

THE PUKEITI LARGE-LEAF RHODODENDRONS

*The Watercolour Drawings of
Susan Worthington*



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NEW ZEALAND

THE PUKEITI LARGE-LEAF RHODODENDRONS

The Beginning of the Large-Leaf Rhododendron Project

HAVING LIVED IN THE Taranaki township of Waitara, Susan Worthington had indicated that she would like to paint some of the special plants growing in the Pukeiti Rhododendron Trust Garden. This is situated within the north-west foothills of Mount Taranaki, just outside the Egmont National Park. Discussion with me when I was Curator of Pukeiti, resulted in Susan painting a watercolour image of Pukeiti's famous large-leaf *Rhododendron protistum*, from Frank Kingdon Ward's 1953 seed collection in Myanmar. This delightful study is the final plate in this book. So great was the interest created, that Alan Jellyman, then Board Chairman of Pukeiti Rhododendron Trust, suggested that a whole portfolio of the large-leaf rhododendrons at Pukeiti would be something very special and possibly lead to a fine publication. Two years of working on the project from mid-winter to late spring has eventually resulted in the volume you have before you.

GRAHAM SMITH *formerly Director of Pukeiti*

Susan Worthington

b. Stratford, New Zealand 1944.

SUSAN COMPLETED A Dip.A.Hons with Distinction at Whitecliffe Art School, majoring in Landscapes and Fibre. She read English and Art History after which she completed a teaching Diploma. She taught for many years. She studied Botanical Illustration at West Dean College, Kew Gardens and earned the Diploma in Botanical Painting at The English Gardening School, gaining a Distinction.

In June 2004 the New Zealand Postal Service used six of her paintings depicting New Zealand bred garden flowers on an issue of stamps, including the First Day Cover. Her paintings are held in important collections including The Royal New Zealand Navy Museum, The New Zealand Army Museum, The Royal Horticultural Society, Ashmolean Museum in Oxford and Clarence House, London.

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List of Plates

Plate 1 *PROTISTUM* var. *GIGANTEUM* 'PUKEITI'

Rhododendron protistum Balfour f. & Forrest, Notes R.B.G.Edinb. 12:131 (1920) var. *giganteum* (Tagg) Chamberlain,
Notes R.B.G.Edinb. 37:331 (1979) 'Pukeiti' KW 21498

Subsection *Grandia Sleumer* (1949)

Plate 2 *MACABEANUM*

Rhododendron macbeanum (Watt ex) Balfour f., Notes R.B.G.Edinb. 12:128 (1920)

Subsection *Grandia Sleumer* (1949)

Plate 3 *SUOILENHENSE*

Rhododendron suoilenhense D.F. Chamberlain & K. Rushforth (1992)

Subsection *Grandia Sleumer* (1949)

Plate 4 *GRANDE*

Rhododendron grande Wight, Calcutta J. Nat. Hist. 8:176 (1847) Subsection

Grandia Sleumer (1949)

Plate 5 *ARIZELUM*

Rhododendron arizelum Balfour f. & Forrest, Notes R.B.G.Edinb. 12:90 (1920)

(*Rhododendron rex* Ssp. *arizelum* D.F. Chamberlain)

Subsection *Falconera Sleumer* (1949)

Plate 6 *SINOGRANDE*

Rhododendron sinogrande Balfour f. & W.W. Smith, Notes R.B.G.Edinb. 9:274 (1916)

Subsection *Grandia Sleumer* (1949)

Plate 7 *MAGNIFICUM*

Rhododendron magnificum Kingdon Ward, J. Bot. (Lond.) 73: 247 (1935)

Subsection *Grandia Sleumer* (1949)

Plate 8 *PRAESTANS*

Rhododendron praestans Balfour f. & W.W. Smith, Notes R.B.G.Edinb. 9:263 (1916)

Subsection *Grandia Sleumer* (1949)

Plate 9 *HODGSONII*

Rhododendron hodgsonii Hooker f., Rhododendrons Sikkim Himalaya 16, t. 15 (1851) Dunedin B.G. form

