybrid of P. occidentalis × P. orientalis. In some areas of western Europe, the leading street tree, especially in France where it is possible to see miles of roadways planted with planetree. A few cultivars are grown.
- 265626 'PYRAMIDALIS'. Habit more upright and the lower branches not drooping; leaves usually 3-lobed with slightly toothed lobes, often longer than broad. Origin in Europe. Plants from 12.
265627 'SUTTNERI'. Leaves conspicuously blotched with creamy-white, sometimes almost completely white. Plants less robust than in the green-leaved phase. Origin in Europe. Plants from 12.
- PLATANUS ORIENTALIS L. 'DIGITATA'
265628 Leaves cuneate to truncate, deeply 5-lobed, the sinuses are wider, the lobes narrower and more elongate and coarsely dentate than in the typical phase of the species. Origin in Europe. Plants from 12.
- PLATYCARYA STROBILACEA Sieb. & Zucc.
Juglandaceae.
260744 Small deciduous tree, 25' to 30' tall, single-trunked, 10" to 14" in diameter; bark gray, fissured; fruiting 'cones' erect, persistent for more than 1 year, blackish at maturity; leaves 4" to 12" long, pinnately divided into 7 to 15 leaflets. China. Seeds from Arboretum des Barres, Nogent-sur-Vernisson, Loiret, France.
- PLATYCERIUM ANGOLENSE Welw.
Polypodiaceae.
265939 Fertile fronds broadly cuneate, about 9" wide in the upper portion, without forks or horns. Tropical Africa. Plants from 14.
- PLATYCERIUM BIFURCATUM (Cav.) C. Chr. (selected)
261068 Syn. P. alcicorne Desv. Selection made from sporeling plants over several generations for the broad fertile fronds in young plants. Superior to the phase of the plant usually grown in the

United States. Origin in the Netherlands. Plants from 19.
PLECTRANTHUS PURPURATUS Harv.
Labiatae.
275926 Erect perennial, 12" to 14" tall, branched, succulent and brittle; leaves about 1" long and nearly as wide, ovate or suborbicular, crenate, purple beneath; flowers white in paniculately arranged racemes. Natal, South Africa. Plants from 1.

PODOCARPUS NERIIFOLIUS D. Don
'VARIEGATUS' Podocarpaceae.
269624 Small evergreen tree, about 20' tall; leaves white-margined, 3" to 5" long. Origin in Park da Pena, Sintra, Portugal. Plants from 5.

PODOCARPUS NIVALIS Hook. f.
266438 Erect or prostrate bush, to 8' tall; leaves densely disposed on the branches, spreading or recurved, about 2/3" long. New Zealand. Plants from 33.

POGONATHERUM CRINITUM (Thunb.) Kunth
Gramineae.
262366 Syn. *P. paniceum* (Lam.) Hack. Densely tufted plant with slender lax culms and slender leaves. Tropical Asia. Plants from 30.

POLYPODIUM MUSIFOLIUM Bl.
Polypodiaceae.
262378 Large epiphytic plant, tufted, with strap-shaped light-green leaves, 30" to 40" long. Native of Java. Plants from 30.

POLYPODIUM NIGRESCENS Bl.
Stoutly rhizomatous; stipes 1' to 1 1/2' long; fronds 2' to 3' long, 1' or more wide, pinnately divided nearly to the rachis into acuminate lobes, 6" to 12" long, 1" to 2" wide. Tropical Asia.
262368 Plants from 30.
263986 Plants from 18.

POPULUS X CANADENSIS Moench
Salicaceae.
Hybrid of *P. deltoides* x *P. nigra*. Hybrid long known in Europe, at least since the 18th century. The plant known to Moench should be considered to

be a single clone. Since the time of Moench this hybrid has arisen spontaneously elsewhere on the Continent and various clonal or cultivar names have been assigned to it, but all material with this parentage should be assigned the above hybrid formula; various cultivars of this cross are grown.

266441 'AUREA'. A mutant of the hybrid with permanently yellowish leaves. The original tree was found in 1867 in the Arboretum Kalmthout, Kalmthout, Belgium. Plants from 33.

265629 'BACHELIERI'. Selection of very rapid growth, and thus useful in areas where this plant may be valuable for rapid production of wood. Origin in Europe. Plants from 12.

266439 'GELRICA'. Staminate. Selection made in the Netherlands for superior qualities of the wood. Plants from 33.

266442 'MARILANDICA'. Staminate. Resembles *P. canadensis* 'Serotina', but the branches more distant and not regularly ascending and coming into leaf earlier. Origin in Europe. Plants from 33.

266440 'ROBUSTA'. Staminate. Selection recommended for the valuable timber. Origin in France about 1895. Plants from 33.

266443 'SEROTINA ERECTA'. Syn. *P. 'Selys'*. Pistillate. Branches erect. Origin in Belgium, about 1818. Plants from 33.

265632 'VERNIRUBENS'. Selection with blood-red new shoots and young leaves. Origin in England. Plants from 12.

POPULUS LASIOCARPA Oliv.
266444 Roundheaded tree with angled branches pubescent when young; buds large, slightly viscid; leaves ovate, cordate, 6" to 12" long, crenately glandular-serrate and revolute on margin, bright green above, midrib red, pubescent and light green beneath; catkins about 3 1/2" long. Handsome on account of the large green leaves in contrast with the red midrib

and petiole. Central and western China. Plants from 33.

POPULUS TREMULA L.

European aspen or the quaking aspen. Widespread tree of Europe closely related to the American *P. tremuloides* Michx., differing from the latter mainly in the irregularly sinuate-dentate often obtuse leaves. Several cultivars are grown in western Europe.

266678 'ERECTA'. Syn. *P. tremula* 'Columnaris'. Selection of the species with a columnar habit.

Origin in Sweden about 1911.

Plants from 31.

265630 'PURPUREA'. Pistillate.

Leaves with a purplish tinge.

Origin in Europe. Plants from

12.

POPULUS TREMULOIDES Michx. 'PENDULA'

265631 Phase of the plant with pendulous branches. The species is North American. The selection arose in France about 1865.

Plants from 12.

POPULUS WILSONII Schneid.

266445 Deciduous tree, 50' tall or more, with a pyramidal head; closely related to *P. lasiocarpa*, differing from it in the glabrous branches and leaves dull bluish-green beneath. Central and western China. Plants from 33.

POTENTILLA FRUTICOSA L. Rosaceae.

Shrub, extremely variable in habit, with two main vegetative types--branches widely spreading or ascending; leaves green to silvery pubescent; flowers vary from pure white to deep yellow, and from 1/4" to 1 1/2" across. Occurs throughout the boreal regions of the Northern Hemisphere. Many cultivars grown in Europe are among the most highly esteemed of flowering shrubs for summer gardens, since they will flower almost continuously from early summer nearly to frost. The finest cultivars are selections of the Chinese phase of the species.

265633 'ALBESCENS'. Leaves bright-green above, pubescent

beneath; flowers yellow. Origin in England. Plants from 12.

259159 'FARRERI'. Syn. *P. fruticosa* 'Gold Drop'. Much-branched, round-headed shrub, 2' to 3' tall; leaves green; flowers deep-yellow. Origin in England about 1916. Cuttings from Veerman Nursery, Boskoop, Netherlands.

259146 'FARRERI GRANDIFLORUM'. Flowers larger than in typical *P. fruticosa* 'Farreri'. Plants from Veerman Nursery, Boskoop, Netherlands.

266482 'FARRERI SELECT'. Selection of *P. fruticosa* 'Farreri' flowering more profusely. Plants from 24.

265634 'FRIESENOLD'. With a round bushy habit about 18" tall; flowers rich-yellow, 1/2" to 3/4" across.

Distinct, and flowering over a very long period. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

259160 'GRANDIFLORA'. Much-branched, coarse-stemmed shrub, 2' to 3' tall; stipules brown, well-developed, branches reclining; flowers 1 1/2" across. Grown first at the botanical garden Berlin about 1800. Cuttings from Veerman Nursery, Boskoop, Netherlands.

'JACKMAN'. Erect grower, of stiff habit, to about 3' tall; flowers very deep-yellow, 1" across. Best cultivar of the shrubby potentillas grown in the Netherlands and the favorite among those grown. Origin in Jackman & Son Nursery, Woking, England, about 1940.

259148 Cuttings from Veerman Nursery, Boskoop, Netherlands.

266619 Plants from 23.

'KLONDIKE'. Raised as a chance seedling of *P. fruticosa* 'Farreri', differs from it in the much deeper yellow flowers and the somewhat shorter leaves. Origin in nursery at Kruyt Bros., Boskoop, Netherlands about 1950.

259149 Cuttings from Veerman Nursery, Boskoop, Netherlands.

266620 Plants from 23.

265039 'LADY DARESBOROUGH'. Shrub, with spreading branches, about 2 1/2' tall; flowers deep-yellow,

1/2" to 3/4" across. Origin in England. Plants from 7.
 262261 'LONGACRE'. Selection with small leaves, giving to the plant a fernlike appearance; flowers bright-yellow. Plants from 32.
 'MAANELYS'. Syn. P. 'Moonlight'. Shrub 14" to 18" tall with gray foliage; flowers light-yellow; plants very floriferous and vigorous. Highly esteemed. Origin by Aksel Olsen, Kolding, Denmark in 1921 from seed obtained from a nursery in Austria. Allegedly a hybrid of P. fruticosa var. fruticosa × P. fruticosa var. mandschurica.
 259150 Cuttings from Veerman Nursery, Boskoop, Netherlands.
 266621 Plants from 23.
 'MOUNT EVEREST'. Broadly spreading in habit, about 3' tall; leaves mostly green, only scarcely pilose; flowers 1" to 1 1/2" across, white. The tallest growing of the white-flowered shrubby potentillas grown in the Netherlands. Origin in nursery of Kruyt Bros., Boskoop, Netherlands.
 259151 Cuttings from Veerman Nursery, Boskoop, Netherlands.
 266622 Plants from 23.
 265636 var. PARVIFOLIA (Lehm.) Th. Wolf. Geographical variant of the species of low-growing habit; leaflets usually 7; flowers yellow. Central Asia. Plants from 12.
 'PRIMROSE BEAUTY'. Semispreading shrub; flowers creamy-yellow, saucer-shaped. Origin in the Netherlands.
 259152 Cuttings from Veerman Nursery, Boskoop, Netherlands.
 266623 Plants from 23.
 259153 var. PURDOMII Rehd. Erect shrub; leaves small, the leaflets about 1/4" long, glaucous and glabrous beneath; flowers pale-yellow. Northern China. Cuttings from 36.
 var. PYRENAICA Willd. Syn. P. fruticosa 'Farreri Prostrata'. Geographical variant of the species; plants mostly spreading and low growing; flowers yellow. High mountains of Europe.
 259147 Cuttings from Veerman Nursery, Boskoop, Netherlands.
 266446 Plants from 33.
 266624 Plants from 23.
 var. RIGIDA (Wall. ex Lehm.) Th. Wolf. Syn. P. fruticosa var. arbuscula (D. Don) Maxim. Much-branched shrub, 2' to 3' tall, forming a roundheaded bush; flowers 1" to 1 1/4" across, lemon-yellow. Himalaya.
 259158 Cuttings from Veerman Nursery, Boskoop, Netherlands.
 266618 Plants from 23.
 262323 'SANDVEDANA'. Erect shrub; flowers white, 1/2" across. Plants from 15.
 'SNOWFLAKE'. Syn. P. fruticosa 'Hersii'. Erect bush about 30" tall; leaflets broad, dark-green, scarcely pilose; flowers 1" to 1 1/4" across, white. Origin in England.
 259154 Cuttings from 36.
 266625 Plants from 23.
 265635 'SULFUREA'. Shrub, 3' to 4' tall, erect, strong growing, much branched; flowers sulfur-yellow, 3/4" to 1" across; a good sort for a hedge. Plants from 12.
 259156 var. VEITCHII (Wils.) Bean. Erect shrub, the branches mostly ascending, 3' to 4' tall; leaves green; flowers white, 1/2" to 1" across. Western China. Plants from Veerman Nursery, Boskoop, Netherlands.
 var. VILMORINIANA Komar. Erect open-headed shrub, 3' to 4' tall; foliage silvery-gray; flowers creamy-yellow, 1/2" to 1" across. Very floriferous. Allegedly the best of the white-flowered kinds. China.
 259157 Cuttings from 36.
 266626 Plants from 23.
 'WALTONENSIS'. Spreading shrub; flowers yellow.
 259155 Cuttings from Veerman Nursery, Boskoop, Netherlands.
 280178 Plants from 33.
 POTHOS SCANDENS L. Araceae.
 260005 Rampant scrambler, rooting

at the nodes, the petioles flattened and leaflike, the leaf blade ovate to elliptic. Malaya. Cuttings from 16.

PRIMULA x ARENDSII Arends 'MULTI-FLORA' Primulaceae.

261294 Hybrid of *P. obconica* x *P. sinolisteri*. Resembles *P. sinensis* Sab. and *P. malacoides* Franch., but the hybrid is more satisfactory as an indoor pot plant. Flowers red and rose. This selection is nearly free of the toxic substance primulin. Origin in nursery of Georg Arends, Wuppertal-Ronsdorf, W. Germany, 1958. Seeds from 6.

PRIMULA OBCONICA Hance

A well-known primrose, much cultivated in Europe and America. Outstanding selections have originated from the nursery of Georg Arends, Wuppertal-Ronsdorf W. Germany from material originally obtained from wild sources in China in 1888.

261297 'ALBA NOVA'. Flowers white.

261295 'ATROCOERULEA'. Flowers dark-blue.

261296 'NEULACHS'. Flowers white at first, changing to salmon-color.

261298 'RONSDORFER DUNKELROTE'. Flowers dark-red.

PRUNUS CERASIFERA Ehrh. 'HESSEI' Rosaceae.

265637 Selection with the leaf blades smaller than in the typical phase of the species, irregularly shaped, dark reddish-brown with a narrow white border. Grown for the attractive leaves. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany, offered first 1907-08. Plants from 12.

PRUNUS LAUROCERASUS L.

European cherry-laurel. A highly esteemed broad-leaved evergreen shrub or small tree, to 20' tall, with a wide-spreading habit, unless pruned; leaves thick, leathery, variable in shape; flowers in axillary and terminal racemes, 3" to 5" long; fruit cherrylike, purple-black.

Numerous cultivars are grown in western Europe distinguished primarily by the leaves. Eastern Europe and Asia Minor.

266551 'HERBERGII'. Habit thickly pyramidal; leaves bright-green. Plants from 21.

266552 'MISCHEANA'. Syn. *P. laurocerasus* 'Reynvaanii'. Loosely branched in habit with ascending branches and large leaves conspicuously 2-ranked. Origin in Germany about 1898. Plants from 21.

266553 'OTTO LUYKEN'. Seedling selection with a broad habit; leaves 3" to 4" long, 3/4" to 1" wide, oblong-lanceolate, acute to acuminate, entire or few toothed. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany, offered first 1953-54. Plants from 21.

PRUNUS x YEDOENSIS Matsum. 'MOERHEIMII'

262262 Hybrid of *P. serrulata* var. *lannesiana* x *P. subhirtella*. Selection grown from seed imported from Japan with the strongly weeping habit, the leaves of *P. subhirtella* Miq., the robust growth, and larger flowers of *P. serrulata* var. *lannesiana* (Carr.) Rehd. Origin in Royal Moerheim Nursery, Dedemsvaart, Netherlands. Plants from 32.

PSEUDERANTHEMUM RETICULATUM Hort. ex Hook. Acanthaceae.

262369 Evergreen shrub; leaves 6" to 10" long, ovate-lanceolate, dark green above, with arching golden-yellow nerves, pale beneath, margin undulate; upper leaves beautifully reticulate with golden or sulfur-yellow and green; panicles in upper leaf axils and terminal; flowers white. Polynesia. Plants from 30.

PSEUDERANTHEMUM SETICALYX Stapf

275927 Subshrub, somewhat hirsute; leaves ovate, 2" to 5" long, 1 1/2" to 3 1/2" wide, dark-green; inflorescence spicate, terminal on upper axillary branches; corollas pale-red, the limb cinnabar-red above, 1" across. Nyasaland. Plants from 1.

PSEUDOTSUGA MENZIESII (Mirb.) Franco
Pinaceae.

Douglas fir. Native of Western United States west of the Rocky Mountains to the Pacific coast north of northern California to British Columbia. The phase of the Great Basin area is geographically distinct from the phase west of the Cascade mountains.

The phase of the interior was first introduced into Europe by David Douglas in 1827 for the Royal Horticultural Society, London. The Pacific coast phase is widely grown and preferred for afforestation purposes in western Europe. Nearly 40 cultivars are grown in Europe.

265278 'ALBOSPICA'. Growth habit of the normal phase, but the needles white-tipped. Origin in Kalmthout Arboretum, Kalmthout, Belgium about 1922. Plants from 12 and 31.

280179 'ARGENTEOVARIEGATA'. Selection with the leaves white-variegated. Plants from 28.

266754 'CAESIA'. Branches strongly horizontal or ascending with gray-green foliage. Grown in Europe before 1907. Plants from 28.

280482 'FLETCHERI'. A slow-growing, round-topped, compact bush, about 3' tall and as much in diameter with glaucous-blue foliage. Very attractive. Selection first grown in England from seed received from Colorado in 1895. Plants from 12.

265279 'GLAUCA ELEGANS'. Vigorous grower, strongly branched, about 15' to 30' tall, with glaucous thick foliage. Origin in Germany. Plants from 12.

280180 'OUDEMANSII'. Pyramidal growth habit, about 20' tall, very densely branched, the needles radially arranged, short, dark-green. Distinctive and slow-growing. Origin in Schovenhorst Pinetum, Putten, Netherlands as a seedling. Plants from 22.

PTELEA TRIFOLIATA L. Rutaceae.

Wafer-ash. A large shrub or small deciduous tree, aromatic; leaves 3-foliolate; flowers in terminal corymbs, yellowish-white; fruit a broadly winged nearly orbicular samara. Much grown in western Europe with several cultivars.

265638 'FASTIGIATA'. Selection with the branches all ascending. Grown first in England. Plants from 12.

PTEROCARYA FRAXINIFOLIA (Lam.) Spach
'DUMOSA' Juglandaceae.

265639 Selection of shrubby habit, much branched from the base, forming a dense round large bush, 10' to 15' tall and as much wide. Grown first in France 1877. Plants from 12.

PTEROCARYA RHOIFOLIA Sieb. & Zucc.

265640 Deciduous tree, often attaining great proportions, to 100' high in wild specimens; leaves 8" to 12" long, pinnately divided, composed of 11 to 21 leaflets; female catkins 8" to 10" long; male catkins 3" long. Japan. Plants from 12.

PYRACANTHA COCCINEA Roem. Rosaceae.

Evergreen or semievergreen shrub, to 15' tall, less in some cultivars, of very dense habit. Grown for the masses of orange to orange-red fruit produced in autumn. Southern Europe to Asia Minor. Several cultivars of this species are grown in gardens of western Europe.

266768 'KASAN'. A selection characterized by the shrubby habit, the coarsely serrate leaves with acute teeth, and the globose orange fruits. Low-growing sort without long scrambling branches. Found in botanic garden at Kasan, U.S.S.R. by chief gardener of Baron L. Economo, Trieste. Plants from 34.

