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About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

Although the writer of these preliminary notes has always been keenly interested in azaleas, there have been several times in his gardening, when there has been a special upsurge of interest and activity. When it was decided informally enough, to undertake a series of crossings to determine if hardy ^{Wagner or San-Wagner} azaleas could be produced that would endure the rigors of the variable winter climate of the Washington, D. C. area, and yet bear flowers as large as those of the kinds that were not dependable in that climate, a general survey was made of all the then available azaleas, that might enter in to such a program. Among the several larger collections of azaleas, not then in easy reach in the United States, one was represented by a large collection of named clones in Japan, listed then by the now defunct Chugai Nursery, near Osaka, and listed as indica, ^{porantha} hybrids. A collection of these was brought in to this country by the U. S. Department of Agriculture in 19³⁸⁻³⁹, totalling some $\sqrt{0}$ clones. Not all survived the importations but most were successfully propagated and sent to nurseries for testing, as soon as large enough to ship.

When in 19.., Dr. John L. Creech of the same Division sent back from Japan a smaller collection of the more recent introductions, the writer asked him if it would in any way interfere with his program, should he, the writer undertake a personal program of introductions, not on a selective basis, but rather on a general one, to see what the whole range of ~~plants~~ kinds might present. Based on Dr. Creech's assurance that it would not, the writer began direct importations in 19³⁸ and has continued to date, with annual importations, some of which have been extremely successful and some quite the reverse.

Since all plants of this type must come in under permit and with no soil on the roots, the plants need more than routine care, in getting the m reestablished and into growth. Since even by air shipments it is wise to bring in very small plants, it has taken more years that was foreseen to get the plants into normal ~~growing~~ ^{the} and the production of bushes that would indicate something of the eventual normal ~~growth~~ ^{habits} and rise flowering habits. Importation is always a shock to any plant that must come in ^{as} living material ^{if} it is only in relatively dormant condition, and it may well be that the writer is not expert enough to have over come the delays as rapidly as might have been done elsewhere. The plants of the first shipment are now 5 years in position and have come to show what appears to be a normal appearance. Those that arrived in March 1962, still look like newly set liners, although there is evidence enough that all will survive, save one clone, that came in as very small plants and has died entirely.

Every care has been taken in the Inspection Station in San Francisco, to see that the plants were handled quickly and well, with even a modification of treatment, for certain sorts that seemed to be sensitive to methyl bromide. Whatever of failure there may be, must be laid at the door of the writer.

There are now growing in the garden here in Pass Christian, ^{most of} old plants of the original collection brought in by the Department, as well as examples of the plants brought in by them through Dr. Creech, as well as those imported by the writer. To these have been added examples of every other clone that might or does belong here, available through nurseries in this country, as there have been other agencies that brought in this type of plant long before the Department concerned itself. In many cases it has been impossible to find the date or the name of the importer.

Sweet

Because the "macrantha" azalea, really Rhododendron indicum, D. Don, was one of the first azaleas to reach Europe and was part of the program of seedling raising that immediately followed the introduction of the several species from the Orient, the writer has concerned himself as far as possible to collect and grow the old azaleas that were brought in to this country in the earliest days and are now generally called "Southern Indicas", a common name that is not altogether satisfactory, although too well established to warrant changing. It was soon apparent, that many of them contained characters that pointed to the "macrantha" as a probable parent. In addition to these, through the kindness of Mr. Roger Coustry, Agricultural Attache of the Netherlands ~~Belgian~~ Embassy in Washington, a collection of the earlier Belgian azaleas was obtained, with the thought that they might show some traces pointing to "macrantha."

Some appear pure indicum
S.S.

Against all these, were the many seedlings and named clones already produced by the writer in which the "macrantha" azalea had been used as a parent.

All this may seem a needless preliminary, but actually it is ~~is~~ needed if we are ever to arrive at as clear and understanding of the origins of the Japanese clones as may be.

For them we know as facts, only that some ^{if not most,} at least/are direct derivatives of Rhododendron indicum, some are said to be derived from R. eriocarpum, and private correspondence has provided some names that are known to be of that lineage. A few are reported to be crosses in which one of the florist's type of Belgian azaleas has been employed, and the names cited are of clones that are late blooming and rarely used in modern forcing for the florist trade, such as Empress of India and Mme. Moreau.

As yet, the writer has not been able to persuade any of his Japanese friends to define a satsuki azalea in terms that would save him labor. The word itself, as all know, indicates a "fifth month" azalea, i.e., a late blooming kind, for May or June. This is characteristic of wild forms of both indicum and eriocarpum. It is also true in this garden of R. nakaharai a species from Formosa, that has never been suggested as an element in this series of garden hybrids. It also appears from the plants of R. eriocarpum in the garden here, that the flowers are not large, as compared to such as mucronatum though they are large as compared to flowers of the ordinary Kurume clones.

