

THE



AVANT GARDENER

The Unique Horticultural News Service

© 1984, HORTICULTURAL DATA PROCESSORS, Box 489, New York, N. Y. 10028
 Published monthly Sold only by subscription, \$15.00 per year
 Thomas Powell, Editor and Publisher Betty Powell, Executive Editor

Vol. 16, No. 8

June, 1984

GUEST SPECIAL ISSUE . . . BY DR. AUGUST E. KEHR

[Rhododendrons are the most widely grown and loved of all broadleaved evergreens. Dr. Kehr, former director of ornamentals research of the U.S. Department of Agriculture, is past president of the American Rhododendron Society and initiated its pollen bank and Research Foundation. He was awarded the Society's Gold Medal in 1976, and has hybridized and released several rhododendrons and azaleas.]

RHODODENDRONS FOR AMERICA

Rhododendrons grow best in a cool, moist climate where the soil is quite acid (pH 4.5 to 5.5) and where relative humidity does not often drop to low levels for any length of time. Consequently, there are many areas in this country and Canada where conditions are naturally suitable for these very desirable plants.

Given favorable conditions, rhododendrons are known to grow to be 100 or more years old. There are rhododendrons of such vigor in New Zealand that they are serving as shade trees. However, most of the rhododendrons being developed today seldom grow more than 3' high and hence are suitable for landscaping around an average home.

THE RHODODENDRON SPECTRUM

From a classification standpoint, the term rhododendron includes both rhododendrons and azaleas, because botanists place azaleas in the genus *Rhododendron*. However, most gardeners think of these as separate.

In actuality rhododendrons can be divided into five categories, each of which is distinct from a gardener's standpoint, from a botanical classification standpoint, and from a hybridizer's standpoint: (1) broadleaved, non-scaly rhododendrons; (2) scaly rhododendrons; (3) vireya rhododendrons,

which are mainly tropical in origin; (4) evergreen azaleas; and (5) deciduous azaleas. This article will deal only with the plants commonly considered as rhododendrons, the scaly and non-scaly rhododendrons.

The genus is made up of at least 800 species. They are native almost entirely to the northern hemisphere, primarily Asia, North America and the East Indian Islands. Australia has one species, Europe two.

Rhododendron species range in height from about 2" to trees 50' to 60' high. Flower colors in the scaly and non-scaly rhododendrons include red, pink, white, purple, yellow, orange, and pastels which have many of the above colors in combination. Some exciting work is being done by hybridizers to develop improved hardy pastel colors, including yellow and orange.

In addition to the 800 or so natural species, hybrids have been produced in countless numbers, especially in the last 50 years. Probably an estimate of 5,000 hybrids would be on the low side.

THE KEHR LIST

Rhododendrons best suited for any given area will vary greatly, and any such list is a rough guide at best. If a gardener wishes to buy more than a few plants, it is recommended that he or she consult a

nearby experienced grower. In addition, most of the 52 local chapters of the American Rhododendron Society scattered throughout the U.S. and Canada develop a list of recommended varieties.

The following list of 30 varieties and species (which may be called the Kehr list) will give the gardener a good sampling of colors, sizes, and flowering periods, as well as a sampling of the finer hybrids and species. The season of flowering is for Zone 6 (-10°).

VERY EARLY (FEBRUARY-MARCH)

R. mucronulatum - a deciduous species, native to northeastern Asia and Japan, extremely hardy. It blooms January to March, the flowers rosy-purple. The leaves are small and scaly. Named cultivars of this species are also available, including 'Cornell Pink', 'Mahogany Red', and a white form. It grows upright to 6' and is fine for early cut flowers. Hardy to -25°.

'Olga' - a hybrid, very hardy and vigorous, scaly-leaved. The flowers, appearing in March to April, are bright pink. 'Olga' is 5' high and spreading. Hardy to -15°.

'P.J.M.' - a very showy hybrid, flowers purple or pinkish-purple, scaly leaves, very vigorous, highly recommended. It flowers February to March, grows upright to about 5', and is hardy to -15°.

