

A Note from Your Editor

Barbara Stump — Nacogdoches, Texas

This issue is devoted completely to the Satsuki. The fall issue will report the 2001 convention at Asheville and catch up on other chapter and Society news. Jim Trumbly of Roseville, California, has produced a wonderful overview of the group, showing how the "fashion" for Satsuki has changed over the years and presenting lineage links between cultivars. Jim Trumbly photographed all the images and drew the line drawings. He also submitted the notes on the *Satsuki Dictionary* that appear in the Research Notes section. The numbers in parentheses refer to the numbered references at the end of his article.

A few definitional comments will help provide the context for this article: First, the names of the Satsuki are given as they appear in the latest edition of *Satsuki Dictionary* (or *Satsuki Daijiten*, 5), not Galle. Trumbly considers the former the most up-to-date and correct source. Thus, some names are written as one word where readers may have seen them hyphenated in the past. Second, his usage of the terms "family," "subfamily," and "group" is not the same as that listed in the International Code of Botanical Nomenclature or the Cultivated Plant Code. His frame of reference is as follows: "A family is designated when a

cultivar of unknown parentage has seven or more first- and second-generation descendants (children and grandchildren). Subfamilies are designated when a cultivar of known parentage has seven or more first-and second-generation descendants." Finally, Tsutsuji is not equivalent to *Tsutsusi*, the subgenus of *Rhododendron* that includes the evergreen azaleas, but is a specific subset. From Galle (1987, p. 206): The Japanese categorize azaleas into two "groups": 1) Tsutsuji, which includes all species or hybrids which flower 30 days or so after the spring equinox, and 2) Satsuki, which includes azaleas which flower 30 days or so after the Tsutsuji.

The Changing Fashion of Satsuki

Jim Trumbly — Roseville, California

The purpose of this article is twofold. The first is to review some important information previously presented by Galle and others that helps explain the large number of cultivars in the Satsuki group. The second is to present new information that takes a closer look at the characteristics of the individual cultivars to see if there were patterns in the types of Satsuki developed during different periods in the past. Such patterns may help to explain the range and continued development of Satsuki. For this I have relied primarily on the most current 1997 *Satsuki Dictionary* and translations of the cultivar descriptions, lineage, and time of introduction.

Satsuki Popularity

Besides the great popularity of Satsuki in Japan and the support industry of clubs, shows, colorful glossy magazines, and numerous commercial growers and nurseries, I believe there are at least three factors contributing to the increasing numbers of Satsuki cultivars. These are:

1. A long legacy of horticultural development of Satsuki

2. The sporting characteristic of Satsuki and the Japanese interest in this
3. The constantly changing tastes and interest in various Satsuki forms and features

In other words, the changing fashion of Satsuki.

Historical Sources

My first *Satsuki Dictionary* (*Satsuki Daijiten*) was the 1983 edition. This is the fat little picture compendium of Satsuki cultivars—one to a page—with text in Japanese except for the English transliteration of the name. During the next decade I obtained



'Shugetsu', a single-patterned *sokojiro* (bicolor) flower form that came from 'Aikoku'.



'Aikoku', a multi-patterned cultivar where the bicolor is only one of several color patterns present; this is an important parent in the 'Juko' subfamily.



'Shisui' shows the unique *shibe* flower form, which has very narrow petals that can appear to some like a very typical form of stamen.

three more dictionaries, the 1992, 1995, and 1997 editions, each one with more newly entered Satsuki. My 1997 Dictionary has 1,012 described Satsuki cultivars.

These dictionaries are worthwhile little books if for no other reason than to enjoy the pictures. But what caught my attention was that between the 1995 and 1997 editions, in just two years, 51 new cultivars were added. This seemed like a tremendous rate of growth in new cultivars to what already is a huge group of azaleas.

My interest piqued, I began to pay more attention to cultivar names and to check these against Satsuki listed in other sources.

Looking back, I found that there are many more named Satsuki cultivars than those described in the current Satsuki dictionary. As many as a half of the cultivars mentioned by Lee and a third of those listed by Galle (1987) are not in the latest Dictionary. I also checked a 1972 Japanese book *Satsuki Taikan*, a lesser-known source to English readers but referenced by Galle: it described 1,500 Satsuki cultivars. About two-thirds are different from those in the current Dictionary.

Through the years, the total number of named Satsuki cultivars must have been prodigious and several times the size of those being described today.

The ancient work *Kinshu Makura*, published in 1692 (republished in an English version as *A Brocade Pillow* in 1984), described 161 Satsuki cultivars from 300 years ago. Only a few of these are around today.

Why are there so many? Why is there such a rate of new introductions when so many currently exist? Are all these new cultivars sufficiently different from those that have already been created?

Finding answers to these questions can be very difficult in the West with few sources of information and without an ability to read Japanese. The situation described nearly 20 years ago in *THE AZALEAN* (9) by Carl Hahn, Chief Horticulturist for the Maryland National Capitol Park and Planning Commission, has not changed. There still is very little information on Satsuki available to the non-Japanese reader.

This has been frustrating for me as a student of Satsuki, but it has also been a motivator to unveil some of the mystery surrounding this important group of azaleas.

Legacy

Satsuki, and azaleas for that matter, have been developed horticulturally in Japan dating back to before 1500 A.D. Azaleas were first mentioned in

Japanese horticultural literature about 320 years ago in *Kadan Komoku*. Some 140 different selections of Tsutsuji are listed. Although the term Satsuki was not specifically mentioned, several of the cultivars described seem to be Satsuki. It has also been suggested that at the time of this publication the distinction between Tsutsuji and Satsuki was probably not made and Satsuki were undoubtedly among these early azaleas (7)



'Kinsai' is an example of the *sai* (split-petal) flower form in a deep red color.

Some 10 years or so later in 1692, *Kinshu Makura* was published in five volumes. This landmark effort on azaleas drew the distinction between Tsutsuji and Satsuki, presenting the former in the first three volumes, and the latter in the last two. Authored by Ito Ihei, a nurseryman and gardener of the castle grounds of a feudal lord, it describes in detail the azaleas of that time including 161 Satsuki. Detailed descriptions of flower forms, colors, bloom time, and grades of flower quality are included along with wood block illustrations giving us a revealing record of the already substantial diversity of Satsuki over 300 years ago. Included are single, double, hose-in-hose, *sai* (split petal), and skirted (partially developed petal-like structures between the calyx and corolla) flower forms, many *shibori* flower patterns (radially marked petals with flecks, stripes, and wedges), and nearly the full range of flower colors seen today.