Subsection *Falconera Sleumer* (1949)

Plate 10 *FALCONERIS* Ssp. *FALCONERI*

Rhododendron falconeri Hooker f., Rhododendrons Sikkim Himalaya t. 10 (1849) Ssp. *falconeri*

Subsection *Falconera Sleumer* (1949)

Plate 11 *PROTISTUM* var. *PROTISTUM*

Rhododendron protistum Balfour f. & Forrest, Notes R.B.G.Edinb. 12:131 (1920) var. *protistum*

Subsection *Grandia Sleumer* (1949)

Plate 12 *FALCONERI* Ssp. *EXIMIUM*

Rhododendron falconeri Hooker f., (1849) Ssp. *eximium* (Nuttall 1853) Chamberlain
Notes R.B.G. Edinb. 37:330 (1979)
Subsection *Falconera Sleumer* (1949)

Plate 13 *MONTROSEANUM*

Rhododendron montrosceanum Davidian, Notes R.B.G. Edinb. 37: 338 (1979)
Syn. *Rhododendron mollyanum* Cowan & Davidian (1953)
Subsection *Grandia Sleumer* (1949)

Plate 14 *KESANGIAE*

Rhododendron kesangiae D.G. Long & Rushforth (1989)
Subsection *Grandia Sleumer* (1949)

Plate 15 *MAGNIFICUM* x *PROTISTUM* 'PUKEITI'

Rhododendron magnificum x *Rhododendron protistum*

Plate 16 'FALCONS GOLD'

Rhododendron 'Falcons Gold' *Rhododendron falconeri* x *Rhododendron macabeanum*

Plate 17 'INA HAIR'

Rhododendron 'Ina Hair' *Rhododendron macabeanum* x 'Pukekura White' hybrid

Plate 18 'BARBARA HAYES'

Rhododendron 'Barbara Hayes' *Rhododendron grandex* *Rhododendron hodgsonii*

Plate 19 'SPICED HONEY'

Rhododendron "Spiced Honey" *Rhododendron macabeanum* x 'Unique'

Plate 20 'JACK ANDERSON'

Rhododendron 'Jack Anderson' *Rhododendron magnificum* x *Rhododendron macabeanum*

Plate 21 *MAGNIFICUM* SEED CAPSULES

Rhododendron magnificum seed pods. *Rhododendron magnificum*
Kingdon Ward, J. Bot. (Lond.) 73: 247 (1935)
Subsection *Grandia Sleumer* (1949)

Plate 22 *PROTISTUM* var. *PROTISTUM* LEAVES

Rhododendron protistum var. *protistum* foliage. *Rhododendron protistum* Balfour f. & Forrest, Notes
R.B.G. Edinb. 12:131 (1920) var. *gigantum* (Tagg) Chamberlain,
Notes R.B.G. Edinb. 37:331 (1979) 'Pukeiti' KW 21498
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Subsection *Grandia Sleumer* (1949)



Protistum
Var. *Giganteum* 'Pukeiti'



Rhododendron protistum (Var. *giganteum*) 'Pukeiti'

KW 21498

[trans.: 'first of the first' relating to early flowering and 'gigantic' size.]

Subsection Grandia

A VERY LARGE SHRUB OR TALL TREE, recorded by George Forrest at over 30m in heavy forest in S.W. Yunnan. Rough barked, light brown in colour the branches are heavy and widely spreading. In cultivation this species is more often a wide spreading large shrub up to 18m in diameter. The huge leaves are oval to elliptic, up to 70cm × 28cm in the juvenile stage, before flowering, and half this size with age. Upper surface is dark matt green with indented veins and below is paler green, initially without any indumentum. This stage can last for many years but gradually a thin marginal fawn indumentum will appear prior to flowering and this band will spread across the underside of the leaf with each new growth and eventually lead to fully indumented leaves. This is a slow process and all stages can be on a plant at one time. The new growth is dramatically attractive as the red bud scales peel back from silvery spears of new leaves, gradually greening as they expand.