EARLY APRIL

R. keiskei - from Japan, probably the most reliable of the yellow-flowered species. Its leaves are small and scaly. There are three forms - tall, dwarf and prostrate. 'Yaku Fairy' is a named clone of the prostrate form, which grows less than 1' high. The dwarf form is 18" to 24", the tall about 4'. Hardy to -15°.

R. metternichii - a non-scaly leaved Japanese species. A low grower, usually 2' to 3', it has shiny foliage with felt underneath, and nice trusses of apple-blossom-pink flowers. One of the earliest of the non-scaly types to flower.

R. racemosum - a scaly-leaved species from China, height about 3' to 4'. Flowers in small trusses, pink or deep pink. -5°.

LATE APRIL

'Blue Ridge' - a nearly blue, scaly-leaved hybrid, very low growing, hardy to at least -10°. A somewhat similar hybrid is 'Russautinii'.

'Mary Fleming' - a pastel pink and yellow, low-growing, bearing abundant soft pink flowers in globular clusters. -20°.

'Purple Gem' - a low-growing purple-flowered hybrid with small scaly leaves. People often mistake it for a blue-purple azalea. Much similar is 'Ramapo'. -20°.

'Windbeam' - a scaly-leaved hybrid, low-growing, flowers plentiful in globular clusters, soft pink color. Hardy to -20°.

EARLY MAY

R. carolinianum - a scaly-leaved species native to the eastern U.S. It grows to 4' and has pink flowers, sometimes with a blotch in the throat. White and light yellow forms are sometimes available. 'M. S. Webb' is a salmon-flowered form, while a tetraploid form with larger leaves and flowers is called 'Epoch'. All require well-drained, well-aerated soil. -25°.

R. chapmanii - native to Florida, this scaly-leaved species grows to 3' and bears clear pink flowers. It is on the list of endangered plants, but is widely available from seed-grown sources. Hardy to -15°.

'Cynthia' - an award winner in many shows, this non-scaly leaved hybrid is a vigorous, tall, compact grower with large trusses of rosy-crimson flowers. -10°.

'Janet Blair' - a densely foliated, spreading, non-scaly hybrid growing to 5' to 6', floriferous, the pale pinkish mauve flowers borne in large full trusses. A similar clone is 'John Wister'. -15°.

'Nestucca' - very compact and semi-dwarf, this non-scaly hybrid has white flowers with traces of brown in the throat. The foliage is excellent. Hardy to -10°.

'Ruby Bowman' - a hybrid with striking flowers and foliage. The flowers are tyrian red with blood red throat. Hardy to 0°.

'The Hon. Jean Marie de Montague' - a most striking scarlet-flowered non-scaly hybrid, low-growing, with glossy foliage and large trusses. Very popular. 0°.

MID-MAY

'County of York' - an extremely vigorous, tall, non-scaly hybrid. A rather open plant with dark green convex leaves. The flowers are white with olive throat. -15°.

R. fortunei - a tall growing species from China, usually with pink or lilac-pink flowers, very fragrant. A vigorous grower, hardy to -15°.

'Helene Schiffner' - a pure white hybrid with trusses of such perfection they often win awards at shows despite the relatively small flowers. Hardy to -5°.

'Mary Belle' - a pastel-flowered non-scaly hybrid with shades of pink, yellow, and tones in-between. A low grower hardy to -10°.

'Scintillation' - one of the best light pink flowered non-scaly hybrids, low growing and spreading. A garden "good doer", easy to grow and reliable. Hardy to -10°.

'Wheatley' - a compact, medium-growing hybrid with good tall trusses of silvery-pink flowers, often a show winner. -15°.

R. yakusimanum - probably the best all-around non-scaly species. The foliage is deep green with heavy brown felt underneath. The apple-blossom-pink flowers are borne in perfect trusses. Very low growing, and a garden must. Hardy to -15°.

LATE MAY

'America' - one of the old "ironclad" non-scaly hybrids. Low-growing, somewhat sprawling, with dark red flowers in compact ball-type trusses. A similar type red iron-clad is 'Nova Zembla'. Hardy to -25°.