Most of the Satsuki cultivars described by Ito Ihei are now considered extinct. Several, however, such as 'Mine-no-Yuki', 'Tanima-no-Yuki', 'Takasago', 'Hakatajiro', 'Matsunami', 'Benibotan', and 'Osakazuki' are still with us today. In *Satsuki Taikan* (7) the authors note that some are considered excellent and popular cultivars, which is an indication of the already outstanding quality of Satsuki that existed during this early time.

The book was renamed *Chosei Karinsho* and reprinted 40 years later in 1733 and then again in 1849 (7). The book's lasting popularity attests to its importance and that of evergreen azaleas in Japan. Other publications followed, and the number of Satsuki cultivars undoubtedly continued to grow during the long Edo Period that ended in 1868.

Popularity and growth of Satsuki were not always the case from the time of *Kinshu Makura* to the present. This was especially so during the confusion and internal conflict of the Meiji Restoration following 1868, in which Satsuki popularity was largely lost

and many cultivars of the time became extinct. Satsuki interest persisted, however, in some localized areas on Honshu, and in Kurume on Kyushu, but not in Tokyo. This period of low interest in Satsuki continued for over 40 years, but was followed by a resurgence of popularity in the years just prior to World War I.

This turn in popularity is noted as around 1914 (in the early Taisho Era) when an exhibition held in a park in Tokyo reintroduced the beauty of Satsuki blossoms to the Japanese public (7). With this came the beginning of a major increase in the rate of discovery of seedlings and sports, and the creation of new cultivars. Cultivars such as 'Eikan', 'Gunpo' (20), 'Bunka', 'Ungetsu', and 'Fukuju' originated in this period.

From this new beginning to the present, Satsuki have maintained popularity in Japan. During this "modern" era the first formal introductions of Satsuki were made into the United States in 1938–1939. Lee (10) and Galle (6) have discussed this previously.

Sporting Characteristic

Excepting the "mie", or hedge Satsuki, that is grown for its vegetative characteristics, the Japanese appreciation of Satsuki is almost exclusively as potted plants. Satsuki are grown and trained to exhibit the flowers or as formal bonsai subjects. I have come to believe that this is because the Japanese think of Satsuki as very individualistic plants that are to be appreciated close-up and enjoyed for their detailed characteristics, particularly flower variegations. Even for a given cultivar one plant's individuality is expressed in the varying representation and composition of different flower patterns. This is quite different from interest in the West, where Satsuki are commonly used as garden shrubs and often planted densely among other plants in drifts or groupings.

The source of Satsuki individuality and the great diversity found in the

group comes from its propensity for sporting. Moreover, the Japanese actively pursue the many variations of concentric and radially marked flower patterns that can and do result. They, in fact, refer to this with appreciation as "the trick of the flower." Sporting has led to a tremendous diversity of flowers, not only in patterns, but also in color, forms, shapes and sizes. Combinations of these variations are often found on an individual plant. Likewise, the recognition of these differences and the development of several new cultivars from one common parent has had a multiplier effect on the creation and naming of new cultivars.

For example, the vegetative propagation of essentially one type of flower pattern from a parent that exhibits a diversity of flower pattern types may result in a separate named cultivar. This especially can be accomplished for some Satsuki flower patterns that are dominant. 'Shugetsu' is a single-patterned *sokojiro* (bicolor) flower that came from 'Aikoku', a multi-patterned cultivar where the bicolor pattern is only one of several.

The Japanese have established naming conventions to distinguish the many variations in flower patterns. These have been presented by Galle and are also described on the azalea website (www.azaleas.org). The Japanese have also established naming conventions for flower forms and shapes, although having not been published in an English version to my knowledge, they are less well known. While single, double, semi-double and hose-in-hose descriptors would be expected and do exist, another 14 types are also commonly recognized. These typically refer to the shape of flowers or the petals. These are illustrated in Chart 1—Japanese Classification of Satsuki Flower Forms. A new cultivar, then, can arise from the recognition of a slight transformation in petal shape while all other characteristics remain unchanged. One such example would be the rounded-petal 'Kozan' that

sported the more pointed star-shaped petal form of 'Kozan-no-Hikari'.

Changing Fashion

Many Satsuki shows are held throughout Japan during the blooming period (22). Satsuki are shown as potted plants that have been trained to display the beauty of the flowers. The owner (or trainer) of one of these Satsuki gives careful attention to the styling and composition of the flowers. Larger-flowered Satsuki are often trained in taller upright styles while smaller-flowered Satsuki are trained to smaller scales. Other styles that provide a broad display of flowers such as cascading and semi-cascading are also popular.

For the many cultivars with multi-patterned flowers, training goes beyond styling and includes the selective pruning out of certain flowers to create the desired balance and composition of flower patterns.

The creator's image and desired outcome have significant influence on the result. This, to some, is artistic expression and is thus subject to the changing tastes of fashion and style. Over time certain flower forms and overall appearances come into popularity only to be later replaced by new favorites. Each of these successive periods of popularity for certain styles undoubtedly contributed to the expansion of Satsuki cultivars with the desired characteristics. During the time *Kinshu Makura* was written (1692) skirted Satsuki flowers were popular, including over 10 percent of those described. Today, these forms are close to non-existent.

The extension of this phenomenon to more recent periods can be revealed by comparison of cultivars in modern compendiums as to their characteristics and time of introduction. The 1997 edition of the *Satsuki Dictionary* provides the most current Japanese Satsuki reference. It includes 1,012 different Satsuki including those regis-

tered up through 1996. For each cultivar there is a close-up color picture of the plant, showing its flower patterns and written descriptions of the leaves, flowers, parentage when known, and occasionally characteristics such as strengths and weaknesses regarding cold or disease. Of those presented, 727 include information as to the particular time of a cultivar's introduction. (See Research Notes for a more detailed description of current Satsuki dictionaries.)

In addition, newly registered cultivars since 1996 and for the years 1997 through 1999 are presented each year in the August and September issues of *Satsuki Kenkyu*, a monthly magazine about Satsuki (12-17). For each new Satsuki there is a color picture along with a description of the flowers, leaves, and parentage. The number of new, previously unregistered Satsuki presented in these three years is 71.

Methodology

In doing this study, my approach was to evaluate changes in cultivar characteristics through different time periods; 798 cultivars with time of origin information were used. A number of characteristics were evaluated. These are shown by differing time periods in Table 1—Satsuki Cultivar Characteristics By Timeframe. Figures given are percentages of the total group size within each time period. Group sizes for the different time periods vary considerably; thus, percentages give a clearer picture of the relative importance of a characteristic in a particular period of time.

