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RHODODENDRON, CAMELLIA & MAGNOLIA GROUP

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Chapter 13

Evergreen Azaleas: the Hybrids

Jozef Heursel

The ‘Japanese’ evergreen azaleas are aptly named, since most of the original species used in breeding originated in that country. They belong to the subgenus Tsutsusia. They arose in Japanese gardens several centuries ago and the parental species were mainly natives of Japan. They have been cultivated outdoors in Europe only since the beginning of the 20th century and their popularity is of recent date.

Hybrids now bred in Europe and the USA outnumber the old Japanese garden azaleas. These are mostly the large-flowered hybrids and it is hard to classify them as their parentage is in many cases no more than a miscellaneous assemblage of hybrids available to the breeder. The so-called Kurume group with small flowers are also now widely grown in the West and are of divers parentage, although they have a common history. They were originally bred for indoor decoration but since they were introduced to cultivation in 1919 by E H Wilson they have been grown as hardy plants for the garden.

Rhododendron indicum, the first evergreen azalea to reach Europe, was introduced into Holland in the 17th century. Called Azalea indica by Linnaeus, the name was for long used indiscriminately for all evergreen azaleas. The first species to be established in British gardens was the tender R. simsi (see figures 15 and 16) introduced by Captain Welbank. Others from China but of Japanese origin were the white R. mucronatum in 1819, followed by ‘Phoeniceum’ in 1824. William Smith of Norbiton in London raised seedlings in the mid-1830s when other better forms of R. indicum arrived. In the 1840s and 1850s these ‘Indian azaleas’ became very popular for greenhouse and indoor decoration and new examples were raised from the seed of the original introductions, many of which were themselves hybrids. They flowered in early May and were not forced as they are today. These old cultivars have long since been lost in Britain and by 1860 were eclipsed by the great race of Belgian ‘Indians’: by 1880 they had all but disappeared. Since then
the great success story of the development of azaleas, both hardy and as tender pot plants, has continued in Belgium, Holland and Germany. Their greatest popularity has been as pot plants forced for the Christmas trade and over 100 million are grown and sold each year. The three forms of *R. simii* found by Robert Fortune in a Shanghai nursery and sent to Standish & Noble in 1851 were probably influential in their parentage.

**Large-flowered azaleas**
The parents of the modern large-flowered evergreen azaleas are assumed to be three species (*R. indicum*, *R. scabrum* and *R. simii*) and a fourth (*R. mucronatum*), never found in the wild but a regular inhabitant of Japanese and Chinese gardens. *R. indicum* L. (Sweet) is found on the islands of Honshu, Shikoku, Kyushu and Yakushima. It is late-flowering with narrow, leathery leaves and carmine blooms. It needs moisture, but cannot tolerate stagnant water. *R. mucronatum* G. Don (syn. *ledifolia*) was first imported from China into England by J. Poole in 1819 and into Belgium in 1825. The most popularly cultivated type, ‘Noordtiana’, has white flowers and has played a key role in the development of winter-hardy plants. *R. scabrum* G. Don, from the Ryukyu Islands, with large, purple to red flowers, grows tall quickly, but is not hardy.

*Rhododendron simii* Planch. (see figures 00), brought back from China in 1806 by Captain Welbank, is the most important of the four parents of the indoor evergreen azalea. It grows wild in many parts of China, as far west as Hubei, Sichuan and Yunnan. It also grows in Taiwan and Thailand. *R. simii* was first cultivated in England in 1812, well before all other azaleas and was introduced into France in 1814, Belgium in 1818 and Germany at about the same time. However, in 1948 the National Arboretum in Washington, DC re-imported the form from the Nanking Botanic Garden and in 1979 the latter sent a plant of *R. simii* to the Research Station for Ornamental Plant Growing in Melle, Belgium. Further variants of *R. simii* were acquired for the Station’s collection in 1989.

**Hybridizing in Europe**
Since 1820 all these plants were used for hybridizing in Belgium, Germany and France. In England the first breeder was William Smith of Norbiton (1830). Others were N. de Cock who acquired the rootstock of ‘Phoeniceum’: this was used until the end of the 19th century. L. Liebig won a first prize in Dresden in 1843 with ‘Aurora’.