'Cadis' - a medium-growing non-scaly hybrid that is quite foolproof. The light pink flowers are large and somewhat fragrant. Hardy to -15°.

'Goldsworth Yellow' - an old standby yellow-flowered non-scaly hybrid. The plant is medium-tall, 5' to 6', wide-growing. It flowers best in half sun. There are better colored yellow hybrids, but this is a good one for the beginner and is less temperamental than most yellows. Hardy to -15°.

'Mars' - another old-timer, a non-scaly low-growing hybrid with true red flowers. Hardy to -10°.

'Roseum Elegans' - the most popular of all the so-called ironclads. It is probably the most dependable, all-around do-gooder. For a beginner, it should be the first plant to try. If you cannot grow this variety, perhaps you should not try to grow rhododendrons. Tall-growing with

good foliage, it bears rose-lilac flowers in well-formed trusses. Hardy to -25°.

'Vulcan' - medium-growing and reliable, with the brightest of red flowers. A similar cultivar is 'Vulcan's Flame'. -5°.

PLANTING SITES

The ideal site for rhododendrons is one that is protected from strong winds by other shrubbery or windbreak trees, shaded from hot sun, and on a north-facing slope.

Some sun is needed to develop flower buds and to encourage compact growth, but direct sun for any length of time over a few hours is to be avoided, especially at the middle of the day. Direct sun in the early morning and late afternoon is less harmful. Avoid planting near reflecting walls. Dappled light is ideal, such as comes from high-branching trees and short-needed pines. Never plant near shallow-rooted trees that will compete with the rhododendrons for water and nutrients, including maples, elms, ashes, tulip poplars and even dogwoods. Deep-rooted trees - oaks, pines, most hardwoods - are fine.

Avoid heavy dense shade because on such sites growth will be spindly and flowering either poor or non-existent. Equally vital is protection from the southern sun, which can be obtained by planting on the north side of a house, hedge or fence.

Planting on a slope, if available, provides air drainage and protects the plants and flowers from unseasonable frosts. Cold pockets - low, hollow locations - mean increased danger of cold damage.

SOILS AND PLANTING

The two most common causes of failure with rhododendrons is planting them in improper soil and too deep planting.

The soil should be definitely acid. A pH of 4.5 to 5.5 is desirable. If in doubt, get a soil test. Soils that are too alkaline can be made acid by applying sulfur.

A soil high in organic matter is preferable, but rhododendrons will thrive in straight mineral soil provided it is highly aerated. Rhododendrons have thread-like feeder roots, and all the roots are very shallow. The roots must have air. It is largely because of their need for air that they grow very near the surface of the soil.

Soils that hold undrained water are lethal.

To test a soil for drainage, dig a hole about 12" x 12" and fill it with water. Let the water drain, then fill again with water. If the water stands in the hole after the second filling for longer than an hour, it becomes questionable for rhododendrons. If it stands three to four hours, do not plant rhododendrons in it, but on it. In other words, plant on top of the soil.

Many people are afraid to plant rhododendrons on top of the soil. However, if the soil is not properly aerated, it is the only way to plant them. Do not even make a shallow planting hole in heavy, poorly drained soil. It acts as a bathtub and drowns your plants.

To plant on the surface of a heavy soil, place the plant on the top of the soil and mound up around the root ball coarsely milled pine bark, a mixture of sand and peat, rotted sawdust, composted oak leaves, decaying wood chunks, even coarse gravel or crushed stone mixed with organic material.

For larger planting areas, the same effect is obtained by building up a bed about 12" above the existing soil level and filling it with any well-aerated mixture. Logs make ideal retainers for such raised beds. Other retainers are dry walls made of flat stones, loose bricks, cement blocks, even treated wood boards staked on edge.

When planting rhododendrons, plant shallow. If the soil medium is freshly rototilled or otherwise loose, allow for settling later and plant even shallower than on settled soil. Even with well-aerated soil, a certain amount of mounding is beneficial. It is far, far better to plant too shallow than too deep. In a moist climate with even, well-spread rainfall, plantings thrive almost unbelievably when the root ball is placed on top of the soil without any soil drawn up around it.