The racemose-umbel inflorescence has 20-30 large, waxy oblique-campanulate flowers, each with darker nectar pouches. The best forms are rich pink to crimson-purple but some fade to a two tone effect with a darker throat. The ovary is covered with rufous tomentum which darkens to russet brown on the large expanding seed capsules which can be 6cm long. Stamens are 16 and unequal in length but shorter than the corolla tube.

Discovered by George Forrest in 1918 in W. Yunnan it was recollected by him, Reginald Farrer and Frank Kingdon Ward along the China-Myanmar border, S.E. Xijiang (Tibet) and Arunachal Pradesh. More recent collections have extended the known boundaries. It occurs at low elevations, 2500-4000m, and because it flowers and comes into growth very early in the year (February-March in the northern hemisphere, July-August in southern) is highly susceptible to frost and cold damage. High tree cover and wind shelter are essential to grow this magnificent species in all but the most benign climates. It takes a long time to mature and flowering from seed can be delayed by 30 years or more, but it is also very long lived when conditions are right.

Recent revision of the two close species, *Rhododendron protistum* and *Rhododendron giganteum* has defined them as one species and as *Rhododendron protistum* was named first it takes precedence. Small differences and original collection data can be used to define varietal names for garden purposes as in *Rhododendron protistum* var. *giganteum*.

First Class Certificate (RHS) to a clone at Brodick, Isle of Arran, 1953.

The Pukeiti plant is an original collection from Kingdon Ward seed in N.E. Burma, 1953.





Rhododendron protistum (var. *giganteum*) 'Pukeiti' KW 21498 - means 'first of the first' relating to the early flowering and 'gigantic' in size.

Subsection Grandia

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The Pukeiti plant is an original collection from Kingdon Ward seed in N.E. Burma, 1953.



Macabeanum



Rhododendron macabeanum

[after Robert McCabe, Naga Hills, N.E.India.]

Subsection Grandia

ALARGE, WIDE SPREADING SHRUB or tree from the Naga Hills region of N.E.India, where it forms part of mixed forests or even pure stands of trees right up to the mountain summits. Growing from 5-15m it has rough bark and sturdy branches, densely tomentose when young. New growth is distinctly white and woolly in appearance, but this cover soon disappears from the upper leaf surface leaving a shiny, yellow mid-ribbed, broadly ovate leaf. The underside is thickly woolly, greyish fawn, made up of two layers of indumentum. This foliage is extremely handsome and quite tough, standing up to more wind than most.

Flowers are a racemose-umbel of 15-25 funnel-campanulate fleshy cups, pale to clear yellow, sometimes with a purple-red blotch in the base, with nectar pouches and some light spotting. Stamens number 16 and the ovary is covered with dense rufous hairs or tomentum. The combination of yellow flowers and bold foliage plus an easy to grow character has made this one of the most popular of all large-leaf rhododendrons in cultivation. Despite its relatively low altitude in the wild it is a much tougher plant than most in the Falconera and Grandia sections. Because of this characteristic and the fact that it hybridises readily with other rhododendrons, seed-raised garden plants are invariably hybrids, many of which are fine garden plants but not the true species.

Discovered by Sir George Watt in 1882 on Mt Japvo, Naga Hills at 2900m and in several other nearby locations over the same year, and being named in 1920, it was not introduced into cultivation until 1927 when Frank Kingdon Ward recollected it on the same mountain and then collected it from yet another mountain in 1935. Since the 1990s the Manipur region has been accessible again and several new collections have been made and the earliest of these are now beginning to flower in New Zealand and elsewhere. Whilst the majority so far have been light yellow in colour some interesting specimens with pink flushed flowers have appeared. Flowering from March-May in the northern hemisphere, September-November in southern.

Award of Merit 1937 and First Class Certificate 1938, Trengwainton, Cornwall.

The specimen shown was grown from seed collected from a deliberate cross of the 'FCC' form with the 'Blackhills' form in the UK, distributed by the RHS Rhododendron, Camellia and Magnolia Group.





Rhododendron macabe anum - after Robert McCabe, Naga Hills, N.E.India.