It is important to note that many of the cultivars from earlier periods, particularly before World War II, are no longer included. This became especially apparent when comparing the lists of Satsuki described by Lee and Galle with those in the 1997 *Satsuki Dictionary*. With allowances for variation in spelling, only about 60 percent of the Satsuki listed in Galle are included, and of those mentioned by

Lee, it is even less. A comparison was also made to the Brookside Gardens collection as listed in *THE AZALEAN* in 1984, which had a similar result; about one-third are not included in the current *Satsuki Dictionary*.

Flower Size

Changing fashions in regard to particular cultivar characteristics may be illustrated by examining changes in the relative popularity of large and small flowers. Of all the characteristics evaluated, that of relative flower size was the most pronounced.

Following the Taisho Era in 1928 and until the end of the 1950s, large- and very large-sized flowers were very popular. New cultivars were introduced that had flowers larger than ones previously described. Flower sizes increased during the period with some reaching five inches in diameter.

From 1946 to 1959, 40 percent of the cultivars introduced had flowers that were very large, being greater than four inches in diameter. It was during this period of time that cultivars such as 'Asahi', 'Heiwa', 'Higasa', 'Banjono-Tsuki', 'Shintaiyo', and 'Gettoku' made their appearance.

By the mid 1960s the interest in cultivars with very large flowers was replaced by increasing interest in those with small flowers. Speculation on the reasons for this change in popularity could be tied to the increased Japanese interest in Satsuki for more formal bonsai training and, consequently, considerations of proportion and scale (small leaves and flowers).

Prior to the 1970s Satsuki were popularly trained for shows in an informal style. This style consisted of upright "s" and reverse "s" bends to three or more feet in height with major branches formed from outer curves. This allowed for the best display of the flowers, which, when in bloom, presented an impressive sight. The thought of Satsuki as formal bonsai subjects was less common, but that apparently changed in the 1970s.



'Hikari-no-Tsukasa' is from the 'Kozan' family of sports, is itself a sport of 'Nikko', and shows the transformation to the narrow *kenben sai* (sword-shaped bloom) flower form.

The Satsuki, it should be noted, is one of the most rewarding materials for bonsai (21). Its bushiness and adventitious buds along nearly all stems and trunk allowed creation of branches in desired places. Good development of trunk taper and buttress roots of some cultivars also contributed to training Satsuki as miniature tree representations.

The desire for bonsai material with small leaves and flowers resulted in the expansion of Satsuki with these characteristics. 'Kozan', an old cultivar that had been around since before the Taisho Era appears to have been the mother of this expansion.

'Kozan' has a small leaf and flower. In addition, it has an ability to sport multiple changes in flower shapes, color, and variegation. Since 'Kozan' is considered to be a cultivar with unvariegated, off-white flowers, many of the various variegations that it sported were selected and named as new cultivars. Beginning in 1959 with 'Nikko', the first-generation sports of 'Kozan' provided many new cultivars. Chart 2-'Kozan' Family of Sports—shows the large number of cultivars derived asexually from 'Kozan' through sporting. While 'Kozan' and a few of its sports were around during the 1960s, it wasn't until the shifting popularity toward smaller scale cultivars that this "family" of cultivars expanded significantly.

The family (or subfamily) of 'Nikko' was, and continues to be, a popular small-flowered Satsuki family. Chart 3 shows its family tree with dates of registration.

While the number of small-flowered Satsuki cultivars expanded during the 1970s, attention shifted to other characteristics by the 1980s and 1990s.

During the 1990s the distribution of new cultivars as to flower size is fairly consistent with that of "old cultivars" that existed prior to 1912, with the only exception being that small-sized flowers have a slightly greater representation. This is likely because of the continuing popularity of Satsuki for formal bonsai.

Other Flower Characteristics

Ruffled or wavy-margined flowers, *namiuchi*, also experienced a period of popularity that mostly coincided with popularity for large flowers in the 1920s through the 1950s. In the last 30 years this characteristic has become virtually a non-existent feature in newly registered cultivars. Popular ruffled-petal Satsuki include 'Gunpo', 'Gunrei', 'Bangaku' and many others which are not included in the current *Satsuki Dictionary* such as 'Fukumusume', 'Gunbi', 'Maihime', and 'Taihei'.

Other Satsuki characteristics have a much less pronounced shift in distribution through time. This includes compound flower types such as semi-double, double, hose-in-hose, and "sai", or split petal forms.

While 'Kozan', 'Nikko', and their derivatives fueled the growth of Satsuki in the 1970s, other cultivars have been popular choices for expansion.



First registered in 1969, 'Juko' is a parent of a subfamily popular as a parent in the mid- to later 1980s and early 1990s. There are 45 descendants to date.



'Kirin-no-Kagami' shows the heavy variegation and flecking that make Satsuki so beautiful and changeable.

Table 1 - Satsuki Cultivar Characteristics by Timeframe

Timeframe	Group Count	FLOWERS										LEAVES			
		SIZE						FORM				COLOR	SIZE		
		S	M	L	VL	VVL	Combined Ls	ruffled	compound	skirted	sai-type	jiai	S	M	L
UP TO 1912	54	22	59	(19)	---	---	19	7	19	2	9	13	52	44	4
1912 - 1927	55	9	51	(40)	---	---	40	7	6	2	2	13	40	49	11
1928 - 1945	58	9	31	(50)	(7)	(3)	60	14	3	---	2	22	20	54	26
1946 - 1959	35	3	23	(34)	(20)	(20)	74	14	---	---	---	20	18	32	50
1960 - 1969	96	24	41	(27)	(5)	(3)	35	1	2	---	---	27	44	40	16
1970 - 1979	185	38	50	(10)	(0)	(1)	11	---	3	1	---	29	59	34	7
1980 - 1989	104	18	58	(24)	---	---	24	3	8	---	1	29	32	63	5
1990 - 1999	211	29	50	(18)	(1)	---	19	1	10	---	1	35	38	57	5

NOTES:

Table 1 shows percentage of occurrence of different Satsuki characteristics for cultivars that originated in different timeframes in the past. Figures are rounded to the nearest whole percentages. Satsuki that were considered are those in the 1997 edition of *Satsuki Daijiten* (the *Satsuki Dictionary*), and newly registered cultivars appearing in recent issues of *Satsuki Kenkyu* (a monthly magazine on Satsuki). Of the 1083 cultivars in these sources, 798 had specific information about their time of registration or period of introduction. This group formed the basis of the data in Table 1.