Many rhododendrons today are grown and marketed in containers. Container plants require some additional treatment before planting. In nursery containers, the roots are rootbound, and will remain rootbound if not treated. After removal from the container, make 5 or 6 cuts 1" deep along the full depth of the root ball. Such wounding encourages new root growth.

Container plants should be planted with the top third of the root ball entirely exposed to the air. If planted with the top even with the surface, the lower roots will die from lack of air. The exposed roots

will live even above the soil level.

For beginners, spring planting is the safest, early in spring after freezing weather is over. But rhododendrons, because of their fibrous root system, can be planted over a rather long period, and even when they are in flower. As a rule, avoid planting during the hot, dry part of summer. The larger the root system, the less danger there is of losses due to transplanting. It is for this reason that large plants can be safely moved, while very small ones are sometimes lost.

Never cultivate around rhododendrons. If weeds are a problem, mulch or hand-weed.

CULTURE

The soil around rhododendrons should be kept moist, but never wet. After planting, water heavily, then do not water again until the soil begins to feel dry. A few heavy waterings are better than many light ones. The rule is moist, not water-logged. Actually rhododendrons with their millions of hair-like roots can withstand quite a lower soil water content than most plants.

Newly planted rhododendrons require more watering during the first season. After the roots are well established in later seasons, keep watering to the minimum needed to prevent the soil from becoming dry. An organic mulch over the roots conserves soil moisture, and also provides valuable nutrients as it decays.

Rhododendrons may be lightly fertilized, but avoid heavy feeding. The safest fertilizers are organic. Chemical fertilizers require more skill - rhododendron roots are easily killed by high salt concentrations caused by over-fertilization with these.

It is best to give many very light applications rather than one or two heavy ones. Fertilizer application should begin in the spring about one month before growth starts, then continue every four to six weeks until early summer. Late summer applications should be avoided - they make the plants grow so late in the fall that early frosts damage tender young growth.

Highly recommended for early spring fertilization is a mixture of 5 parts of cottonseed meal, 3 parts of superphosphate, and 1 part of a complete fertilizer such as 10-10-10. Mix thoroughly and apply at the rate of 1 tablespoon per 1' of top growth in a circular band on the soil midway

from the trunk to the drip line of the branches. Late spring and early summer feedings can be cottonseed meal alone.

In the experience of most rhododendron growers, commercial fertilizers formulated especially for rhododendrons have not proven superior to ordinary garden fertilizers.

In nature, rhododendrons thrive with no fertilization other than decaying organic matter - so if you maintain a constant organic mulch, little fertilizer is needed.

Never put limestone around rhododendron plants. They will not tolerate it. Calcium, if needed, should be supplied by the addition of gypsum (calcium sulfate). This is also called land plaster, and has the effect of loosening heavy soils, thereby improving aeration and drainage. Surprisingly, rhododendrons do require considerable amounts of calcium, but not in the form of limestone.

On days when the relative humidity of the air is low (below 20%), it is wise to wet the foliage once or twice a day with a hose, especially at midday. Spraying is also desirable when the temperatures rise, particularly above 90°. Some growers practice this rule carefully, especially if the temperatures at night also remain high.

Pruning may be done to encourage better-shaped plants. Even better than pruning is pinching out the early growth (just as the leaf buds are expanding they can be easily broken out). Such pinching back encourages multiple bud breaks and results in a bushy plant. Pruning is best done just after flowering time.

Rhododendrons which are properly planted in well-aerated soil are less troubled by insects and diseases than many other garden plants. The most serious disease is root rot, which is encouraged by poor aeration and poor subsoil drainage.

Insects can sometimes be bothersome. Leaf-eating insects are best controlled by Orthene. Japanese beetles rarely bother rhododendrons, but if they do, Sevin will easily control them.

If the plants have yellow leaves, it indicates nutritional problems. The first thing to consider is soil aeration. If the soil is poorly aerated, the roots do not grow properly and this causes nutritional deficiency. If the soil is well-aerated, then look at mineral deficiencies.

