THE AZALEAN

Journal of the Azalea Society of America

Volume 7 Number 1 March 1985

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The Azalea Society of America, organized December 9, 1977 and incorporated in the District of Columbia, is an educational and scientific non-profit association devoted to the culture, propagation and appreciation of the series *Azalea* (subgenus *Anthodendron*) of the genus *Rhododendron* in the Heath family *(Ericaceae).*

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THE AZALEAN

The Journal of the Azalea Society of America, Inc.

Dr. Charles H. Evans, Editor

THE AZALEAN is published during March, June, September, and December by the Azalea Society of America, Inc., P.O. Box 6244, Silver Spring, MD 20906. Additional copies of the current and back issues are $2.50 each and can be obtained from the Secretary.

Address all editorial and business correspondence to The Editor, **THE AZALEAN,** 9233 Farnsworth Drive, Potomac, MD 20854.

Volume 7 No. 1 March 1985

IN THIS ISSUE:

PATTERN OF SPORTING

Charles H. Evans and William C. Miller III
Potomac and Bethesda, Maryland

Part of the excitement and intrigue of azaleas is the variety of flower colors present on cultivars of one variety compared to another and even on the same plant of a variety. An azalea flower of a single color is known as a self. Dots, blotches, flecks, stripes, sectors, margination, and a variety of other patterns produce an extraordinarily diverse flower color patterning, and thus lead to the delightful diversity of azalea cultivars.

A single azalea plant, particularly a Satsuki, may exhibit several, and in a few instances many, flower variants coupled with a changeable flower color pattern from one season to the next (1). In addition, a plant demonstrating a single or common flower color pattern may throw "sports" or flowers of unusual coloration from time to time. Some "sports" if vegetatively propagated breed true, while others revert to their parental form or produce yet another pattern reflecting the incompletely understood genetic constitution and regulation resident in azaleas.

Color variation and sporting are important aspects of azalea hybridization and propagation (2). The potential for sporting, however, can lead to severe problems when a cultivar does not resemble the parent. In September 1965 letters to Dr. William Ackerman, horticulturist in charge at that time at the U.S. Plant Introduction Station at Glenn Dale, Maryland, Ben Morrison elaborated upon his ideas concerning the development of azalea sporting. These letters were exchanges with Bill Ackerman and with Kaname Kato of Tokyo, Japan, concerning flower color variation in the Satsuki cultivar 'Kaghetsu-muji' (Flower and Moon-self). Morrison wrote: "I know that both Dr. Creech and Dr. Kato feel that any sport will in time yield all the other sports possible from the original. This has not been the case here, as yet. When I may have to "eat my words" remains to be seen. I have an imported plant of Kaghetsu that answers all the proper descriptions and has given me all the sports. I have a plant from Henry Hohman that is a self rose red, and I have some propagations of it my old P.I. stock, that have bloomed a rose red self, and in their third summer, have given in one case, a striped branch and on another, a white throat, but neither have the purple color of Kaghetsumuji." (3).

"While I very much doubt that any Japanese will go along with me, my own observations incline me to be arbitrary and state that any striped clones with white or light colored base color, can produce all types of sports, see page 282-283 in Lee's last [Reference 1, Ed.]. Lee altered my text a little as any editor would do, and made it less snappy!!!! I enclose a sheet of sketches [Figure 1, Ed.] to show what I meant in that paragraph. I have sent just such sketches to Kato but no comment follows. All I can say, is that I have seen this happen time and time again, with my first experience of it with the old P.I. introduction of Mai Hime!

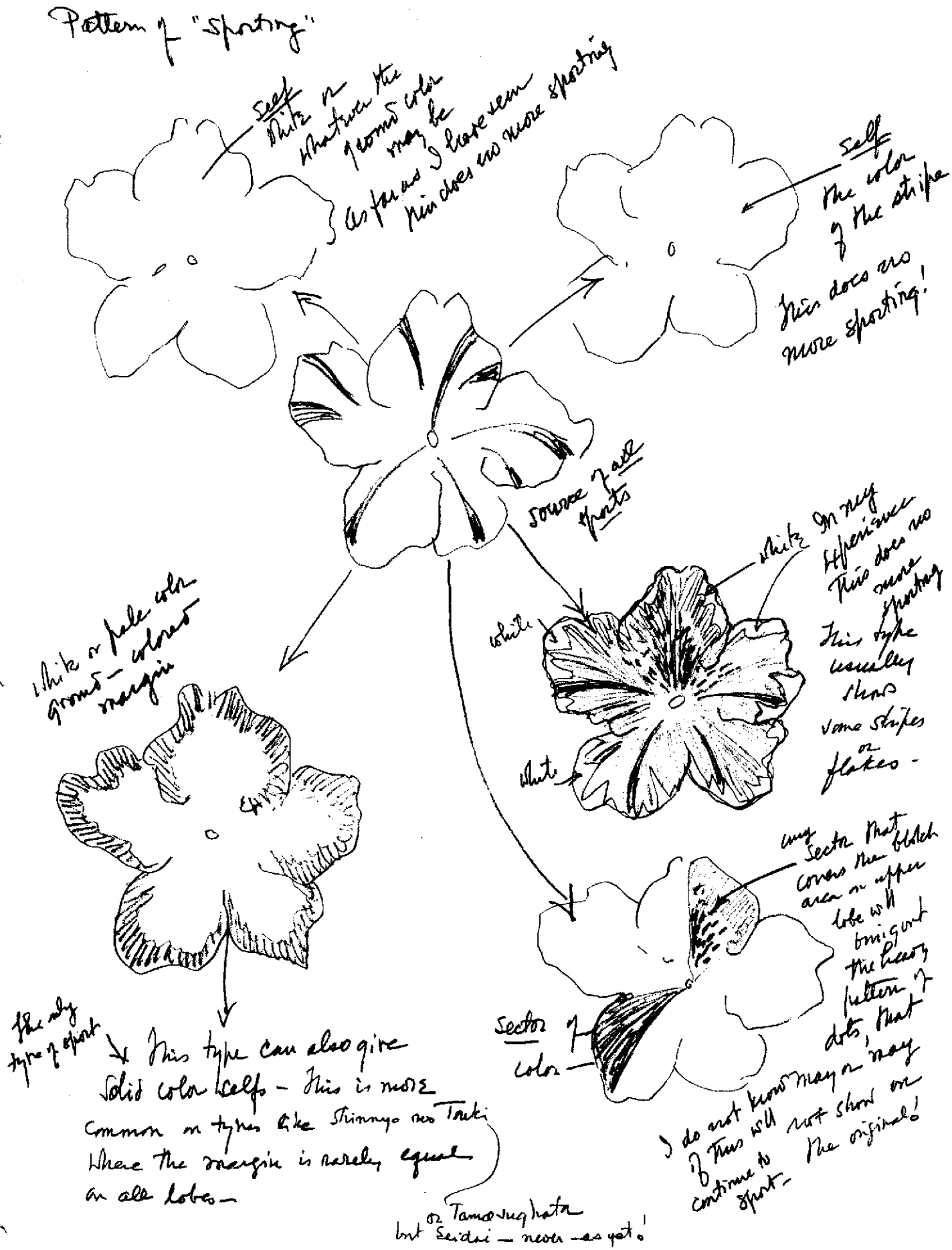
A rather similar type of sporting will come from the use of the old Southern Indica, 'Fortunei from Vittata'! This plant is itself, a striped flower, and behaves just as the satsukis with stripes, behave."(4)

The genetics of azalea flower coloration are incompletely defined (5) but the variation in azalea flower coloring continues to provide a stimulus and challenge to hybridizers and an inspiration and delight to propagators and growers, both amateurs and professionals. With the introduction of the Brookside Gardens Satsuki Collection (6) and the many other hybrid groups containing varying degrees of Satsuki parentage, B.Y. Morrison's observations are as important today as they were when written twenty years ago.

REFERENCES

1. Lee, F. P. **The Azalea Book,** 2nd Edition, D. Van Nostrand Co., Inc., Princeton, New Jersey (1965) pp 282-283.
2. Ibid, pp 86-88.
3. Morrison, B. Y., Letter of September 22, 1965 to Dr. W. Ackerman, in the files at the Plant Introduction Station, Glenn Dale, Maryland.
4. Ibid. September 23, 1965.
5. Heursel, J., "The Inheritance of Flower Color in Azaleas". In **Azaleas,** Galle, F. C., Timber Press, Beaverton, Oregon (1985).
6. **THE AZALEAN**, 6: 57-59, 1984.

THE AZALEAN is very pleased to publish this original drawing and commentary by B. Y. Morrison from the files at the Plant Introduction Station at Glenn Dale, Maryland.


Pattern of "sporting"
Self
White or whatever the ground color may be as far as I have seen this does not more sporting
Self
The color of the stripe
This does not more sporting!
source of all sports
white or pale color ground – colored margin
white
white
On my experience This does not more sporting This type usually shows some stripes or flakes –
any sector that edged covers the area in upper lobe will dominant the heavy pattern of dots, that
sector of color –
I do not know may or may not this will not show on continue to the original sport –
the only type of sport
This type can also give solid color selfs – This is more common in types like Shinnyo and Taiki where the margin is rarely equal on all lobes –
or Tamosughata but Seidai – never – as yet!

THE IMPORTANCE OF DISEASE PREVENTION IN AZALEA CULTURE

Robert C. Lambe
Blacksburg, Virginia

Azaleas planted in the landscape that become established quickly and develop into healthy, vigorous plants frequently indicate healthy plant production in the nursery. Producing plants that are free from fungus pathogens that attack roots, stems, flowers, and leaves should be a goal of all progressive nurserymen. The recent implementation of improved technology in many nurseries such as high humidity propagation to avoid over misting, the use of pine bark growing media ensuring good porosity, containers placed on crushed rock to ensure drainage, application of systemic fungicides to prevent infection by fungi, and chlorination of irrigation water supplies or watering with pathogen-free irrigation water from wells, are all factors in an improved system of growing azaleas.

DISEASES IN PROPAGATION

Azalea cuttings rooted under certain conditions are susceptible to infection by the fungi *Rhizoctonia solani* and *Cylindrocladium scoparium.* If cuttings are collected from stock plants with leaf spots, stem die-back or root rot, healthy-appearing cuttings will rot after being stuck in propagating media. Cutting rots occur more commonly in peat moss or peat moss-perlite rooting mixtures that have been kept excessively wet by prolonged misting intervals or in a propagating medium that has been used previously to root azaleas. After cuttings have rooted, root and stem rots caused by *Phytophthora, Cylindrocladium,* and *Rhizoctonia* are occasionally severe. Other fungi like *Pythium* and *Pestalotia* occur secondarily as stem and root rotters.