266770 'KEESSEN'. A selection from P. coccinea 'Ialandei' and much like it in habit, but the twigs more hairy and the berries flattened, 3/8" wide, 1/4" thick. Found by

W. Keessen of the Terra Nova Nursery, Aalsmeer, Netherlands about 1890. Suitable for walls. Plants from 34.

266769 'ORANGE GIANT'. Seedling selection allegedly from a natural cross of *P. coccinea* 'Kasan' x *P. coccinea* 'Lalandei'. Fruit larger than either parent and the plant with a shrubby habit unsuited for training on walls. Makes a good specimen plant. Origin in nursery of A. E. Schiphorst, Wageningen, Netherlands. Plants from 34.

PYRACANTHA COCCINEA x P. CRENULATA
var. ROGERSIANA

266794 Evergreen shrub intermediate between the parents. Origin in the Netherlands. Plants from 39.

PYRACANTHA FORTUNEANA (Max.) Li
'ORANGE GLOW'

266771 Syn. *P. crenatoserrata* (Hance) Rehd. Evergreen shrub, with rusty-pubescent young branches; leaves to 2" long, 1" wide; fruit coral-red. Selection with a shrubby habit, makes a specimen plant. Chance seedling found in garden of Dr. O. Banga, Wageningen, Netherlands. Plants from 34.

PYRUS COMMUNIS L. Rosaceae.

260722 Deciduous tree, 40' tall; fruit 2" across. Seeds from Forest Garden, Hann. Münden, W. Germany.

PYRUS ELAEAGRIFOLIA var. KOTSCHYANA
(Decne.) Boiss.

265641 Variant of the species without thorns and with broader leaves, 2 1/4" to 3 1/2" long. A small tree. Asia Minor. Plants from 12.

PYRUS NIVALIS Jacq.

Snow pear. Deciduous tree, 40' tall, with black branches and trunk, deeply furrowed bark, thornless; leaves elliptic to obovate, 2" to 3" long, 3/4" to 1 1/2" wide; flowers white, about 1" across; fruit subglobose, to 2" across, yellowish-green, the stalk as long or longer than the fruit. Not of commercial

importance for the fruit, but an old tree laden with fruit is extremely attractive. An old specimen exists in the Hortus Botanicus, Leiden, Netherlands. Southeastern Europe.

265952 Seeds from 30.

266679 Plants from 31.

PYRUS SALICIFOLIA Pall. 'PENDULA'

266447 Selection with strongly pendulous branches. Leaves 1 1/2" to 3 1/2" long, narrowly lanceolate, covered on both sides with silvery-gray down while young, later becoming glabrous on upper surface; flowers white, about 3/4" across in closely packed small rounded corymbs; fruit of no commercial value. Grown first in Germany about 1854. The species occurs in southeastern Europe and Asia Minor. Plants from 33.

Q

QUERCUS BOREALIS Michx. f. Fagaceae.

The American northern red oak is much cultivated in parts of northern Europe, especially in the Netherlands where it has naturalized and assumes the aspect of a native tree in the sandy soils that prevail in the elevated eastern part of that country. Several cultivars are grown.

265654 'AUREA'. Leaves of the new twigs bright-yellow, turning green by summer. Origin in the Netherlands about 1878. Plants from 12.

265655 'SCHREFELDII'. Leaves irregularly shaped, sometimes oblique, irregularly dentate and shallowly lobed. Origin in Germany about 1892. Plants from 12.

QUERCUS CANARIENSIS Willd.

266795 (6325) Syn. *Q. mirbeckii* Durieu. Deciduous tree, 60' to 80' tall; leaves ovate-oblong to obovate, 2" to 4 1/2" long, dark-green and smooth above, glaucous beneath. Northern Africa and the Iberian Peninsula. Plants from 39.

QUERCUS CERRIS L.

260723 (7094) Large deciduous tree, 60' to 70' tall; leaves oval or oblong, coarsely dentate, lustrous

above, 3" to 7" long, to 3" wide; acorns to 1 1/4" long, set in a bristly cupule. Caucasus to Iran. Acorns from Park of Wilhelmshöhe, Kassel, W. Germany.

267659 'ARGENTEOVARIEGATA'.

Leaves bordered by a white band of varying width, sometimes penetrating to the midrib. Grown first in Germany in 1864. Plants from 35.

QUERCUS DENTATA Thunb.

Roundheaded deciduous tree, to 60' tall or more; leaves large, occasionally 1' long and 6" to 7" wide, obovate, blunt or rounded at apex, the margin with 5 to 9 rounded lobes or deep undulations; acorns 1/2" to 3/4" long in clusters. Japan and Korea.

260745 (7202) Acorns from Arboretum des Barres, Nogent-sur-Vernisson, Loiret, France.

266796 Plants from 39.

QUERCUS DENTATA X Q. PONTICA

280181 Hybrid originating at Trompenburg, garden of J. R. P. von Hoey Smith, Rotterdam, Netherlands. Plants from 35.

QUERCUS FRINETTO Ten.

266797 (6328) Deciduous tree of roundheaded habit, sometimes nearly 100' tall; leaves short-petiolate, 4" to 7" long, obovate to oblong-obovate, auriculate at base, deeply lobed or pinnatifid. Attractive ornamental species. Balkan Peninsula and Italy. Plants from 39.

QUERCUS HAAS Kotschy

260724 Deciduous tree, to 50' tall, similar to Q. robur, but with larger leaves and broader lobes and larger acorns, to 2" long. Asia Minor. Acorns from Botanic Garden, Hamburg, W. Germany.

QUERCUS X HICKELII A. Camus

Hybrid of Q. pontica X Q. robur. Leaves oblong-obovate, dentate or lobulate with acute or obtuse teeth, yellowish-green with pinkish veins. Origin about 1923 in Europe. Plants from 35.

280182 Veins yellow. Plants from 21.

280183 Veins red. Plants from 21.
QUERCUS X LIBANERRIS Boom 'TROMPENBURG'

266680 Hybrid of Q. cerris X Q. libani and a selection of the hybrid with persistent stipules and rough upper side of leaves like Q. cerris, also the leaves have numerous lobes. Origin at "Trompenburg," garden of J. R. P. van Hoey Smith, Rotterdam, Netherlands. Plants from 31.

QUERCUS LIBANI Olivier

266798 Lebanon oak. Deciduous tree, to about 30' tall; leaves oblong-lanceolate, tapering to a fine point, 2" to 4" long, 1/2" to 1" wide, dark glossy green above. Handsome small tree. Mountains of Syria and Asia Minor. Plants from 39.

QUERCUS X LUDOVICIANA Sargent

277777 Hybrid of Q. falcata X Q. phellos. Plants from 4.

QUERCUS MACRANTHERA Fisch. & Mey.

266799 (6330) Deciduous tree with tomentose branches; leaves obovate, 2 1/2" to 7" long, 4 1/2" wide, rounded at apex, with 8 to 10 ovate lobes on each side, grayish tomentose beneath. Caucasus Mts., Armenia to northern Iran. Plants from 39.

QUERCUS MONGOLICA Fisch. ex Turcz.

266800 Deciduous tree; leaves very short-stalked, crowded at the ends of the branches, obovate to obovate-oblong, 4" to 8" long, obtuse, narrowed toward auriculate base, coarsely sinuate-dentate, with 7 to 10 broad teeth. Northern Japan to northeastern east Asia. Plants from 39.

QUERCUS PALUSTRIS Muenchh. 'LOMBARTS'

266681 Selection with the branches more strongly ascending than in the typical phase of the species and densely branched. Origin in nursery of Pierre Lombarts, Zundert, Netherlands. Plants from 31.

QUERCUS X PENDULINA Kit. 'PUNGENS'

265649 Selection of the hybrid Q. pubescens X Q. robur. Deciduous tree, with a rather narrow habit and grayish tomentose branchlets; leaves elliptic to obovate-elliptic, 1 1/2" to 2 1/2" long, about 1" wide, deeply dentate-lobed,

- glabrous and grayish green above, tomentose, especially on veins beneath. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany, about 1927. Plants from 31.
- QUERCUS PETRAEA (Mattusch.) L. ex Lieblein
- Durmast oak. Deciduous tree, 30' to 40' tall, similar to Q. robur, the leaves long-petiolate and the acorns sessile. Widely distributed in Europe. Rarely cultivated in the United States.
- 260746 (7185) In woodland near Toul, along road west from Nancy, France. Acorns from this source.
- 272068 Syn. Q. esculus L. Grown as Q. petraea 'Aesculus'. Phase of the species from south Europe with leaves uniformly dark-green and lobed, mostly about 5" long. Plants from 43.
- 'COLUMNA'. Selection of columnar habit. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants grown from acorns come true about 50 percent.
- 265643 (6789) Plants from 12.
- 266628 Plants from 23.
- 272069 (6988) 'FALKENBERGENSIS'. Selection with leaves often 6" long and more deeply lobed than in the typical phase of the species. Plants from 43.
- 272070 (6993) 'GIESLERI'. Selection with leaves yellowish-green and uniformly lobed, 3" to 4" long, similar to but smaller than Q. petraea 'Muscaviensis'. Introduced to cultivation first by Spaeth Nursery, Berlin, W. Germany from material obtained earlier from a Mr. Giesler of Potsdam, about 1885. Plants from 43.
- 265644 'LACINIATA CRISPA'. Selection which in spring has leaves 6" long with white edges and laciniately lobed, those of summer are green and develop normally. Plants from 12.
- 266801 (6985) 'MESPILOFOLIA'. Syn. Q. petraea 'Louettii'. Leaves nearly entire, lanceolate-elliptic, acuminate, undulate-dentate. Grown first in France about 1843. Plants from 39.
- 272071 (6990) 'MUSCAVIENSIS'. Selection with uniformly lobed leaves, 6" to 7" long, thick coriaceous, deep green above, lighter beneath, similar to Q. petraea 'Giesleri' but the leaves larger. Plants from 43.
- 272072 'RUBICUNDA'. Selection with the leaves uniformly purplish throughout the growing season. Plants from 43.
- QUERCUS PHILLYRAEOIDES A. Gray
- 261217 (7377) Evergreen small tree, 25' tall, densely branched. Japan. Acorns from 5.
- QUERCUS PONTICA K. Koch
- Large shrub or small tree with large conspicuous terminal buds; leaves elliptic to obovate-oblong, 4" to 6" long, acute, sharply and irregularly serrate, with 13 to 17 strong veins, bright green above, glaucous beneath, the petioles yellow; acorns about 1" long, dark-brown. Attractive low-growing deciduous oak. Armenia and the Caucasus.
- 260695 Acorns from 35.
- 266802 Plants from 39.
- QUERCUS ROBUR L.
- English oak. Lofty deciduous tree, often attaining 100' tall in Europe. Perhaps the commonest and most planted of native oaks of western Europe. Occurs widely in Great Britain and over much of the continent south of lower Scandinavia to northern Africa and western Asia. Numerous cultivars are grown.
- 265646 'ALBOMARMORATA'. Syn Q. robur 'Marmorata'. Leaves with white patches and white streaks covering about half of the total leaf surface. Origin in the Netherlands about 1867. Plants from 12.
- 265642 'ARGENTEOMARGINATA'. Selection with irregularly shaped leaves with white margins. Often not a good growing tree. Grown first in Germany about 1864. Plants from 12.
- 265651 'ATROPURPUREA'. Selection with reddish-purple leaves. Grown first in Germany about 1864. Plants from 12.
- 272074 'CUCULLATA'. Some of the

leaves cucullate and all smaller than in the typical phase of the species. Plants from 43.

265652 'FASTIGIATA PURPUREA'. Selection of columnar habit, attaining 3' to 3 1/2' in diameter; new growth purplish, later turning light green. Plants from 12.

265653 'FILICIFOLIA'. Leaves 5" to 6" long, pectinately divided nearly to the midrib, the lobes irregular in shape, with slightly crispate margins, giving a fern-like aspect to the foliage. Origin in Germany about 1850. Plants from 12.

272073 'LACINIATA MACULATA'. Some of the leaves cucullate (hood-shaped), similar to *Q. robur* 'Punctata' (272074) but narrower and maculate. Plants from 43.

265645 'MACULATA'. Leaves about 3" long, flat, green with some of the leaves mottled and streaked with white. Origin in Europe about 1864. Plants from 12.

265647 (6858) 'NIGRICANS'. Leaves of normal size for the species, the new growth dark brownish-red. Strong growing. Origin at Spaeth Nurseries at Berlin, W. Germany. Plants from 12.

266803 (6331) 'PENDULA'. Trunk erect with strongly pendulous branches. Origin in England about 1788. Plants from 39.

265648 'PICTA'. Leaves especially of the twigs strongly streaked and mottled with yellowish-white, leaves elsewhere on the tree dark green. Plants from 12.

260979 'SALICIFOLIA'. Syn. *Q. robur* 'Laurifolia'. Leaves elliptic to oblong, 1" to 3 1/2" long, 1/2" to 3/4" wide, obtuse, dark green above, much lighter beneath, the petiole 1/4" to 1/2" long; acorns as for the species. A remarkable form of the English oak. Known in Germany first about 1873. In a population of seedlings about 50 percent of the plants come true to type. Acorns from 35.

265650 'SCOLOPENDRIFOLIA'. Leaves irregular in shape, 2" to 4" long,

some of them bullate and cucullate. Origin in Germany. Plants from 12.

QUERCUS × SCHOCHIANA Dieck
265656 Hybrid of *Q. palustris* × *Q. phellos*. Leaves oblong to narrow-oblong, usually with 1 to 3 teeth or lobes on each side, rarely entire, 2 1/2" to 4 1/2" long. Origin in Germany about 1896. Plants from 12.

QUERCUS × TURNERI Willd.
An alleged hybrid of *Q. ilex* × *Q. robur* which arose at the end of the 18th century in the English nursery of Spencer Turner at Holloway Down, Essex. Leaves entire, leathery, lustrous green above, oblong-obovate, 2 1/2" to 4 1/2" long, 3/4" to 1 3/4" wide. The tree resembles more strongly *Q. ilex* L. than the second parent. 'PSEUDOTURNERI'. A shrubby tree, with handsome dark-green leaves retained nearly to spring in mild climates.

261218 (7376) Acorns from an old plant 25' tall and nearly as wide in the Royal Botanic Gardens, Kew, Surrey, England. Acorns from this source.

266627 (6329) Plants from 23.

R

REMUSATIA VIVIPARA (Loss.) Schott
Araceae.

263987 From a large flattish-round tuber, the shoots reddish-purple; leaves cordate-ovate, 12" to 16" long, 8" to 10" wide; peduncle 4" to 6" long; spathe yellow, 3" to 3 1/2" long. Himalayas to Indonesia. Plants from 18.

RHAMNUS FALLAX Boiss. Rhamnaceae.

265280 Carniolian buckthorn. Deciduous shrub, 8' to 10' high of compact globose habit; axillary buds brown, relatively large and pointed; leaves elliptic-oblong to oblong, 2" to 6" long, 1 1/4" to 2 1/2" wide, with 12 to 20 pairs of strong veins. Shrub with handsome leaves. Mts. of southeastern Europe. Plants from 12.

RHAMNUS FRANGULA L. 'ASPLENIIFOLIA'
265281 Selection with linear

sometimes nearly filiform leaves, 1 1/2" to 3 1/2" long, usually undulate-margined. Origin at the Spaeth Nursery at Berlin, Germany about 1880. Plants from 12.

RHODODENDRON X ARENDsii Arends
Ericaceae.

A race of hybrid azaleas developed about 1910 at the Georg Arends Nursery, Wuppertal-Ronsdorf, W. Germany. The white-flowered seed parent, R. mucronatum G. Don 'Van Noordtiana' was crossed with a series of pollen parents involving mostly R. obtusum hybrids of Japanese origin, such as 'Hinodegiri', 'Benegiri', 'Hatsugiri', and R. obtusum var. kaempferi (Planch.) Wils.

The results sought in this cross, namely to produce hardy hybrids for the German climate, were successfully achieved by the originator.

269228 'AGGER'. Flowers bright-lilac.

269229 'GLOER'. Flowers dark-rose; habit compact.

269230 'LINGESE'. Flowers orange-red.

269231 'NEYE'. Flowers carmine-red.

RHODODENDRON X BALSAMAEFLORUM Veitch
Hybrid of R. jasminiflorum X R. javanicum. A group of tender greenhouse rhododendrons which arose in England after the middle of the 19th century as a result of self-fertilization of a mixed lot of Javanese rhododendron hybrids; they have double or semi-double flowers.

257476, 257482, 268484 'NE PLUS ULTRA'. Syn. Rhododendron X balsamaeflorum 'Triumphans'. Large globose truss with flowers about 2" across, of a uniform crimson-scarlet. Introduced by James Veitch Nursery, 1892. Plants from 5.

273268 'SOUVENIR DE J. H. MANGLES'. Of the balsamaeflorum hybrids raised by the Veitch firm this one is regarded among the best

introductions with the flowers brilliant orange-yellow suffused with rose-pink, the center light-rose, the tube pale-yellow. Awarded a First Class Certificate from the Royal Horticultural Society, England about 1890. Plants from 5.

RHODODENDRON IMPEDITUM Balf. f. & W. W.
Sm.

Evergreen small shrub, 2' to 3' tall, densely branched; leaves 3/8" to 5/8" long, obtuse; flowers mauve to purple-blue, 1/2" to 3/4" across. Western China. One of the best known of the so-called blue-flowered dwarf rhododendrons. Several selections are grown in Europe.

269297 'BAD ZWISCHENAHN'. Seedling selection with bright clearer blue flowers than in the typical phase of the species. Grown first at the nursery of Joh. Bruns, Bad Zwischenahn, Oldenburg, W. Germany. Plants from 9.

269298 'MOERHEIM'. Selection of the species made originally by the Royal Moerheim Nurseries, Dedemsvaart, Netherlands with very compact growth and lilac-blue flowers. Plants from 9.

RHODODENDRON LOCHAE F. Muell.

268482 Evergreen shrub to 20' tall, often epiphytic in the wild; leaves 2" to 3" long, leathery, glossy green above; flowers few in a truss, 1" to 2" across, scarlet. A tender plant for frost-free areas. The only species of Rhododendron native of Australia from about 5,000' elevation in Queensland. Plants from 5.

RHODODENDRON LONGIFLORUM Lindl.

257475 Evergreen large shrub, to about 8' tall; leaves obovate, about 3 1/2" long, 1 1/2" wide; flowers in trusses of 9 to 10, about 2" long, crimson. Sarawak. Tender greenhouse plant. Plants from 5.

RHODODENDRON MACREGORIAE F. v. M. X
R. ZOELLERI Warb.

262370 An alleged natural hybrid found in the Kebar Valley, about 1,200' alt., Vogelkop Peninsula, west Arfak Mts., western New Guinea. Seedlings from 30.

RHODODENDRON METTERNICHII Sieb. &

Zucc. 'METTERNIANUS'

269299 A fine selection of the species with rose-colored flowers. Said to be very winter hardy in northern Germany. Japanese species. Plants from 9.

RHODODENDRON MULTICOLOR Miq.

268483 Evergreen large shrub with funnel-shaped flowers, bright yellow in color; flowers of bright crimson are produced in color variants. High mountain species of Sumatra, very useful as a parent in hybrids of greenhouse rhododendrons. Plants from 5.