Subsection Grandia

A large, wide spreading shrub or tree from the Naga Hills region of N.E.India, where it forms part of mixed forests or even pure stands of trees right up to the mountain summits. Growing from 5-15m it has rough bark and sturdy branches, densely tomentose when young. New growth is distinctly white and woolly in appearance, but this cover soon disappears from the upper leaf surface leaving a shiny, yellow mid-ribbed, broadly ovate leaf. The underside is thickly woolly, greyish fawn, made up of two layers of indumentum. This foliage is extremely handsome and quite tough, standing up to more wind than most.

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Suoilenhense



Rhododendron suoilenhense

[named after the river location, N. Vietnam.]

Subsection Grandia

ALARGE SHRUB TO SMALL TREE in the wild, 6-12m, this species is relatively new in cultivation and eventual size is yet to be determined. It appears to be upright and open in habit and has reached 4m at Pukeiti, New Zealand in less than 20 years. The juvenile foliage is extremely handsome being dark glossy green, up to 40cm x 18cm, broadly-oblong in shape and with wavy edges. Undersides are initially matt green without indumentum. At a relatively young age for a member of the Grandia section, marginal indumentum appears under the leaves, suede-like and tan in colour, and this increases in width with annual new growths until it covers the entire underside. The leaf shape also changes to elliptic and becomes smaller.

The racemose-umbel of flowers are white or cream, sometimes flushed pink in bud, with a deep red basal blotch. Flowers are fleshy, tubular-campanulate, 15-20 with 8 lobes and held in a loose truss. Stamens are 16 and the ovary is densely covered with white hairs. The overall impression resembles *R. sinogrande* but with smaller flowers that sometimes look out of proportion to the leaves, especially on younger plants.

This species was introduced only in 1992 by Clark, Rushforth and Hudson from N. Vietnam near Sapa at around 2200-3200m. It has since been found on another mountain closer to the Chinese (S. Yunnan) border at a similar low altitude in mixed forest. Given the southern latitude and lowish elevations it would be expected that this species is tender but in cultivation it has proven to be relatively hardy. Furthermore it flowers at a much younger age than most other large-leaf rhododendrons, an added bonus when waiting patiently for that first flower bud to appear. A very valuable addition to the ranks of the large-leaf fraternity that has become well established in cultivation. Flowering from April-May in the northern hemisphere, September-October in southern.

The illustrated specimen was grown from the original seed collection, distributed by the American Rhododendron Society.



SUZAN VORHINE



Rhododendron suoilenhense – named after a locality in N. Vietnam.

Subsection Grandia

A large shrub to small tree in the wild, 6-12m, this species is relatively new in cultivation and eventual size is yet to be determined. It appears to be upright and open in habit and has reached 4m at Pukeiti, New Zealand in less than 20 years. The juvenile foliage is extremely handsome being dark glossy green, up to 40cm x 18cm, broadly-oblong in shape and with wavy edges. Undersides are initially matt green without indumentum. At a relatively young age for a member of the Grandia section, marginal indumentum appears under the leaves, suede-like and tan in colour, and this increases in width with annual new growths until it covers the entire underside. The leaf shape also changes to elliptic and becomes smaller.

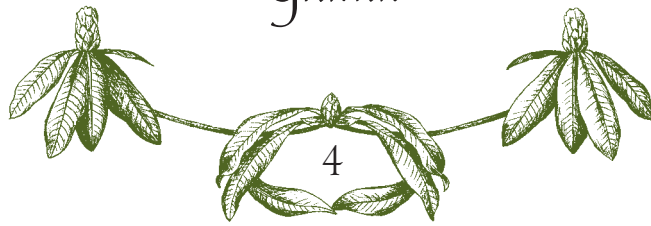
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Grande



4

Rhododendron grande

[trans.: Large]

Subsection Grandia

ALARGE SHRUB or single trunked tree, 5-16m, with rough bark. Young growth and branchlets are white tomentose. The striking leaves are oblong to oblong-lanceolate, 14-45cm × 6-13cm, upper surface mid green, slightly rugulose and are retained for several years. The lower surface has a plastered silvery-white to fawn indumentum made up of fine rosulate hairs and the 2-4cm petiole has white indumentum initially. The new growth is particularly attractive, appearing as silvery-white or purple-bronze spears above the old darker green leaves.