DISEASE PREVENTION

Cuttings should be collected from healthy, vigorous plants. Cutting rots can be minimized if cuttings are stuck in new or pasteurized rooting media, in flats or beds that have been chemically treated and are misted so that the media is never soggy. Systemic fungicides like Subdue® and Aliette® applied as granules or in a water drench over the medium surface will prevent infection by water molds like *Phytophthora* and *Pythium* spp.

Table 1. AZALEA DISEASES AND THEIR CONTROL: DISEASES OF PROPAGATION

DISEASE	SYMPTOMS	EFFECT OF ENVIRONMENT	CONTROL - CULTURAL AND CHEMICAL
STEM ROT (*Rhizoctonia solani* and *Cylindrocladium scoparium*)	Base of stem turns chocolate brown involving a portion or the whole stem.	Favored by rooting media that remains moist and warm.	Avoid using a propagating medium that remains wet and adjust the mist interval to prevent a soggy medium.
ROOT ROT (*Phytophthora cinnamomi, Rhizoctonia solani* and *Cylindrocladium scoparium*)	Fiberous roots turn brown and slough off. Cuttings finally rot.	Favored by a soggy rooting medium. Pathogens survive from previous crop of cuttings in the media.	Avoid reusing a propagating medium. Apply fungicides like Subdue® or Aliette® to prevent infection of cuttings.
LEAF SPOTS AND BLIGHTS (*Rhizoctonia solani* and *Cylindrocladium scoparium*)	Small necrotic lesions or areas initially tan becoming dark brown to black. The lesions of *R. solani* are irregular, enlarge, causing leaf drop. Lesions of *C. scoparium* are regular in shape causing leaf drop and root rot.	Favored by warm humid conditions.	Collect cuttings from healthy stock plants. Adjust mist so that cuttings do not remain wet. Apply a fungicide like Benlate®.

Chemicals referred to in this and subsequent tables
Subdue® (metalaxyl), Ciba-Geigy Corp., Ag. Division, P.O. Box 18300, Greensboro, NC 27419.
Bayleton® (triadimefon) Mobay Chem. Corp., Kansas City, MO 64120
Ornalin® (vinclozolin), Mallinckrodt Inc., St. Louis, MO 63147
Aliette® (fosetyl-Al), Rhone-Poulenc, Inc., Agro-chemical Division, Monmouth Junction, NJ 08852
Benlate® (benomyl), DuPont Agrichemicals
Danconil 2787® (chlorothalonil), SDS Biotech. 1100 Superior Ave., Cleveland, OH 44114

DISEASES IN CONTAINERS

Root rots are some of the most serious diseases affecting container-grown azaleas. High temperature and excessively wet containers are ideal for root rots caused by *Phytophthora* and *Cylindrocladium* fungi. Systemic fungicides drenched over the media surface will prevent disease.

Web-blight caused by the fungus *Rhizoctonia solani* occurs under conditions of high air temperature and wet weather (frequent irrigation and rain). It is particularly serious when the plants are sheared to produced tight tops or in certain cultivars that have a compact growth habit like the cultivar 'Gumpo'. Failure to space plants as they grow will result in *Rhizoctonia* killing the center and lower leaves and binding the dead leaves to the stems with mycelium.

If containers are crowded for cold protection and watered or wetted by rain before they are covered with plastic for cold protection in the winter, the gray mold fungus *Botrytis cinerea* will infect leaves during the winter and result in defoliation or cause flower bud blight. In the spring, flower blight will develop on plants that are adjacent to infected ones because the *Botrytis* spores are wind-borne.

Healthy liners planted in new or pasteurized porous media and drenched or sprayed with systemic fungicides will usually remain free of disease. As plants grow, they should be spaced so that the tops do not overlap and the leaves dry off quickly after rain or overhead irrigation. Container-grown plants placed on crushed rock will not be infected by *Phytophthora* through drainage holes in the bottom.

Table 2. AZALEA DISEASES AND THEIR CONTROL: DISEASES OF CONTAINER CULTURE

DISEASE	SYMPTOMS	EFFECT OF ENVIRONMENT	CONTROL - CULTURAL AND CHEMICAL
ROOT ROT (*Phytophthora cinnamomi* and *Cylindrocladium scoparium*)	Fiberous roots slough off. Brown discoloration may extend into crown of plant. Leaves become smaller than those of healthy plant. Unthrifty, slow growth. Slow wilt with *P. cinnamomi*. Sudden wilt with *C. scoparium*.	Warm soil temperatures and wet soils predispose roots to infection. Fungus propagules overwinter in the soil.	Grow in well-drained media. Use healthy liners. Apply fungicides like Subdue®, Aliette®, or Benlate® to prevent infection of fiberous roots.
WEB-BLIGHT (*Rhizoctonia solani*)	Small necrotic lesions enlarge to involve entire leaf. *R. solani* will kill small stems and cause dead leaves to remain attached to stems.	Moderate summer temperature and high humidity when plants are crowded favors disease.	As plants grow, space the containers so that air can reach the foliage and enhance drying. Fungicides like Benlate® or Danconil 2787® prevent infection.
BOTRYTIS BLIGHT (*Botrytis cinerea*)	Dead flowers and leaves turn brown and become covered with gray fungus growth of *Botrytis*.	When humid air in the greenhouse or under plastic is cooled so that water vapor condenses into water droplets on petals or leaves, conditions are favorable for infection.	Use heat or open vents in greenhouse so that water vapor will not condense on flowers or leaves. Remove flowers as they mature to avoid a buildup of *Botrytis*.
STEM DIE-BACK (*Phytophthora parasitica*)	Dark brown to black irregularly-shaped lesions. Shoots die back followed by wilt and death.	Favored by high humidity and temperature of 30-35° C. Fungus is splashed from soil to leaves.	*Avoid splashing when watering to prevent infection. Apply Subdue®* as a drench or foliar spray.

See Table 1 footnote for generic names and manufacturers of chemicals.

Table 3. AZALEA DISEASES AND THEIR CONTROL: DISEASES OF FIELD CULTURE

DISEASE	SYMPTOMS	EFFECT OF ENVIRONMENT	CONTROL - CULTURAL AND CHEMICAL
ROOT ROT (*Phytophthora cinnamomi*)	Plants are stunted and light green to yellow. Leaves wilt and roots turn brown.	Disease favored in fields that remain wet following rain or irrigation.	Build up field beds so that they are higher than roads. Fumigate before planting with a fumigant like methyl bromide-chloropicrin mixture.
POWDERY MILDEW (*Erysiphe polygoni* or *Microsphaera penicillata*)	White spots on both upper and lower leaf surfaces with leaves becoming covered with white powdery growth.	Cloudy weather or shady structures that reduce the light favor the disease. Warm temperatures 75°F day/55°F night are favorable for disease.	Grow deciduous azaleas in full sun. Apply the fungicide Bayleton® to prevent infection.
LEAF RUST (*Pucciniastrum myrtilli*)	Small circular yellow spots on the upper leaf surface. On the lower leaf surface. the fungus produces abundant yellow to orange spores.	Grow the plants in full sun. Canadian hemlock (*Tsuga canadinsis*) is the alternate host of this disease.	Grow cultivars that have been resistant previously. Do not grow deciduous azaleas in close proximity to Canadian hemlock.
PHOMOPSIS DIE-BACK (*Phomopsis* sp.)	Leaves and stems die on a portion of the top. Diseased stems show a reddish-brown discoloration of the wood in diseased stems.	Plants growing under drought stress or suffering from cold injury are susceptible to infection.	Irrigate during dry weather periods. Prune out diseased stems making cuts through healthy wood. Surface sterilize pruning tools with a solution of bleach in water or 70% alcohol between cuts.
LEAF AND FLOWER GALL (*Exobasidium vaccinii*)	Leaves that develop in the spring become swollen and enlarged (galls). The fleshy galls are pale green to white or pink becoming brown and hard.	Cool, wet weather during the spring when the new growth appears. Usually the plants have galls from a previous growing season.	Hand pick galls to reduce fungus inoculum.
PETAL BLIGHT (*Ovulinia azaleae*)	Pinhead size spots appear on petals. Spots are whitish on colored flowers. Spots enlarge into irregular blotches. Affected tissue becomes soft and slimy to the touch.	Wet weather during the spring and summer when flower buds are opening. Initial infections result from ascospores produced in apothecia on the soil surface.	Pick and destroy affected flowers. Replace litter on the surface under azalea plants. Apply Bayleton® as flower buds expand and show color.

DISEASES IN THE FIELD

Root rots caused by *Phytophthora* spp. can be destructive. Liners die quickly, especially if the soil remains wet. Some plants survive but have have smaller-than-normal tops with light green foliage because the root systems are restricted. Infected plants frequently serve as a source of fungus inoculum. When diseased but healthy-appearing plants from infested fields are dug and sold to retail centers, they may survive for a short period or die quickly when planted in the landscape, depending on the planting site selected.

If the soil in a home landscape is tight and does not drain well, constructing elevated or raised beds with soil and peat moss will usually provide the drainage necessary for root rot disease prevention. Soil fumigation with vofatile chemicals like methyl bromide or chloropicrin before planting will eradicate soil-borne fungus pathogens, but they should be applied by experienced applicators. Other diseases of lesser importance like powdery mildew, rust and leaf and bud gall can be prevented by cultural practices such as improved air movement, greater exposure to light, and hand-picking of diseased leaves and flowers. By reducing environmental stress like drought and cold, injury die-back caused by *Phomopsis* can be minimized. Petal blight is effectively prevented by the application of the fungicide Bayleton® in the spring.

Specific comments on symptoms and the effects of environment, cultural and chemical control during propagation, and container and field production are contained in Tables 1-3.

Dr. Lambe is an Extension Plant Pathologist in the Department of Plant Pathology, Physiology and Weed Science, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.

WHAT NURSERYMEN SHOULD KNOW ABOUT SPRAY ADDITIVES

Richard L. Miller
Columbus, Ohio

The term spray additive seems quite simple until a grower or producer begins to explain what it is and how it works.

The whole business of spray additives reminds me so much of what the nursery industry has been experiencing with microcomputers. The computer era is moving so fast that most nurserymen are being left in the dust as far as their knowledge of the technology is concerned.

Many people do not know enough about computers even to place a proper order in purchasing one, but they believe they must have one to be in step with the times and to be somebody.

With both computers and spray additives, nurserymen probably have already made many expensive mistakes and will most likely continue to do so, unless they stop dead in their tracks and begin asking some very important questions: "What are our needs? What do we hope to accomplish?"