RHODODENDRON 'MULTIFLORA'

269227 Of unknown parentage, and perhaps a hybrid found among other seedlings with a very distinct low-spreading habit, slow-growing and with lilac-rose flowers. Origin in nursery of Georg Arends, Ronsdorf-Wuppertal, W. Germany. Plants from 6.

RHODODENDRON 'PINK SEEDLING'

273265 A Javanese hybrid with carmine-rose flowers. For greenhouse use. Plants from 5.

RHODODENDRON × 'PRINCESS ROYAL'

273266 Hybrid of R. jasminiflorum (white) × R. javanicum. Flowers delicate pink or rose. The first of the so-called Javanese rhododendron hybrids produced by Veitch in England about 1870. Plants from 5.

RHODODENDRON 'PROMETHEUS' × R. FORESTII

var. REPENS 'FRUHLINGSZAUBER'

269302 Hybrid originated by Dietrich Hobbie, Linswege, W. Germany with a low dense habit and waxy, bright-red bell-shaped flowers. The collection Kingdon-Ward 9629 of R. f. repens was the pollen parent. One of a new race of hybrids of outstanding garden merit. Plants from 9.

RHODODENDRON PRZEWALSKII Maxim.

269300 Compact shrub, to about 6' tall, with yellow glabrous branches; leaves oval or obovate to ovate, 2" to 4" long, 3/4" to 1 1/2" wide; flowers 12 to 15 in a truss, white to deep pink, spotted purple. Northwestern China. Grown under H. Smith 43980. Plants from 9.

RHODODENDRON RUFUM Batal.

269301 Evergreen shrub, to about 15' tall, with whitish floccose new twigs soon becoming glabrous; leaves elliptic to oblong or oblong-obovate, 2 1/2" to 4 1/2" long, tawny or rusty-brown woolly-tomentose beneath; flowers white to pinkish-purple, spotted crimson. Northwestern China. Grown under H. Smith 13973. Plants from 9.

RHODODENDRON 'SIR GEORGE HOLFORD'

273267 A Javanese hybrid with orange flowers. For greenhouse use. Plants from 5.

RHODODENDRON ZOELLERI Warb.

262371 Evergreen shrub; leaves elliptic to oblong-elliptic, about 1" long. Grown from seed obtained from Kebar Valley, Vogelkop Peninsula, west of Arfak Mts., western New Guinea. Alt. about 3600'. Plants from 30.

RIBES SANGUINEUM Pursh Saxifragaceae.

Deciduous shrub, to about 12' tall, with pendulous racemes usually of reddish-carmine flowers. Much grown in western Europe where several cultivars are known. Native of the Pacific Coast section of British Columbia to California. The following collection comes from 31.

266685 'CARNEUM'. Flowers pink.

266682 'GRANDIFLORUM'. Flowers light-red; a strong growing plant.

266683 'KING EDWARD VII'. Flowers large, deep-red.

266684 'LOMBARTS'. Flowers light-red with a white eye.

ROBINIA PSEUDOACACIA L. Leguminosae.

Deciduous tree, much grown in Europe, esteemed as a tree of parks, streets, and dooryards. Escaped in many areas, especially in parts of France. Introduced to Europe, first to France in 1630 (the original tree still stands in the Jardin des Plantes, Paris). Many cultivars are grown.

266554 'FRISIA'. Leaves bright yellow throughout the summer; branches with red spines. Origin in the Netherlands about 1935. A notable improvement over

- R. pseudoacacia* 'Aurea'. Plants from 21.
 265657 'MIMOSIFOLIA'. Leaflets narrow and fernlike. Plants from 12.
 'MONOPHYLLA FASTIGIATA'. Syn. *R. pseudoacacia* 'Erecta'.
 Branches strongly ascending, the tree of columnar habit, similar to the Lombardy poplar. Origin in Germany about 1880.
 262324 Plants from 15.
 265658 Plants from 12.
 265659 'PYRAMIDALIS'. Selection with a columnar habit and unarmed branches. Habit like that of the Lombardy poplar. Origin in France about 1839. Plants from 12.
 265660 'ROZYNSKYANA'. Tree, of upright habit, the ends of the branches and the leaves pendulous; leaves often more than 12" long. Grown first in Germany about 1903. Plants from 12.
 266686 'SANDRAUDIGA'. Selection of pyramidal habit with strong spines and leaves of 3 to 7 leaflets. Origin in nursery of Pierre Lombarts, Zundert, Netherlands. Plants from 31.
 266755 'TORTUOSA'. A slow-growing form with short twisted often tortuous branches pendulous at the tips. Young specimens are handsome. Origin in France about 1813. Plants from 28.
 266687 'UNIFOLIOLA'. Leaves with one large leaflet or occasionally with 2 to 7. Origin in France about 1855. Plants from 31.
- ROSA ECAE Aitch. Rosaceae.
 259463 Erect deciduous shrub, 5' to 6' tall; leaflets small, reddish; flowers 1/2" to 3/4" across, yellow. Afghanistan. Seeds from Zuider Park, The Hague, Netherlands.
- ROSA EGLANTERIA L. 'MAGNIFICA'
 265661 Selection with larger flowers than in the typical phase. Plants from 12.
- ROSA MOYESII Hemsl. & Wils. 'GERANIUM'
 266507 Selection with geranium-red flowers; plant of compact habit and densely leafy, to 10' tall and 8' wide. Plants from 27.
- ROSA SERICEA Lindl.
 259470 Deciduous shrub, 4' to 5' high, stiffly erect; flowers white, rarely pink or pale yellow, solitary, 1" to 2" wide; hips red to yellow. Himalayas. Seed from Zuider Park, The Hague, Netherlands.
- ROSCOEIA PURPUREA J. E. Sm.
 Zingiberaceae.
 262263 Perennial about 12" tall; leaves sessile, linear-lanceolate or widely linear; flowers in a short head above the bracts, 2 to 4, purple or purplish-blue. Himalayas. Plants from 32.
 262264 'PROCERA'. A taller plant than the above with wider leaf sheaths and much larger flowers, the lip 2" long. Origin in England about 1825.
- ROUPALA MACROPHYLLA Pohl 'CORCOVADENSIS' (Meyer) Proteaceae.
 in BAILEYA, vol. 9, p. 131 (1961). An evergreen tree, the shoots densely rust-colored, woolly; leaves pinnate, about 1' long; leaflets 11 to 17, 3" to 5" long, about 3" wide, bright green above, paler and at first downy beneath. This selection represents the pinnate-leaved phase of the plant long cultivated in Europe.
 265940 Plants from 14.
 268486 Plants from 5.
- RUBUS HENRYI Hemsl. & Kuntze Rosaceae.
 265282 Evergreen slightly prickly scandent shrub, to 20' long; stems downy when young; leaves 3-lobed, 4" to 6" long, closely white-felted beneath; flowers pink; fruit black, shining. Western China. Plants from 12.
- RUBUS TRICOLOR Focke
 265283 Evergreen or sometimes deciduous, unarmed creeping shrub, 1' or more tall, bristly in nearly all parts; leaves cordate, 3" or 4" long, dark-green, whitish-felted beneath; flowers white, 1" wide, solitary, in leaf axils and in a terminal raceme; fruit bright-red, palatable. Western China. Plants from 12.
- RUELLIA BLUMEI Steud. Acanthaceae.
 262372 Herbaceous; leaves narrow-oblong, 4" long, blunt, rough;

flowers whitish, small, the lobes tipped pink. Java. Plants from 30.

RUELLIA ROSEA Bull

275928 Leaves oblong-elliptic; cyme with 4 to 6 flowers; corolla bright rose-pink or mauve, the tube curved, 1 1/2" long, the limb 1 1/2" across, the lobes emarginate. Brazil. Plants from 1.

S

SALIX ACUTIFOLIA Willd. 'PENDULIFOLIA' (staminate) Salicaceae.

Large shrub or small tree with slender violet- or red-brown bloomy branches; leaves lanceolate to linear-lanceolate, 2 1/2" to 4 1/2" long, acuminate, strongly pendulous in this selection.

Origin at Spaeth Nursery, Berlin, Germany about 1950.

265666 Plants from 12.

268121 Plants from 31.

SALIX ALBA L.

White willow. Large deciduous tree to, about 75' tall, with widely spreading branches pendulous at the ends; leaves 1 1/2" to 4" long, glaucous and silky beneath.

A widespread tree of Europe, much planted and highly esteemed as an ornamental and used for forestry purposes. Many cultivars are grown in western Europe.

268122 'BRITZENSIS'. With a pyramidal habit in young specimens; leaves dark-green and the twigs bright-red, in winter orange.

Origin in Spaeth Nursery, Berlin, Germany. Plants from 31.

268123 'DRAKENBURG' (pistillate).

Selection with leaves 8 to 9 times as long as wide, green above, glaucous beneath, slightly pubescent with a yellowish-green petiole. Origin in the Netherlands. Plants from 31.

266453 'LIEMPDE' (staminate).

Selection of pyramidal habit with leaves 6 to 7 times as long as wide, glaucous above and below, closely pubescent with a reddish petiole. Origin in the Netherlands. Plants from 33.

268124 'LUTESCENS'. Selection with yellowish wood. Origin in the Netherlands. Plants from 31.

268125 'METMONDIANA'. A very rapid growing selection, green throughout. Origin in the Netherlands. Plants from 31.

268126 'ROCKANJE' (staminate). Selection with spreading habit; leaves 6 to 7 times as long as wide, glaucous throughout and moderately pubescent with a yellowish-green petiole. Plants from 31.

SALIX AURITA L.

265662 Shrub, to about 9' tall, with tomentulose young branchlets; leaves obovate to oblanceolate, 1" to 2" long, toothed, the upper surface wrinkled and somewhat woolly, strongly so beneath. Europe to western Asia. Plants from 12.

SALIX BOCKII Seem. (pistillate)

Deciduous shrub, 3' to 4' tall; leaves 1/2" to 1" long, elliptic, shiny above, dull beneath; pistillate catkins 1 1/2" long, appearing in autumn. W. Szechwan, China. 261208 Plants from 4.

262265 Plants from 32.

SALIX BOYDII E. F. Linton

262888 Dwarf erect shrub, 3' to 4' tall; leaves 1/2" to 1" long, nearly oval, lustrous green above, whitish beneath. Scotland. Found only once in the wild, but now much cultivated in England and Scotland. Plants from 32.

SALIX CHRYSOSTELA Dode

265663 Tree of pyramidal habit and yellow branches. Origin in Europe from cultivated plants. Plants from 12.

SALIX CINEREA L.

268127 Large shrubby willow, 6' to 10' tall, gray-downy throughout; leaves obovate or oval, 2" to 3 1/2" long, mostly entire; catkins very silky, 3/4" to 1 1/4" long. Europe and Asia. Plants from 31. 277779 Plants from 4.

268128 'GRANDIS NO. 56'. Selection of very rapid growth and longer dark-green leaves; a cultivar grown for the production of salicin. Plants from 31.

SALIX DAPHNOIDES Vill.

A deciduous tree of vigorous habit,

to about 40' tall. Worth growing in gardens for the attractive purple or violet-colored waxy bloom on the shoots. Native of continental Europe eastward to Siberia and the Himalayas.

268129 'LATIFOLIA'. A selection with broader leaves than in the typical phase of the species. Origin in Austria about 1860. Plants from 31.

265664 var. POMERANICA (Willd.) Koch. Usually shrubby with very white-glaucous branches, the leaves narrower than in the typical phase of the species; catkins more slender. Europe. Plants from 12.

SALIX DASYCLADOS Wimmer

268130 Tall shrub or tree, to 18' tall, with dense woolly branches; leaves oblong-lanceolate or lanceolate to obovate-lanceolate to 8" long, acuminate, glaucescent beneath; catkins 1 1/2" to 2" long. Eastern Europe. Plants from 31.

SALIX FRAGILIS L. 'BULLATA'

265665 Syn. *S. fragilis* 'Sphaerica'. Selection forming a compact subglobose bush. Plants from 12.

SALIX GRACILISTYLA var. MELANOSTACHYS

(Makino) C. K. Schn. (staminate)

266509 Shrub; leaves about 2" long, 1/2" to 5/8" wide, light green above, silvery beneath; catkins reddish-black at first. Grown for the striking catkins.

Introduced to the Netherlands from Japan. Plants from 27.

SALIX HASTATA var. VEGETA Anderss.

'WEHRHAHNII' (staminate)

263858 Dense shrub, about 20" tall, with yellowish-brown branchlets; leaves ovate-elliptic, acute, finely serrate, reticulate and at first silky beneath. Origin in Germany where it was found by Mr. Bonstedt of Göttingen. Plants from 7.

SALIX INTERIOR Rowlee

268131 Stoloniferous shrub or small tree; leaves narrowly lanceolate or on the sprouts linear, 2" to 5 1/2" long; catkins in the staminate 3/4" to 1 1/2" long, in the pistillate to 3 1/4" long. North-

eastern United States. Plants from 31.

SALIX MOUPINENSIS Franch.

265284 Shrub or small tree, 10' to 20' tall, with glabrous, reddish-brown shoots; winter buds to 1/2" long; leaves oval to obovate, 2" to 5" long, finely and regularly glandular-toothed; catkins very slender, the pistillate 3" to 5" long. Handsome and distinct. China. Plants from 12.

SALIX PURPUREA L.

A deciduous shrub with thin, graceful branches, forming a bush, 10' to 18' tall. Unusual willow in having some of the leaves opposite as well as alternate. Makes an elegant garden shrub for its loose spreading habit and vivid blue-white under side of the leaves. High in salicin. Native of Europe to central Asia. Several cultivars are grown.

259471 and 266477 var. AMPLEXICAULIS

(Bory & Chaub.) Boiss. Deciduous tree; leaves glaucous beneath; stems red to purplish; leaves opposite. Southeastern Europe and western Asia. Often used as a source of salicin. Plants from 42. 262325 'PENDULA'. Selection with very slender pendulous branches. Best effect when grafted on a standard stem. Grown first about 1850 in Switzerland. Plants from 12.

SALIX REPENS L.

Creeping willow. A low deciduous shrub of variable habit, often only 1' to 1 1/2' tall in the wild, often taller in cultivation; leaves silky-white beneath. Best when grown on poor soil, otherwise it loses its true character. Native of Europe and northern Asia. 277781 'NITIDA'. Syn. *S. repens* var. *argentea* (Sm.) W. & G. Selection with broadly elliptic to oblong leaves, densely silky when young, later glabrescent above. A low shrub, to about 3' tall, with prostrate stems and ascending branches. Grown first about 1808 in Germany. Plants from 4.

265667 'ROSMARINIFOLIA'. Leaves linear to oblong-lanceolate, acute

and not recurved at apex, with 8 to 12 pairs of veins. Plants from 4.

SALIX SACHALINENSIS Fr. Schmidt
'SEKKA' (staminate)

266510 Syn. *S.* 'Setsuka' (an ambiguous name). Fasciated, the flat twigs sometimes up to 2" wide; leaves 2" to 4" long, 1/2" to 3/4" wide, lustrous green above, silvery beneath; catkins to 2" long. Introduced to the Netherlands from Japan. See BAILEYA, vol. 10, p. 19 (1962). Plants from 27.

SALIX × SIMULATRIX B. White

265668 Hybrid of *S. formosa* × *S. herbacea*. Creeping shrub; leaves suborbicular to ovate, about 1/2" long. Origin in Switzerland about 1922. Plants from 4.

SALIX × TSUGALUENSIS Koidz. 'GINME' (pistillate)

266508 Alleged hybrid of *S. integra* × *S. vulpina*. Deciduous shrub, with yellowish-green wood; leaves 3" to 4" long, about 1 1/2" wide, green above, silvery beneath, the new growth pinkish. Introduced to the Netherlands from Japan. See BAILEYA, vol. 10, p. 20 (1962). Plants from 27.

SALIX × WIMMERIANA Grenier & Godron (staminate)

266511 Hybrid of *S. caprea* × *S. purpurea*. Young branches sparingly gray-pubescent, later glabrous, lustrous; leaves oblong to oblong-lanceolate or lanceolate, irregularly serrulate. Cultivated in Europe since about 1872. Plants from 41.

SAMBUCUS NIGRA L. Caprifoliaceae.

A large shrub or tree, to about 30' tall, widespread over much of Europe and much cultivated from ancient times.

266772 'ALBOPUNCTATA'. Syn. *S. nigra* 'Pulverulenta'. Plant of slow growth with white-marmorate and stippled leaves. Cultivated first in England about 1770. Plants from 34.

262373 and 274265 'PENDULA'.

Plant with stiff, pendulous branches. Cultivated first in

France about 1884. Plants from 30.
SANSEVIERIA TRIFASCIATA Prain 'CRAIGII'
Liliaceae.

275929 Leaves with a broad creamy-yellow band on the margin, the center milky-green marked with gray, the leaf edge green. Plants from 1.

SANTOLINA CHAMAECYPARISSUS L. 'ERICOIDES'
Compositae.

266688 A more erect plant than in the typical phase of the species with shorter twigs, the foliage thicker and finer, and the inflorescence smaller. Garden origin in the Netherlands. Plants from 31.

SCIAPHYLLUM AMOENUM Brem. Acanthaceae.

263988 Suffrutescent perennial, 12" to 24" tall; stems green, somewhat inflated at the nodes; leaves mostly ovate, 3 1/2" to 5 1/2" long, the petioles reddish, the blades above green, suffused reddish, rather iridescent, purplish beneath; flowers purplish, about 1" long. Known only in cultivation. Plants from 18.

SCLERIA RACEMOSA Poir. Cyperaceae.

275930 Tufted herb, 2' to 3' tall, the culms strongly winged. Handsome plant. Madagascar. Plants from 1.

SCUTELLARIA VILLOSA Hook. Labiatae.

265941 Herb 12" tall, sparingly branched, purplish-green; leaves cordate-ovate, green above, purple beneath; flowers 1" long, scarlet. Andes of Peru. Plants from 14.

SEDUM SPECTABILE × *S. TELEPHIUM*

'HERBSTFREUDE' Crassulaceae.

261293 Selection of the hybrid of more compact habit than in either parent and with arching brownish-red flowering stems. Origin in nursery of Georg Arends, Wuppertal-Ronsdorf, W. Germany. Plants from 6.

SELAGINELLA ATROVIRIDIS Spring.

Selaginellaceae.

267927 Stems suberect, 6" to 12" long, flat on back, much branched; leaves bright-green. Attractive stovehouse plant. Tropical Asia. Plants from 5.