The inflorescence is a racemose-umbel of 15-25 oblique-campanulate flowers with 8 corolla lobes and purple nectar pouches in the base. Colour is creamy-white to pale yellow, possibly pink flushed, with a dark purple blotch and spots. The ovary is fawn tomentose, with or without glandular hairs and the 16-18 stamens are shorter than the corolla. The fruit capsules are 2-4cm long, slightly curved, and fawn tomentose with persistent calyx lobes.

Discovered by W. Griffith in Bhutan and named in 1847. In 1849 J.D. Hooker discovered *R. argenteum* in Sikkim, similar to *R. grande* but with silver indumentum. In 1887 it was realised that these two species were variations on just one and *R. grande* took precedence. Introduced by J.D. Hooker in 1850 and now known from Nepal through to N.E. India (Arunachal Pradesh) and S.E. Xijang (Tibet). It grows at relatively low altitudes, 2100-3200m, and has proven to be tender in cold climates, being particularly prone to damage with its early spring flowering and new growth. Woodland conditions and shelter from cold winds are essential. Flowering from February-April in the northern hemisphere, August-October in southern.

A clone from South Lodge, Horsham, U.K. received a First Class Certificate in 1901 for F.D. Goodman.

This plant at Pukeiti was grown from seed collected in Nepal by Ron Gordon, former Chairman of the Trust, on a Pukeiti sponsored tour to that country to see rhododendrons and other spring flowering plants in the wild.





Rhododendron grande - means 'large'

Subsection Grandia

A large shrub or single trunked tree, 5-16m, with rough bark. Young growth and branchlets are white tomentose. The striking leaves are oblong to oblong-lanceolate, 14-45cm x 6-13cm, upper surface mid green, slightly rugulose and are retained for several years. The lower surface has a plastered silvery-white to fawn indumentum made up of fine rosulate hairs and the 2-4cm petiole has white indumentum initially. The new growth is particularly attractive, appearing as silvery-white or purple-bronze spears above the old darker green leaves.

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Arizelum



5

Rhododendron arizelum

[*trans.*: notable]

Subsection Falconera

AROUNDED, SPREADING SHRUB or small tree, 3-8m with rough or flaking bark, reddish-brown in colour, often pinkish when young. The handsome foliage is most attractive but variable. Leaf shape can range from obovate to oblanceolate, 7-25cm x 3-12cm and can be retained for several years. The upper surface is dark green, usually shiny but can have the remains of indumentum present. The under surface is the most striking feature made up of bistrate (two layered) indumentum. The under-layer of white plastered rosulate hairs is covered by a thicker woolly brown to cinnamon upper-layer of funnel shaped hairs. This is usually a much paler pinkish-fawn when the leaf first unfurls but darkens over the season.

The inflorescence is a racemose-umbel of 12-25 oblique-campanulate flowers, 4.5cm long, with 8 corolla lobes and a fawn tomentose pedicel, 2-4.5cm. Flower colour ranges from cream to pale yellow, pink flushed, mauve or crimson, with or without a crimson blotch in the base. Both calyx and ovary are densely tomentose and the 15-16 stamens are shorter than the corolla.

First introduced by George Forrest in 1917 from N.E. Yunnan, China it has since been found in N.E. India (Arunachal Pradesh), N.E. Myanmar (Burma) and S.E. Xijang (Tibet). It usually grows in association with coniferous forests between 2500-4400m. In cultivation it is relatively slow growing and takes ten years or more to flower, appreciating sheltered woodland conditions with ample moisture. Flowering from April-May in the northern hemisphere, October-November in southern.

The clone 'Brodick' with purple-red flowers received an Award of Merit from the RHS, London in 1963 for Brodick Castle Gardens, Isle of Arran, Scotland.