Nurserymen must prove to themselves that their purchases will improve the jobs they are doing with their current operations. If their purchases make more work or do not improve their operations' effectiveness or produce better results, then they have not really gained much by buying them.

Perhaps the first question nurserymen should ask when considering spray additives is, "What are these chemicals?"

Spray additives are not new. They have been used in North America since the late 1800s. Some of the earliest records of using spray additives mention soaps produced from whale or fish oil.

By the 1950s, the value of wetting spray additives was widely recognized, but few products were on the market, and few growers were using them.

Household detergents were in good supply and were used in agriculture. They had many drawbacks, and applicators had many problems when they tried them.

Chemical companies made huge strides in developing spray adjuvants, or spray additives, when herbicide development took off in the 1950s. Spray additives were widely used as post-emergence materials on corn, cotton and soybeans.

RECENT HISTORY

Most spray additives are exempt from the tolerances set by the Environmental Protection Agency. Therefore, many formulators packaged and sold every kind of spray additive imaginable. In 1980, "Farm Chemicals Handbook" listed 112 products. By 1984, this number had grown to more than 140.

With so many products, it is no wonder that there is so much confusion and misunderstanding concerning spray additives.

As might have been expected, some formulators diluted their spray additives with water to maximize profits as competition became keener. This practice became so widespread that today there are hundreds of spray additives that contain anywhere from 16 to 80 percent spray adjuvant.

Therefore, nurserymen must be able to understand adjuvant labels to know what they are buying. Unfortunately, restrictions on label format and content are not as stringent for spray additives as they are for poisons.

In fact, the restrictions slightly favor formulators rather than buyers. In other words, buyers do not always know exactly what or how much they are buying.

DEFINITIONS

To better understand spray additives, nurserymen must first become familiar with some terms associated with this subject.

A "spray additive" increases the performance and improves the effectiveness of agricultural sprays in controlling pests. If a spray does not do this, why bother buying it?

Adjuvants, surfactants, penetrants, emulsifiers, spreaders, and wetting agents are all spray additives, but they are different kinds of products.

The name most commonly used to describe spray additives is adjuvant. Maybe the place to begin our discussion is to define what an adjuvant is.

Adjuvant. An adjuvant is a subsidiary ingredient or additive in a mixture that contributes to the primary ingredient's effectiveness. In other words, it is any substance that, when added to a chemical spray, increases the performance of that spray.

Wetting agents, spreaders, emulsifiers, dispersing agents, foaming adjuvants, foam suppressants, penetrants, and correctives are all adjuvants.

An adjuvant may contain one or more surfactants, solvents, solubilizers, buffering agents, and stickers.

For example, with the proper adjuvant, certain chemical pesticides can be used together in a tank mix that would otherwise present compatibility problems.

Wetting Agents. When added to a liquid, a wetting agent increases the liquid's spreading and penetrating power by lowering its surface tension. A wetting agent's effectiveness is measured by the increase in the liquid's spread over a specified surface area and by the contact angle between the liquid and the surface.

A wetting agent also appreciably lowers the interfacial tension between a liquid and a solid and increases the liquid's tendency to make complete contact with the solid's surface so that no dry area remains on the solid.

Many materials are used as wetting agents, including long-chain alcohols, petroleum, sulfonates, acid sulfates and derivatives, sulfonated aromatic derivatives, esters of fatty acids, and clay.

The turf and ornamental industry uses surfactants, or surface-active agents, as adjuvants.

Surfactants. When dissolved in water or a water solution, surfactants reduce the water's surface tension. They also reduce interfacial tensions between two liquids or between a liquid and a solid.

Most pesticide adjuvants may be considered surface-active agents or surfactants.

IONIC CHARACTER

Surfactants can be classified as non-ionic, anionic, or cationic. The differences are very important, because the wrong type can cause plant injury.

Ion. An "ion" as defined by "Condensed Chemical Dictionary" is "an electrically charged atom or group of atoms. Ions may be either positively or negatively charged, indicating that one (or more) electrons have been either gained or lost."

Non-ionic. A surfactant that does not ionize, break apart.

Cationic. An ion with a positive charge is a cation. When the surface-active portion of surfactant molecule has a positive charge, it is a cationic surfactant.

Anionic. An ion with a negative charge is an anion. When the surface-active portion of a surfactant molecule has a negative charge, it is an anionic surface-

Anionic (negatively charged) surfactants contain sodium, potassium, or ammonia salts. They are used to reduce surface tension or for rapid wetting. Wetting agents and some detergents are anionic and phytotoxic to plants.

Cationic (positively charged) surfactants are composed of phosphates and quaternary ammonia compounds. They exhibit the highest degree of phytotoxicity to plants and are not used extensively in horticulture.

Non-ionic (uncharged) surfactants are much less chemically active and are used most widely on turf and ornamentals. Most emulsifying agents are non-ionic.

SPRAY ADDITIVES

Accutrol
Acidiphactant
Activate
Activators
Activators, insecticide
Ad-Here
Ad-Just
Adsee
Ad-Spray 101
Ad-Wet
Agicide Activator
Agral 90
Agridex
Agrimul
Agri-Tac
Alkyl aryl sulfonate
Anti-foam agents
Aqua-Gro
Aquazorb
Armix
Assist
Attaflow
Attagel
Big Stick
Bio 88
Bio-Film
Blend
Blendex
Bond
Britener Plus
Bubblegon
Buffer P.S.
Buffering agents
Cide-Kick activator adjuvant
Citowett Plus
Citrufilm
Coax
Combyne oil concentrate
Compatibility agents
Compex
Compliment compatibility agent
Control foam suppressant
Crop oil concentrate
Defoamers
Easy Spot Foam Marker
Enhance
Exhalt 800
Extend
E-Z Mix
Fighter F
Flo-Mo
Flozine
Flush-Aid
Foam Buster
Foamer
Foaming agents
Fomark
Galoryl
Gustol
Herbex
Herbimax
Herbispray
Hydro-Wet
Hyonic
Induce
Kombind
Leaf Act 80
Lo-Drift
Lomar
Lonzest Polysorbates
Maximizer 420
Miller-Aide
Min-U-Gel 200
Morwets
Nalco
Nalco 2151 Pesticide Antifoam
Nalco-Trol
Nalquatic
Neptune
No Foam
Nu-Film
Oil surfactant blends
Ortho X-77
Orthotrol
Pen-A-Trate
Penetrator 3
Peptoil
Pestilizer
Petro-Ag Special
Pinolene
Plyac
Poly control
Polyfac
Polyfon
Purefoam foam marker
Reax
Reduce
Regulaid
Rigo D-Fome
Rigo Flush Aid
Rigo oil concentrate
Rigo Spray Ad 56
Rigo Spray Ad CVF
Rigo Spreader-Sticker with Defoamer
Rigoette Plus
Sandovit
Saturall
Sellogen
Slurry Additive
Soaps
Sorbacide
Sorba-Spray
Soy-Dex
Soy oil concentrate
Soy-Plus
Spray Fuse 90
Spray oil additive
Spray-Stay Sticker-Extender
Spray tracer
Spreaders and stickers
Stepanad
Sticker extender
Superfoam
Surf-AC 820
Surfactant WK
Surfel
Surfix
Tergitol
The Unfoamer
T-Mulz
Toximul
Triton
Tronic
Unite
Viterra Agri-Gel
Water softening agents, liquid
Wetting agents
Wex
Wind-Fall
X-77 spreader

SURFACE ACTIVITIES

Other terms describing surfactants designate surface activity.

An activator accelerates or increases the effect of a pesticide.

A dispersant reduces the cohesiveness of like particles, either solid or liquid. Dispersing and suspending agents are added to emulsifiable concentrates and wettable powders during their preparation. These agents facilitate dispersion and suspension of the ingredients.

A suspension of two liquids that normally would not mix is likely to separate. Emulsifiers reduce this tendency.

A deflocculator is a dispersing agent that retards the settling of solid particles in a suspension, especially when the particles tend to clump and settle out rapidly. Emulsifiers are often effective deflocculators.

Detergents are cleaning substances, such as soap. The term is often applied to synthetic preparations as opposed to natural detergents made from fats and lye. Detergents are used in pesticide formulations as emulsifiers and wetting agents.

A foam suppressant is a spray adjuvant useful for suppressing both surface foam and trapped air.

Foaming adjuvants form fast-draining foams that provide maximum contact with plant surfaces. This insulates the surfaces and reduces the evaporation rate. Foaming adjuvants are used to enhance herbicide action and to reduce spray drift.

A foam marking agent is used in foam-generating equipment to mark the limits of spray swaths, thereby avoiding overlapping or missed areas. These agents are highly visible and stable.

These agents also reduce drift, extend the application time because wind is no longer a factor, provide better coverage and require fewer reloading trips because less water is used.

Penetrants, or penetrating agents, are wetting agents that enhance a liquid's ability to enter a substrate's pores and penetrate the surface.

An emulsion is a dispersion of fine particles of oily material in water or water in oil. One liquid does not dissolve in the other. However, when a suitable emulsifier is added, a stable mixture is created.

A spreader increases the area that a given volume of liquid covers on a solid or on another liquid. Such a substance is also known as a film extender.

Stickers increase the retention of sprays or dust deposits by resisting the various factors of weather. Proteinaceous materials, such as milk products, wheat flour, blood albumin, and gelatin; oils; gums; resins; and fine clays are good examples of stickers.

Stickers also increase the firmness of the attachment of finely divided solids or water-soluble materials to solid surfaces. Their effectiveness is measured by their resistance to time, wind, water, and mechanical and chemical action.

Many stickers have wetting and spreading characteristics. Some consist of alkyl sulfonates, petroleum sulfonates, the salts or sulfates of sulfated alcohols, or the esters of fatty acids.

A sticker may produce an elastic film on leaves that, when added to a mixture, forms a layer through polymerization. This allows for the controlled release of the pesticide, which is held suspended within the film. In effect, this extends the effect of the pesticide. Such an elastic sticker is called an extender or film extender.

LABELS

Once nurserymen understand what types of spray additives there are, they next must be able to interpret product labels to determine how much "principal functioning agents" are available in them.

Ingredients are grouped into two categories on spray adjuvant labels: 1) principal functioning agents; 2) constituents ineffective as spray adjuvants. Principal functioning agents include such elements as surfactants, defoamers, emulsifiers, alcohols, corrosion inhibitors and antifreeze mixes.

Because these elements are often grouped together into the one category on a label, it may be difficult to determine the surfactant content. In fact, it can be determined only when it is listed separately or is the only principal functioning agent. A few sample labels illustrate this point.