SELAGINELLA GRANDIS Moore

Stems erect, robust, treelike, about 12" long, unbranched in lower part, then branched in upper half;

- leaves flattened along the stems, bright-green. Handsome stovehouse plant. Borneo.
 262374 Plants from 30.
 267928 Plants from 5.
 274437 Plants from 10.
- SELAGINELLA HAEMATODES** (Kuntze)
 Spring.
 262375 Stems 1' to 2' long, bright-crimson, unbranched in lower half then much branched in upper half, pinnae again much divided. Handsome stovehouse plant. Andes. Plants from 30.
- SELAGINELLA ORNITHOPODIOIDES** (L.)
 Spring.
 267929 Low-creeping, much-branched plant rooting at the nodes. Ceylon. Plants from 5.
- SELAGINELLA PATULA** Spring.
 265942 Syn. *S. sarmentosa* A. Br. Stems long-creeping with ascending branches. Jamaica. Plants from 14.
- SELAGINELLA WALLICHII** (Hook. & Grev.)
 Spring.
 267930 Stems creeping, suberect, 2' to 3' long. Handsome stovehouse plant. India. Plants from 5.
- SELAGINELLA WILDENOWII** Bak.
 262376 Stems long-scrambling and climbing, 12' to 20' long or more; pinnae spreading, 1' to 2' long; leaves often with a blue tint in the lower plane. Handsome stovehouse plant. South-eastern Asia. Plants from 30.
- SEMPERVIVUM 'RUBIN'** Crassulaceae.
 260655 Allegedly of hybrid origin. Densely tufted succulent; leaves dark-red; flowers pink. Origin in nursery of Georg Arends, Wuppertal-Ronsdorf, W. Germany. Plants from 6.
- SEMPERVIVUM SCHLEHANII** Schott
 'RUBRIFOLIUM'
 260654 Forming large rosettes of brown-red leaves with green tips. Origin in nursery of Georg Arends, Wuppertal-Ronsdorf, W. Germany. Plants from 6.
- SENECIO CITRIFORMIS** G. Rowley
 Compositae.
 259950 Syn. *Kleinia pusilla* Dinter. Dwarf, densely tufted, with short branches radiating from a fleshy rootstock, becoming prostrate, fleshy, pale-green, brittle; leaves nearly in a rosette, erect, terete, short-fusiform, blue-gray and pruinose with numerous narrow vertical translucent lines; flowers pale creamy-yellow. Southwestern Africa. Grown under acc. n. Cp44, Institute of Experimental Botany and Plant Breeding, Wageningen, Netherlands. Plants from 44.
- SENECIO IOSENSIS** G. Rowley
 259953 Syn. *S. herreianus* Hort. non Dinter. A dwarf, mat-forming perennial with creeping rhizomes; leaves forming a rosette, obovoid-obconical to cylindrical or subglobose, 1/2" to 1" long, succulent, dark-green, glaucous, with about 6 translucent stripes on upper side. Southwestern Africa. From type material of the species, grown under acc. n. cp 73, Institute of Experimental Botany and Plant Breeding, Wageningen, Netherlands. Plants from 44.
- SENECIO RADICANS** (L. f.) Sch.-Bip.
 259954 Stems numerous, creeping and rooting, 6" to 12" long, round; leaves thick-rounded, bright-green with darker lines. Plants sent originally from Transvaal. South Africa. Grown under n. Cp72, Institute of Experimental Botany and Plant Breeding, Wageningen, Netherlands. Plants from 44.
- SEQUIADENDRON GIGANTEUM** (Lindl.)
 Buchholz 'PYRAMIDALIS GLAUCA'
 Taxodiaceae.
 265285 Selection with strongly pyramidal growth and glaucous foliage. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.
- SIBIRAEA LAEVIGATA** (L.) Maxim.
 Rosaceae.
 265669 Deciduous shrub, 5' to 6' tall, with strict often purple- or red-brown branches; leaves cuneate-oblong, 1 1/2" to 4" long, bluish-green; flowers white. Siberia. Plants from 12.
- SINARUNDINARIA MURIELAE** (Gamble) Nakai
 Gramineae (Bambuseae).
 262266 Clump-forming bamboo; culms

about 10' tall, arching, yellowish with a waxy bloom when young. May be successful in areas of U.S.A. now without any hardy clump-forming species. Central China. Plants from 32.

SINARUNDINARIA NITIDA (Mitf.) Nakai
Culms about 10' tall, erect unbranched the first year, branching and arching the second year; stem sheaths purplish. This and S. murielae are clump-forming species possibly hardy in northern areas of U.S.A. now without any bamboos of this habit. Central and western China.

261213 Plants from Myddleton House, Enfield, Herts., England.

265286 Plants from 12.

SINNINGIA PUSILLA (Mart.) Baill.

Gesneriaceae.

Perennial 2" to 3" tall from a corm; leaves nearly orbicular, about 1/2" across; flowers about 1/4" across, violet. Cultivation as for an epiphyte. Brazil.

263989 Plants from 18.

265943 Plants from 14.

SOPHORA JAPONICA L. Leguminosae.

A much-grown deciduous tree in various parts of western Europe, especially in France where it is often planted as a street tree. Not so frequent are cultivars grown for special purposes. Japan. 266512 'PENDULA'. The branches all strongly pendulous. Especially attractive when grafted on a standard stem of the species. Grown first about 1827 in England. Plants from 12.

× SORBARONIA SORBIFOLIA (Poir.)

Schneid. Rosaceae.

266689 Bigeneric hybrid of Aronia melanocarpa × Sorbus americana. Intermediate between the parents, forming a large deciduous shrub; leaves strongly pointed and the inflorescence glabrous; fruit nearly black. Grown first in France about 1816. Plants from 31.

× SORBOCOTONEASTER POZDNJAKOVII Pojark
Rosaceae.

269625 A natural bigeneric hybrid of Cotoneaster melanocarpa × Sorbus sibirica found in eastern

Siberia in the Yakutsk area in the Aldan River valley. The present material represents the sorboid-type of the hybrid characterized by the pinnate leaves and large inflorescence with more numerous flowers (to 10); a shrub 7' to 10' tall. Plants from 4.

SORBUS (Lombarts hybrids) Rosaceae.

A series of hybrids originating in Pierre Lombarts Nursery, Zundert, Netherlands about 1950; these were developed for the color of the fruit, using as parents Sorbus prattii Koehne, S. aucuparia L., and S. discolor (Maxim) Maxim. A hybrid name has not been proposed for this group. Collection from 31.

266690 'APRICOT QUEEN'. Strong grower with whitish-brown buds; fruit apricot-colored, shining.

266691 'CORAL BEAUTY'. Strong grower; leaf blades red; flower buds red; fruit coral-red.

266292 'RED COPPER GLOW'. Strong grower with large reddish leaf blades; fruit red-copper, and blushed with salmon.

266693 'VERMILION'. Moderate grower with hairy violet flower buds; fruit violet tinted.

SORBUS ARIA (L.) Crantz

Deciduous tree with a broadly pyramidal or ovoid crown; leaves elliptic to elliptic-oblong, 2" to 4 1/2" long, sharply and doubly serrate, green above, white-tomentose beneath; fruit orange-red or scarlet. A much-cultivated native tree of Europe, often seen in parks and gardens on the Continent. Several cultivars are grown. 265671 'AUREA'. Syn. S. aria 'Chrysophylla'. Selection with yellowish leaves. Grown first by H. A. Hesse Nursery, Weener/Ems, W. Germany, about 1890. Plants from 12.

265670 'MAGNIFICA'. Leaves larger and darker green above than in the typical phase of the species.

Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

SORBUS AUCUPARIA L. 'FASTIGIATA'

266513 Selection with strongly

- ascending branches forming a narrow pyramidal tree. Grown first in England about 1838. Plants from 27.
- SORBUS FOLIOLOSA (Wall.) Spach
265672 Closely related to S. aucuparia, but more robust, with red-brown tomentum on the petioles, inflorescence, and midribs of the leaves beneath, becoming glabrate; fruit bluish-red. Temperate Himalaya. Plants from 12.
- SORBUS SEROTINA Koehne
265673 Deciduous tree of pyramidal habit; leaves at first reddish, later turning dark-green; flowers white, relatively small; fruit scarlet. Nativity uncertain. Cultivated in Europe since about 1900. Plants from 12.
- SPIRAEA ARCUATA Hook. f. Rosaceae.
Deciduous shrub, to about 4' tall, of arching habit; leaves elliptic to elliptic-oblong, about 1/2" long, entire; flowers white in umbels borne along the full length of the branches. Handsome. Himalayas.
263859 Plants from 7.
266514 Plants from 27.
- SPIRAEA × ARGUTA Zabel 'COMPACTA'
263860 Hybrid of S. multiflora × S. thunbergii. Selection of the hybrid with a low compact habit, about 18" tall. Of garden origin in Europe. Plants from 7.
- SPIRAEA × CINEREA Zabel 'NANA'
266515 Hybrid of S. cinerea × S. hypericifolia. Low deciduous shrub, about 18" tall, of dense habit; flowers white. Of garden origin in Europe. Plants from 27.
- SPIRAEA JAPONICA L. f. 'ALPINA'
266773 Low-growing, 8" to 10" tall, of strict habit; flower heads rose-pink. An attractive low-flowering shrub for border use. Of garden origin in Europe. A species of Japan and China. Plants from 34.
- SPIRAEA THUNBERGII Sieb. ex Bl.
'COMPACTA'
266629 A selection of very dense low habit. Origin in the Netherlands. Species of China. Plants from 23.
- SPIRAEA TRICHOCARPA Nakai
266630 Deciduous shrub, about 6' tall; leaves oblong to oblong-oblong, 1" to 2" long, entire or with a few teeth at apex; flowers white. Korea. Plants from 23.
- SPIRAEA TRILOBATA L. 'GROSSULARIAEFOLIA'
265287 Deciduous shrub, 3' to 4' tall, with slender spreading branches; leaves suborbicular and deeply incised crenate-dentate, usually 3-lobed, with the aspect of Ribes; flowers white. Origin in Europe. The species occurs in northern China to Siberia and Turkestan. Plants from 12.
- STACHYURUS HIMALAICUS Hook. f. & Thoms. Stachyuraceae.
261209 Deciduous small tree or large shrub; leaves ovate, 4" to 6" long, 1 1/2" to 2" wide, finely serrate, with strongly reticulate veins beneath; flowers about 1/4" long in drooping racemes, yellowish. Planted for the precocious flowers appearing before the leaves. Sikkim Himalaya and Nepal. Plants from 4.
- STAPHYLEA × ELEGANS Zabel 'HESSEI'
Staphylaeaceae.
265674 Hybrid of S. colchica × S. pinnata. Deciduous shrub, to about 10' tall; flowers pinkish. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.
- STEPHANANDRA INCISA (Thunb.) Zabel 'CRISPA' Rosaceae.
266694 Deciduous shrub, about 4' tall, of graceful widespreading habit; leaves ovate 3/4" to 1 3/4" long, incisely lobed, the blades more or less crisped; flowers small, white. Origin in nursery of A. M. Jensen, Holmstrup, Denmark. A species of Japan and Korea. Plants from 31.
- STEPHANANDRA TANAKAE (Franch. & Sav.) Franch. & Sav.
Deciduous glabrous shrub of twiggy habit, to 6' tall; leaves broadly ovate or triangular, 2" to 5" long and nearly as wide, with a long slender tip, doubly-serrate, frequently with two pairs of lobes near

base; flowers yellowish-white in lax branched panicles 2" to 4" long. More vigorous and hardier than *S. incisa*. Japan.
261846 Plants from 36.
266454 Plants from 33.

STROBILANTHUS GLOMERATUS (Nees) T. Anders. Acanthaceae.

275931 Shrubby (an herb in pots); leaves ovate, 4 1/2" long, acute, hairy; flowers purple, 2" long, in heads. Handsome pot plant. Sikkim Himalaya and Burma. Plants from 1.

SYMPHORICARPOS ORBICULATUS Moench 'VARIEGATUS' Caprifoliaceae.

265675 Deciduous shrub, with slender upright branches; selection with yellow-variegated leaves. Origin in England about 1838. Species of Eastern U.S.A. Plants from 12.

SYRINGA AFGHANICA C. Schneid. Oleaceae.

265288 Deciduous shrub, closely related to *S. persica* L. Leaves pinnately divided, 1 1/4" to 1 1/2" long; flowers lilac, in compound panicles. Material imported as seed from Afghanistan by H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 12.

SYRINGA TIGERSTEDTII H. Sm.

262326 Deciduous shrub, about 10' tall; leaves ovate, about 3" long, acuminate, glabrous above; panicles terminal on leafy shoots, about 8" long; flowers fragrant, whitish-lilac. Western China. Plants from 15.

T

TACCA MACRANTHA W. Limpr. Taccaceae.

260987 A tropical monocotyledonous plant related to the Amaryllidaceae. Herb, 12" to 18" tall; leaves erect, long-petiolate, lustrous-green; fruit 2" to 3" long, 1" thick, deep purplish. Southeastern Asia. Seeds from 1.

TAXUS BACCATA L. Taxaceae.

English or European yew. Ever-green tree, 25' to 40' sometimes to 60' tall, widely distributed in Europe as a wild plant from the British Isles south to North

Africa, and east to western Asia. The plant is variable, and numerous cultivars are grown mostly as seedling selections; others have arisen through vegetative propagations from wild plants with witches' broom and other vegetative abnormalities. At least 45 cultivars are grown in continental Europe. 280189 'ADPRESSA STRICTA'. Shrubby, erect conical growth habit, 10' to 15' tall, with bright-green foliage. Grown in Europe before 1867. Plants from 28.

'AMERSFOORT' (Meyer) in BAILEYA, vol. 9, p. 133 (1961). Small, slow-growing tree, pyramidal; branches strongly spreading, stiff, with leaves radially disposed on the branchlets; leaves rather strongly arcuate-recurved. The radially arranged leaves half as wide as long easily distinguish this plant from other cultivated yews. Original plant on grounds of Psychiatric Hospital, Amersfoort, Netherlands. 259956 Cuttings from mother plant at Amersfoort.

266781 Plants from 37.

'CORONA'. Strongly spreading habit. Mother plant 69' around, 24' wide, 6' tall. Origin in nursery of Joh. Nissen, Aprath, near Wuppertal, W. Germany.

265289 Plants from 12.

266555 Plants from 21.

Note: Through selection by seed, the Nissen nursery has developed several new cultivars of *Taxus baccata*, including 'Corona'; 'Kadet'; 'Page'; 'Praesident'; and 'Regent' listed herein.

'DAVISIAE'. Of narrow pyramidal habit; leaves blue-green. Origin in Germany.

265290 Plants from 37.

280184 Plants from 28.

266756 'ELVASTONENSIS'. Leaves at first bright orange, becoming dull later. Plants from 28.

266556 'FASTIGIATA ROBUSTA'.

Fastigate, compact growth habit with very vigorous and thicker leaves than in the normal phase of the species. Color of the foliage is much darker green and without

the often reddish discoloration in winter as in some other cultivars of T. baccata. Found in an old country garden near Schinznach, Switzerland by Hermann Zulauf, nurseryman of Schinznach-Dorf, Switzerland. In the European trade since 1950. Plants from 21.

265291 'GLAUCA'. Strong-growing, with the habit of the normal phase, the leaves when young glaucous or bluish-green beneath. Origin in England before 1867. Plants from 12.

266557 'HESSEI'. Erect, slow-growing plant with very dense habit, making a round compact shrub, 10' to 12' tall, the foliage very dark-green and the needles shorter than in the normal phase. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany. Plants from 21.

266757 'HORSHOLMII'. Plants from 28.

280185 'IMPERIALIS'. Erect and compact but less stiff than in T. baccata 'Fastigiata', the Irish yew. Grown in Europe since before 1891. Plants from 28.

'JACKSONII'. Pyramidal growth, with pendulous branchlets, the branches numerous, and the crown branched; foliage green. Origin in England about 1862.

265292 Plants from 12.

280186 Plants from 28.

265293 'KADET'. Spreading, vase-shaped, with an open habit. Origin in Nissen Nursery, Aprath near Wuppertal, W. Germany. Plants from 12.

280187 'MAJOR'. Plants from 28.

280188 'NANA'. Makes a low pyramidal bush of very open habit about 3' tall and as much in diameter; foliage very dark-green and lustrous and sometimes red-brown at the leaf tips. Origin in England before 1850. Plants from 28.

266455 'NUTANS'. Dwarf bush of a very open habit, about 3' tall and as wide; foliage dark-green. Origin at Old Farm Nursery, Boskoop, Netherlands. Plants from 33.

265294 'PAGE'. Hedge type with strongly ascending branches, of compact growth; foliage dark-green. Origin in Nissen Nursery, Aprath near Wuppertal, W. Germany. Plants from 12.

265295 'PRAESIDENT'. Flat spreading plant, branches nearly horizontal with dark-green foliage. Original plant at Nissen Nursery, Aprath near Wuppertal, Germany is 69' around, 20' wide, and 10' tall. Plants from 12.

266782 'PYGMAEA'. Perhaps the most dwarf and slowest growing of the known cultivars of T. baccata. It makes a minute, narrowly ovoid bush of densely compact growth habit; foliage deep-green. Origin in the Netherlands about 1910. Plants from 37.

266456 'SEMPERAUREA' (staminate). Shrubby habit, about 6' tall, with the foliage yellow throughout the first and second years. Grown in Europe before 1908. Plants from 33.

TAXUS CUSPIDATA Sieb. & Zucc.

An evergreen tree, native of Japan and now much-cultivated.

266631 'NIDIFORMIS'. Slow-growing, of very dense habit. Plants from 23.

TEUCRIUM X LUCIDRYS Boem Labiatae.

266695 Hybrid of T. chamaedrys X T. lucidum. Habit erect, about 2' tall and the stolons shorter than in T. chamaedrys L.; from T. lucidum L. it differs in the shorter stolons and the rather dense pubescence. The plant is sterile, of unknown origin, but it has been grown at the Hortus Botanicus, Amsterdam, Netherlands, since 1899. Plants from 31.

THUJA OCCIDENTALIS L. Pinaceae.

American arborvitae. Widespread tree, 60' to 70' tall, especially in swampy and springy areas or along streams from Nova Scotia to Manitoba, south to North Carolina, Tennessee, and Illinois. Much grown in northern Europe where numerous cultivars are cultivated, at least 70 being listed in the latest reference works.