One may start then, with the idea that satsukis are a race of late blooming azaleas. In general this is true, but there is at least one clone, Kei-setsu, that blooms well ahead of all the others and even in late April here. As normal blooming becomes established in the collection here, others may appear as early, for not all clones have had normal flowering as yet.

The next generality that maybe safely offered is that the foliage is evergreen and lasts about two years per leaf, as is the case with R. indicum. The foliage, in no clone as yet observed would suggest that R. mucronatum has ever been used, but this is not an altogether safe conclusion as among the Glenn Dale azaleas such clones as Angela Place show heavy foliage of comparable type though not always lasting two season. Mucronatum figured in the ancestry of 'Angela Place', together with a satsuki. The typical leaf form of indicum, which Wilson gives as "short-petioled, narrow-lanceolate, lanceolate to oblanceolate, mucronulate, * *" does not appear in many of the clones, although it does appear in such clones as

Wilson's description of the plant habit, " * * * * *
 The plants though often decumbent, are naturally upright and
 very densely branched: * * * " is certainly correct for all
 the clones observed. He also mentions the fact that in ~~KURUMES~~
~~PHANOSMITH~~ the only place where he observed the plant truly
 wild, it grew "from a half to two meters high and forming
 dense masses in open country * * * " There was no comment as to
 how old such stands may have been and that would be an added
 bit of data, if available. Certainly in cultivation, it varies
 in habit according to the nature of the site, free standing
 and upright to four or five feet in ordinary positions, lower
 and prostrate to semi-prostrate in exposed positions, and
 these characteristics seem to be true of the named clones of
 satsukis as well. The species apparently grows less and less
 tall as it is grown in colder parts of this country often
 with wide spreading habit, similar in character to that which
 it shows when grown in sunny exposed positions here.

From all this plus the present condition of the oldest
 collection of the named clones in the garden here, plants now
 about twelve to fifteen years of age, one may safely say that
 the satsukis are not dwarf. It is important to establish this
 fact early in their history in this country, so that we need not
 allow the error that plagued the Kurumes for years, as dwarfs
 when they definitely are not such. Here the oldest plants
 reach as much as eight feet in height and this is not due to
 crowding as they were planted at least forty inches apart,
 and in some cases have died out, so that the distances are even
 greater. It is true, however, that some clones show a tendency
 to greater lateral growth than vertical and only a few appear
 to be approximately columnar.

where
2

slow / sm

added
evidence

some

6- draft only.

If one dare use merely casual observation, it may be said that the majority of the named clones have leaves that approximate those of R. eriocarpum, heavy in substance, dark green in color, and rounded on the tips, often obovate in form. Whether or not this may safely be assumed as an indication of the free use of this species in the total progenies, is doubtful. In the writer's work with R. indicum as one parent in various combinations, widely differing leaf forms have resulted, some of which would belie the possible use of indicum. None, it is true, are as small or as rounded as those in the Japanese clones of satsukis.

It would appear therefore, that until some Japanese authority will write on this subject, we cannot be too certain of the total ancestral background of our plants.

It may be said, however, that they constitute, a group of clones with flowers of singular beauty, and beauty not only of color and form, but of pattern. They make up a race that will add at least one month to the blooming season of azaleas in all places where they are cold hardy.

In Japan, the species and some clones are most commonly used in the landscape gardens, as ground covers, as hedges or as individual specimens, usually so severely trimmed as to curtail all flowering and provide only accents from foliage masses.

The other great use, appears to be in the special cult of Bonsai, in which the special clones of satsukis are magnificently done, and are exhibited annually at Utsunomiya, in particular, a town about miles north from Tokyo. *Other clones?*

Judging from the illustrations in the annuals in the writer's hands, yearbooks for about ten years in the mid-thirties, the plants grown as bonsai, are more valued for the actual training of the plant itself, than for what flowering it may have at the moment of showing.

7- draft only.

This may be only a partial truth, for while there are ^{now} few specimens photographed that show masses of bloom, there are some such. Flowering would appear to be of interest if the blooms appear in the places on the plant, that accent the habit of growth and in some cases at least, show the possibilities of the plant to produce more than one type of bloom, ⁱⁿ color or pattern. Even in these illustrations, there is sufficient evidence of tall specimens to let one repeat that the ~~se~~ plants are not dwarfs. And in the diagrammatic illustrations showing the early stages of producing a plant for eventual bonsai showing, there are many showings of plants with a single erect stem, and a reduction of all laterals except in such particular places as would be needed if a compensating branch was needed, to complete and perfect the balance of the ultimate composition. One finds an occasional note in descriptions, stating that growth is flexible, another indication of the intent of bonsai production, since the young shoots, are often forced by wiring, or ties or weights into postures that will eventually reproduce the aspects of plants far older in calendar years ⁷ ~~than may be the case.~~

This passion for the production of an early establishment of a plant habit that will simulate that of age, is paramount in much of the bonsai work, as well as in training practices in the regular gardens. It is a form that should present, philosophically, the idea of maturity, with a sense of the achievement of the ultimate poise and serenity that will come or should come with the matured plant - or individual.