Sample label 1

Principal functioning agents:
1. Alkyl polyoxyethylene glycols
2. Free fatty acids
3. Isopropanol

Constituents ineffective as spray adjuvants...68.6%

In this first label, the principal functioning agents make up 31.4 percent (100-68.6 percent ineffective ingredients). The surfactant concentration is only 21 percent.

Sample label 2

Principal functioning agents:
1. Alkyl polyoxyethylene glycols
2. Free fatty acids
3. Isopropanol

Constituents ineffective as spray adjuvants...10%

At first, it looks as if this wetting adjuvant has a very high surfactant content. Actually, the concentration is only 30 percent. As with the first label, the surfactant content has been grouped with other ingredients and is therefore indeterminable.

Sample label 3

Principal functioning agents:
1. Alkyl aryl polyoxyethylene glycols

Constituents ineffective as spray adjuvants...20%

In the third label, the surfactant concentration must be 80 percent (100—20 percent ineffective spray adjuvant) because it is the only effective ingredient listed.

This label is for Triton AG-98, a low-foam, non-ionic wetting agent.

In examining the adjuvant label, nurserymen should make sure they know what they are getting. If the percentage of the ingredients is not clear, ask the dealer to explain it. Also compare costs in terms of the actual quantity of the active ingredient.

COMMERCIAL PRODUCTS AND USES

Buffer-X	Acts as a spreader or wetting agent to help sprays stick to and spread over leaf surfaces. Also as an activator to help sprays penetrate waxy surfaces. Also aids in the penetration and transport of systemic chemicals.
Bio-Film	Helps deposit and spread sprays. Is a sticker to reduce wash off during bad weather. Forms a tough, non-drying elastic film for extended protection and improved pesticide performance.
Spray Ad CVF	Resin-based, non-ionic surfactant and water-soluble, detergent-type wetting agent. Resists rewetting and removal by rain or irrigation.
All Wet	Non-ionic wetting agent used as a turf penetrant on thatched or compacted spots.
The Unfoamer	A persistent anti-foamer and defoaming agent.
Unite	Improves compatibility of and stability in liquid mixtures of fertilizers and pesticides.
Neptune	Non-ionic surfactant for all-purpose wetting and spreading.
Maximizer 420	Contains a combination of a superior paraffinic oil and spreader activators.
Plyac	Non-ionic spreader-sticker.
Triton AG-98 spreader-activator	Low-foam, non-ionic, general-purpose spray adjuvant. Uniform coverage without runoff. Increases contact activity and aids pesticide penetration.
Triton CS-7 spreader-binder	Improves deposition, tenacity, and control. Increases wettability of powders and ability to mix incompatible pesticides.
Triton B-1956 spreader-sticker	Increases pesticide resistance to rewetting and runoff. Increases pesticide adhesion and coverage.
Agway Charger E	Non-ionic surface-active agent that increases herbicidal effectiveness of paraquat.
Compex	Compatibility agent for mixtures of liquid fertilizers and pesticides.
Nu-Film P	Spreader-sticker for pesticides.
Tween 20	Non-ionic emulsifier-solubilizer.
Target-NL	Blend of film-forming dispersants, surfactants, and non-ionic emulsifier. Provides drift control and improved spreading and sticking.
Surfactant WK	Non-ionic, water-soluble surface-active agent used with Karmex, Diuron, and Lorox.
Gro-Safe	A soil amendment of activited charcoal that reduces the amount of organic pesticide residues in the soil.
Hydro-Wet	Water-soluble, non-ionic surfactant for wetting hydrophobic soils. Aids materials in penetrating thatch and grass.
Igepon surfactants	Anionic wetting agent and dispersant.
Induce	Low-foam, non-ionic spreader and activator.
D-Foam	Non-ionic surfactant blend that increases surface wettability, spreadability, and penetration. Prevents undesirable foaming in tank mixes.
Emulphogene emulsifiers	Non-ionic emulsifier and wetting agent.

BUYING THE RIGHT ADDITIVE

Nurserymen should consider the following guidelines when they buy spray adjuvants. They should:

- Determine what type of adjuvant they need.
- Read the pesticide labels on each product they intend to use. If the manufacturers have worked with adjuvants, they will provide the necessary information on their labels. Frequently, they will specify specific brands or types.
- Remember that there are dozens of manufacturers that may make ambivalent statements about their products on the labels. It is often difficult to tell truth from fancy.
- Pay close attention to the labels to determine if the products contain spreading agents, sticking agents or another type of additive.
- Avoid using detergents as spreading agents. Detergents are ionic materials and combine with hard water to cause scum and mineral deposits in spray equipment.
- Remember that young leaves are more waxy than older leaves. Therefore, they may be more difficult to wet and protect at certain times. The right adjuvant at the right time could be beneficial in controlling pests that attack these leaves.

MORE GUIDELINES

The use of an adjuvant with systemic pesticides may or may not be needed or beneficial. Research has shown that using spreader-stickers with systemic fungicides does not always produce consistent results. It appears that nurserymen benefit most from products that hold systemics on leaf surfaces until most of the chemical has been absorbed.

Do not hesitate to consult with pesticide dealers, extension specialists, applicators, or other knowledgeable individuals about their experiences with various products.

Hairy-leaved plants are more apt to require spreading agents than sticking agents because the hairs help hold the spray droplets. Therefore, sticking agents are less important and less valuable.

On plants with slick or vertical leaves, spreader agents help sprays stick better.

Some applicators believe that they do not need to add spray adjuvants to their sprays to each application in a regular spray program.

Nurserymen who sell their crops for their beauty must be careful in using adjuvants. They might leave a spray deposit that is persistent and difficult to remove. Spray only a few plants at first and see what happens.

If nurserymen do not expect too much from adjuvant programs, they will more than likely be satisfied.

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THE SELECTIVE SERVICE FOR MRS. WITHINGTON

Mrs. Jeremiah Aloysius Withington III
Acknowledges decision making always gets deferred—
For though she has the wherewithal, whenever so inclined,
To acquire most anything, she can't make up her mind...

Presented with alternatives, you can rest assured,
Lengthy indicision by her has to be endured,
Which is why she rarely chooses anything herself,
Unless she's waited till there's only one left on the shelf.

What shape? What size? What color? And finally what the heck—
She lets somebody else decide while she makes out her check.
All of which explains those pink flamingos on her lawn,
Chosen by a gard'ner who belatedly is gone.

Nor was her dilemma lessened by our catalog,
Since one of each might well be seen as too high on the hog.
Should we have been surprised then by how much she telephoned,
Not realizing how much AT&T she owned?

You, too, if undecided, why not do what she would do?
Write or phone (but not collect) to our old you-know-who.
But if our phone is busy, please don't be deterred—
We're prob'ly picking plants for Mrs. Withington III.

CARLSON'S GARDENS OF VERSES
AZALEAS AND RHODODENDRONS
Box 305
South Salem, NY 10590
Telephone: (914) 763-5958

A VISION OF SPRING

Mary S. Beasley
Lavonia, Georgia

In midwinter being confined to the house with crutches and a sore, sore foot is not conducive to a good mental outlook about life in general. Rescue came as **The Azalean** arrived in the mail, and after devouring it avidly from cover to cover, life began to look much better! I realized spring WAS coming, and the prospect of that period of great loveliness was certainly the thing to snap one out of the doldrums.

Mentally, I began to visualize our garden and the succession of different species and varieties of azaleas as the season would progress. First of all I could see the big Florida Azalea—*Rhododendron austrinum*—with its beautiful golden blossoms leading the season. Next would come *R. canescens,* our Piedmont Azalea, with its variations of pink and white in the long, delicate flowers. In a helter-skelter pattern will then come *R. vaseyi, R. alabamense, R. speciosum, R. nudiflorum*—or *R. periclymenoides,* if you prefer, *R. atlanticum* and the Choptanks (a natural hybrid of *R. atlanticum* and *R. nudiflorum*) found in the wild by Mrs. Polly Hill.

The gorgeous *vaseyi* will herald the arrival of spring in all its delicate pink glory. Our lavender pink *nudiflorum* exists through the generosity of Dr. John Bell, who found this prize-winning selection in the mountains of North Carolina. It is well named, as the flowers cover the bush even as the green leaves are beginning to show color. Our *speciosum* came from middle Georgia where it vied with *canescens* on a rocky hillside with *speciosum* at the bottom and *canescens* at the top. The middle ground is full of wonderful hybrid treasures. Some are pink, red, apricot, and rose as well as the vivid orange in its perfect ball truss form. *Alabamense* with its spicy fragrance and compact habit will burst into flower somewhere in all this array.

In the pines, our Choptank will bloom forth with its aromatic offering. Such a fragrance—it is worth growing for that alone! The offspring of a self-pollinated seed pod from this plant produced incredible results. There is a vivid rose colored flower, one a yellow bordered with a lavender margin, one a blend of yellow, pink, and white and of course, our 'Nacoochee', a beautiful pink with the same unbelievable fragrance. It does make one wonder what the parentage of that one bush really was eons ago. A cross between Choptank (*R. atlanticum* × *R. nudiflorum*) and *R. austrinum* produced 'My Mary'. My husband got into trouble with that, as he described it as being like its namesake—sturdy and wide!

The early *R. calendulaceum* will come forth with its vivid oranges and yellows. The view of a yellow "Flame" and a pinkish lavender *nudiflorum* ought to set nerves on edge when they manage to bloom together, but somehow it doesn't. In nature it all blends together!

As the months change into summer, our *R. arborescens* will show its pristine beauty and fragrance. It wasn't called "The Sweet Azalea" for nothing! *R. viscosum* will bloom with its spicy, sticky flowers, and then *viscosum* var. *montanum* will come into its own. This clone growing in the mountains hybridizes with *arborescens, bakeri,* and *calendulaceum* and is partially responsible for the multitude of beauty one can find there.

And then, the best of all will be here! *R. bakeri* will bloom and bloom and bloom! These recurved, flat-faced flowers with their porcelain quality will continually amaze one. You could spend weeks in the woods and never be bored by the diversity of material. There is such an amazing range of color, size, and shape; one is certain the bumblebee has been at work. Interspersed with all this is the later blooming *calendulaceum.* Sometimes it takes a chromosome count to tell them apart.

As June glides into July, our hybrid of *R. prunifolium* and *R. arborescens* will start its yearly display of vivid pink flowers. *R. bakeri* × *R. aemulens* will have finished its rosy display, and then it will be time for *R. prunifolium*—a welcome spot of red in the woods where all else is green.

R. serrulatum finishes off this "Parade of Beauty." It is not an overwhelming sight but a very welcome one in August and early September when the delicate white blossoms shine like stars on a green background.