Spray the leaves with a solution of soluble iron which is available at most garden stores. In addition, sprinkle a small

amount of epsom salts around the plant to provide magnesium. These two treatments, along with the addition of gypsum to the soil, will usually clear up yellow leaves within a month. If not, get a soil test to see if the soil is sufficiently acid.

CREATING YOUR OWN HYBRIDS

Hybridizing rhododendrons can be lots of fun for anyone, of any age or background, with a love of plants. It can be as simple or as complex as you care to make it.

The main requirements are patience, curiosity, and an eagerness to learn. The prospective hybridizer must not be discouraged by a few disappointments. There is an excitement in creating plants that are unlike any other ever before grown and in watching for your new creations to flower. It may take a minimum of five years for rhododendrons to flower from true seed. However, with modern techniques of lighting, a friend of mine shortens this to two years.

RULE 1 - MAKE CROSSES WITHIN LIKE GROUPS

The first recorded rhododendron hybrid came from an accidental cross made in the 1800s between *R. ponticum* and *R. nudiflorum*, the latter a deciduous azalea. Crosses between rhododendrons and azaleas are possible but very difficult, and the hybrids are seldom worthwhile.

So the first rule is to hybridize within a group, i.e. scaly-leaved with scaly-leaved and non-scaly with non-scaly. Crosses between scaly and non-scaly types rarely succeed, and it is better to spend your time in a more profitable manner.

RULE 2 - HAVE A PURPOSE IN HYBRIDIZING

Do not make a cross just because two plants are handy and close by. Without a definite goal, little progress will be made. Some worthwhile objectives could be hardiness, compact or dwarf growth, resistance to diseases or insects, improved colors, or plants which can tolerate heat.

Probably more improvement effort has been devoted to non-scaly rhododendrons than to any other group. Despite this, there are wide areas in the U.S. and Canada where these plants cannot be grown because they cannot tolerate the heat, alkaline soils, drought or low humidity. These are challenges for venturesome hybridizers.

In scaly rhododendrons, there is no true

red. Reddish or even off-red species exist and can be used as parents. Likewise, most scaly hybrids flower very early in spring and there are few mid-season or late hybrids. Late-flowering scaly species exist so there is a good breeding goal here.

In both scaly and non-scaly types, double flowers would be desirable. Germplasm for double flowers exists, so it is a matter of obtaining parents and using them for this.

These are but a few of the objectives one could have. With about 800 species and over 5,000 hybrids to choose from for parents, there is unlimited opportunity.

RULE 3 - KEEP YOUR OBJECTIVES NARROW

It's of the utmost importance to concentrate on a few objectives. Many beginners make the mistake of trying to do too much. Usually a single goal is sufficient, for then one can concentrate all time and effort on that objective.

Thus if you are primarily interested in increased hardiness, spend all your time in searching for better parents, learning techniques of testing for hardiness, studying the factors involved in hardiness, and discarding all plants that are not hardy regardless of their other good qualities.

RULE 4 - DO A GOOD JOB

Plan to start right and follow through. Develop a good knowledge of existing species and hybrids so you will have standards of excellence for comparison, and so you can judge how to make selections for superior plants from among the many seedlings you grow. Visit many gardens and attend rhododendron shows to study the better forms. Build up a library and study the descriptions of award-winning plants.

RULE 5 - KEEP ONLY THE SUPERIOR PLANTS

When the plants flower, keep only the superior plants to grow on. Unless you are ruthless in discarding average or below-average plants, you will end up with such a huge number of heterogenous plants of little or no merit that you will become confused and bogged down with their routine care. Above all, don't be tempted to name a plant unless it is recognizably superior to any other plant. It's better to become known for a few award-winning releases than to have a large number of "also-rans".

MAKING THE CROSSES

Hybridizing is simple because the parts

of rhododendron flowers are fairly large and easily recognized.

(1) Just before the selected flower opens, pull out the stamens. Make a slit in the flower bud to expose the stamens and remove them with a pair of tweezers. Remove adjacent open flowers to prevent their pollen from contaminating your cross.

In a day or two, the pistil will become receptive, as noted by a shiny appearance on the top of the pistil.