8- draft only

One may well ask, what do the flowers look like.

Judging from the collection as known to the writer, there seem to be three major types of bloom in regard to shape; the smaller, more or less funnel shaped blooms, rarely over an inch and one half, larger flowers often to three inches that are flatter, and among the last importations even larger flowers that are absolutely flat, so that they appear to show their total widths at five inches or so. Private correspondence suggests that flowers of the first type are preferred by the purists. Those of the last type while causing great admiration are often on plants that require or seem to require more years in establishing a strong framework of branches, so that the sheer weight of the blooms does not pull the plant out of shape.

As to colors, one may have almost anything one wishes, save true yellows, and pure blues, the usual limitations of the evergreen azaleas of any type. The colors may be pure selfs, but more often are represented either as stripes and derivatives of striping to be discussed later on, and marginal colors on a white or tinted ground, and as a variation on this last in which the white center is not equally distributed on all lobes, and is often accented by the darker color of the small dots that make up the blotch on the upper lobe. Since all these patterns are related to somatic variations, any one plant, may, and often does exhibit more than one type of bloom. In this lies the delight of the bonsai grower and from it, the despair of the nurseryman in this country when it comes to propagation.

As an example of what is meant, one plant of the clone, Gobi-Nishiki, in this garden produced a fine plant of good proportions on which all flowers were the proper white with an occasional fleck of rose pink. One single branch appeared on which all flowers were rose pink selfs.

9- draft only.

The still more common type of variation, is that of the clones that are essentially white flowers, marked with dots, flakes or stripes of color. This is the type of plant that may produce, and frequently does, ~~a~~ branches with colored flowers margined irregularly with white, and more rarely with flowers that are white, margined with color. In so far as the writer's experience allows any statement, propagations from the typical part of the plants, i.e. the striped, freckled or otherwise marked branches will continue as such and will continue to produce all the sports mentioned above. Propagations from either of the two types of sports, have so far, continued as such without reversions. This does not mean that reversions cannot occur. In so far as the writer has observed, the two major types of sport, occur only on clones with striping or one of its forms. In such clones as have white eyes, the reversion to solid color, usually the color and not to white is more frequent. There seems to be no time element involved, if one may judge from the experience with one clone here, unfortunately unnamed, that has been producing pure white flowers for at least ten years. Two years ago, a few flowers showed a very few, very small rose pink stripes. In 1962, one branch produced one flower, that was of the white marginé type, with a light rose pink ground, darker stripings, deep rose dots in the blotch area, and the irregular white margins. This after ten years of whiteness.

IN correspondence ~~the~~ writer has been told that the chief sport of the satsuki growers who are concerned with bonsai production as well, is the annual hunt among their plants for sports of any kind that can be propagated and named. As soon as the sport can be grown to a size where it in turn may be used as a source of cuttings, it becomes a source of income, by sales to other bonsai growers who wish as "complete a collection as is possible."

Because of this constant interest in new forms, it often happens that old varieties drop out of cultivation, just as old kinds of any plant may do in this country. One would particularly like to see plants of the clone known to British growers years ago and given varietal status by Wilson, the clone known as Tanima-no-yuki. Dr. Creech was able to find this in Kyoto, but as yet plants have not been successfully brought to this country. It is said to ^{be} very old, and it would be fine to see it and ponder as to whether or not it represents the original source of all the variegations that have come since. Since it is described as having "salmon-red flowers ~~with~~ whitish at the base" it may not be the source; and one would also like to see the clone named by Wilson as common about Osaka, and known there as Shiki-takane-satsuki. This is a "red spotted" white flower and would appear to this writer as a more probable ancestor. One would also like to get replacements of some of the clones first brought over by the Department of Agriculture, as the plants now in cultivation of at least two clones appear to be identical which should not be the case. The writer's inquiries have brought back word, that neither is ^{now} known.

11- draft only

The easiest and clearest way in which to show the characteristics of the blooms seems to have been to make drawings of a typical flower of as many clones as possible, make note of the colors, the number of stamens and any tendency on the part of the clone toward wide sporting, and a brief indication of the leaf characters and plant habit. This last is the least certain as too many of the plants are much too young to show what the ultimate habit will be. It may usually be surmised, but surmises may well be wrong.

Drawings will also show something of the leaf characteristics and a few drawings of twigs will indicate the close branching habits.



BRANDEIS UNIVERSITY
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Interest in "satsuki" =

Two lines = catalogue curiosity
Tussock breeding work

"definition of status of this provisional report"

definition of "satsuki"

as a work - Japanese

as a class - 'late flowering'

as a plant - brassica in Japan -

macrantha in back forms of *edgii* in Japan

Original ~~import~~ form of "macrantha"

has many macranthas are in cult in
US -

Has many satsukis have been in cult &
are now in cult that predated the 1935/39
import by USDA.

General discussion of field.

Japanese imports 1935/39

later -

Vars in USA - continuing search for types