All of this incredible beauty comes from this country. These are the only native azaleas of our United States. They are tough and hardy. I've seen big old bushes covered with ice swaying in the wind on top of a mountain in midwinter. I've also seen them live through periods of drought when trees died.

My late husband, George, introduced me to the fascination of these special plants, and I'm thankful I had the opportunity to learn. Anyway, just thinking about what WILL BE has changed my outlook from Doom and Gloom to Beauty and Bloom! (That is about as bad as a bridge friend who slowly said to her husband as he laid down his hand "Well, damm, Sam, we had a slam".)

That really happended and so do all our amazing native azaleas! Just look and see!

Mary Beasley her son, Jeff and daughter-in-law, Lisa, operate an azalea nursery featuring a variety of native deciduous material.

"Azalea Classic"
NOTES ON OLD VARIETIES OF INDIAN AZALEAS, 1950

B. Y. Morrison
Washington, D.C.

In working with old varieties of "Indian Azaleas", one often wishes he had access to the records of the men who produced them, but it is not without interest to examine them, or such as can be found, and make one's own conjectures as to their parentages. One recalls that in that early period when the first great enthusiasm began, "collections" were reputedly made up of varieties that we should now call forms of *Rhododendron indicum* (the *Azalea macrantha* of gardens). How many such there were or how wide the variations they presented is difficult to estimate, since early varietal lists of azaleas often do no more than cite the flower color, and usually there is no way to tell which were scarlet reds and which were rose reds with their subsidiary colors toward orange and pink, nor their categories. Historically we believe that there was a striped sort and another of rose color with a white base to the corolla, but whether or not there was a pure white or double forms is not recorded though these are known from later records.

The snow azalea (*R. mucronatum)* was known early but whether or not its lavender form was in cultivation, even if not properly recognized as such, is doubtful. *R. kaempferi,* too, came early on the scene.

The less well known *R. phoeniceum* was certainly there and finally *R. simsii* which all agree turned the tide of azalea production from plants for the cold greenhouse to plants for gentle winter forcing, with not much interest in plants for outdoor use since azaleas of this group do not really flourish in the lukewarm climates of Europe.

Various conjectures have been made as to how these several species ceased to play a part in the general development of the mongrel race that was first known as the "Indian Azaleas" and in its latest forms is currently known as "Belgian," although the gap between these two groups is great enough, when one looks at the latter and compares them with the far from uniform varieties surviving from the earlier group, and even more so when one compares them with their putative ancestors.

If, however, after having raised many thousands of hybrid seedlings and having arrived at various working and, for the most part, satisfactory hypotheses, one ventures to suggest the species that dominate in the older "Indian Azaleas," it may seem foolhardy, but it may also serve as a point for critical study by other workers. No suggestion is offered at this time concerning the "Belgian" azaleas as they now appear although certain guesses seem likely to become working hypotheses.

What follows, therefore, must be considered as no more than data to serve as a point of departure, useful for the time being but still open to correction.

The plants examined have come from nurseries only and were accepted and recorded as received with no attempt at critical examination as to nomenclature, though certain names suggest local origins and some names are obviously misspelled with the years of label writing in this country. If, therefore, it is reported that certain clones appear to be identical, this may be true or there may have been mistakes in filling the original orders.

From the plant breeder's point of view, the following clones may be considered as either variants within the species now known as *R. indicum* L. or hybrids in which that species is completely or almost completely dominant, the alterations showing chiefly in the number of stamens (not a completely dependable character) and in some of the color patterns: 'Alba Punctata', 'Brilliant', 'Coccinea Major', 'Duc de Rohan', 'Iveryana', 'Marie Louise', 'Miltoni', 'Mme. Margottin', 'Pluto', 'Salmon Pink.'

Of the forgoing series, 'Alba Puncata', 'Iveryana', and 'Mme. Margottin', the first and last much alike, are whites with slight flaking of color. Whether these are seedling variants of the species, hybrids between the species and the striped form (Wilson and Rehder, Azaleas, A Monograph of, page 26) or sports, is a question. Of these three, only 'Iveryana', as known to the writer, has given self-colored sports, the color approaching that of the stripes. This self-colored sport, which is constant, does not resemble any known seedling of the species in the writer's experience. If the "striped variety" cited above was not in fact a variety but an unknown hybrid, the changes are excellent that the clone that produces the striping is the plant known in trade as 'Vittata Fortunei,' assigned by Wilson as a variety of *R. simsii.* The writer is not fully convinced that the assignment is correct, but he has no other suggestion to offer at this time and lets it stand.

Of the remainder, 'Brilliant', 'Coccinea Major', 'Duc de Rohan', 'Marie Louise', 'Miltoni', 'Pluto', and 'Salmon Pink' may well be considered as seedling variations of the species itself, suspicion falling only on 'Pluto' and 'Miltoni', this last possibly belonging in the group of seedlings from *simsii* × *indicum*, in which *simsii* is dominant and 'Pluto' in the same group but with *indicum* dominant.

To a possible ancestry of *indicum* × *simsii* in which *indicum* dominates: 'Anthenon', 'Charles Encke', 'Criter-

ion', 'Duke of Wellington', 'Glory of Sunninghill', 'Pres. Claeys' (not 'Pres. Clay' as often given), and 'Pride of Dorking'. Of these, 'Anthenon', 'Charles Encke', and 'Criterion' are probably sports from the striped *indicum* ancestry, no matter what the name of the clone.

To a possible ancestry of *simsii* × *indicum* in which one finds *simsii* the dominant element, one finds: 'Cavendishii' ('Lady Cavendish'), 'George Franc', 'Perfection de Rentz', 'Prince of Orange', 'Triomphe de Ledeberg', and 'Zeke's Pride', with some likelihood that 'George Franc', 'Zeke's Pride' and 'Triomphe de Ledeberg' represent some back cross in the same blood line. These three come closer to modern "Belgian" azaleas in flower form and quality than any other of the old clones known to the writer except 'Harry Veitch', although there are marked differences in foliage and in bush habit.

Although a further study of seedling populations of *R. Simsii* from seed recently imported from China may alter the opinion, the writer is tempted to look upon 'Dixie', 'Eulalie van Geert', and the clone offered under the name of "Reddish Salmon purple throat" as seedling variants of *R. simsii* itself. Accepting for the present Wilson's dictum, the clones sold as 'Vittata Fortunei' and 'Vittata Purple' should go here.

The plant sold in the trade as 'Indica Alba', properly *R. mucronatum* G. Don, probably gave rise to 'Alba Maculata', and was the parent of 'Fielder's White' that varies chiefly from it in the excellence of the flower form, a slightly later blooming habit, more tolerance of longer summers, and a slight alteration in foliage characters. From it with some plant probably of *R. indicum* blood could have come 'Mme. Dominique Vervaene' and from it with *simsii* blood could have come 'Elegans' ('Pride of Summerville' and apparently 'Croemina') and also 'Early Lavender.'

Another group that stemmed from *R. phoeniceum*... we have the selection 'Omurasaki', the reputed sport 'G. L. Taber' and the hybrids: 'Formosa', 'Praestantissima', 'Pride of Mobile', 'Vicomte de Nieuport', 'Violacea', and possibly the double 'William Bull'.

No suggestions are made at this writing for the fine double white 'Flag of Truce', though one suspects *simsii* × *indicum* or for 'Harry Veitch' which appears to be one generation beyond such clones as 'George Franc' in the direction of the modern Belgians.

A few varieties have not been purchased as yet and a few varieties have died out so that another survey must be undertaken of the balance in trade. A few others have not been in flower at times when the writer could make observations, but their late blooming habits make one believe that in them *indicum* may well be the dominant factor.

The varietal descriptions that follow were all taken at Pass Christian, Mississippi between January 27 and February 10, 1950, an unusually advanced season, and do not cover the entire collection, many varieties being still in bud there as of February 10, e.g. 'Harry Veitch', 'William Bull', 'Venus', 'Flag of Truce', etc. In time, they will be supplemented with notes on some of the remaining varieties from the writer's old garden in Takoma Park, Maryland, survivors of a duplicate collection. There remain in trade in southern nurseries a few other named clones of "Indian Azaleas" that must in time be grown and examined in a similar fashion.

The writer realizes that there are various possibilities of error, but at present it is not possible to undertake the collecting of all named clones from all nurseries to verify trade identities. Whenever it has been possible to find old descriptions in Vol. I of the Tuinbouw Encyclopedie published in Amsterdam in 1938, they have been used as a check, but not all of our plants are listed there and one wonders about such names as 'Dixie' and 'Zeke's Pride' that appear to be of local origin.

For many years, there has been incomplete information on the cold-hardiness in this group, but enough time has passed to show that most of them are much more cold resistant than had been believed possible. These forms that seem closest to *R. indicum* seem most cold hardy, with the *mucronatum, simsii,* and *phoeniceum* derivatives in descending scale. As could be imagined, the plants do not grow as luxuriantly in northern states as further south, though they are definitely in health. It is probable also that their ultimate height will be less.

Some of the clones are azaleas of only second rate quality, if one compares them to the best within their own group, and many are now even less valuable than other azaleas in other groups. At present, however, they are and must remain the central core of any plantings in the South.

For the gardener working within the area where the Glenn Dale azaleas will become the mainstay of the planting it is hoped that we can eventually give names of Glenn Dales that will duplicate the effects, even if the details are distinct. For example, the Glenn Dale variety 'Robinhood' will give precisely the same garden picture that the southern gardener will get from 'Vicomte de Nieuport', 'Sprite' will answer for 'Early Lavender', 'Louise Dowdle' for 'Elegans', and so on. Data for these comparisons are more difficult to collect now since most of the Glenn Dale clones are still such small plants that they do not, cannot give mass effects for comparison.

Alba Maculata. Rather loose straggling bush habit as yet, leaves possibly not as hairy as those of *R. mucronatum* of which it appears to be a derivative, possibly a direct seedling. 1-3 flowers in head, starry, faint green blotch, 10 stamens, long style. No color flakes as yet to justify the name "maculata." Hardy in Washington, D.C.

Alba Punctata. Rather low spreading habit, leaves small, dark green, modified *indicum* type. Flowers, 1-2 in head, white with occasional flake or stripe of magenta (between Mallow Purple and Rhodamine Purple), 5 stamens.

Brilliant. Rather low spreading habit suggesting *R. indicum* with foliage of the same character. Flowers, however, 2-3 in head, and early as compared with others of type. Rose Color with dots of blotch, Tyrian Rose. 5 stamens.