The Germans have been the most successful of the European breeders and can claim 47 per cent of existing cultivars. Belgium has 37 per cent, followed by the USA and Switzerland. Breeding in France, Australia and The Netherlands has been on a small scale. Belgium has the greatest number of breeders, but the Germans have had greater success owing, in the most
part, to their skilful selection procedures.

The main objectives of breeding have been three: to reduce the cost of production; to spread the period during which azaleas will be in flower; and to make the flowers last longer. The German breeders excelled in the first of these aims by speeding up the time needed to produce azaleas of a certain size, that is 22cm (8 in). Julius Schaeme introduced a cultivar ‘Paul Schäme’ in 1890 that grew on its own roots and therefore did not need to be grafted. This cultivar was followed by others. In 1930 Reinhold Ambrosius introduced a carmine-red cultivar that grew even faster. With the success of ‘Hellmut Vogel’ introduced by Otto Stahnke in 1967, German breeders were able to abandon grafting completely. In Belgium also a mere six per cent of plants are now grafted.

In 1860 azaleas were flowering in April and efforts to advance the flowering time succeeded when Jozef Vervaene introduced the ‘early’ ‘Vervaeneana’ (1886) flowering in February or March. The major breakthrough for the ideal Christmas flower came with the Belgian ‘Madame Petrick’ (1901), even though this had to be grafted. ‘Madame Petrick’ had the additional advantage of producing abundant sports. But undoubtedly Otto Stahnke has been the most successful breeder. With ‘Hellmut Vogel’ he has advanced the flowering season by four months so that azaleas are now available for sale from 15 August to 15 May.

Giving buyers their money’s worth is certainly not a new concept: the first semi-double cultivar ‘Madame van der Cruyssen’, bred in 1867 by Eduard van der Cruyssen, enjoyed a huge success. Since double flowers are known to last longer than singles, this was a first step. ‘Vervaeneana’ featured large double flowers. ‘Hellmut Vogel’ had also improved longevity. To please the consumer, attractive colour-revealing buds have now become a quality feature and Otto Stahnke was again the breeder who introduced in 1972 the first cultivar, ‘Friedheim Scherrer’, with that feature. Other successful German breeders include Karl Glaser (‘Aline’, 1985) and Heinz Manten (‘Memoria Theo Simon’, 1986).

Vegetatively propagated plants like azaleas can suddenly produce variations, such as flowers of different shades, or other features – the shape of the plant or its leaves, frost resistance, or even greater or less vigour. Economically, the most important feature is, of course, the flower colour. Over the years new colours developed from sports have accounted for 50 per cent of new cultivars: ‘Vervaeneana’, ‘Paul Schäme’ (1890), ‘Avenir’ (1911, August Haerens) and ‘Knut Erwën’ (1934, ‘Roger de Meyer’) are examples. The last two are among Belgium’s top selections of the 20th century. ‘Hellmut Vogel’ has produced more different sports than any other parent.

Most breeders have done their hybridizing with existing cultivars. The Research Station for Ornamental Plant
Growing in Melle under Dr ir. Jozef Heursel has focused on more fundamental research with azaleas from Japan (Hirado). This has produced the sweet-smelling azaleas ‘Lara’ and ‘Mistral’ (1984) and ‘Mevrouw Marc van Eetvelde’ (1992). Further research on colour inheritance is also going on, especially to find a yellow azalea. There is also scope for hybridization with other species of the Tsutsusi genus.

**Hybridizing in Japan**

Western, mainly *R. simsii*, hybrids were used to create potted plants. It is interesting to note that the same material used in Japan produced entirely different results, some as a result of selection and some to fulfil different key roles.

**Satsuki azaleas:** The Japanese Satsuki azaleas are virtually *R. indicum* hybrids, although they owe something to *R. simsii* and *R. scabrum* and somewhat less to *R. simsii* var. eriocarpum. Satsuki azaleas are to Japan what the potted azaleas are to Europe. They first appeared 350 years ago and in 1692 no less than 162 cultivars were known. Commercial cultivation started around 1900. It was found that the volcanic soil known as ‘tuff’ or ‘tufa’, available throughout Japan, was a perfect growing medium for azaleas. A secondary revival in popularity occurred in 1925-41, and again in 1955 after World War II, when extremely large flowers were popular. Of two types cultivated, the Mie azalea lends itself very well to being clipped in semi-spherical shapes to simulate rock formations. As a pot plant the Satsuki azalea is also well known in bonsai form. Nine hundred cultivars had been described by 1987 of which 60 were in commerce. The breeding centre of Satsuki is in Utsunomiya, Tochigi Prefecture.