- 265296 'ALBOVARIEGATA'. Plant about 4' tall with white-variegated foliage. Origin in Europe. Plants from 12.
- 266764 'AUREOSPICATA'. Broadly conical in shape to 30' tall, with the twigs golden-yellow at first, turning yellowish-brown. Grown in Europe before 1893. Plants from 28.
- 266758 'BEAUFORT'. Erect growing, similar to the typical phase of the species, the new growth white-variegated. Raised by W. Haalboom Nursery, Driebergen, Netherlands, in 1930. Plants from 28.
- 280190 'BUCHANANII'. Conical in shape, to 10' tall, the main branchlets long and slender with distant secondary branchlets and sparse, gray-green leaves. Introduced first by L. Spaeth Nursery in Germany about 1891. Plants from 28.
- 266765 'CRISTATA AUREA'. Slower growing than T. occidentalis 'Cristata', with dark-green yellow-tipped leaves, the branches short and cockscomblike at the tip. Origin in Europe before 1904. Plants from 28.
- 265297 'GRACILIS'. Pyramidal, 10' to 15' tall, with finely divided foliage. Recommended for hedges. Origin in Germany. Plants from 12.
- 266759 'HOLMSTRUPII'. Dwarf growing of conical erect habit and densely branched; leaves light-green. Raised by Arg. M. Jensen, Holmstrup, Denmark, 1943. Plants from 28.
- 'MALONYANA'. Columnar habit, 20' or more tall, densely branched, with yellowish-green foliage. Origin in Mlýňany Arboretum, Czechoslovakia.
- 265040 Plants from 7.
- 266469 Plants from 17.
- 269303 'PENDULA'. Main trunk erect, the branches pendulous. Origin in England about 1862. Plants from 9.
- 266760 'RECURVA NANA'. Very dense, globose conical habit, with recurved foliage twisted at the tips. Origin in Europe before 1867. Plants from 28.
- 280192 'RECURVATA'. Compact globose habit with ascending branches, mon-strose at the tip and sometimes crowded. Origin in Europe. Plants from 28.
- 265298 'STRICTA'. Short-branched bright-green columnar habit, 30' to 50' tall. Origin in the Netherlands. Plants from 12.
- 280193 'WAGNERIANA'. Slender conical-shape, with dark-green foliage. Origin in Germany. Plants from 28.
- 266762 'WAREANA LUTESCENS'. Compact pyramidal tree, with the young shoots yellow. Origin in H. A. Hesse Nursery, Weener/Ems, W. Germany, about 1891. Plants from 28.
- 266632 'WOODWARDII'. Dwarf globose habit, about 3' tall, with erect branches, but not as dense as in other globose cultivars; foliage dark-green. Origin in Germany. Plants from 23.
- THUJA PLICATA D. Don ex Lamb.
Western red cedar. Giant forest tree of Western United States, from Montana to Washington and California, British Columbia and Alaska. Introduced to Europe in 1853, first to England. Now it is widely cultivated on the Continent. About 15 cultivars of this species are known in Europe.
- 266633 'CUPREA'. Dwarf habit, conical, about 3' tall, compact, branches short and very thick, pendulous at the tips; foliage uniformly copperish or bronze-yellow, in summer more green. Origin at Rogers Nursery, England, about 1937. Plants from 23.
- 266761 'ROGERSII'. Seedling selection, very dwarf, about 3' tall, pyramidal in habit, with golden and bronze-colored foliage. Origin in Rogers Nursery, England about 1929. Plants from 28.
- 280194 'STONEHAM GOLD'. Foliage golden yellow. Plants from 28.
- 'VARIEGATA'. Syn. T. plicata 'Zebrina'. Conical-shaped tree, 30' to 50' tall, branches upright,

- the foliage yellowish-striped.
Origin in Europe.
265041 Plants from 7.
266763 Plants from 28.
280191 Plants from 28. Received
as 'Perk van Vlaanderen'.
- THUJOPSIS DOLOBRATA (L. f.) Sieb. &
Zucc. Pinaceae.
Hiba arborvitae. Pyramidal tree,
to 45' tall in the wild, usually
less in cultivation. With the
aspect of Thuja, but the branch-
lets much broader and the whole
plant more robust. Usually makes
a dense bush in young plants which
become more open with attenuated
branches in old plants. Intro-
duced first to Europe via England,
in 1853. At least 8 cultivars are
grown in European gardens.
265299 var. HONDAE Makino.
Branchlets more closely arranged
than in the typical phase of the
species, the cones larger and
globose, the scales without a
prominent mucro. Hokkaido and
the northern part of Honshu,
Japan. Plants from 12.
- THUNBERGIA ERECTA (Benth.) T. Anders.
'ALBA' Acanthaceae.
275932 Erect shrub, to about 6'
tall; leaves ovate to oblong,
1 1/2" to 2 1/2" long, toothed;
selection with white flowers with
a yellow tube. The species is
South African. Plants from 1.
- THUNBERGIA IKBOLIANA De Wild.
275933 Scrambling or clambering
shrub; flowers about 2" long,
dark-purple. Congo. Plants from 1.
- TILIA AMERICANA L. 'NOVA' Tiliaceae.
265676 Selection of strongly
pyramidal growth habit. Origin
in Europe. Plants from 12.
- TILIA X EUROPAEA L.
Hybrid of T. cordata X T. platy-
phyllos. A hybrid of unknown
origin, mostly sterile, widely
planted as a street tree in west-
ern Europe.
266457 'KONIGSLINDE'. Syn. Tilia
X europaea 'Pallida'. Selection
with larger leaves than in the
typical phase of the hybrid usually
grown, usually yellowish to bluish-
green beneath. Long cultivated in
Europe. Plants from 33.
- TILIA MIQUELIANA Maxim.
265042 Deciduous tree, 40' to 50'
tall, with gray-felted shoots;
leaves broadly ovate, 2" to 5"
long, cordate, gray-felted be-
neath; flowers yellowish. China.
Plants from 8.
- TILIA MONGOLICA Maxim.
265043 Deciduous tree, 30' to 40'
tall, globular in habit, with red-
dish glabrous shoots; leaves often
3-lobed, coarsely triangular-
toothed, 1 1/2" to 3" long, lus-
trous and glabrous above. Hand-
some. China and Mongolia. Plants
from 8.
- TILIA PLATYPHYLLOS Scop.
Large deciduous tree, often 100'
tall. Much planted, and perhaps
the most commonly seen linden
grown for ornament in western
Europe. Several cultivars are
grown in gardens.
266634 'ÖREBRO'. Selection of
fastigate habit found originally
in a park at Örebro, Sweden.
Plants from 23.
266458 'RUBRA'. Selection with
red branches. Grown first in
France about 1755.
- TRICHANTHA TEUSCHERI C. V. Morton
Gesneriaceae.
263990 Trailing; leaves of two
sizes, both kinds hairy beneath,
rather thick; flowers dark-purple
with a yellow mouth, about 2"
long. Colombia. Previously grown
as T. minor Hook. f. Plants from
18.
- TRIPHASIA TRIFOLIA (Burm. f.) P.
Wils. Rutaceae.
260988 Evergreen spiny shrub or
small tree; leaves trifoliolate,
dark lustrous green; flowers
white, fragrant; fruit ovate,
1/2" in diameter, red, with 1
large seed embedded in mucilagi-
nous pulp. Nativity unknown; often
found in tropical regions. Seed
from 1.
- TROPAEOLUM SPECIOSUM Poepp. & Endl.
Tropaeolaceae.
260374 Rampant herbaceous climber,
with compound leaves and succulent
stems; flowers 2" across, scarlet;
fruit china-blue. Chile. Requires

a cool moist climate winter and summer. Seeds from 32.

TSUGA CANADENSIS (L.) Carr. Pinaceae.

Large evergreen tree often attaining 100' tall. Introduced into British gardens about 1736 and long a favorite in cultivation also on the Continent. At least 60 cultivars are grown in Europe and in the United States.

265300 'MINIMA HESSE'. Low-growing, compact habit, 3' to 6' tall, with shorter leaves than in the normal phase of the species. Origin in H. A. Hesse Nursery, Weener/Ems, Germany, about 1909. Plants from 12.

TSUGA HETEROPHYLLA (Raf.) Sarg.

'CONICA'

Slow-growing conical growth habit, densely branched, tips of the branches pendulous; foliage dark-green. Origin in Gimborn Arboretum, Doorn, Netherlands.

265044 Plants from 8.

280195 Plants from 28.

TSUGA × JEFFREYI (Henry) Henry

277783 Alleged natural hybrid of *T. heterophylla* × *T. mertensiana*. Intermediate between the parents with the bluish radially spreading leaves of *T. mertensiana* and the soft somewhat pendulous habit of *T. heterophylla*. Originally grown at Edinburgh, Scotland in 1851 from seed sent from British Columbia. Plants from 4.

TSUGA MERTENSIANA (Bong.) Carr.

280483 'ARGENTEA'. Foliage intensely glaucous-blue. Plants from 12.

TYPHONODORUM LINDLEYANUM Schott

Araceae.

265944 Giant, treelike aquatic evergreen herb, 3' to 10' high, to 1' thick; leaves in a terminal crown, the petiole 2' to 4' long, the blades 1" to 40" long, deeply cordate with a sagittate base; spathe 16" to 24" long, the tube green, the blade yellow; spadix orange-yellow, 10" to 16" long. Madagascar. Plants from 14.

U

ULMUS GLABRA Huds. Ulmaceae.

Wych elm. Large deciduous tree forming a wide-spreading head, of relatively open habit. Widely grown in northern Europe where it is indigenous. Several selections are found in parks and gardens.

266459 'EXONIENSIS'. Syn. *U. glabra* 'Fastigiata'. Selection with strictly upright branches forming a narrow columnar head; leaves smaller than in the typical phase of the species, broadly obovate, coarsely and deeply serrate, wrinkled above and often twisted. Origin in England about 1826. Plants from 33.

280196 'NANA'. Dwarf-growing, old plants attain about 3' tall; leaves half as large as in the typical phase of the species. Origin in Europe before 1869. Plants from 35.

UTRICULARIA LONGIFOLIA Gardn.

Lentibulariaceae.

265945 Densely tufted with strap-shaped leaves to 12" long; flowers mauve, with a golden blotch on the palate, on a scape to 2' long. Epiphytic. Brazil. Plants from 14.

V

VANILLA LUJAE De Wild. Orchidaceae.

275934 Scrambling, evergreen, with stems about 1 1/2" in diameter; upper leaves oblong, about 10" long, 4" wide, apiculate; racemes pedunculate; flowers about 2" in diameter, whitish. Handsome. Congo. Plants from 1.

VIBURNUM HARRYANUM Rehd. Caprifoliaceae.

261219 Evergreen shrub, densely branched, with a stiff habit, 8' to 10' tall; leaves orbicular-ovate to obovate, 1/2" to 3/4" long, with a faint metallic-blue hue. Western China. Seeds from garden of Exbury House, Exbury, Hants, England.

VILLARESIA GRANDIFLORA Fisch. ex Regel
Olacaceae.

274452 Evergreen tree; leaves ovate-lanceolate, acuminate, coriaceous, dark-green, entire, with revolute margins; flowers inconspicuous. Very decorative foliage plant resembling Ficus elastica. Brazil. Plants from 14.

W

WEIGELA (cultivars from various sources) Caprifoliaceae.

266635 'BOSKOOP GLORY'. A hybrid with salmon-pink, large flowers. Origin in the Boskoop nurseries, Netherlands. Plants from 23.

265678 'DESBOISII'. Plants from 12.

265679 'EDOUARD ANDRÉ'. Plants from 12.

WEIGELA PRAECOX (Lem.) Bailey

Deciduous shrub, about 6' tall; leaves elliptic or elliptic-ovate to obovate, to about 4" long. The earliest of all species to flower. Korea. Widely cultivated with several cultivars grown in parks and gardens. First introduced to cultivation about 1894.

265677 'AVANT GARDE'. Plants from 12.

265680 'FLEUR DE MAI'. Flowers carmine-rose. Plants from 12.

265681 'ROSEA'. Flowers pink, sometimes white-marmorate, Plants 12.

XYZ

ZELKOVA CRETICA Spach Ulmaceae.

261210 Deciduous shrub, 10' to 15' tall, bushy and twiggy; leaves 1/2" to 1" long, ovate to oblong, toothed. Mts. of Crete. Plants from 4.

ZELKOVA VERSCHAFFELTII (Dippel)

Nichols.

274266 Small deciduous tree or large bush; leaves oval or ovate, 1 1/2" to 2 1/2" long, coarsely toothed. Not known as a wild plant. In cultivation at least since 1886 in Europe. Distinct. Plants from 4.

ZINGIBER 'DARCEYI' Zingiberaceae.

262312 Rhizomatous; plant 2' to 3' tall; leaves lanceolate, 6" to 8" long, bright shining green with a broad creamy-white or often pink margin and oblique stripes of the same color; flowers deep-red, ball-like. Known only in cultivation. Plants from 38.

NUMERICAL LIST OF PLANT INTRODUCTIONS

249769	COLEUS BLUMEI	var.	VERSCHAFFELTII	'AFTERGLOW'
249770	"	"	"	'AUTUMN'
249771	"	"	"	'BEAUTY'
249772	"	"	"	'BECKWITH'S GEM'
249773	"	"	"	'BLACKBURN'
249775	"	"	"	'CAMPFIRE'
249777	"	"	"	'CRIMSON VELVET'
249778	"	"	"	'CRISTATA'
249779	"	"	"	'DOMINANT'
249780	"	"	"	'DORIS'
249781	"	"	"	'ETNA'
249782	"	"	"	'EXCELLENT'
249783	"	"	"	'FRECKLES'
249784	"	"	"	'GLITTER'
249785	"	"	"	'GLORY OF LUXEMBOURG'
249786	"	"	"	'HARLEQUIN'
249787	"	"	"	'LAING'S CROTON'
249788	"	"	"	'LORD FALMOUTH'
249790	"	"	"	'PAISLEY SHAWL'
249791	"	"	"	'PEGASUS'
249792	"	"	"	'PICTURATUM'
249794	"	"	"	'POYNTON'
249795	"	"	"	'RED CROTON'
249796	"	"	"	'RUST'
249797	"	"	"	'RUSSET'
249798	"	"	"	'SALMON CROTON'
249799	"	"	"	'SKYLARK'
249800	"	"	"	'SUNBEAM'
249802	"	"	"	'SUNSET'
249803	"	"	"	'TAPESTRY'
249806	"	"	"	'VESUVIUS'
249807	"	"	"	'WHITE GEM'
251601	"	"	"	'SCARLET RIBBON'
255993	AESCULUS CHINENSIS			
257475	RHODODENDRON LONGIFLORUM			
257476	"	x	BALSAMAEFLORUM	'NE PLUS ULTRA'
257482	"	x	"	" " "
259141	CYTISUS 'HOLLANDIA'			
259142	" 'ZEELANDIA'			
259143	HIBISCUS SYRIACUS 'ADMIRAL DEWEY'			
259144	" " 'DUC DE BRABANT'			
259145	" " 'MONSTROSUS'			
259146	POTENTILLA FRUTICOSA 'FARRERI GRANDIFLORUM'			
259147	" " var. PYRENAICA			
259148	" " 'JACKMAN'			

259149 POTENTILLA FRUTICOSA 'KLONDIKE'
 259150 " " 'MAANELYS'
 259151 " " 'MOUNT EVEREST'
 259152 " " 'PRIMROSE BEAUTY'
 259153 " " var. PURDOMII
 259154 " " 'SNOWFLAKE'
 259155 " " 'WALTONENSIS'
 259156 " " var. VEITCHII
 259157 " " " VILMORINIANA
 259158 " " " RIGIDA
 259159 " " 'FARRERI'
 259160 " " 'GRANDIFLORA'
 259461 CORNUS PAUCINERVIS
 259462 CELTIS LABILIS
 259463 ROSA ECAE
 259470 " SERICEA
 259471 SALIX PURPUREA var. AMPLEXICAULIS
 259473 CRASSULA x ANDEGAVENSIS
 259474 HIBISCUS SYRIACUS 'DUC DE BRABANT'
 259475 " " 'SOUVENIR DE CHARLES BRETON'
 259476 " " 'LUTEUS PLENUS'
 259896 CYTISUS HYBRID
 259897 CRASSULA ACUTIFOLIA
 259898 " ANOMALA
 259899 " "
 259900 " BAKERI
 259901 " "
 259902 " BREVIFOLIA
 259903 " CEPHALOPHORA
 259904 " DASYPHYLLA
 259905 " DECEPTRIX
 259906 " "
 259907 " DELTOIDEA
 259908 " DUBIA
 259909 " DUBIA
 259910 " "
 259911 " "
 259912 " "
 259913 " GRISEA
 259914 " HETEROTRICA
 259915 " HYSTRIX
 259916 " LYCOPODIODES
 259917 " "
 259918 " "
 259919 " "
 259920 " "
 259921 " NAMAQUENSIS
 259922 " "

259923 CRASSULA NUDICAULIS
259924 " OBVALLATA
259925 " PACHYSTEMON
259926 " PERFOSSA
259927 " "
259928 " RADICANS
259929 " RUBELLA
259930 " "
259931 " RUPESTRIS
259932 " "
259933 " "
259934 " SERICEA
259935 " "
259936 " SUBAPHYLLA
259937 " TETRAGONA
259938 " TOMENTOSA
259939 " DECEPTRIX × C. FALCATA
259940 " MARNIERIANA (hybrid)
259941 " " "
259942 " SP.
259943 " "
259944 " "
259945 " "
259946 " "
259947 " "
259948 " "
259949 KALANCHOE PUMILA
259950 SENECIO CITRIFORMIS
259951 PILEA GLOBOSA
259952 AEONIUM ARBOREUM 'MOORKOP'
259953 SENECIO IOSENSIS
259954 " RADICANS
259956 TAXUS BACCATA 'AMERSFOORT'
259963 NERINE 'BLENHEIM'
259964 " 'BAGDAD'
259965 " 'BEN HILLS'
259966 " 'CARYTID'
259967 " 'CARITA'
259968 " 'CARMINATA'
259969 " 'CERISE'
259970 " 'DESDEMONA'
259971 " 'EDDY'
259972 " 'VIVID'
259973 " 'HORSA'
259974 " 'INCHMERY'
259975 " 'KING OF BELGIANS'
259976 " 'LEO'
259977 " 'MRS. H. J. ELWES'
259978 " 'MISS MOORE'

259979 NERINE 'OPTOMIST'
 259980 " 'OCTOBER DAVID'
 259981 " 'QUEEN MARY'
 259982 " 'RUTH'
 259983 " 'SOLENT SWAN'
 259984 " 'SPITFIRE'
 260003 BOLBITIS CUSPIDATA
 260004 MARCGRAVIA POLYANTHA
 260005 POTHOS SCANDENS
 260374 TROPAEOLUM SPECIOSUM
 260383 BUXUS SEMPERVIRENS 'HEINRICH BRUNS'
 260654 SEMPERVIVUM SCHLEHANII 'RUBRIFOLIUM'
 260655 " 'RUBIN'
 260695 QUERCUS PONTICA
 260721 FRAXINUS SPAETHIANA
 260722 PYRUS COMMUNIS
 260723 QUERCUS CERRIS
 260724 " HAAS
 260731 DORSTENIA ARGENTEA
 260732 NEPTUNIA PROSTRATA
 260743 ACER GROSSERI var. HERSII
 260744 PLATYCARYA STROBILACEA
 260745 QUERCUS DENTATA
 260746 " PETRAEA
 260979 " ROBUR 'SALICIFOLIA'
 260987 TACCA MACRANTHA
 260988 TRIPHASIA TRIFOLIA
 260989 MELASTOMATACEAE
 261065 ARMORACIA RUSTICANA 'ALBOVARIEGATA'
 261066 CHRYSANTHEMUM ARCTICUM
 261067 EUPHORBIA XYLOPHYLLOIDES
 261068 PLATYCERIUM BIFURCATUM
 261112 ANTHURIUM HARRISII
 261113 ERICA MAMMOSA
 261114 LIMNOCHARIS FLAVA
 261116 NEPTUNIA PROSTRATA
 261155 ARUNDINARIA VARIEGATA
 261178 ABELIA CHINENSIS
 261179 " FLORIBUNDA
 261180 " GRAEBNERIANA 'VEDRARIENSIS'
 261181 " SCHUMMANNII
 261182 " SERRATA
 261183 COTONEASTER x WATERERI 'EXBURIENSIS'
 261185 FAGUS SYLVATICA 'ALBOVARIEGATA'
 261186 " " 'CRISTATA'
 261187 " " 'FAUX DE VESEY'
 261188 " " 'GRANDIDENTATA'
 261189 " " 'NORWEIGIENSIS'