Cavendishii ('Lady Cavendish'). Bush habit spreading rather than erect. Leaves modified *R. indicum* type. Flowers 1-2 in head, irregular in early blooming coming into mass later, of heavy substance, a little paler than La France Pink, the few dots of the blotch, Tyrian Rose. Pistil pale rose color, filaments of the 5 stamens, white. Somewhat variable in color from plant to plant, perhaps due to propagation from sport-branches.

Coccinea Major. Bush habit spreading of *R. indicum* type. Foliage dark green and very persistent. Flowers 1-2 in head, freely produced to make a brilliant show, Scarlet Red, the dots in blotch only a trifle darker and not conspicuous. Stamens 5, pistil often deformed, not much evidence of natural seed formation. Lasts about a month in flower and almost no sunburning.

Dixie. Athough the plant is still young, this suggests in all bush habit and characters, a direct seedling of *R. simsii.* Very floriferous, carrying in gardens as orange salmon, darker than 'Eulalie van Geert' but of the same color sequence. Flowers 2-3 in head, Rose Doree with suffused blotch of Tyrian Rose. 10 stamens.

Duc de Rohan. Bush habit spreading rather than erect, and of *R. indicum* type. Early flowering for this type, with general effect of a lively pink. Flowers 1-3 in heads, Begonia Rose with dots of blotch Tyrian Rose but not showy. 8 stamens.

Duke of Wellington. Bush habit spreading rather than tall, but with some modification of the *R. indicum* habit. Foliage similar to that of *indicum* and persistent. Flowers 1-2 in head, good substance, but some sunburning. Begonia Rose with blotch of Tyrian Rose dots. 10 stamens.

Early Lavender. Even earlier than 'Elegans' in flowering in 1950 (an early season) being almost out of bloom by January 29. Rose Purple of color chart but garden effect is pinkish lavender. General habit of *R. mucronatum* seedlings, flowers 1-3 in head, very freely produced, 8-10 stamens. Hardy in Washington, D.C.

Eulalie van Geert. Like 'Dixie', the whole habit of bush suggests a direct seedling of *R. simsii.* Carries in garden effect as pale salmon pink, color chart Geranium Pink. There is a little fading of color as flower ages. Flowers 2-3 in head, freely produced and lasting long in bloom. 10 stamens. Hardy in Washington, D.C.

Formosa. Very large and vigorous shrub usually a little broader than tall but tall enough in time. Foliage heavy and persistent, leaves large and coarse; flowers 1-3 in heads, very freely produced, Mallow Purple of the color chart, the dots of blotch Tyrian Red, but effective only as warming the color of the whole flower. Stamens 8-10, short filaments.

George Franc. Bush habit broader than tall but of fair size in time. Foliage heavy and persistent but not as much so as that of 'Formosa'. Flowers 1-3 in heads, freely produced, early, in garden effect carries as a lively rose color; color chart, Deep Rose Pink with undertone of Strawberry Pink (yellowish) that fades out as flower ages, blotch large and showy, of Tyrian Rose dots. 10 stamens. Hardy in Washington, D.C.

Glory of Sunninghill. Bush habit, broad rather than tall, but apparently will make a taller bush in time than 'Coccinea Major'. Leaves dark green, modified *indicum* type, very persistent. Flowers 2-3 in heads, freely produced but slow to make mass effect. Spectrum Red; there are a few darker dots in the not very conspicuous blotch. 5-8 stamens.

Iveryana. Bush habit broader than tall but eventually good height. Leaves much like those of *R. indicum*, but somewhat modified. Persistent. Flowers 1-2 in heads, freely produced. Pure white with a faint suggestion of a chartreuse blotch and occasional flakes of Spinel Pink. 5 stamens. Branch sports of Spinel Pink or slightly darker self-colored flowers. One sometimes buys a bush that turns out to be of the latter type which only means that the cutting came from a branch sport. There are no reversions to the striped forms on record. Hardy in Washington, D.C.

Miltoni. Bush habit broader than tall, compact. Leaves modified *indicum* type. Flowers 1-2 in head, freely produced, petal lobes poorly shaped, Deep Rose Pink, with definite blotch of Tyrian Rose dots. 7-10 stamens. Hardy but not happy in Washington, D.C.

Mme. Dominique Vervaene. General bush habit like that of *R. mucronatum;* foliage somewhat similar to that of that species but often smaller in general dimensions. Flowers 1-2 in heads, of very fine form, ground color white almost entirely overlaid, save on margins, with La France Pink. The very conspicious blotch is of small dots of Tyrian Rose to darker. 7 stamens. Hardy and good at Washington, D.C. with winter killing of flower buds only when that occurs with *R. mucronatum* itself, which is rarely.

Mme. Margottin. Bush habit broader than tall. Foliage of a modified *R. indicum* type, moderately persistent. Flower 1-2 in heads, good form, rather close to those of 'Alba Punctata' except that the occasional stripes and flakes in this case are of light Rosolane Purple. 7 stamens.

Perfection de Rentz. Bush habit broader than tall, dense and twiggy. Foliage like that of *R. indicum* but with more rounded leaf tips. Flowers 1-2 in heads, white with pale chartreuse blotch. Very good form and substance, usually 6 stamens. Hardy at Washington, D.C. The name probably should be 'Perfection', as de Rentz was a breeder and grower in Belgium.

Phoenicea. Vigorous bush almost as broad as tall, of general branching habit of *R. mucronatum* style but with

leaves less hairy and hanging in a curious manner that seems very characteristic. Flowers 2-3 in heads, very freely produced and making as much a show as those of 'Formosa'. General landscape effect almost identical and equally difficult. Rhodamine Purple with blotch of Tyrian Rose dots. Fragrant, mid-season. 10 stamens, short filaments. Barely hardy in Washington, D.C. It would seem that there may be several clones in cultivation under this name, varying slightly in intensity in color. Presumably, this is *R. phoeniceum*, a species about which Wilson had some doubts. 'Omurasaki' is assigned to this species as a variety. It is distinct and hardy in Washington, D.C.

Pluto. Bush habit, broad spreading rather than erect, densely twiggy with excellent persistent foliage of *indicum* type. Flowers 1-2 in head, freely produced, a few stray flowers often appearing early before main mass. Excellent form and substance, Scarlet Red with small blotch of Carmine dots. 10 stamens. Hardy in Washington, D.C. but flower buds kill in severe winters.

Praestantissima. Bush habit vigorous, probably making in time plants as large as those of 'Formosa'. Leaves broader than many, persistent. Flowers 2-3 in heads, freely produced, late mid-season, good substance but not attractive form, almost Tyrian Rose in color with an inconspicuous blotch of Amaranth Purple dots. 5 stamens, short filaments. A difficult color in gardens.

Pres. Claeys. Usually offered as 'Pres. Clay', a name for which no authority is found. The variety as now grown does not conform to the original description but is probably a self-colored sport from the original white margined flower. Bush habit broader than tall but not really spreading. Modified *simsii* habit. Flowers 2-3 in head, freely produced. Between Begonia Rose and Spectrum Red. 8-10 stamens.

Pride of Mobile. In general, bush habit much like 'Praestantissima'. Flowers usually 2-3 in heads, heads often grouped. Good substance, in color between Deep Rose Pink and Rose Color, the dots of blotch, Pomegranate Purple (which is a brownish purple), usually 9 stamens. One of the standard varieties for bold not subtle midseason effects in South.

Prince of Orange. At least during the earlier years, bush habit much more spreading than erect, and flower masses often hidden by the younger overtopping shoots. Foliage dark green, somewhat like that of 'Formosa' but smaller. Flowers 2-3 in heads, of good form and substance, Nopal Red, with an inconspicuous blotch of Carmine dots. 5 stamens. Late, no fading color.

"Reddish Salmon, Purple Throat" Habit very much like that of *R simsii*. Very floriferous, 2-3 flowers in head, a little darker than Begonia Rose with a rather suffused blotch of Tyrian Rose dots. Some sunburning. 8-10 stamens.

Triomphe de Ledeberg. Bush more spreading than tall with heavy dark green persistent foliage. Flowering branches usually overtopped by younger shoots. Flowering intermittent over a long period. Flowers 1-2 in heads, large, very fine substance, carrying in garden effect as pure orange but actually Begonia Rose with a blotch of Tyrian Rose dots that accentuate the "orange" effect, 8-10 stamens. The clone grown here is not that described in the Tuinbouw Encyclopedie.

Vicomte de Nieuport. Vigorous bush, erect rather than spreading with excellent persistent foliage. A few stray flowers before the main bloom period which is mid-season. Flowers 2-3 in head, between Mallow Purple and Rhodamine Purple of color chart with a very few inconspicuous darker dots in the blotch area. 8-10 stamens.

Violacea. Vigorous bush, erect rather than wide-spreading, with dark green persistent foliage. Late mid-season. Flowers 2-3 in heads, Rhodamine Purple, blotch inconspicuous, 7-8 stamens.

Zeke's Pride. Vigorous bush, erect rather than wide-spreading, with abundant medium green persistent foliage. Flowers 2-3 in head, heads often grouped, Geranium Pink shaded Rose Doree with showy blotch of Tyrian Rose dots. Some sunburning as flowers age, but less than in 'George Franc'. 10 stamens.

This article with six plates of sketches is from **The National Hort. Mag.,** 29:15-27, 1950.

"Azalea Classics" are articles published in the past which **THE AZALEAN** staff deems worthy of being brought to the attention of today's azalea enthusiasts. Whenever possible **"Azalea Classic"** will relate to a feature article in **THE AZALEAN** in order to increase the perspective of the issue. We think this is a valuable way to link the past, present, and future in azalea horticulture.

THE STORY OF THE GLENN DALE AZALEAS AND THE NATIONAL ARBORETUM

Erik A. Neumann
Washington, D.C.

Each spring at the National Arboretum, Mount Hamilton is ablaze with a burst of color from over 70,000 azaleas ranging from pure white through pinks and reds to the deepest of purples. Scattered among the azaleas are snow-white dogwoods which lightly contrast with the azaleas to create an ethereal beauty.

The story of the Glenn Dale Azalea begins over fifty years ago when several dampened burlap bags arrived from Japan. Inside the bags were collections of azalea cuttings from the Imperial University's Agricultural College in Tokyo. Dr. R. Kent Beattie, a plant explorer, obtained the cuttings while in Japan studying the native chestnuts possibly to replace the dying American chestnut. He came upon the azaleas in his travels and was impressed with the size of the blossoms, their wide range of color, and long flowering period—all chacteristics which cause the Japanese people to especially enjoy these plants in their garden. With the arrival of the azalea cuttings from Japan, B.Y. Morrison of the Division of Plant Exploration and Introduction in the USDA Bureau of Plant Industry began a project to develop a race of garden azaleas which were large-flowered, would cover the gamut of seasonal and habit variation and were winter-hardy in the middle-Atlantic states. At that time, azaleas were scarcely grown as garden plants in Washington, D.C. The original intention of the breeding program was later expanded to include some races of azaleas which were winter hardy and valuable in themselves but did not fill the requirements for flower size. With these cuttings Morrison began his breeding work near Washington, D.C. at the U.S. Plant Introduction Station, Glenn Dale, Maryland. His task was to adapt the Japanese azaleas, accustomed to the more humid and mild climate of Japan, to the more severe winters of the Washington, D.C. area.