(2) Pollen may be fresh, stored, or purchased from the American Rhododendron Pollen Bank. For fresh pollen, pull the stamens from a newly opened flower to be used as the pollen parent, and apply the pollen onto the receptive stigma. If you wish, you may pick the anthers a day ahead to insure getting it before the pollen-collecting insects. These may be kept in the refrigerator for several days. Rhododendron pollen is stringy and comes out of the anther in long strands which may be wound around on the stigma, completely covering it.

(3) Tag the flower to indicate female and male flowers and in that order. The female is the seed parent and the male is the pollen parent. It is not necessary to bag the pollinated flowers as there is little risk of chance pollination if you have literally covered the pistil with pollen.

(4) The successful crosses will result in growth of the ovary within a few weeks. The seed should be left on the female plant until just before the first killing frost. Fully ripened seed gives best germination.

After harvest, dry and clean the seed and put it in labeled envelopes or paper wrappers. Do not store it in plastic envelopes because they hold moisture. Store in the refrigerator in a container such as a peanut butter jar, with a little package of dessicant under the seed. Rhododendron seed is almost as tiny as begonia seed.

(5) At planting time in early spring, prepare a shallow flat, 3" to 4" deep, with ample drainage. Prepare a mix of equal parts of screened peat and perlite. Wet this thoroughly with boiling water and fill the flat. Leave the medium quite loose.

Plant the seed on top of the medium, but do not cover it unless you use a very fine sprinkling of fine white sand or milled sphagnum moss. Cover the flat with glass or plastic to prevent drying, and keep it at about 75°. Do not allow the seed ever to become the least bit dry - spray with a

fine sprayer every few days. Protect it from direct sun; use a strong north light or a greenhouse.

The seedlings may be transplanted into other flats (same soil mix) when they form the second true leaves. Fertilize lightly with a spray of fish emulsion - no chemical fertilizer at this stage. If mold appears at any time on the young seedlings, spray with a very weak solution of a fungicide. Seedling growth can be speeded by extending the day with artificial lighting.

The seedlings should be 2" to 4" tall by fall. It is suggested that they be kept in the flat in a coldframe over the winter, then planted in a prepared bed in spring.

THE ROMANCE OF RHODODENDRONS

Although by far the greatest number of rhododendron species are found in Asia, there is little in the Western literature of their history from that part of the world. The Chinese and Japanese apparently did not value rhododendrons as highly as they did azaleas. Consequently much of the history of these plants is centered in Europe, especially the British Isles where no species is endemic. Thus, rhododendrons were most highly valued in an area of the world where (with the exception of two species) they were not found originally in nature.

The modern history of rhododendrons extends little more than 300 years ago when the first species, *R. hirsutum*, the alpine rose, was introduced into Great Britain from the Alps Mountains in 1656. Earlier history based on fossilized remains indicate they existed in Europe and North America, probably 60 million years ago. Their probable descent is from magnolias and camellias which evolved even earlier.

In the hundred years or so after 1656, a mere trickle of species was introduced into the British Isles, mainly from North America. By 1800, fewer than a dozen had found their way into cultivation. However, at this time the vast rhododendron flora of Asia was discovered and the trickle became a flood prior to 1900. In fact, the rate of introduction was so great there was not sufficient time and expertise to catalog them properly. As a result, the taxonomic nomenclature used during the second half of the century was based on stop-gap measures. The correction is now being made and a system of classification is being

worked out, but it will undoubtedly not be completed before the year 2000, if then.

In America, the history is even briefer. Other than the species which are native here, little was done to introduce or improve these plants. In the late 1870s, some of the European hybrids found their way into New England, but there was little interest in rhododendrons until after World War I. By 1930, only a dozen or so people were engaged in introducing the species and hybrids from Europe or elsewhere.

By the 1940s the tempo began to pick up. The American Rhododendron Society was organized in Portland, Oregon, in 1944 with about 100 members. Today it has 6,000.