Timeframes

- Up to 1912 Old satsuki, recognized cultivars before 1912. Some date back to the early Edo Period (1600s).
- 1912 - 1927 Taisho Period in Japan. Beginning of the modern era in Satsuki growth and development.
- 1928 - 1945 Early Showa Period in Japan through WWII.
- 1946 - 1959 Post war to the end of the 1950s.
- 1960 - 1969 Decade of the 60s.
- 1970 - 1979 Decade of the 70s.
- 1980 - 1989 Decade of the 80s.
- 1990 - 1999 Decade of the 90s.

Group Count - the total number of cultivars evaluated in each timeframe.

Flower Size

- S - small, up to 5 cm (less than 2") in diameter
- M - medium, 5.1 - 7 cm (2" to 2-3/4") in diameter
- L - large, 7.1 - 10 cm (2-3/4" to 4") in diameter
- VL - very large, 10.1 - 12 cm (4" to 4-3/4") in diameter
- VVL - very-very large, 12.1+ cm (over 4-3/4") in diameter
- Combined Ls = L + VL + VVL

Flower Forms

- ruffled - flowers described as "*namiuchi*" type having wavy or ruffled petals
- compound - double, semi-double, and hose-in-hose flowers
- skirted - flowers described as "*koshimino*", "*hakama*", and others having semi-petal-like structures arising between the calyx and corolla
- sai-type - split-petal flowers and those with few to no petals

Flower Color

jiai - base color in between white or light color and darker color of ma.f" colored flowers

Leaves

- S - small, less than 2 cm
- M - medium, 2 - 4 cm (3/4" to 1-1/2")
- L - large, greater than 4 cm

Table 2
Most Frequent Parents of New Cultivars 1985-1999

<u>Parent Cultivar</u>	<u>Sport</u>	<u>Open Cross</u>	<u>Cross</u>	<u>Total</u>
Juko	5	0	18	23
Ai-no-Tsuki	3	0	13	16
Suisen	2	0	13	15
Kobai	1	1	10	12
Reiko	0	0	12	12
Gekkeikan	0	0	11	11
Kami-no-Yamakirin	1	2	8	11
Kogetsu	1	1	8	10

sion in the following decades. 'Juko', for example, has been used as a parent of more new cultivars than any other in the years from 1985 to the present. See Table 2—Most Frequent Parents of New Cultivars, 1985 to 1999.

'Juko' is a small-leafed, medium size *jiai*-flowered cultivar with a diversity of variegated flower patterns. Its flowers are of good substance and relatively long-lasting. "*Jiai*" is a common descriptive term used by the Japanese to define certain Satsuki flower colors. This is illustrated and explained separately (see *Jiai* page 37.)

Several years ago I asked a visiting Japanese bonsai master (20) why 'Juko' is especially popular in Japan. With the help of a translator, his explanation was that 'Juko' is regarded as one of the most beautiful of Satsuki flowers. On a personal level this was not especially revealing, but as we stood in front of a 'Juko' "show" azalea I could see the bouquet effect of many different patterned flowers subdued and held together by a soft pink base color. The intricate detail of differing flower patterns and their balance in composition seemed certain to be a sought after ideal in the Japanese pursuit of Satsuki. The lineage of 'Juko' and its family is presented in Chart 4.

During the 1990s other cultivars prominently contributed to the expansion of Satsuki, particularly the par-

ent cultivars 'Kobai' and its offspring 'Kobai-no-Kagayaki'.

In observing 'Kobai' one could speculate in various ways why it may be so popular now. It is a small-scale Satsuki with small very round overlapping petals. It has a rich deep reddish-purple coloration and a propensity for diverse patterning including the less commonly seen patchy variegation.

'Kobai' and 'Kobai-no-Kagayaki' also have contributed in recent years to a number of cultivars that exhibit a darker *jiai* coloration. This stands in contrast to the typical lighter pastel *jiai* cultivars popular in previous periods. The lineage of 'Kobai' and its family is shown in Chart 5.

Conclusion

What do these newer Satsuki offer to the azalea enthusiast not particularly interested in bonsai? If we recognize the objective driving Satsuki development, that of creating plants to be used in situations of close proximity and for detailed observation, then garden uses that work in concert with these objectives will be most successful.

This would include their use as potted plants on decks and patios or any place in close proximity to outdoor living areas. Hanging baskets or containers placed on benches or railings that

bring the plants up from ground level and closer to the viewer will enhance their observation and appreciation.

Satsuki of medium stature such as 'Juko' can also be successful when planted in garden beds near outdoor living areas or perhaps near benches, resting areas, or at the juncture of woodland paths where closer observation may be afforded.

Unfortunately, newer Satsuki are currently not very easy to find in the United States. The Sacramento area is fortunate to have two nurseries primarily serving the bonsai community that are continuing to import Satsuki, including some of the newer cultivars and even some that are not yet registered. Hopefully, more US nurseries will recognize the potential of some of the newer Satsuki.

There are still unfilled gaps in the broad span of Satsuki diversity and future creations will undoubtedly fill some of these gaps. In 1999, for example, 'Senbazuru' was registered as the name for what appears to be a yellowish-white version of the uniquely flowered 'Chojuhō'. The ephemeral nature of fashion will likely lead to new characteristics becoming popular and an even greater expansion of the number of Satsuki cultivars in Japan and possibly elsewhere.

Acknowledgment

Much of what I have come to learn

about Satsuki has been unlocked for me by the generous translations of Koso Takemoto. As a young man Koso and his family were interned at the Tule Lake Relocation Camp during World War II before he was recruited for the American war effort. Working in intelligence, he later continued on after the war as an instructor for the Military Language School. His personal interests in bonsai and horticulture have facilitated his ability to translate technical articles and books on Satsuki.

Jim Trumbly has been an ASA member since 1991 and is a member of Satsuki Aikokai of Sacramento, an organization interested in bonsai training and display of Satsuki azaleas. It was there he met Koso. He has put a BS in Environmental Horticulture, UC Davis, and an MS in Recreation Resources from Colorado State University, Fort Collins, to use as a Senior Resource Ecologist working for California State Parks (265 park areas including 1.4 million acres). He manages natural resource restoration programs such as prescribed burning, watershed restoration, exotic plant control, and endangered species protection and habitat enhancement. His azalea interest began about 1985. His particular interest for the last seven years has been Satsuki lineage and history of development. He has about 100 different cultivars of Satsuki, but his objective has never been to collect as many different ones as he can. He also has a fondness for the Robin Hill azaleas and the low growing or trailing kinds, such as the R. nakaharae hybrids. He propagates cuttings every year.