In ten years, Morrison completed over three hundred crosses between the Beattie introductions and selections of Japanese azaleas which had made their way into the southern U.S. by way of Europe in the mid 1800's.

In 1938 and 1939, Morrison introduced a large number of named Satsuki hybrids from the Chugai Nursery Company, Japan, known for their large flowers and late blooming habit. Unfortunately, few of them survived the Washington area winters. The surviving azaleas were crossed with the earlier introductions from Japan, resulting in a number of satisfactory plants. Seeds were gathered and sown at Glenn Dale, resulting in some seventy to eighty thousand seedlings which were then planted in a wooded area at Glenn Dale, Maryland, where winter temperatures were considerably lower than Washington, D.C. In addition, plantings were made at the National Arboretum from which selections were also made. Over 400 azalea cultivars were selected and introduced into the nursery trade from those which survived the next several winters.

These new large-flowered, hardy azaleas now known as the Glenn Dale azaleas were literally covered with flowers in a range of color and with a flowering season far more diversified than the varieties (cultivars) in commerce.

In 1948, the south slopes of the Arboretum's Mt. Hamilton were planted with some 70,000 of the Glenn Dale azaleas, covering almost seven acres of ground. Without a doubt few, if any, experiments in azalea breeding have reached the magnitude that lay behind these Glenn Dale hybrids. With these azaleas, the gardener can have a wide range of flower form and color, a blooming period ranging from mid-April to mid-June, hardiness, and a range of plant habits.

Because of the popularity of the Glenn Dale azaleas when they came into bloom, the National Arboretum, which had previously been closed to the public, opened its gates for the first time. This led to necessary road improvement and created a regular yearly public awareness of the Arboretum. It may be said that the establishment of the Glenn Dale azalea plantings at the National Arboretum pave the way for its present state as our leading national institution for public education and research on garden plants.

On May 3, 1954 the Morrison Glenn Dale Azalea Garden, featuring named cultivars of the Glenn Dale azaleas, was dedicated to Mr. Morrison.

This formal garden, built with brick from an old schoolhouse, stands in remembrance of Ben Morrison, horticulturist, landscape architect, plant breeder, and first Director of the U.S. National Arboretum.

These comments by Erik A. Neumann, Curator of Education at the U.S. National Arboretum, are from the bulletin of the Friends of the National Arboretum, 1984 and were originally entitled THE STORY OF THE GLENN DALE AZALEAS.

FLOWERING TIME OF THE GLENN DALE HYBRID AZALEAS IN THE WASHINGTON, D.C. AREA

Mary L. Rutley
Silver Spring, Maryland

EARLY APRIL

Bopeep
Cantabile
Caress
Cygnet
Dayspring
Faith
Freedom
Minuet
Pastel
Portent
Refrain
Samite
Sebastian
Sligo
Tartar
Trouper

MID APRIL

Alabaster
Aladdin
Allure
Ambrosia
Antares
Aphrodite
Astarte
Beacon
Bettina
Bishop
Bowman
Brangaene
Bridal Veil
Buccaneer
Burgundy
Camelot
Capella
Caprice
Carbineer
Carmel
Carnival
Cavalier
Chloe
Cinderella
Circe
Clarion
Con Amore
Concordia
Dawning
Delight
Delilah
Desire
Dimity
Dream
Duenna
Echo
Effective
Fairy Bells
Fantasy
Festive
Geisha
Gladiator
Glamour
Greeting
Jeannin
Jingle
Jongleur
Kashmir
Katinka
Limerick
Madrigal
Marionette
Marmora
Marvel
Mascot
Matins
Mavourneen
Mayflower
Medea
Minstrel
Modesty
Morning Star
Mother of Pearl
Oracle
Pied Piper
Pixie
Quakeress
Quest
Red Bird
Red Hussar
Refulgence
Reward
Rising Sun
Robinhood
Roselight
Rosette
Satrap
Seneca
Serenade
Serenity
Signal
Simplicity
Sprite
Stardust
Tango
Templar
Temptation
Tokay
Tristan
Troubador
Viking
Violetta
Vision
Wildfire
Witchery

LATE APRIL

Abbot
Acme
Afterglow
Anchorite
Angelus
Araby
Arcadia
Argosy
Astra
Bacchante
Bagatelle
Berceuse
Blushing Maid
Captivation
Cascade
Cathay
Celestial
Challenger
Cherry Spot
Colleen
Commodore
Constance
Consuela
Content
Coquette
Corydon
Damozel
Daphnis
Demure
Dulcimer
Emblem
Enchantment
Evangeline
Evensong
Fanfare
Fashion
Favorite
F. C. Bradford
Galathea
Ganymede
Glacier
Glee
Gracious
Grenadier
Gypsy
Hopeful
Illusion
Ivory
Jamboree
Joya
Jubilant
Kenwood
Ladylove
Litany
Lucette
Lullaby
Madeira
Magic
Melanie
Muscadine
Nectar
Nerissa
Noreen
Opera
Orpheus
Padre
Paradise
Peerless
Peter Pan
Phoebe
Picador
Pilgrim
Pinkie
Pippin
Pirate
Prelate
Prudence
Ranger
Red Robe
Sappho
Satin Robe
Scout
Sentinel
Sheila
Souvenir
Suwanee
Thisbe
Treasure
Trilby
Twinkles
Valkyrie
Vanity
Velvet
Vintage
Warrior
Whirlwind
Winner
Zingari
Zulu

EARLY MAY

Alight
Angela Place
Bagdad
Ballet Girl
Bountiful
Coralie
Corsair
Crinoline
Cytherea
Driven Snow
Everest
Gaiety
Gawain
Gorgeous
Granat
Grandee
Harlequin
Helen Close
Isolde
Lacquer
Lustre
Martha Hitchcock
Merlin
Morgana
Nativity
Nocturne
Novelty
Pinocchio
Polonaise
Progress
Remembrance
Requiem
Shannon

Sonata
Stampede
Swashbuckler
Tanager
Ursula
Veteran
Volcan
Wanderer

MID MAY

Acrobat
Adorable
Advance
Allegory
Altar
Andros
Anthem
Antique
Arctic
Ave Maria
Aviator
Baroque
Blizzard
Bohemian
Boldface
Bolivar
Bonanza
Bravo
Bravura
Cadenza
Campfire
Caraval
Carrara
Catawba
Cavatina
Chameleon
Chanticleer
Chum
Cinnabar
Cocktail
Commando
Conquest
Consolation
Copperman
Coral Sea
Cordial
Cream Cup
Cremona
Cupid
Damaris
Damask
Dandy
Darkness
Dauntless
Dazzler
Defiance
Delos
Dowager
Dragon
Egoist
Elizabeth
Ember
Eucharis
Fakir
Fandango
Fawn
Felicity
Firedance
Folly
Frivolity
Furbelow
Futurity
Galaxy
Gallant
Gnome
Goblin
Grace Freeman
Grandam
Guerdon
Harbinger
Helen Fox
Helen Gunning
Herald
Janet Noyes
Jessica
Joker
Jubilee
Kathleen
Killarney
Kobold
Kohinoor
Leonore
Lillie Maude
Louise Dowdle
Loveliness
Luminary
Luna
Lyric
Madcap
Mandarin
Manhattan
Marjorie
Mary Helen
Mary Margaret
Masquerade
Masterpiece
Mavis
Megan
Memento
Meteor
Moira
Moonbeam
Moonstone
Motley
Niagara
Niphetos
Nobility
Nubian
Omen
Oriflamme
Orison
Paladin
Paprika
Parade
Patriot
Picotee
Pink Star
Pinta
Polar Sea
Presto
Prodigal
Puck
Punchinello
Radiance
Regina
Revery
Rhapsody
Rogue
Rosalie
Roundelay
Safrano
Saga
Sambo
Samson
Sarabande
Satyr
Scherzo
Scholar
Seafoam
Seashell
Shimmer
Silver Cup
Silver Lace
Silver Mist
Silver Moon
Snowclad
Snow Wreath
Sorcerer
Spangles
Surprise
Susannah
Swagger
Swansong
Taffeta
Talisman
Teresa
Token
Tomboy
Trinket
Trophy
Trousseau
Undine
Valentine
Vanguard
Vespers
Vestal
Wavelet
Welcome
Whimsical
Winedrop
Wisdom
Yeoman
Zealot
Zephyr

LATE MAY

Aztec
Cranford
Crusader
Epicure
Eros
Fountain
Mountebank
Pearl Bradford
Rose Ash
Sagittarius
Snowscape
Sterling
Stunner
Youth

FIRST WEEK IN JUNE

Epilogue
Juneglow

This alphabetical listing according to bloom time as listed in **THE AZALEA BOOK** by Frederic P. Lee was originally published in the Brookside Gardens Chapter Newsletter, Vol. 2, No. 2, 1981. We asked Mary Rutley to comment on its origin.

"Mr. Mel Rees was a local (Hyattsville, Maryland) azalea and rhododendron enthusiast and grower. He had a home nursery, specializing in "plants with a future." It was through Mr. Rees that I became aware of the large selection of later blooming azaleas.

One day when we were visiting him, he communicated that with so many of his customers requesting plants of the same blooming period, it would be very time saving to have a Glenn Dale listing by flowering time. So I volunteered to regroup the Lee book's listing."

THE PRESIDENT'S COLUMN

As you read this, the Annual Meeting in Mobile may be history. If the weather treated us right, the azaleas would have done their part and put on a spectacular show for us at Bellingrath Gardens and the many private gardens throughout the Mobile area.

For those of you who have made the trip south, as you return north to your homes I'm sure your thoughts will be of the spring season still a month or so away.

I experienced this last year when I made the trip north to attend the annual meeting in Fredericksburg in May. Our flowering season was at its peak around the first of April and what a show it was, one of the best. But then to see it all over again in just one month, what a joy. The memory of that trip I'll treasure for years to come. Isn't it great to live in a land such as ours, so large and such a diversity of weather zones.