Today most of the world's known species have been introduced into this country, and one of the best collections of species in the world now exists near Tacoma (Rhododendron Species Foundation, Box 3798, Federal Way, WA 98063). A large proportion of the hybrid rhododendrons registered today were developed by amateur hybridizers in this country within the last 40 years. A seed list of hybrids and species published in 1984 contains nearly 2,000 different seed lots developed by approximately 200 amateur hybridizers and collectors, mainly in the U.S. and Canada.

Thus the entire history of *Rhododendron* in America spans little more than a century, and effectively only about 40 years.

THE AMERICAN RHODODENDRON SOCIETY

The best source of information is a grower or specialist right in your city or town. The American Rhododendron Society has over 6,000 members in 52 chapters, and it is likely that one lives near you and would be very pleased to provide information and assistance. To learn the whereabouts of a chapter near you, write to Mrs. Ed Egan, Executive Secretary, American Rhododendron Society (14635 S.W. Bull Mountain Road, Tigard, OR 97223).

The Society also offers many valuable books and publications, including "American Rhododendron Hybrids" (\$8.50), "The Rhododendron Handbook 1980" (\$16), "Rhododendrons in America" (\$21), "Getting Started with Rhododendrons and Azaleas" (\$12.50), and "Greer's Guide to Available Rhododendron Species and Hybrids" (\$11). These may be ordered from the Executive Secretary; prices are postpaid.

RHODODENDRON SOURCES AND RESOURCES

"Dwarf Rhododendrons", by Peter Cox (Macmillan, \$17.95)
 "The Larger Species of Rhododendrons", by Peter Cox (Batsford, Box 578, North Pomfret, VT 05053; \$45)
 "Rhododendrons and Their Relatives", Handbook 66, Brooklyn Botanic Garden (Brooklyn, NY 11225; \$2.25 plus 80¢ shipping)
 Two excellent references, currently out of print but available in many libraries or from used book dealers, are "Rhododendrons and Azaleas", 2nd ed., by Clement G. Bowers (Macmillan, 1960) and "Rhododendrons of the World" by David G. Leach (Scribner, 1961). Other useful books are available from the American Rhododendron Society (see page 63).

Warren Baldsiefen, Box 88, Bellvale, NY 10912; \$2.50
 Bovees Nursery, 1737 S.W. Coronado, Portland, OR 97219; \$2
 Bull Valley Rhododendron Nursery, Route 1, Box 134, Aspers, PA 17304; \$1
 Carlson's Gardens, Box 305, South Salem, NY 10590; \$2
 V. O. Chambers Nursery, 26874 Ferguson Road, Junction City, OR 97448
 The Cummins Garden, 22 Robertsville Road, Marlboro, NJ 07746; \$1
 Eastern Plant Specialties, Box 40, Colonia, NJ 07067; \$1
 Flora Lan Nursery, Route 1, Box 357, Forest Grove, OR 97116
 The Greenery, 14450 N.E. 16th Place, Bellevue, WA 98007; \$1
 Greer Gardens, 1280 Goodpasture Island Road, Eugene, OR 97401; \$2
 Stan and Dody Hall, 1280 Quince Drive, Junction City, OR 97448; \$1
 Mowbray Gardens, 3318 Mowbray Lane, Cincinnati, OH 45226
 Roslyn Nursery, Box 69, Roslyn, NY 11576; \$1
 Salter Tree Farm, Route 2, Box 1332, Madison, FL 32340; SASE
 Sonoma Horticultural Nursery, 3970 Azalea Avenue, Sebastopol, CA 95472; \$1
 The Sweetbriar, Box 25, Woodinville, WA 98072
 Van Veen Nursery, Box 06444, Portland, OR 97206
 Westgate Gardens Nursery, 751 Westgate Drive, Eureka, CA 95501
 Whitney Gardens, Box F, Brinnon, WA 98320; \$1
 Woodlanders, 1128 Colleton Avenue, Aiken, SC 29801; \$2.50

Additional copies of this Special Issue are \$2 each,
 10 or more \$1 each, 50 or more 50¢ each.

 THE AVANT GARDENER

P.O. Box 489

New York, N.Y. 10028

 SECOND CLASS POSTAGE
 PAID AT NEW YORK, N. Y.