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Chart 1 Japanese Classification of Satsuki Flower Forms

The Japanese use terms to describe the numerous flower forms of Satsuki. Like the many terms for flower color patterns, these describe and distinguish between cultivars of otherwise similar characteristics and heritage. The following are eighteen of the more common of these terms.

Following each term is the translated meaning of the term, if available, in parentheses and a translated Japanese description. The equivalent flower terms used in the West have been added to the descriptions of compound flower forms.



Futu saki — ordinary, average, single flowers, 5 petals, 5 stamens.



Kuruma saki (wheel bloom) — not deep, flat from the bottom, petals overlapping.



Kire saki — bloom deeply cut nearly to base, petals do not overlap.



Hataben saki (flag bloom) — small flags attached at end of stamens.



Choji saki (T-shaped bloom) — mixture of stamens and petaloid stamens. Semi-double.



Korin saki — elegant, rounded, well-formed petals, neatly shaped flowers.



Namiuchi saki (wave bloom) — wavy or frilled at edges of petals. Distinction is often made between large and small waves.



Fukakire saki — deeply cut blooms, petal margins irregularly sinuate.



Futae saki — layered, also called kasane. Hose-in-hose.



Hakama saki (Skirt bloom—formal male)—same as Koshima saki, except margin of skirt is not irregular.



Kikyo saki — deep, tubular (trumpet-shaped) flowers. Almost all are small flowers.



Shishi saki (lion bloom)—petal margins irregularly shaped.



Sai saki (tassel bloom)—petals divided into narrow strips, much thinner than Kire saki.



Yae saki (8-layer bloom)—stamens transformed to many petals that overlap each other. Semi-double hose-in-hose.



Koshima saki (Skirt bloom—farmers grass)—partially developed irregularly shaped petal-like structure between the calyx and corolla. Less developed form of hose-in-hose.



Kenben saki (sword-shape bloom) — tips of petals are pointed.



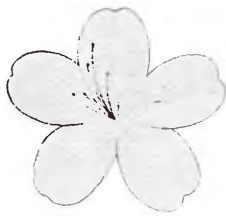
Shibe saki — petals degenerated into stamen-like form.



Manju saki (10,000 layers bloom) — a more pronounced stage of Yae saki. Double hose-in-hose.



WHITE



JIAI



SOLID



SHIBORI



JIAI SHIBORI



DARKER JIAI SHIBORI

JIAI

The Japanese term "*jiai*" is used to describe the base color of some Satsuki flowers. Its translated meaning is "in-between color"; that is, a color between a lighter color and darker color. Typically the light color is the base color of the flower and the dark color appears as markings such as stripes, flecks, sectors, or solid-colored "self" flowers. Thus "*jiai*" is not a specific color such as pink, although many cultivars with flowers described as *jiai* are pink.

In this sense *jiai* is a relative term that is in reference to other flowers usually of the parent or parents from which it came. Cultivars with *jiai* flowers have a base color that has shifted from white or a pale color to one that is darker. For example, if a cultivar is a sport from another cultivar that has white flowers overlain with red markings, and the white has shifted to a pale pink then it would likely be described as having *jiai* flowers.

Jiai is not always used to describe a "pale" color. For example, the *Satsuki Dictionary* is organized into groups by flower color and pattern. Four basic colors are recognized: white, red, purple, and *toki*, which is a persimmon-orange color. Solid *toki*-colored flowers are often pale in appearance and are described only as *toki*. If they are being distinguished from a parent cultivar in having a darker base color they could be described as *jiai* and also of the color *toki*. Also, for example, 'Kobaruto' is a pale-colored sport from 'Takasago'. It is not described as *jiai*.

One of the older and popular *jiai* cultivars is 'Gyoten', a sport of 'Kaho', in which the white base color shifted to a light purplish-pink. 'Juko' is a *jiai* cultivar with pale pink base-colored flowers that came from a cross between 'Kotobuki' with white base flowers and 'Gyoten'.

'Kozan' is a solid off-white or very pale *toki*-colored cultivar. 'Nikko' is considered a *jiai* sport of 'Kozan' where the base color became darker. 'Goko', in turn, is a *jiai* sport of 'Nikko' where the base color became even darker, a strong persimmon color.

Jiai-flowered cultivars have been around a long time and were certainly included in the 161 Satsuki described by Ihei Ito in *Kinshu Makura*. In the last few decades *jiai* flowers, particularly when overlaid with a *shibori* pattern, have captured the imagination of Japanese breeders and the public. Indeed, many of the most popular cultivars are *jiai* types such as 'Yama-no-Hikari', 'Juko', 'Nikko', 'Issho-no-Haru', and 'Aozora'.

In recent years the *jiai* concept has expanded into darker *jiai* colors and *jiai* cultivars with heavier *shibori* patterns (sectors) providing an overall stronger, less pastel appearance. Some of the newer, darker *jiai* cultivars include 'Koyo', 'Shusui', 'Nasuno', and 'Shien'.