Satsuki azaleas are single-flowered. The corolla size varies from large to small. The flowers are purple, lilac, carmine, red, pink and white and a typical plant may feature flowers with different colours, stripes, shaded sections and borders. Flowering is late, from mid-May to mid-June. In recent years, other breeders, such as B Morrison, of Glenn Dale, USA, have used Satsukis.

**Hirado azaleas:** The mild, hot and moist climate of Japan’s Hirado Island provided ideal conditions for hybridizing *R. scabrum*, coming as it did from the more southerly Ryukyu Islands in the Pacific. Hirado azaleas were first referred to in literature in 1712 when the island was the only part of Japan which, under the Daimyos (1616-1867), continued to trade with the West and was therefore prosperous. Hirado azaleas have large leaves and flowers and are much used in public places in Japan, but the European summers are too cold to permit flower buds to form.

**The Small-flowered Kurume Azaleas**

It has been assumed that the small-flowered kurume-type azaleas originated from
three species. The natural habitat of *R. kiusianum* Matkino is the island of Kyushu in southern Japan, hence its name. It grows on purely volcanic soil at an altitude of more than 1000m (3,280ft). The second species, *R. kaempferi* Planch., is found all over Japan in shady and mountainous slopes at less than 700m (2,300ft). The taxonomic status of the third species, *R. sataense* Nakai, has not yet been fully established and it is still classified as *R. kiusianum*. It is found on Takakuma mountain between 650m (2,130ft) and 800m (2,625ft). These three species have produced a major group of hybrids known as *R. 'Obrusum'* (Lindl.) Planch.

Between 700m (2,300ft) and 1000m (3,280ft) on the island of Kyushu *R. kiusianum* and *kaempferi* have hybridized naturally and the lower slopes are covered with transitional types. It was these that caught the eye of Ernest Wilson on his travels in the Kirishima crater area. Japanese breeders, and particularly M Sakamoto, had been breeding non-winter-hardy hybrids near Kurume since about 1820. When Wilson visited K Akashi’s nursery at Kurume in 1918 he picked out 50 of the most promising cultivars and sent two identical sets to Professor Charles Sargeant at the Arnold Arboretum, Boston. They arrived in April 1919 and became known as ‘the Wilson Fifty’. Of these cultivars, ‘Kirin’ has undoubtedly become the most important. The plants were given English names which has subsequently caused great confusion.

**Hybridizing in Europe**

These Japanese hybrids and species have been used by European breeders to produce azaleas to suit the tastes of the European customer. Commercial breeding started in Europe after 1920 when virtually all of ‘the Wilson Fifty’ cultivars were imported into the Netherlands by C B Van Nes and Sons and a London subsidiary of the Yokohama Nursery.

**Belgium:** The first Japanese azaleas to be brought into Belgium between 1901 and 1910 by Adolf Van Hecke (1874-1952) were ‘Amoenum’, ‘Hatsugiri’, ‘Hinodegiri’ and ‘Yodogawa’. These plants had been brought back from Japan by Dutch bulb traders and were exchanged for Belgian potted plants. They were not grown commercially. In 1928 Flandria, a Bruges firm, who had imported some azaleas, including a few of ‘the Wilson Fifty’, exhibited three, ‘Azuma-kagami’, ‘Kirin’ and ‘Kure-no-yuki’, at the Floralies. One of Adolf Van Hecke’s sons, Albert, exchanged some of the Van Hecke plants for these three cultivars. ‘Kirin’, which did particularly well, was sold to the Lam Brothers at Alphen aan de Rijn, in The Netherlands. It was an overwhelming success because it could be forced for the Christmas market. It was re-imported into Belgium then sold all over western Europe.

Other azaleas, like *R. indicum*, were also imported into Belgium through the Yokohama Nursery. Albert Van Hecke, on his return from Scotland, was able to
persuade his father of the potentialities of spring-flowering Japanese azaleas for small gardens. Between 1932 and 1975 the Van Heck family were breeding them, but it was one of the brothers, René (1912-73), who invested most time and effort into this research.