261190 FAGUS SYLVATICA 'AUREOPENDULA'
 261191 " " 'PURPUREOPENDULA'
 261192 " " 'QUERCIFOLIA'
 261194 " " 'ROHANII'
 261195 " " 'ROSEOMARGINATA'
 261196 " " 'ROTUNDIFOLIA'
 261197 " " 'ZLATIA'
 261200 JASMINUM FLORIDUM
 261201 " HUMILE var. GLABRUM
 261202 " " " REVOLUTUM
 261203 " PARKERI
 261204 KOELREUTERIA PANICULATA 'FASTIGIATA'
 261205 LABURNUM CARAMANICUM
 261206 LIRIOPE GRAMINIFOLIA var. DENSIFLORA
 261207 PHOTINIA sp.
 261208 SALIX BOCKII
 261209 STACHYURUS HIMALAICUS
 261210 ZELKOVA CRETICA
 261213 SINARUNDINARIA NITIDA
 261214 AESCULUS INDICA
 261215 DECAISNEA FARGESII
 261216 ILEX MELANOTRICHIA
 261217 QUERCUS PHILLYRAEOIDES
 261218 " x TURNERI 'PSEUDOTURNERI'
 261219 VIBURNUM HARRYANUM
 261267 AESCULUS TURBINATA
 261268 CORNUS WALTERI
 261291 ACONITUM x ARENDSII
 261292 HYDRANGEA ACUMINATA x H. MACROPHYLLA 'HORTENSIA'
 261293 SEDUM SPECTABILE x S. TELEPHIUM 'HERBSTFREUDE'
 261294 PRIMULA x ARENDSII 'MULTIFLORA'
 261295 " OBCONICA 'ATROCOERULEA'
 261296 " " 'NEULACHS'
 261297 " " 'ALBA NOVA'
 261298 " " 'RONSDORFER DUNKELROTE'
 261305 BEGONIA PAULENSIS
 261306 CAMELLIA JAPONICA
 261307 CROCUS CLUSII
 261308 DACRYDIUM CUPRESSINUM
 261309 " "
 261441 ILEX PERADO
 261442 PITTOSPORUM HUTTONIANUM
 261826 ACER NEGUNDO 'AUREOVARIEGATUM'
 261827 " " 'AURATUM'
 261828 " PSEUDOPLATANUS 'BRILLIANTISSIMUM'
 261829 CARPINUS BETULUS 'PURPUREA'
 261830 CASSINIA FULVIDA
 261831 CHAENOMELES x SUPERBA 'ETNA'
 261832 " " " 'FIRE DANCE'

- 261833 CHAENOMELES x SUPERBA 'HOLLANDIA'
 261834 " " " 'VESUVIUS'
 261835 COLUTEA ORIENTALIS
 261836 CORNUS ALBA 'GOUCHAULTII'
 261837 CORYLUS AVELLANA 'AUREA'
 261838 COTONEASTER MICROPHYLLA 'COCHLEATA'
 261839 CRATAEGUS MONOGYNA 'PINK CORKSCREW'
 261840 HAMAMELIS x INTERMEDIA 'JELENA'
 261841 HEBE PINGUIFOLIA 'PAGEI'
 261842 HYDRANGEA HETEROMALLA
 261843 " MACROPHYLLA 'BELZONII'
 261844 LAVANDULA OFFICINALIS 'MIDDACHTEN'
 261845 PIERIS JAPONICA
 261846 STEPHANANDRA TANAKAE
 262242 ACER RUFINERVE 'ERYTHROCLADUM'
 262243 BERBERIS LINEARIFOLIA 'ORANGE KING'
 262244 BUDDLEIA CRISPA var. FARRERI
 262246 CEANOTHUS 'BRILLIANT'
 262247 " x DELILIANUS 'CHARLES DÉTRICHÉ'
 262248 " " " 'INDIGO'
 262249 " 'LUCIE SIMON'
 262250 " x PALLIDUS 'MARIE SIMON'
 262251 " 'DELILIANUS 'TOPAZ'
 262252 CORIARIA TERMINALIS
 262253 CORNUS ALBA 'WESTONBIRT'
 262254 COTONEASTER CONSPICUA 'DECORA'
 262255 FORSYTHIA SUSPensa 'ATROCAULIS NYMANS'
 262256 INDIGOFERA POTANINII
 262257 KOLKWITZIA AMABILIS 'ROSEA'
 262258 MAHONIA AQUIFOLIUM 'VICARII'
 262259 " PINNATA
 262260 PHILADELPHUS DELAVAYI 'NYMANS'
 262261 POTENTILLA FRUTICOSA 'LONGACRE'
 262262 PRUNUS x YEDOENSIS 'MOERHEIMII'
 262263 ROSCOEA PURPUREA
 262264 " " 'PROCERA'
 262265 SALIX BOCKII
 262266 SINARUNDINARIA MURIELAE
 262310 LEPTOCHITON QUITOENSIS
 262311 NEOMARICA CAERULEA
 262312 ZINGIBER 'DARCEYI'
 262320 FAGUS SYLVATICA 'CRISTATA'
 262321 NEILLIA AFFINIS
 262322 " THIBETICA
 262323 POTENTILLA FRUTICOSA 'SANDVEDANA'
 262324 ROBINIA PSEUDOACACIA 'MONOPHYLLA FASTIGIATA'
 262325 SALIX PURPUREA 'PENDULA'
 262326 SYRINGA TIGERSTEDTII
 262329 ACHIMENES 'AMBROISE VERSCHAFFELT'

262330 ACHIMENES 'LEONORA'
 262331 " 'LITTLE BEAUTY'
 262332 " 'MADUNA'
 262333 " 'MAGNIFICENT'
 262334 " 'MASTER INGRAM'
 262335 " 'MAUVE QUEEN'
 262336 " 'PAUL ARNOLD'
 262337 " 'PURPLE KING'
 262338 " LONGIFLORA 'MARGARITA'
 262339 BESSERA ELEGANS
 262340 CROCOSMIA MASONORUM
 262341 GLOXINIA MACULATA 'INSIGNIS'
 262342 HAEMANTHUS KATHERINAE
 262343 MONTBRETIA 'EMILY McKENZIE'
 262344 EUCOMIS UNDULATA
 262349 ALPINIA RAFFLESIANA
 262350 ALSOMITRA SARCOPHYLLA
 262351 GASTROCHILUS ANGUSTIFOLIA
 262352 CYPERUS ALTERNIFOLIUS 'VARIEGATUS'
 262353 DRYNARIA SPARSISORA
 262354 EURYCLES SYLVESTRIS
 262355 FICUS CANNONII
 262356 " PREUSSII
 262357 GASTROCHILUS PANDURATA
 262358 GYMNOSTACHYUM CEYLANCIUM
 262359 HEMIGRAPHIS REPANDA
 262360 LUDOVIA CRENIFOLIA
 262361 MUSA HALABANENSIS
 262362 MYRMECODIA TUBEROSA
 262363 NEOALSOMITRA PODAGRICA
 262364 NEPTUNIA PROSTRATA
 262365 PANDANUS GRAMINIFOLIUS
 262366 POGONATHERUM CRINITUM
 262367 PHLEBODIUM AUREUM 'CRISPUM'
 262368 POLYPODIUM NIGRESCENS
 262369 PSEUDERANTHEMUM RETICULATUM
 262370 RHODODENDRON MACGREGORIAE x R. ZOELLERI
 262371 " ZOELLERI
 262372 RUELLIA BLUMEI
 262373 SAMBUSCUS NIGRA 'PENDULA'
 262374 SELAGINELLA GRANDIS
 262375 " HAEMATODES
 262376 " WILDENOWII
 262378 POLYPODIUM MUSIFOLIUM
 262379 AGLAOMORPHA HERACLEUM
 262380 HITCHENIOPSIS KUNSTLERI
 262882 ABIES FORRESTII
 262883 BUDDLEIA x PIKEI 'HEVER'
 262884 CEDRUS LIBANI subsp. STENOCOMA

262885 CHAMAECYPARIS LAWSONIANA 'GREEN HEDGER'
 262886 GENISTA LYDIA
 262887 PIERIS FORMOSA var. FORRESTII 'WAKEHURST'
 262888 SALIX BOYDII
 263122 HOSTA ALBOMARGINATA 'ALBA'
 263123 HOSTA CRISPULA
 263124 " DECORATA
 263125 " ELATA
 263126 HOSTA FORTUNEI 'ALBOPICTA'
 263127 " " 'ALBOPICTA VIRIDIS'
 263128 " " 'ALBOPICTA AUREA'
 263129 " " 'HYACINTHINA'
 263130 " " 'MARGINATO-ALBA'
 263131 " " 'OBSCURA'
 263132 " SIEBOLDIANA 'ELEGANS'
 263133 " " 'SIEBOLDIANA'
 263134 " LANCIFOLIA
 263135 " TARDIFLORA
 263136 " TOKUDAMA
 263137 " " 'AUREONEBULOSA'
 263138 " UNDULATA 'ALBOMARGINATA'
 263139 " " 'ERROMENA'
 263140 " " 'UNDULATA'
 263141 " " 'UNIVITTATA'
 263142 " VENTRICOSA
 263143 " " 'AUREOMACULATA'
 263858 SALIX HASTATA var. VEGETA 'WEHRHAHNII'
 263859 SPIRAEA ARCUATA
 263860 " x ARGUTA 'COMPACTA'
 263974 ADIANTUM POIRETII
 263975 ANREDERA CORDIFOLIA
 263976 BOENNINGHAUSENIA ALBIFLORA
 263977 DENNSTAEDTIA OBTUSIFOLIA
 263978 DERMATOBOTRYS SAUNDERSII
 263979 DIOSCOREA MACROURA
 263980 GEITONOPLESIMUM CYMOSUM
 263981 GURANIA MAKOYANA
 263982 MICROLEPIA SPELUNCAE
 263983 PASSIFLORA COLVILLEI
 263984 PIPER ORNATUM
 263985 ARUNDINARIA VIRIDISTRIATA
 263986 POLYPODIUM NIGRESCENS
 263987 REMUSATIA VIVIPARA
 263988 SCIAPHYLLUM AMOENUM
 263989 SINNINGIA PUSILLA
 263990 TRICHANTHA TEUSCHERI
 264347 CLEMATIS 'SUPERBA'
 264517 CYTISUS ELONGATUS
 264518 " NIGRICANS

- 264519 CYTISUS SCOPARIUS 'CRITERION'
 264520 " " 'DAISY HILL SPLENDENS'
 264521 " x DALLEMOREI
 264522 " SCOPARIUS 'DONARD SEEDLING'
 264523 " " 'DRAGONFLY'
 264524 " " 'FULGENS'
 264525 " " 'GOLDEN SUNLIGHT'
 264526 " " 'GOLDFINCH'
 264527 " 'HOLLANDIA'
 264528 " SCOPARIUS 'JUBILEE'
 264529 " " 'KILLINEY RED'
 264530 " " 'LORD LAMBOURNE'
 264531 " " 'MOONLIGHT'
 264532 " " 'NEWRY GOLD'
 264533 " " 'NEWRY SEEDLING'
 264534 " " 'QUEEN MARY'
 264535 " " 'RED WINGS'
 264536 " " 'WINDLESHAM RUBY'
 264537 " 'ZEELANDIA'
 264571 CLEMATIS INTEGRIFOLIA
 265027 ABIES CILICICA
 265028 CORNUS KOUSA var. CHINENSIS 'BRUNS TYPE I'
 265029 " " " " 'BRUNS TYPE II'
 265030 COTONEASTER PRAECOX 'HESSEI'
 265031 " SALICIFOLIA 'PARKTEPPICH'
 265032 " STERNIANA
 265033 " x WATERERI 'HERBSTFEUER'
 265034 JUNIPERUS COMMUNIS 'LAXA'
 265035 LONICERA x BROWNII 'FUCHSIOIDES'
 265036 PICEA x MARIORIKA
 265037 " BREWERIANA x P. OMORIKA
 265038 PINUS CEMBRA var. SIBIRICA
 265039 POTENTILLA FRUTICOSA 'LADY DARESBOROUGH'
 265040 THUJA OCCIDENTALIS 'MALONYANA'
 265041 " PLICATA 'VARIEGATA'
 265042 TILIA MIQUELIANA
 265043 " MONGOLICA
 265044 TSUGA HETEROPHYLLA 'CONICA'
 265055 ANGIOPTERIS HYPOLEUCA
 265056 MANDEVILLA SANDERI
 265057 GLOBBA WINITII
 265096 IMPATIENS WALLERIANA
 265097 PERISTROPHE SPECIOSA
 265208 ABIES LASIOCARPA var. ARIZONICA 'ARGENTEA'
 265209 " MARIESII
 265210 " x VILMORINII
 265211 ACER PALMATUM 'FREDERICI-GUILELMI'
 265212 " " 'SCHWERINII'
 265213 ALANGIUM PLATANIFOLIUM

265214	ATHYRIUM	FILIX-FEMINA	'BISFURCATUM'
265215	"	"	" 'FRIZELLIAE'
265216	"	"	" 'GRAMINICON'
265217	"	"	" 'MONSTROSUM'
265218	"	"	" 'MULTIDENTATUM'
265219	"	"	" 'PSEUDOVICTORIAE'
265220	BERBERIS	VEITCHII	
265221	BUDDLEIA	DAVIDII var.	NANHOENSIS
265222	"	"	'VEITCHIANA'
265223	CHAMAECYPARIS	LAWSONIANA	'SCHONGARIANA'
265224	"	"	'GLAUCA ARGENTEA'
265225	"	NOOKATENSIS	'VIRIDIS'
265226	"	PISIFERA	'DWARF BLUE'
265227	"	"	'ARGENTEOVARIEGATA'
265228	"	THYOIDES	'ATROVIRENS'
265229	CLEMATIS	HERACLEAEFOLIA	
265230	CLEMATIS	KOREANA	
265232	COTONEASTER	HORIZONTALIS	'SAXITILIS'
265233	"	"	'VARIEGATA'
265234	CRYPTOMERIA	JAPONICA	'PUNGENS'
265235	"	"	'PYRAMIDATA'
265236	"	"	'VIMINALIS'
265237	"	"	'ARAUCARIOIDES'
265238	DRYOPTERIS	FILIX-MAS	'DAEDALEA'
265239	"	"	'EROSACRENATA'
265240	"	"	'FURCANS'
265241	"	"	'LINEARIS POLYDACTYLON'
265242	"	PALEACEA	'POLYDACTYLA'
265243	"	FILIX-MAS	'SUBINTEGRA'
265244	EPHEDRA	FRAGILIS	
265245	"	"	var. CAMPYLOPODA
265246	"	GERARDIANA	
265247	"	"	var. SIKKIMENSIS
265248	EUPTELEA	PLEIOSPERMA	
265249	FAGUS	SYLVATICA	'ANSORGEI'
265250	"	"	'SWAT MAGRET'
265251	"	"	'CRISTATA'
265252	"	"	'COCHLEATA'
265253	GINKGO	BILOBA	'PENDULA'
265254	HAMAMELIS	MOLLIS	'FEUERZAUBER'
265255	ILEX	AQUIFOLIUM	'HANDSWORTHENSIS'
265256	"	"	'PLANIFOLIA'
265257	"	PEDUNCULOSA	var. CONTINENTALIS
265258	JUNIPERUS	COMMUNIS	var. DEPRESSA
265259	"	MACROCARPA	
265260	"	COMMUNIS	'HILS FREIBURG'
265261	LARIX	POTANINII	
265262	LIGUSTRUM	OVALIFOLIUM	'ARGENTEUM'
265263	"	STRONGLYOPHYLLUM	

265264 LONICERA ALSEUOSMOIDES
 265265 x MACLUDRANIA HYBRIDA
 265266 MAGNOLIA STELLATA 'ROHRBACH'
 265267 MICROGLOSSA ALBESCENS
 265268 PEROVSKIA ABROTANOIDES
 265269 " ATRIPLICIFOLIA
 265270 PICEA ABIES 'PARVIFORMIS'
 265271 " " 'TABULAEFORMIS'
 265272 " ASPERATA 'GLAUCA'
 265273 " LIKIANGENSIS
 265274 " POLITA selection
 265275 " WILSONII
 265276 PINUS HELDREICHII var. LEUCODERMIS 'AUREOSPICATA'
 265277 " STROBUS 'NIVEA'
 265278 PSEUDOTSUGA MENZIESII 'ALBOSPICA'
 265279 " " 'GLAUCA ELEGANS'
 265280 RHAMNUS FALLAX
 265281 " FRANGULA 'ASPLENIIFOLIA'
 265282 RUBUS HENRYI
 265283 " TRICOLOR
 265284 SALIX MOUPINENSIS
 265285 SEQUOIADENDRON GIGANTEUM 'PYRAMIDALIS GLAUCA'
 265286 SINARUNDINARIA NITIDA
 265287 SPIRAEA TRILOBATA 'GROSSULARIAEFOLIA'
 265288 SYRINGA AFGHANICA
 265289 TAXUS BACCATA 'CORONA'
 265290 " " 'DAVISIAE'
 265291 " " 'GLAUCA'
 265292 " " 'JACKSONII'
 265293 " " 'KADET'
 265294 " " 'PAGE'
 265295 " " 'PRAESIDENT'
 265296 THUJA OCCIDENTALIS 'ALBOVARIEGATA'
 265297 " " 'GRACILIS'
 265298 " " 'STRICTA'
 265299 THUJOPSIS DOLOBRATA var. HONDAE
 265300 TSUGA CANADENSIS 'MINIMA HESSE'
 265582 ACER CAMPESTRE 'PULVERULENTUM'
 265583 " LAXIFLORUM
 265584 " NEGUNDO 'ELEGANS'
 265585 " " 'AURATUM'
 265586 " OPALUS 'AURATUM'
 265587 " PLATANOIDES 'STOLLII'
 265588 " RUBRUM 'WAGERI'
 265589 " TRUNCATUM 'ALBOVITTATUM'
 265590 " x ZOESCHENSE 'ANNAE'
 265591 AESCULUS x CARNEA 'AUREOMARGINATA'
 265592 " " " 'PLANTIERENSIS'
 265593 " HIPPOCASTANUM 'MEMMINGERI'

- 265594 AESCULUS x NEGLECTA 'ERYTHROBLASTOS'
 265595 ALNUS MAXIMOWICZII
 265596 AMELANCHIER 'PUMILA'
 265597 AMORPHA FRUTICOSA 'CRISPA'
 265598 BERBERIS DIELSIANA 'COMPACTA'
 265599 " GIRALDII
 265600 " MOUILLACANA
 265601 BETULA NANA
 265602 " POTANINII
 265603 " PUBESCENS 'AUREA'
 265604 CATALPA FARGESII f. DUCLOUXII
 265605 CELASTRUS ROSTHORNIANA
 265606 CERCIDIPHYLLUM JAPONICUM var. SINENSE
 265607 CLEMATIS LASIANDRA
 265610 CORNUS ALBA 'ALBOMARGINATA ELEGANS'
 265611 " KOEHNEANA
 265612 COTONEASTER DAMMERI x C. SALICIFOLIA 'SAKDAN'
 265613 DEUTZIA COREANA
 265614 " GRACILIS 'AUREA'
 265615 EUONYMUS EUROPAEUS 'ARGENTEOVARIEGATUS'
 265616 FAGUS SYLVATICA 'HORIZONTALIS'
 265617 FESTUCA SCOPARIA
 265618 FRAXINUS EXCELSIOR 'CRISPA VARIEGATA'
 265619 " " 'DOORENBOS 5'
 265620 " " 'HESSEI'
 265621 " POTAMOPHILA
 265622 HERACLEUM MANTEGAZZIANUM
 265623 LONICERA OBOVATA
 265624 " MYRTILLUS
 265625 " PROSTRATA
 265626 PLATANUS x ACERIFOLIA 'PYRAMIDALIS'
 265627 " " " 'SUTTNERI'
 265628 " ORIENTALIS 'DIGITATA'
 265629 POPULUS x CANADENSIS 'BACHELIERI'
 265630 POPULUS TREMULA 'PURPUREA'
 265631 " TREMULOIDES 'PENDULA'
 265632 " x CANADENSIS 'VERNIRUBENS'
 265633 POTENTILLA FRUTICOSA 'ALBESCENS'
 265634 " " 'FRIESENGLD'
 265635 " " 'SULFUREA'
 265636 " " var. PARVIFOLIA
 265637 PRUNUS CERASIFERA 'HESSEI'
 265638 PTELEA TRIFOLIATA 'FASTIGIATA'
 265639 PTEROCARYA FRAXINIFOLIA 'DUMOSA'
 265640 " RHOIFOLIA
 265641 PYRUS ELAEAGRIFOLIA var. KOTSCHYANA
 265642 QUERCUS ROBUR 'ARGENTEOMARGINATA'
 265643 " PETRAEA 'COLUMNA'
 265644 " " 'LACINIATA CRISPA'
 265645 QUERCUS ROBUR 'MACULATA'