Chart 2

KOZAN FAMILY of SPORTS

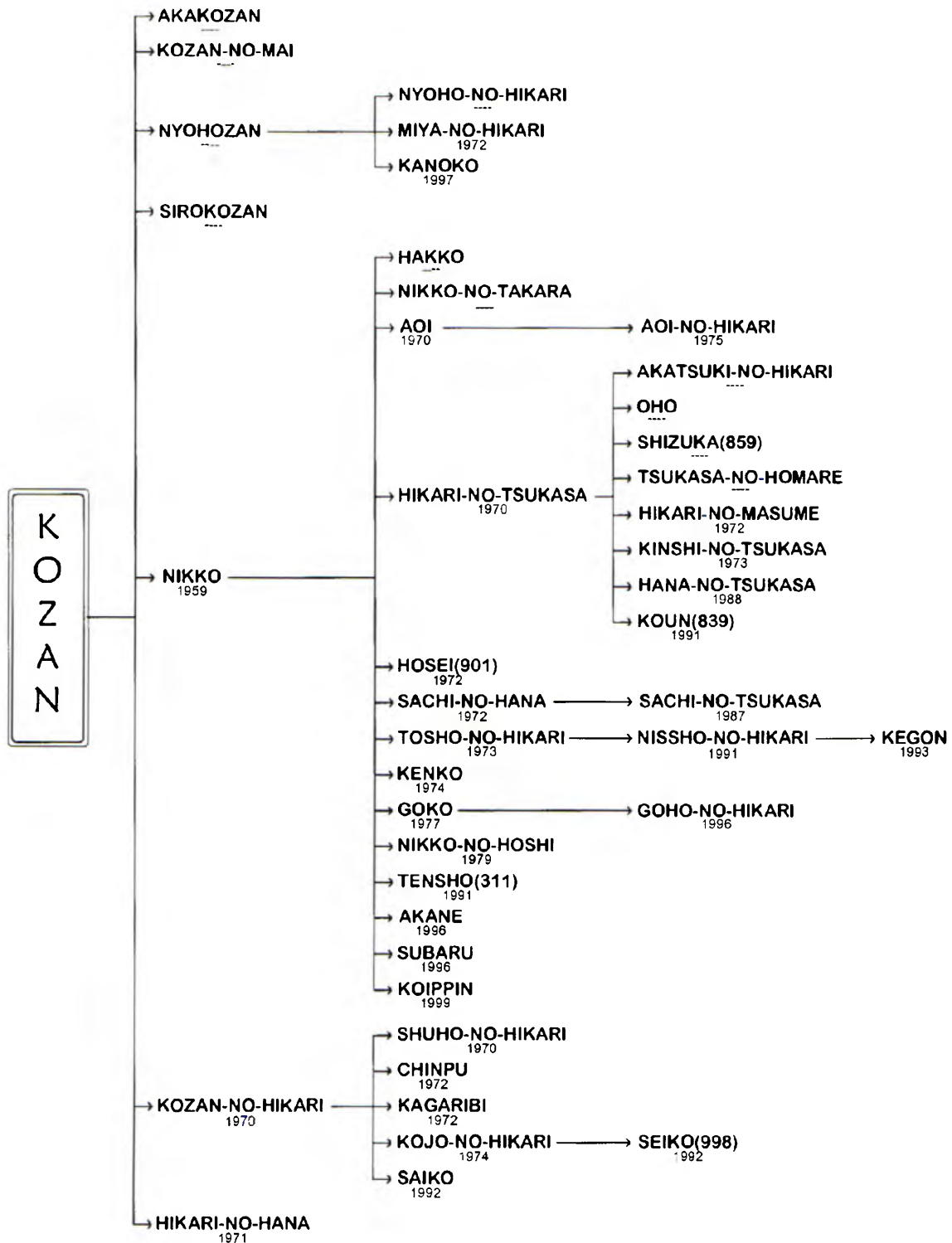


Chart 2 Kozan Family of Sports—'Kozan' best exemplifies the expansion of Satsuki from a single cultivar through the selection of sports and sports of sports. In existence prior to the 20th century, it has been the source of 43 named sports since 1959, with the most recent in 1999.

About Selected Kozan Family Sports (Chart 2)

The Selected Kozan Family Sports chart (Chart 2) illustrates the significant expansion of Satsuki from just one cultivar. It includes only cultivars that have been created from 'Kozan' by the vegetative selection of variations ("sports", and "sports of sports", etc.). The cultivars shown are only part of a much larger Kozan family that includes not only sports but the many descendants created from crosses with other cultivars both within and outside the family.

The chart is laid out chronologically from top to bottom and left to right. Cultivars with unknown dates of origin are shown chronologically before ones with known dates. Centered below each new creation is the date of registration or approximate time of origin when known. Some cultivars have been registered with more than one organization in Japan. In such cases the earliest date of registration is shown.

The lineage to 'Tsukasa-no-Homare', for example, would start with 'Nikko', a sport selected from 'Kozan' that was registered in Japan in 1959. Later, a sport was selected from 'Nikko' and registered as 'Hikari-no-Tsukasa' in 1970. In turn, a sport was selected from 'Hikari-no-Tsukasa' and named 'Tsukasa-no-Homare'. Its date of origin is unknown.

About the Subfamily Lineage Charts (Charts 3-5)

The subfamily charts are from a large Satsuki lineage study by the author. Each chart is excerpted from one of the many Satsuki families and is chosen to show a popular area of Satsuki cultivar expansion during the last 30 years.

The concept of Satsuki "family" can be found in Japanese publications (5,7) and is occasionally employed in articles in *Satsuki Kenkyu*, (*Monthly Magazine of Satsuki*). The term, however, is not static and different approaches to the lineage record have been presented. The charting conventions and subfamily designations shown here are those of the author.

On each chart the mother line (seed or vegetative parent) of the subfamily head extends down the left side, with sports followed by open crosses (unknown father or pollen parent) and then crosses. Within each group the oldest progeny occurs closest to the family head. The father line extends up and follows the same pattern with the oldest progeny closest to the family head and the most recent offspring at the top or away from the head.

The standard convention of "mother x father" is followed. "Crossers" are in parentheses and normal typeface; new creations are in bold typeface. Centered below each new creation is the date of registration or approximate time of origin in Japan, when known. Some cultivars have been registered with more than one organization. In such cases the earliest date of registration is shown.

The following is an example of the reading of the lineage to 'Hokutosei' on the 'Juko' Subfamily Chart (Chart 4). From the down line representing 'Juko' as seed or vegetative parent (mother side), 'Karenko' was created through an "open cross" (pollen parent unknown) and registered in Japan in 1977. 'Byakuren' was created vegetatively as a "sport" from 'Karenko' and registered in 1987. Later, 'Byakuren', as seed parent, was crossed with 'Suisen' (pollen parent) to create 'Hokutosei' that was registered in Japan in 1997.

Another example is the lineage of 'Iwaiboshi', which has 'Juko' as a pollen parent in its heritage and

is read from upward line, or father side, of the 'Juko' Subfamily Chart. On this line 'Koganenishiki', the seed parent, was crossed with 'Juko' to create 'Sachi-no-Kotobuki', registered in 1985. Later, 'Sachi-no-Kotobuki' as pollen parent was crossed with 'Kobai-no-Kagayaki' as seed parent to create 'Iwaiboshi', registered in 1998.

Chart Symbols Used

JUKO = Subfamily head

S = Sport

O = Open cross (pollen parent unknown)

x (GEKKOKAN) = Cross, cross cultivar name in parentheses (example).

→ **JUKOKAN** = New creation (example).

1987 = Earliest date of registration in Japan (example).