I recently attended a nursery short course sponsored by the States Association of Nurseries for Mississippi and Louisiana. Dr. Marc Cathey, Director of the National Arboretum, was one of the guest speakers. Dr. Cathey did an excellent job presenting what the Arboretum is all about. It brought back memories when I saw the slides of the National Arboretum, having served as a council member of the National Arboretum for the past three years. Many new plants will be available shortly from cooperating nurseries due to efforts of the Arboretum in its plant introduction and breeding programs. When at all possible, visit the National Arboretum. It is one visit you won't forget, especially in the spring when some 40,000 azalea plants are blooming on Mt. Hamilton.

John U. Rochester

SOCIETY COMMITTEES

The Azalea Society of America operates with a system of committees administered by your Board of Governors. Committees active at present include the Executive Committee (the operating body of the Board of Governors), Chapter Expansion, Finance, Glenn Dale Preservation, National Meeting and Convention Site Selection, Nominating, Publications (includes **THE AZALEAN**), Satsuki Project, and Slide Library Committees.

The activities and needs of your society committees are periodically highlighted in **THE AZALEAN**. The names of society members and record of their many hours of service due to space limitations frequently remain unlisted and thus unrecognized to the majority of society members. Likewise the need for additional help also often goes largely unnoticed. For example, the Finance Committee needs the assistance of society members with experience in obtaining endowment funds and grants to aid in establishing a stable enduring financial base for society operations. Help is also needed with the Glenn Dale Preservation Project (see below for work dates). It takes many volunteer hours to run the society and with membership approaching 900 the need is increasing. Members are encouraged to contact the Chairman of the Board of Governors, the President of the Society, any member of the Board of Governors or the chairperson of the committee in which they are interested.

NOMINEES FOR THE BOARD OF GOVERNORS AZALEA SOCIETY OF AMERICA

The Nominating Committee has submitted the following slate for consideration by the membership as at-large governors 1985-1987.

James A. (Tony) Dove, Jr., Edgewater, MD

Tony is an incumbent governor, immediate past-president of the Society, and a member of the Ben Morrison Chapter. As horticulturist (University of Maryland '69) for Anne Arundel County, Tony is acquiring an international reputation for his work at the London Town Publik House and Gardens.

Charles H. Evans, M.D., Ph.D., Potomac, MD

An immunologist by profession, Charlie has served both the Society (charter member) and the Brookside Chapter (founding member) in a long list of capacities. Currently, he is Editor of **THE AZALEAN,** as a governor chairs the Finance Committee, and serves his Chapter as secretary/treasurer.

Donald W. Hyatt, McLean, VA

A two-term governor and past-president of the Northern Virginia Chapter, Don is a teacher, horticulturist (Virginia Tech '69), lecturer, nurseryman and hybridizer. He has also been active in the ARS, which he has served as president of the Potomac Valley Chapter and as District 9 Alternate Director.

Ryon Page, Silver Spring, MD

Chairman of the Board of Governors since 1982, Ryon is also a past-president of the Society, the Brookside Gardens Chapter, and the Silver Spring Garden Club. As a measure of his contributions to his Chapter, he was the first recipient of the Brookside Gardens Chapter's Frederic P. Lee Commendation.

Long an avid plantsman, Ryon may hold the record for number of varieties per square foot of greenhouse and garden.

Russell Scott, Mobile, AL

A member since 1978, Russell is a founder of the Mobile Chapter and co-chairman of the 1985 Annual Meeting. Formerly president and chairman of the

influential South Alabama Botanical and Horticultural Society, he now operates a small nursery in his retirement from real estate.

Election will be held during the business portion of the 1985 Annual Meeting. (See Article V, Section 1 and Article XIII, Section 9g of the By-Laws of the Azalea Society of America, Inc.)

THE GLENN DALE PRESERVATION PROJECT

1984 was a good year for the Glenn Dale Project. The Committee wishes to express its appreciation to the society members who donated their time and talents in support of the Project.

Despite last year's rugged winter, there were relatively few casualties in the new collection area. There were no additions to the collection area in 1984 and much effort was expended toward maintenance and controlling the weed situation. The collection area was further improved by the application of a heavy layer of wood chip mulch which was provided by the Glenn Dale station at no expense to the society. In addition, through the efforts of George Switzer, president of the Ben Morrison chapter, snow fence for a wind break was obtained. On Saturday, December 8, 1984, Roger Brown, Bill Miller, and Ed Rothe installed the snow fence along the northern edge of the collection area to provide an element of protection from the drying winter winds (Figure 1).

Figure 1. Ed Rothe and Roger Brown installing snow fence to protect the Preservation Program's hybrid azalea collection at USDA's Plant Introduction Station in Glenn Dale, Maryland.

Substantial progress was also made in the restoration/reclamation of the old, wooded area. In 1984 for the first time, considerable individual attention was given to the azaleas in the woods planting. Dead wood was pruned and where necessary the layer of leaf mold was reduced to promote new growth and improve the growing conditions.

Nancy and Ed Rothe, of the Ben Morrison chapter, have taken a strong interest in the old deciduous hybrids found at Glenn Dale. They are trying to determine precisely what the collection contains and are making a special effort to map, verify the tagged varieties, and identify the untagged varieties. We believe that the collection may contain many of the very old Ghent hybrids, some of which may be extremely rare.

The schedule of workdays for 1985 has been established. Workdays are planned for: September 21, October 19, and November 16, from 9:00 a.m.-1:00 p.m. Bring your gloves, pruning shears, loppers, pitchforks, and other tools and enjoy the company. A benefit not here-to-fore recognized is the informal information exchange that invariably ensues during each workday.

The Azalea Society of America, through the Glenn Dale Preservation Project Committee, is trying to collect Glenn Dale, Back Acres, Beltsville, and other named hybrids, to preserve these important azalea groups. The criteria for donating plants to the Glenn Dale project were previously published in **THE AZALEAN** (Vol. 5, pg. 54). For more information or to donate plants, contact Andy Dietz at (301) 384-2092, or Roger Brown at (301) 577-7509.

The Glenn Dale Preservation Project Committee

SATSUKI PROJECT A SUCCESS! BROOKSIDE SATSUKI COLLECTION NOW AVAILABLE

During the past two years, over 12,000 cuttings have been propagated by 4 commercial nurserymen who are members of ASA. I have been assured by the nurseries that in this spring of 1985 a limited number of the Brookside Gardens Satsuki Collection may be ordered. The clones that are available, all over one year old, will be indicated in the respective nursery catalogs. The nurseries are:

Dogwood Hills Nursery, Franklinton, Louisiana
Gordon W. Severe Nursery, Millsboro, Delaware
Hager Nurseries, Inc., Spotsylvania, Va.
Hass Nursery, Philomath, Oregon

During the blooming seasons of 1983 and 1984, I have had the extreme pleasure of seeing these plants in their full splendor. In the Silver Spring and Bethesda areas of Maryland, they have survived several severe winters of below zero degrees fahrenheit. Some of the varieties are truly unique.

In the future, the Satsuki (Sat-ski) Committee will be asking you, the membership, to give us reports on the hardiness and growth habits in your respective areas, so that we may report them in **THE AZALEAN**. Malcolm Clark will be the National Evaluation Co-ordinator for these future reports. Other members of the Satsuki

Project Committee are: George Harding, John Rochester, Jerry Goodman and myself.

Descriptions of this delightful collection and some color prints are included in 'AZALEAS' by Fred C. Galle which will be introduced at the National Meeting in Mobile, Alabama on March 22, 1985.

Robert K. Barry
Satsuki Project Chairman

Correction to the listing of Brookside Gardens Satsuki Collection Cultivar Names previously published in the December 1984 issue of **THE AZALEAN**, Volume 6, pp. 57-59.

The spelling or BG number of seven cultivars was in error. The correct spelling and numbers are:
Cho no Hagoromo BG 1324
Fuji Nami BG 1004
Gyoko BG 1098
Gyokudo BG 0486/1180
Hime Nakahara BG 0849
Matsunami BG 0505
Myojo BG 1178

CHAPTER ACTIVITIES

Members of the Brookside Gardens Chapter at the annual meeting of the chapter on December 6, 1984 elected Deborah Van Vechten president, Harriet D. Carroll vice-president, and Charles H. Evans secretary/treasurer for 1985. A highlight of the meeting was the presentation of the Frederic P. Lee Commendation to Charles H. Evans, secretary/treasurer of the chapter, editor of **THE AZALEAN**, and member of the Board of Governors of the Azalea Society of America. The Frederic P. Lee Commendation is awarded by the Brookside Gardens Chapter for distinguished service in promoting knowledge of and appreciation of azaleas. Previous recipients have been Ryon A. Page in 1982 and Anna Jane Martin in 1983.

Thomas E. Wingrove, a member of the Ben Morrison Chapter, was recently recognized in THE ENTERPRISE of Lexington Park, Maryland for his additional gift of two hundred azaleas to St. Mary's College. Last fall Tom gave and helped plant one hundred sixty azaleas from his personal collection toward an ultimate goal of having at the college the region's largest collection of azaleas open to public view and enjoyment.

Chapter and member activities for inclusion in **ASA NEWS AND VIEWS** should be sent to the Editor three months prior to the month of publication desired in **THE AZALEAN.**

THE AZALEA CALENDAR

March		
	22-24	7th National Convention, Azalea Society of America, Mobile, Alabama. Russell Scott, Chairman, (205) 633-7069
	29-30	Louisiana Chapter Annual Flower Show. Hammond Square Mall, Hammond, Louisiana. Contact: John Rochester, (504) 839-4917.
April		
	13-14	Louisiana Chapter exhibition at the Annual Flower Show in New Orleans at Delgado College. Contact: John Rochester, (504) 839-4917.
May		
	3-5	Landon Azalea Garden Festival, Landon School, 6101 Wilson Lane, Bethesda, Maryland. 10-5 p.m. Daily. (301) 320-3200.
	11-12	Brookside Gardens Chapter 6th Annual Azalea Flower Show. Denise Stelloh, Chairman, (301) 840-1714.
	18	Brookside Gardens Chapter 7th Annual Azalea Sale. Richard Antony, Chairman, (301) 439-6085.
September		
	21	Glenn Dale Preservation Project Workday. 9 a.m.-1 p.m. Andy Dietz, (301) 384-2092.
October		
	19	Glenn Dale Preservation Project Workday. See September 21.
November		
	16	Glenn Dale Preservation Project Workday. See September 21.

THE AZALEA CALENDAR lists upcoming Society and chapter activities. Items to be included should be forwarded to the Editor together with name, address, and telephone number of contact person(s) at least three months prior to the month of publication of **THE AZALEAN** in which the notice is to appear.