265646 QUERCUS ROBUR 'ALBOMARMORATA'
265647 " " 'NIGRICANS'
265648 " " 'PICTA'
265649 " × PENDULINA 'PUNGENS'
265650 " ROBUR 'SCOLOPENDRIFOLIA'
265651 " " 'ATROPURPUREA'
265652 " " 'FASTIGIATA PURPUREA'
265653 " " 'FILICIFOLIA'
265654 " BOREALIS 'AUREA'
265655 " " 'SCHREFELDII'
265656 QUERCUS × SCHOCHIANA
265657 ROBINIA PSEUDOACACIA 'MIMOSIFOLIA'
265658 " " 'MONOPHYLLA FASTIGIATA'
265659 " " 'PYRAMIDALIS'
265660 " " 'ROZYNSKYANA'
265661 ROSA EGLANTERIA 'MAGNIFICA'
265662 SALIX AURITA
265663 " CHRYSOSTELA
265664 " DAPHNOIDES var. POMERANICA
265665 " FRAGILIS 'BULLATA'
265666 " ACUTIFOLIA 'PENDULIFOLIA'
265667 " REPENS 'ROSMARINIFOLIA'
265668 " × SIMULATRIX
265669 SIBIRAEA LAEVIGATA
265670 SORBUS ARIA 'MAGNIFICA'
265671 " " 'AUREA'
265672 " FOLIOLOSA
265673 " SEROTINA
265674 STAPHYLEA × ELEGANS 'HESSEI'
265675 SYMPHORICARPOS ORBICULATUS 'VARIEGATUS'
265676 TILIA AMERICANA 'NOVA'
265677 WEIGELA PRAECOX 'AVANT GARDE'
265678 " 'DESBOISII'
265679 " 'EDOUARD ANDRÉ'
265680 " PRAECOX 'FLEUR DE MAI'
265681 " " 'ROSEA'
265914 ALOCASIA KORTHALSII
265915 " MICHOLITZIANA
265916 CHLOROPHYTUM BICHETII
265917 ANTHURIUM SP.
265918 APHELANDRA TETRAGONA
265919 " FUSCOPUNCTATA
265920 " 'FRITZ PRINSLER'
265921 ARISTOLOCHIA LEUCONEURA
265922 BEGONIA CRISPULA
265923 BEGONIA RAJAH
265924 CALATHEA CHANTRIERI
265925 " ILLUSTRIS
265926 " LINDENIANA

265927 CARLUDOVICA PLICATA 'PICTA'
265928 CLUSIA FLUMINENSIS
265929 COSTUS IGNAEUS
265930 CYCLANTHUS CRISTATUS
265931 GURANIA MALACOPHYLLA
265932 HOYA MULTIFLORA
265933 IMPATIENS NIAMNIAMESIS
265934 LYCOPODIUM SQUARROSUM
265935 " SP.
265936 MYRIOCARPA DENSIFLORA
265937 PIPER CROCATUM
265938 " ORNATUM 'TYPICUM'
265939 PLATYCERIUM ANGOLENSE
265940 ROUPALA MACROPHYLLA 'CORCOVADENSIS'
265941 SCUTELLARIA VILLOSA
265942 SELAGINELLA PATULA
265943 SINNINGIA PUSILLA
265944 TYPHONODORUM LINDLEYANUM
265945 UTRICULARIA LONGIFOLIA
265952 PYRUS NIVALIS
266389 ABIES ALBA 'PYRAMIDALIS'
266390 ACER PALMATUM 'RUBRIFOLIUM'
266391 " " 'DISSECTUM RUBRUM'
266392 " " 'DISSECTUM VIRIDIS'
266393 ALNUS INCANA 'PINNATA'
266394 ARALIA ELATA 'AUREOVARIEGATA'
266395 " " 'VARIEGATA'
266396 BERBERIS × RUBROSTILLA 'BARBAROSSA'
266397 " " " 'BUCCANEER'
266398 " PRATTII
266399 BETULA MEDWEDIEWII
266400 " PENDULA 'DALECARLICA'
266401 CELTIS AUSTRALIS
266402 CHAMAECYPARIS LAWSONIANA 'DEPKENII'
266403 " " 'GIMBORNII'
266404 " " 'LYCOPODIOIDES'
266405 " " 'PATULA'
266406 " " 'VEITCHII'
266407 " " 'WISSELLII'
266408 " " 'YOUNGII'
266409 " " 'ERECTA BLOM'
266410 " " 'LUTEA'
266411 " " 'LUTEOCOMPACTA'
266412 " " 'NANA ROGERSII'
266413 " " 'OBTUSA' 'CONTORTA'
266414 " " 'CORALLIFORMIS'
266415 " " 'NANA PYRAMIDALIS'
266416 " " 'NANA SMITH'
266417 " " 'NANA'
266419 " PISIFERA 'NANA AUREOVARIEGATA'

266420 CORNUS ALTERNIFOLIA 'ARGENTEA'
 266421 " KOUSA 'XANTHOCARPA'
 266422 CRATAEGUS x GRINGNONENSIS
 266423 CRYPTOMERIA JAPONICA 'CRISTATA'
 266424 FAGUS SYLVATICA 'CRISTATA'
 266425 " " 'ZLATIA'
 266426 JUNIPERUS CHINENSIS 'BLAAUWS VARIETY'
 266427 " DAVURICA 'PARSONII'
 266429 " x MEDIA 'GLOBOSA'
 266430 " SABINA 'HICKSII'
 266431 " COMMUNIS 'REPANDA'
 266432 PICEA ABIES 'HIGHLANDIA'
 266433 " " 'HORNIBROOKII'
 266434 PINUS HELDREICHII var. LEUCODERMIS
 266435 " MUGO var. MUGHUS 'GNOM'
 266436 " PUMILA 'DWARF BLUE'
 266437 " NIGRA selected
 266438 PODOCARPUS NIVALIS
 266439 POPULUS x CANADENSIS 'GELRICA'
 266440 " " " 'ROBUSTA'
 266441 " " " 'AUREA'
 266442 " " " 'MARILANDICA'
 266443 " " " 'SEROTINA ERECTA'
 266444 " LASIOCARPA
 266445 " WILSONII
 266446 POTENTILLA FRUTICOSA var. PYRENAICA
 266447 PYRUS SALICIFOLIA 'PENDULA'
 266453 SALIX ALBA 'LIEMPDE'
 266454 STEPHANANDRA TANAKAE
 266455 TAXUS BACCATA 'NUTANS'
 266456 TAXUS BACCATA 'SEMPERAUREA'
 266457 TILIA x EUROPAEA 'KONIGSLINDE'
 266458 " PLATYPHYLLOS 'RUBRA'
 266459 ULMUS GLABRA 'EXONIENSIS'
 266460 ABIES FAXONIANA
 266461 " MOROCANA
 266462 " NEBRODENSIS
 266463 " x INSIGNIS 'PARDEI'
 266464 " SACHALINENSIS
 266465 EPHEDRA EQUISETINA
 266466 " GERARDIANA var. SIKKIMENSIS
 266467 PICEA SPINULOSA
 266468 PINUS YUNNANENSIS
 266469 THUJA OCCIDENTALIS 'MALONYANA'
 266471 ACER LOBELII
 266472 ALNUS x SPAETHII
 266473 BERBERBIS THUNBERGII 'SPECIAL'
 266474 BETULA DAVURICA
 266475 " PLATYPHYLLA var. SZECHUANICA

- 266476 GLEDITSIA TRIACANTHOS 'PENDULA'
 266477 SALIX PURPUREA var. AMPLEXICAULIS
 266478 BERBERIS CANDIDULA 'GRACILIS'
 266479 " " 'HAALBOOM'
 266480 " × HYBRIDO-GAGNEPAINII 'CHENAULT SELECT'
 266481 " MORRISONENSIS
 266482 POTENTILLA FRUTICOSA 'FARRERI SELECT'
 266483 ACER JAPONICUM 'AUREUM'
 266484 " NEGUNDO 'AURATUM'
 266485 " × ZOESCHENSE 'ANNAE'
 266486 × AMELASORBUS JACKII
 266487 BERBERIS × HYBRIDO-GAGNEPAINII 'TERRA NOVA'
 266488 " HOOKERI
 266489 " × MEDIA 'PARKJUWEEL'
 266490 BETULA ALBOSINENSIS
 266491 " COSTATA
 266492 CASTANEA SATIVA 'ARGENTEOVARIEGATA'
 266493 " " "
 266494 " " 'HETEROPHYLLA'
 266495 CELTIS AUSTRALIS
 266496 COTONEASTER SALICIFOLIA 'PERKEO'
 266497 CRATAEGUS OXYACANTHA 'GIREOUDII'
 266498 CYTISUS SESSILIFOLIUS
 266499 FAGUS SYLVATICA 'ROTUNDIFOLIA'
 266500 HALIMODENDRON HALODENDRON
 266501 HIBISCUS SYRIACUS 'BOULE DE FEU'
 266502 " " 'LEOPOLDII'
 266504 LONICERA PILEATA 'GRAZIOSA'
 266505 " " 'HOHENHEIMER FINDLING'
 266506 PINUS CEMBRA 'NANA'
 266507 ROSA MOYESII 'GERANIUM'
 266508 SALIX × TSUGALUENSIS 'GINME'
 266509 " GRACILISTYLA var. MELANOSTACHYS
 266510 " SACHALINENSIS 'SEKKA'
 266511 " × WIMMERIANA
 266512 SOPHORA JAPONICA 'PENDULA'
 266513 SORBUS AUCUPARIA 'FASTIGIATA'
 266514 SPIRAEA ARCUATA
 266515 " × CINEREA 'NANA'
 266516 ACER NEGUNDO 'AUREOVARIEGATUM'
 266517 ALNUS TENUIFOLIA 'AUREA'
 266518 BERBERIS × RUBROSTILLA 'PIRATE KING'
 266519 " CANDIDULA 'HAALBOOM'
 266520 " × MEDIA 'PARKJUWEEL'
 266521 " THUNBERGII 'ROSY GLOW'
 266522 BETULA PENDULA 'PURPUREA'
 266523 CAMPSIS RADICANS 'YELLOW TRUMPET'
 266524 CEDRUS DEODARA 'ALBOSPICATA'
 266525 CHAENOMELES × SUPERBA 'HOLLANDIA'

266526 CHAMAECYPARIS LAWSONIANA 'BRUINII
 266527 " " 'DRUMMONDII'
 266528 " OBTUSA 'NANA KOSTERI'
 266529 CRYPTOMERIA JAPONICA 'COMPRESSA'
 266530 EUONYMUS PHELLOMANUS
 266531 FAGUS JAPONICA
 266532 " LUCIDA
 266533 " SYLVATICA 'SWAT MAGRET'
 266534 " " 'ROHANII'
 266535 " " 'ZLATIA'
 266536 HEDERA COLCHICA 'ARBORESCENS'
 266537 " " 'AMURENSIS'
 266538 JUNIPERUS COMMUNIS 'HORNIBROOKII'
 266539 " SABINA 'BLUE DANUBE'
 266540 LIRIODENDRON TULIPIFERA 'AUREOMARGINATUM'
 266541 PARTHENOCISSUS TRICUSPIDATA 'BEVERLEY PARK'
 266542 PHOTINIA VILLOSA var. MAXIMOWICZIANA
 266543 PICEA ABIES 'CRANSTONII'
 266544 " " 'PUMILA GLAUCA'
 266545 " " 'PYGMAEA'
 266546 " " 'VIRGATA'
 266547 " ORIENTALIS 'ATROVIRENS'
 266548 " " 'AUREOSPICATA'
 266549 " PUNGENS 'GLOBOSA'
 266550 " " 'ENDTZ'
 266551 PRUNUS LAUROCERASUS 'HERBERGII'
 266552 " " 'MISCHEANA'
 266553 " " 'OTTO LUYKEN'
 266554 ROBINIA PSEUDOACACIA 'FRISIA'
 266555 TAXUS BACCATA 'CORONA'
 266556 " " 'FASTIGIATA ROBUSTA'
 266557 " " 'HESSEI'
 266590 ABIES BALSAMEA 'NANA'
 266591 ACER CAPPADOCICUM 'AUREUM'
 266592 " PLATANOIDES 'REITENBACHII'
 266593 " PSEUDOPLATANUS 'SPAETHII'
 266594 ALNUS INCANA 'AUREA'
 266595 CARAGANA ARBORESCENS 'LORBERGII'
 266596 CATALPA BIGNONIOIDES 'AUREA'
 266597 CHAMAECYPARIS LAWSONIANA 'GLOBOSA'
 266598 " " 'PYGMAEA ARGENTEA'
 266599 " " 'FILIFORMIS COMPACTA'
 266600 " " 'GLAUCA SPEK'
 266601 " OBTUSA 'MARIESII'
 266602 FAGUS SYLVATICA 'ROHANII'
 266603 HAMAMELIS x INTERMEDIA 'RUBY GLOW'
 266604 " MOLLIS 'BREVIPETALA'
 266605 HIBISCUS SYRIACUS 'ADMIRAL DEWEY'
 266606 " " 'MONSTROSUS'
 266607 JUNIPERUS x MEDIA 'BLUE CLOUD'

- 266608 JUNIPERUS CHINENSIS 'OLYMPIA'
 266609 " X MEDIA 'GLOBOSA CINEREA'
 266610 " " " 'OLD GOLD'
 266611 " " " 'FAIRVIEW'
 266612 " COMMUNIS 'MAYER'
 266613 " SQUAMATA 'LODERI'
 266614 " 'GREY OWL'
 266615 PHILADELPHUS LEWISII 'SILVER RAIN' ('SILBERREGEN')
 266616 PICEA GLAUCA 'ECHINIFORMIS'
 266617 " OMORIKA 'NANA'
 266618 POTENTILLA FRUTICOSA var. RIGIDA
 266619 " " 'JACKMAN'
 266620 " " 'KLONDIKE'
 266621 " " 'MAANELYS'
 266622 " " 'MOUNT EVEREST'
 266623 " " 'PRIMROSE BEAUTY'
 266624 " " var. PYRENAICA
 266625 " " 'SNOWFLAKE'
 266626 " " var. VILMORINIANA
 266627 QUERCUS X TURNERI 'PSEUDOTURNERI'
 266628 " PETRAEA 'COLUMNA'
 266629 SPIRAEA THUNBERGII 'COMPACTA'
 266630 " TRICHOCARPA
 266631 TAXUS CUSPIDATA 'NIDIFORMIS'
 266632 THUJA OCCIDENTALIS 'WOODWARDII'
 266633 " PLICATA 'CUPREA'
 266634 TILIA PLATYPHYLLOS 'ÖREBRO'
 266635 WEIGELA 'BOSKOOP GLORY'
 266637 CLEMATIS MONTANA f. RUBENS 'ODORATA'
 266638 " " " " 'PINK PERFECTION'
 266639 " X VEDRARIENSIS 'ROSEA'
 266640 HAMAMELIS MOLLIS 'DONKER'
 266641 PICEA OMORIKA selection
 266642 " ORIENTALIS 'ATROVIRENS'
 266643 PINUS MUGO var. MUGHUS 'KOBALT'
 266644 " " " " 'MOPS'
 266645 ABIES LASIOCARPA var. ARIZONICA 'COMPACTA'
 266646 BERBERIS HOOKERI
 266647 COTONEASTER X WATERERI 'EXBURIENSIS'
 266648 " " " 'HERBSTFEUER'
 266649 PICEA GLAUCA 'ECHINIFORMIS'
 266650 ACER NEGUNDO 'LOMBARTS'
 266651 " PALMATUM 'AUTUMN GLORY'
 266652 " PLATANOIDES 'DRUMMONDII'
 266653 " SACCHARINUM 'ASPLENIFOLIUM'
 266654 " " 'MONSTROSUM'
 266655 " X ZOESCHENSE 'ANNAE'
 266656 BERBERIS JULIANAE 'LOMBARTS RED'
 266657 " X OTTAWENSIS 'GOLDEN RING'

266658 BERBERIS x OTTAWENSIS 'LOMBARTS PURPLE'
266659 BETULA x PURPUSII
266660 CARAGANA FRANCHETIANA
266661 " FRUTEX 'ANGUSTIFOLIA'
266662 " " 'SYLVATICA'
266663 CARPINUS BETULUS 'CORDATA'
266664 " " 'PURPUREA'
266665 CRATAEGUS x MORDENESIS 'TOBA'
266666 " OXYACANTHA 'GIREOUDII'
266667 FAGUS LUCIDA
266668 " SYLVATICA 'AUREOPENDULA'
266669 " " 'ATROPURPUREA MACROPHYLLA'
266670 " " 'COCHLEATA'
266671 " " 'CASTANIFOLIA'
266672 " " 'CRISTATA'
266673 " " 'ALBOVARIEGATA'
266674 HAMAMELIS VERNALIS 'LOMBARTS WEEPING'
266675 LEUCOTHOË FONTANESIANA 'ROLLISONII'
266676 LIGUSTRUM SINENSE 'PENDULA'
266677 PHILADELPHUS LEWISII 'WATERTON'
266678 POPULUS TREMULA 'ERECTA'
266679 PYRUS NIVALIS
266680 QUERCUS x LIBANERRIS 'TROMPENBURG'
266681 " PALUSTRIS 'LOMBARTS'
266682 RIBES SANGUINEUM 'GRANDIFLORUM'
266683 " " 'KING EDWARD VII'
266684 " " 'LOMBARTS'
266685 " " 'CARNEUM'
266686 ROBINIA PSEUDOACACIA 'SANDRAUDIGA'
266687 " " 'UNIFOLIOLA'
266688 SANTOLINA CHAMAECYPARISSUS 'ERICOIDES'
266689 x SCRBARONIA SORBIFOLIA
266690 SORBUS 'APRICOT QUEEN'
266691 " 'CORAL BEAUTY'
266692 " 'RED COPPER GLOW'
266693 " 'VERMILION'
266694 STEPHANANDRA INCISA 'CRISPA'
266695 TEUCRIUM x LUCIDRYS
266698 ABIES ALBA 'PYRAMIDALIS'
266699 " AMABILIS 'COMPACTA'
266700 " CONCOLOR 'COMPACTA'
266701 " " 'VIOLACEA'
266702 " KOREANA 'NANA'
266703 " NORDMANNIANA 'AUREOSPICATA'
266704 " PROCERA 'PROSTRATA'
266705 " RECURVATA
266706 ACER PALMATUM 'DECOMPOSITUM'
266707 " " 'NICHOLSONII'
266708 " " 'RIBESIFOLIUM'
266709 " " 'RUFESCENS'