---- = Time of origin unknown

Chart 4

JUKO SUBFAMILY

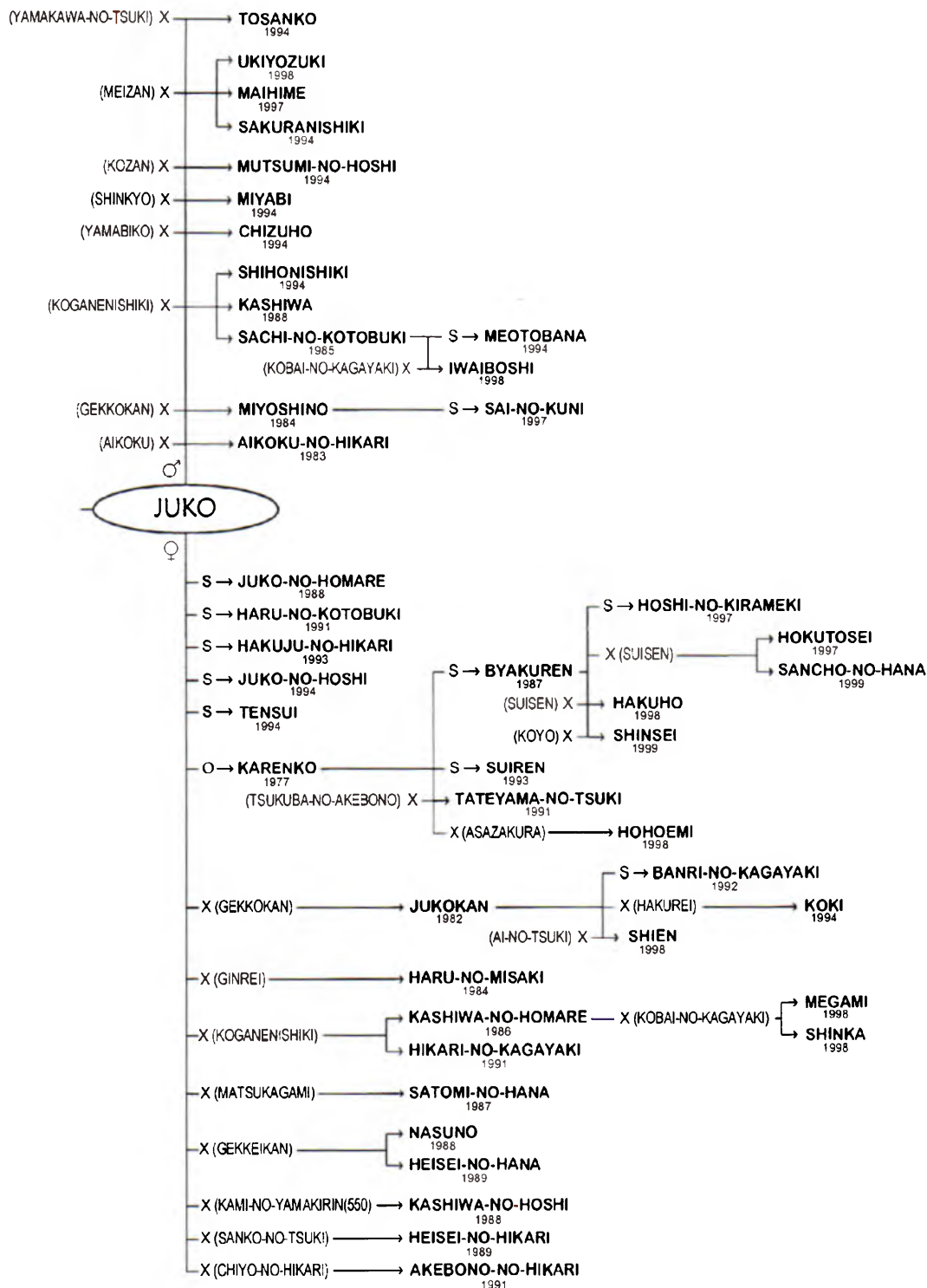


Chart 4 Juko Subfamily Lineage—'Juko' was created by a cross between 'Kotobuki' as the seed parent and 'Gyoten' as the pollen parent. The 'Kotobuki' lineage includes 'Chitosenishiki' and 'Togyoko' ('Kyokkonishiki' x 'Kinkazan'). 'Gyoten' is a *jiai* sport of 'Kaho', a seedling of 'Asahizuru'. 'Juko' was first registered in Japan in 1969. Its descendants now number 45. 'Juko' was particularly popular as a parent in the mid- to late 1980s and early 1990s. In the later half of the 1990s many "grandchildren" and "great-grandchildren" of 'Juko' have been registered.