Only the cultivars ‘Agnes’ and ‘Madame René Van Oost’ remain to recall the work of another breeder, René Van Oost (1899-1975), well known for his Japanese azaleas.

One of the most influential breeders was an amateur, O F Wuyts (1892-1968), a Plant Protection Inspector. Starting in 1924, he crossed the material available at the time, such as ‘Alice’, ‘Fedora’. ‘Hinomayo’, ‘Palestrina’ and the Arendsi hybrids from Germany, with the best of the *R. simsii* hybrids. Between 1944 and 1947 his selections were offered at the meetings of the Royal Syndical Chamber of Belgian Horticulture in Ghent. Unfortunately the names then provided have completely disappeared and it is therefore difficult to identify the successful ones. But nearly half of the current Belgian cultivars were from Wuyts. From 1960 onwards his selections were gradually introduced by T M Tollenaere (1898-1983) of Zaffelare and H De Meyer of Heusden.

Since 1963, I, in association with the Research Station for Ornamental Plant Growing at Melle, have been hybridizing using *R. simsii* cultivars. This work has culminated in three new cultivars: ‘Directeur Van Slycken’, ‘Koli’, and the winter-hardy ‘Gilbert Mullie’.

**Germany**: Small-flowered Japanese azaleas were popular in the first decade of the 20th century, but were not sufficiently hardy for the climate of northern Germany.

Georg Arends of Wuppertal-Ronsdorf was one of the pioneers of breeding. His first ambition was to produce a hardy, small-flowered azalea similar to ‘Hinodegiri’. To achieve this he crossed ‘Benigiri’, ‘Hatsugiri’ and ‘Hinodegiri’ with *R. indicum*, *R. kaempferi* and *R. mucronatum ‘Noordtiana’*. He also wanted to produce plants resembling the indica type which would be sufficiently hardy to survive under light cover before being forced. His first results, known as the Arendsi azaleas, were exhibited in 1927 and were distributed under code numbers. They were not named until 1951. They are hardy, slow-growing and semi-deciduous, with a large leaf. The Aronensis seedlings produced by Georg and his son Werner were distributed commercially by G H Böhlje of Westerstede around 1960.

One of C Fleischmann of Wiesmoor’s objectives was to develop cultivars whose young budding twigs formed in early autumn would be frost-resistant. He used both *R. Obtusum* and *R. simsii* and succeeded with ‘Multiflora’ × *R. kiusianum*. He named the new race Diamond Azaleas. They flowered profusely and late, were both compact and hardy. W Thieme’s
Brilliant azaleas (‘Multiflora’ x ‘Vuyk’s Scarlet’) were closely related.

H Hachmann, Barmstedt, also aimed for hardy, compact cultivars. Other breeders were U Schumacher, W Nagel, G Mittendorf and E Pusch.

England: Between 1935 and 1940 Lionel de Rothschild breeder of deciduous Exbury azaleas, bred some evergreens using R. kaempferi and, on one occasion, R. oldhamii. Some named cultivars are ‘Eddy’, ‘Leo’ and ‘Bengal Fire’.

The Netherlands Dutch breeders have played a key role in ensuring that new plants are hardy. Major breeders have been H den Ouden & Son, Felix & Dijkhuis, W Hage & Co., W Koppeschaar, P Koster, C B Van Nes & Sons and A Vuyk. They were mainly active in the first half of the 20th century, after which breeding activity passed to the Research Station for Nursery Stock in Boskoop. Early forcing has been an aim. Attempts in the 1950s to introduce yellow flowers, using Mollis azaleas and a white-flowered Japanese azalea, have been disappointing.

Breeders in both Czechoslovakia and Switzerland have been active. Both extreme hardiness and early flowering have been objectives.

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Figures 15 and 16: R. simsii, found in a Shanghai nursery by Robert Fortune, was sent to Standish & Noble at Bagnall in 1851—(top left) an engraving of the plant from Curtis’s Botanical Magazine and (top right) a living plant (see Chapter 13). Figure 17 (above left): R. 'Lem's Cameo', Halfdan Lem's superb American hybrid. (see Chapter 11). Figure 18 (above right): John Charles Williams of Caerhays, one of the first Englishmen to grow Chinese rhododendrons and Chairman of the Rhododendron Society 1916-27 (see Chapter 15).
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