266710 ACER PALMATUM 'ELEGANS PURPUREUM'
266711 " " 'DISSECTUM PAUCUM'
266712 " " 'DISSECTUM VARIEGATUM'
266713 ARUNDINARIA SP.
266714 CHAMAECYPARIS LAWSONIANA 'DARLEYENSIS'
266715 " " 'FRASERI'
266716 " " 'KRAMERI'
266717 " " 'MINIMA'
266718 " " 'MOERHEIMII'
266719 CHAMAECYPARIS LAWSONIANA 'ROSENTHALII'
266720 " " 'FILIFORMIS GLAUCA'
266721 " " 'ROBUSTA GLAUCA'
266722 " " 'HOGGER'
266723 " " 'NANA ROGERSII'
266724 " OBTUSA 'NANA TEMPELHOF'
266725 " " 'ALBOSPICATA'
266726 " " 'AUREOSPICATA'
266727 " " 'NANA HAGE'
266728 " " 'NANA TONIA'
266729 " THYOIDES 'AUREA'
266730 " " 'VARIEGATA'
266731 CRATAEGUS MONOGYNA 'COMPACTA'
266733 EUONYMUS SANGUINEUS
266734 " VERRUCOSUS
266735 HEDYSARUM MULTIJUGUM
266736 JUNIPERUS COMMUNIS 'CRACOVIA'
266737 " " 'CANDELABRIFORMIS'
266738 " " 'PROSTRATA'
266740 " SQUAMATA
266741 " VIRGINIANA 'KOSTERI'
266742 CALOCEDRUS DECURRENS 'AUREOVARIEGATA'
266743 PICEA ABIES 'AUREOSPICATA'
266744 " " 'CRANSTONII'
266746 " " 'FINEDONENSIS'
266747 " " 'VIMINALIS'
266748 " LIKIANGENSIS var. BALFOURIANA
266749 " MARIANA 'NANA'
266750 " ORIENTALIS 'ATROVIRENS'
266751 " " 'AUREOSPICATA'
266752 " " 'NANA'
266753 PINUS PARVIFLORA 'BREVIFOLIA'
266754 PSEUDOTSUGA MENZIESII 'CAESIA'
266755 ROBINIA PSEUDOACACIA 'TORTUOSA'
266756 TAXUS BACCATA 'ELVASTONENSIS'
266757 TAXUS BACCATA 'HORSHOLMII'
266758 THUJA OCCIDENTALIS 'BEAUFORT'
266759 " " 'HOLMSTRUPII'
266760 " " 'RECURVA NANA'

266761 THUJA PLICATA 'ROGERSII'
266762 " OCCIDENTALIS 'WAREANA LUTESCENS'
266763 " PLICATA 'VARIEGATA'
266764 " OCCIDENTALIS 'AUREOSPICATA'
266765 " " 'CRISTATA AUREA'
266768 PYRACANTHA COCCINEA 'KASAN'
266769 " " 'ORANGE GIANT'
266770 " " 'KEESSEN'
266771 " FORTUNEANA 'ORANGE GLOW'
266772 SAMBUCUS NIGRA 'ALBOPUNCTATA'
266773 SPIRAEA JAPONICA 'ALPINA'
266774 CHAMAECYPARIS LAWSONIANA 'POTTENII'
266775 " THYOIDES 'ANDELYENSIS AUREA'
266776 JUNIPERUS x MEDIA 'MATHOT'
266777 " COMMUNIS var. SAXATILIS
266778 PINUS CEMBRA 'PYGMAEA'
266779 " NIGRA 'AUREOSPICATA'
266780 " CEMBRA 'FASTIGIATA'
266781 TAXUS BACCATA 'AMERSFOORT'
266782 " " 'PYGMAEA'
266783 ABIES BALSAMEA f. HUDSONIA
266784 CHAMAECYPARIS LAWSONIANA 'GLAUCA BOOTH'
266785 PICEA OMORIKA 'EXPANSA'
266786 CHAMAECYPARIS LAWSONIANA 'ERECTA BLOM'
266787 " NOOTKATENSIS 'LUTEA'
266788 " THYOIDES 'CONICA'
266789 JUNIPERUS x MEDIA 'PLUMOSA ALBOVARIEGATA'
266790 " " " " 'AUREOVARIEGATA'
266791 " SARGENTII
266792 LONICERA THIBETICA
266793 PICEA ABIES 'SARGENTII'
266794 PYRACANTHA COCCINEA x P. CRENULATA var. ROGERSIANA
266795 QUERCUS CANARIENSIS
266796 " DENTATA
266797 " FRAINETTO
266798 " LIBANI
266799 " MACRANTHERA
266800 " MONGOLICA
266801 " PETRAEA 'MESPILIFOLIA'
266802 " PONTICA
266803 " ROBUR 'PENDULA'
267658 IRIS LAEVIGATA 'VARIEGATA'
267659 QUERCUS CERRIS 'ARGENTEOVARIEGATA'
267926 CLERODENDRUM NUTANS
267927 SELAGINELLA ATROVIRIDIS
267928 " GRANDIS
267929 " ORNITHOPODIOIDES
267930 " WALLICHII
268111 FRAXINUS EXCELSIOR 'DOORENBOS 5'
268112 " " 'JASPIDEA'

268113 FRAXINUS EXCELSIOR 'WESTHOF'S GLORY'
268114 " " 'AUREA'
268115 " " 'DIVERSIFOLIA'
268116 ARUNDINARIA VIRIDISTRIATA
268117 FRAXINUS ANGUSTIFOLIA 'PENDULA'
268118 " EXCELSIOR 'PENDULA'
268119 " " 'PENDULA VARIEGATA'
268120 " OXYCARPA
268121 SALIX ACUTIFOLIA 'PENDULIFOLIA'
268122 " ALBA 'BRITZENSIS'
268123 " " 'DRAKENBURG'
268124 " " 'LUTESCENS'
268125 " " 'METMONDIANA'
268126 " " 'ROCKANJE'
268127 " CINEREA
268128 " " 'GRANDIS NO. 56'
268129 " DAPHNOIDES 'LATIFOLIA'
268130 " DASYCLADOS
268131 " INTERIOR
268482 RHODODENDRON LOCHAE
268483 " MULTICOLOR
268484 " x BALSAMAEFLORUM 'NE PLUS ULTRA'
268486 ROUPALA MACROPHYLLA 'CORCOVADENSIS'
269227 RHODODENDRON 'MULTIFLORA'
269228 " x ARENDSII 'AGGER'
269229 " " " 'GLOER'
269230 " " " 'LINGESE'
269231 " " " 'NEYE'
269253 PIERIS JAPONICA 'NANA COMPACTA'
269293 COTONEASTER DAMMERI 'SKOGSHOLMEN'
269294 PICEA ABIES 'COLUMNARIS'
269295 PINUS MUGO var. MUGHUS 'NANA TYPE I'
269296 " " " " 'NANA TYPE II'
269297 RHODODENDRON IMPEDITUM 'BAD ZWISCHENAHN'
269298 " " 'MOERHEIM'
269299 " METTERNICHII 'METTERNIANUS'
269300 " PRZEWALSKII
269301 " RUFUM
269302 " 'PROMETHEUS' x R. FORRESTII var. REPENS
'FRUHLINGSZAUBER'
269303 THUJA OCCIDENTALIS 'PENDULA'
269328 ABIES KAWAKAMII
269605 ACER CAMPBELLII
269607 " OSMASTONII
269608 " TARONENSE
269609 BUXUS SEMPERVIRENS SELECTION
269610 " " 'MYRTIFOLIUM'
269611 CHAMAECYPARIS LAWSONIANA 'PENA PARK'
269620 ILEX PERADO

269621 ILEX FARGESII var. SCLEROPHYLLA
 269622 " GEORGEI
 269623 " PLATYPHYLLA
 269624 PODOCARPUS NERIIFOLIUS 'VARIEGATUS'
 269625 xSORBOCOTONEASTER POZDNJKOVII
 269626 ACER LAEVIGATUM
 272068 QUERCUS PETRAEA
 272069 " " 'FALKENBERGENSIS'
 272070 " " 'GIESLERI'
 272071 " " 'MUSCAVIENSIS'
 272072 " " 'RUBICUNDA'
 272073 " ROBUR 'LACINIATA MACULATA'
 272074 " " 'CUCULLATA'
 273264 LUCULIA GRANDIFOLIA
 273265 RHODODENRON 'PINK SEEDLING'
 273266 " x 'PRINCESS ROYAL'
 273267 " 'SIR GEORGE HOLFORD'
 273268 " x BALSAMAEFLORUM 'SOUVENIR DE J. H. MANGLES'
 273691 CLEMATIS MONTANA f. RUBENS 'GRANDIFLORA'
 274261 CYPERUS ALTERNIFOLIUS 'VARIEGATUS'
 274263 NEPENTHES GRACILIS
 274264 " SPECTABILIS
 274265 SAMBUCUS NIGRA 'PENDULA'
 274266 ZELKOVA VERSCHAFFELTII
 274433 CALATHEA WARSCEWICZII
 274434 LYCOPODIUM HIPPURIS
 274435 NEPENTHES x DORMANNIANA
 274436 PINGUICULA CAUDATA
 274437 SELAGINELLA GRANDIS
 274438 BEGONIA LINDLEYANA 'EPPLES FINDLING'
 274439 " SERRATIPETALA
 274440 " SP.
 274441 BERTOLONIA MARMORATA 'AENEA'
 274442 CISSUS CRAMERIANA
 274443 COSTUS SP. 'ALBOVARIEGATA'
 274444 DROSERA PYGMAEA
 274445 ERICA 'EVENING GLOW'
 274446 EUPHORBIA CARACASANA 'SANGUINEA'
 274447 LYCOPODIUM HIPPURIS
 274448 MISCANTHUS SINENSIS 'STRICTUS'
 274449 NEPENTHES x DORMANNIANA
 274450 PINGUICULA CAUDATA
 274451 PIPER PORPHYROPHYLLUM
 274452 VILLARESIA GRANDIFLORA
 275866 AGAPANTHUS CAULESCENS
 275867 ANUBIAS AFFINIS
 275868 " CONGENSIS
 275869 APHELANDRA AURANTIACA
 275870 " " var. ROEZLII

275871	APHELANDRA	TETRAGONA			
275872	ASYSTASIA	VOGELIANA			
275873	BEGONIA	'COLONEL SIX'			
275874	"	CRISPULA			
275875	BIGNONIA	UNCATA	'RODIGASIANA'		
275876	CHLOROPHYTUM	ALISMAEFOLIUM			
275877	"	MACROPHYLLUM			
275878	"	MANNII			
275879	"	ORCHIDASTRUM			
275880	"	UKAMBENSE			
275881	CLUSIA	OVIGERA			
275882	CODIAEUM	VARIEGATUM	var. PICTUM	'APPENDICULATUM'	
275883	"	"	"	"	'B. COMTE'
275884	"	"	"	"	'BARON JAMES DE ROTHSCHILD'
275885	"	"	"	"	'BRITISH EMPIRE'
275886	"	"	"	"	'CARRIERE'
275887	"	"	"	"	'DAME MELANIE'
275888	"	"	"	"	'FREDERIC SANDER'
275889	"	"	"	"	'GLACÉ'
275890	"	"	"	"	'L'AUORE'
275891	"	"	"	"	'L'IDEAL'
275892	"	"	"	"	'MAJESTICUM'
275893	"	"	"	"	'MAURICE ROUVIER'
275894	"	"	"	"	'MLLE. ETIENNE JORIS'
275895	"	"	"	"	'MME. de SOLIGNAC'
275896	"	"	"	"	'MR. GEORGES TRUFFAUT'
275897	"	"	"	"	'MR. PEETERS'
275898	"	"	"	"	'NEGLECTUS'
275899	"	"	"	"	'OSTERSII'
275900	"	"	"	"	'PRESIDENT CHARLES'
275901	"	"	"	"	'PRINCE OF MONACO'
275902	"	"	"	"	'QUADRICOLOR'
275903	"	"	"	"	'SOUVENIR DE LAEKEN'
275904	"	"	"	"	'SUNBEAM'
275905	CORDYLINE	TERMINALIS	'EECKHOUTEI'		
275906	"	"	'KAISER WILHELM'		
275907	"	"	'MARGUERITE STORY'		
275908	"	"	'MME. CHARRON'		
275909	"	"	'MR. RUSSELL'		
275910	COSTUS	AFER			
275911	"	SP. 'ALBOVARIEGATA'			
275912	CRINUM	CONGOLENSE			
275913	DRACAENA	RUBROAURANTIACA			
275914	"	UMBRACULIFERA			
275915	EPIPREMNUM	MIRABILE			
275916	ERANTHEMUM	NIGRUM			
275917	EUGENIA	GUILLEMINIANA			
275918	EULOPHIA	HORSFALLII			
275919	FICUS	ROSTRATA			

275920 GLORIOSA HOMBLEI
275921 HYMENOCALLIS SENEGAMBICA
275922 MICROSTYLIS COMMELINIFOLIA
275924 PHRYNIUM BRACHYSTACHYUM
275925 PILEA ELEGANS
275926 PLECTRANTHUS PURPURATUS
275927 PSEUDERANTHEMUM SETICALYX
275928 RUELLIA ROSEA
275929 SANSEVIERIA TRIFASCIATA 'CRAIGHI'
275930 SCLERIA RACEMOSA
275931 STROBILANTHUS GLOMERATUS
275932 THUNBERGIA ERECTA 'ALBA'
275933 " IKBOLIANA
275934 VANILLA LUJAE
277743 ABIES x VASCONCELLOSIANA 'AMARAL FRANCO'
277744 ACER AMPLUM
277745 " CAMPESTRE 'SCHWERINII'
277746 " CAPPADOCICUM f. TRICAUDATUM
277747 " CAUDATUM var. MULTISERRATUM
277748 " FLABELLATUM
277749 " FRANCHETII
277750 " HENRYI
277751 " HOOKERI
277752 " NEGUNDO 'ELEGANS'
277753 " " var. VIOLACEUM
277754 " OSMASTONII
277755 " PALMATUM 'CRIPPSII'
277756 " " 'SENKAKI'
277757 " VILLOSUM
277758 " VELUTINUM var. VANVOLXEMII
277759 " WILSONII
277760 AESCULUS CHINENSIS
277761 " WILSONII
277765 CHAMAECYPARIS LAWSONIANA 'PENA PARK'
277766 CUPRESSUS ARIZONICA 'NANA'
277768 EUONYMUS PHELLOMANUS
277771 ILEX GEORGEI
277773 LIQUIDAMBAR ORIENTALIS
277776 PHOTINIA PRIONOPHYLLA
277777 QUERCUS x LUDOVICIANA
277779 SALIX CINEREA
277781 " REPENS 'NITIDA'
277783 TSUGA x JEFFREYI
280134 ABIES CEPHALONICA 'NANA'
280135 CHAMAECYPARIS LAWSONIANA 'CAUDATA'
280136 " " " 'COLUMNARIS'
280137 " " " 'ERICOIDES'
280138 " " " 'FILIFORMIS ERECTA'
280139 " " " 'FLETCHERI REUTHE'

280140	CHAMAECYPARIS LAWSONIANA	'GLAUCA LOMBARTS'
280141	"	" 'LUTEA NANA'
280142	"	" 'MAAS'
280143	"	" 'NIVEA'
280144	"	" 'PENDULA'
280145	"	" 'PRES. ROOSEVELT'
280146	"	" 'PULCHERRIMA'
280147	"	" 'TRIOMPHE DE LOMBARTS'
280148	"	" 'WINSTON CHURCHILL'
280149	CHAMAECYPARIS NOOTKATENSIS	'AUREOVARIEGATA'
280150	CHAMAECYPARIS OBTUSA	'LYCOPODIOIDES'
280151	"	" 'LYCOPODIOIDES AUREA'
280152	"	" 'PYGMAEA AURESCENS'
280153	CRYPTOMERIA JAPONICA	'GLOBOSA'
280154	FAGUS SYLVATICA	'ANSORGEI'
280155	"	" 'INTERRUPTA'
280156	"	" 'INTERRUPTA PURPUREA'
280157	"	" 'QUERCIFOLIA'
280158	"	" 'ROHANII'
280159	JUNIPERUS COMMUNIS var.	NIPPONICA
280160	JUNIPERUS COXII	
280161	JUNIPERUS SABINA	'VARIEGATA'
280162	"	" 'FASTIGIATA'
280163	"	SCOPULORUM 'SKYROCKET'
280164	"	SQUAMATA 'WILSONII'
280165	LAVENDULA OFFICINALIS	'HIDCOTE'
280166	LIRIODENDRON TULIPIFERA	'HELTORF'
280167	"	" 'MEDIOPICTUM'
280168	PICEA ABIES	'ACROCONA'
280169	"	" 'HORNIBROOKII'
280170	"	GLAUCA 'ECHINIFORMIS'
280171	"	JEZOENSIS 'AUREA'
280173	"	PUNGENS 'BISMARCK'
280174	PINUS CEMBRA	'GIMBORN NO. 2'
280175	PINUS NIGRA	'AUREA'
280176	PINUS PARVIFLORA	'GIMBORN'S IDEAL NO. 1'
280177	"	" 'GLAUCA'
280178	POTENTILLA FRUTICOSA	'WALTONENSIS'
280179	PSEUDOTSUGA MENZIESII	'ARGENTEOVARIEGATA'
280180	"	" 'OUDEMANSII'
280181	QUERCUS DENTATA × Q. PONTICA	
280182	"	× HICKELII (veins yellow)
280183	"	" (veins red)
280184	TAXUS BACCATA	'DAVISIAE'
280185	"	" 'IMPERIALIS'
280186	"	" 'JACKSONII'
280187	"	" 'MAJOR'
280188	"	" 'NANA'
280189	"	" 'ADPRESSA STRICTA'

280190 THUJA OCCIDENTALIS 'BUCHANANII'
 280191 " PLICATA 'VARIEGATA'
 280192 " OCCIDENTALIS 'RECURVATA'
 280193 " " 'WAGNERIANA'
 280194 THUJA PLICATA 'STONEHAM GOLD'
 280195 TSUGA HETEROPHYLLA 'CONICA'
 280196 ULMUS GLABRA 'NANA'
 280465 ABIES ALBA 'PENDULA'
 280466 CEDRUS DEODARA 'HESSE'
 280467 CEDRUS LIBANI subsp. STENOCOMA
 280468 PICEA JEZOENSIS
 280469 " " 'AUREA'
 280470 " " 'NYMPHENBURG'
 280471 PICEA ABIES 'ARGENTEOSPICA'
 280472 PICEA MARIANA 'BEISSNERI'
 280473 PICEA OMORIKA 'NANA'
 280474 PICEA ORIENTALIS 'NUTANS'
 280475 PICEA POLITA selection
 280476 PICEA SCHRENKIANA
 280478 PINUS DENSIFLORA 'PUMILA'
 280479 PINUS HELDREICHII var. LEUCODERMIS 'AUREOSPICATA'
 280480 PINUS MUGO 'HESSE'
 280481 PINUS CEMBRA 'PYGMAEA'
 280482 PSEUDOTSUGA MENZIESII 'FLETCHERI'
 280483 TSUGA MERTENSIANA 'ARGENTEA'

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