Chart 5 KOBAI SUBFAMILY

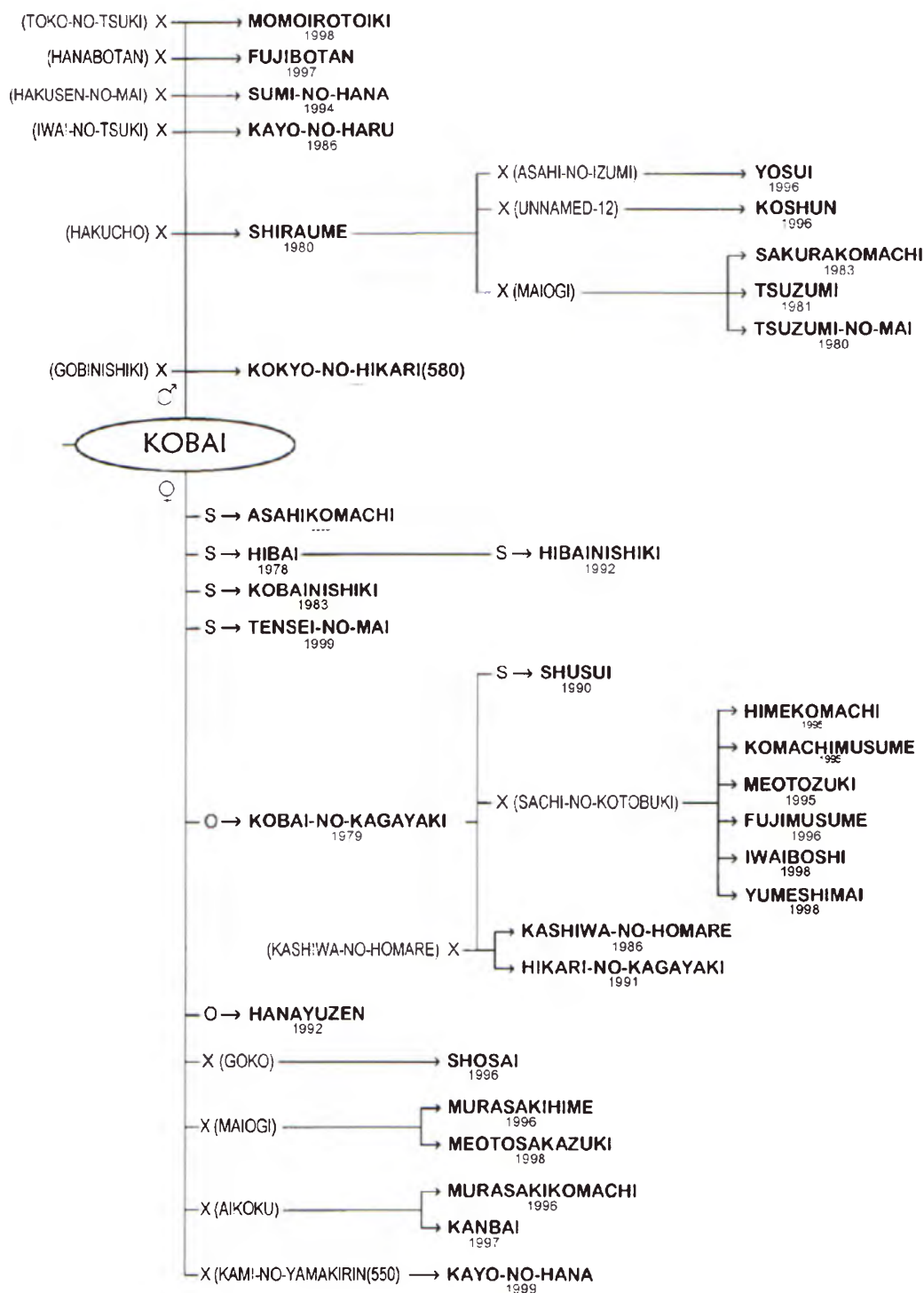


Chart 5 Kobai Subfamily Lineage—'Kobai' was created by a cross between 'Sanko-no-Tsuki' and 'Yata-no-Kagami'. The heritage of 'Sanko-no-Tsuki' ('Shozui' x 'Fujinishiki') includes 'Izayoi', 'Fujinishiki', 'Kyokkonishi' and 'Tamaorihime'. 'Kobai' was first registered in 1969 and now has 33 descendants. 'Kobai' and its offspring 'Kobai-no-Kagayaki' have been parents to 15 new cultivars since 1995.

Research Notes

About the Satsuki Dictionary

The *Satsuki Dictionary* (*Satsuki Daijiten*) is a Japanese reference book of Satsuki cultivars. A full page is devoted to each cultivar and includes a color picture and basic descriptive information. All text is in Japanese except for a transliteration of the name in English.

The dictionary has been published in several editions at least over the last 18 years. Editions have been published in 1983, 1987, 1992, 1995, and 1997. Each edition in the series has included more Satsuki than the one before. The last two have been cumulative, with new Satsuki added to the back of the 1992 edition.

The most recent 1997 dictionary includes 1,012 Satsuki. Not all of the cultivars known in the US are included, and it is difficult to ascertain what criteria were applied in selecting those for inclusion. However, it appears that most of the important and popular cultivars have been included in recent editions.

The 1997 dictionary is a compact softbound book yet rather heavy, weighing nearly 2-1/2 pounds. Dimensions are 5 x 7-3/8 inches and 1-5/8 inches thick. It reads from back to front in the standard Japanese form.

The beginning of the book provides a brief introduction and explains the terms and conventions used to describe the cultivars. For example, leaves described as medium size are between 2 and 4 cm. in length. Those outside this range are described as either small or large. Table 1 "Notes" lists conventions for flower and leaf sizes as used in the dictionary (see page 33).

The introduction also presents graphic depictions of the common flower forms and color patterns used in the descriptions. Following the introduction is an index of cultivars and their page numbers in Japanese alphabetical order.

Unlike the editions of the 1980s that presented cultivars in Japanese alphabetical order, the last three editions have organized cultivars into 12 groups by flower color and pattern. The order in which these groups are arranged is: solid white, solid red, white throat on red base, red variegation on white base, *jiai* of red color, solid purple, white throat on purple base, purple variegation on white base, *jiai* of purple color, solid *toki* (persimmon-like color), variegation on *toki* base, and *fukurin* (jewel border, or white margin on the petals). The new cultivars since 1992 are added to the back and are not in any particular order. However, each has a color-patterned tab printed in the bottom outside corner of the page identifying the group to which it belongs. These will likely be rearranged to the appropriate groups in a future edition.

The information provided for each cultivar is structured into nine subject headings. These columns read horizontally across the page from right to left. Subjects are:

- Parentage (sometimes also includes information on period of origin)
- Flower form and size
- Flower color and pattern
- Leaf characteristics
- Plant characteristics
- Key points in culture
- Year of registration
- Creator
- Registrant

The first six subjects are addressed for nearly all of the cultivars. Information for the last three subjects is included for only about half of them.

The information provided under each of the subjects varies but is generally very brief. Leaves, for example,

may only be described as "medium size, glossy" or just "medium size."

"Plant characteristics" is limited to a brief comment, often in one of three areas—winter hardiness, branching density, and plant habit (creeping to upright). Examples: weak against winter cold, dense branching, vine-like habit.

"Key points in culture" includes brief comments on care, or special considerations for bonsai or flower display training. The following are five examples. "Stop fertilizing in July and expose to plenty of sun so as to increase resistance to cold weather and to prevent bark split." "White color tends to dominate so keep as many branches as possible which bear variegated flowers." "No problems, suitable for garden planting and for *shohin* bonsai." "Because of two-color bloom, styling should be done as you confirm the color of flowers." "Because it has large flower, style it for flower viewing."

Other Satsuki References

Besides the references cited in Jim Trumbly's article, note these articles have also been published by the Society. Extra copies are available for \$1.00 each by writing or calling:

Col. Murray Sheffield
334-567-4974
875 Canyon Road
Wetumpka, AL 36093

Clark, Malcolm. "Named Satsuki Sports." June 1990. *THE AZALEAN*. 12 (2): 28-29.

Evans, Charles H. and William C. Miller III. "Pattern of Sporting." March 1985. *THE AZALEAN*. 7 (1): 1-2.

Thakur, Ajit. "The Enchanting Satsuki, Part 2." March 1990. *THE AZALEAN*. 12 (1): 4-7, 15-16.