The specimen illustrated is from a grafted clone originally imported from Reuthe's Nursery, Kent, England, in 1952.



BLAKE PAPILLIGRAPHY



Rhododendron arizelum - means 'notable'.

Subsection Falconera

A rounded, spreading shrub or small tree, 3-8m with rough or flaking bark, reddish-brown in colour, often pinkish when young. The handsome foliage is most attractive but variable. Leaf shape can range from obovate to oblanceolate, 7-25cm x 3-12cm and can be retained for several years. The upper surface is dark green, usually shiny but can have the remains of indumentum present. The under surface is the most striking feature made up of bistrate (two layered) indumentum. The under-layer of white plastered rosulate hairs is covered by a thicker woolly brown to cinnamon upper-layer of funnel shaped hairs. This is usually a much paler pinkish-fawn when the leaf first unfurls but darkens over the season.

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Sinogrande

6

Rhododendron sinogrande

[*trans.*: Chinese grande]

Subsection Grandia.

ATALL OPEN TREE OR LARGE SHRUB TO 15m in wild with rough bark but generally smaller and more wide spreading in cultivation. It is probably the most handsome foliage plant in the genus, looking like a tropical plant with its massive, heavy, glossy leaves. These are oblanceolate to elliptic, 20-70cm long (even up to 90cm on young vigorous plants) by 10-30cm broad, with deeply impressed veins giving a wrinkled appearance. The undersides are covered with a silvery plastered indumentum, sometimes fawn in colour.

The racemose-umbel of 15-30 oblique-campanulate flowers, 8-10 lobed and with 16-20 stamens, are usually pale yellow or creamy-white with a deep crimson blotch. The flowers are of a waxy texture with dark nectar pouches and the ovary is covered with long fawn hairs. The whole truss is very impressive in its size and a shrub in full bloom is a memorable sight.

R. sinogrande is a slow growing shrub and takes its time in reaching flowering size. Ten years would be very quick and twenty not unusual. It was first discovered by George Forrest in W. Yunnan in 1912 and introduced from that collection. He made many other collections and as the species is quite widespread through W. China, S.E. Xijang (Tibet), N. Myanmar (Burma) and E. Arunachal Pradesh it has been collected many, many times. Collection altitudes vary from 2100 to 4000m and this leads to variable hardiness, depending on the provenance, and plants in cultivation still need sheltered, moist conditions to be seen at their best. It is susceptible to late frost, damaging both flowers and growth buds, but usually grows away later. There is a high altitude form var. *boreale* which has proven to be hardier, with smaller leaves and flowers but it is uncommon in cultivation today. Flowering from March-May in the northern hemisphere, September-November in southern. Award of Merit 1922 to South Lodge, Sussex.

First Class Certificate 1926 to Trewithen, Cornwall.

The plant illustrated was grown from seed from Brodick Castle Gardens, Isle of Arran, Scotland.





Rhododendron sinogrande – means 'Chinese grande'

Subsection Grandia.

A tall open tree or large shrub to 15m in wild with rough bark but generally smaller and more wide spreading in cultivation. It is probably the most handsome foliage plant in the genus, looking like a tropical plant with its massive, heavy, glossy leaves. These are oblanceolate to elliptic, 20-70cm long (even up to 90cm on young vigorous plants) by 10-30cm broad, with deeply impressed veins giving a wrinkled appearance. The undersides are covered with a silvery plastered indumentum, sometimes fawn in colour.

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Magnificum



7

Rhododendron magnificentum

[*trans.*: magnificent]

Subsection Grandia

ATALL TREE OR LARGE SHRUB in the wild, it has been recorded as growing up to 18m with a girth of 1.8m. Smaller growing in cultivation it still retains its arboreal habit, with rough bark and is an impressive plant even without flower. The leaves are oblanceolate, dark green with a slight sheen on the upper surface. The undersides are initially glabrous but at a relatively young age begin showing marginal bands of thin, light tan indumentum. This band increases with each annual growth and covers the whole surface in just a few years. Leaves are impressively large, particularly when young, reaching 50cm x 16cm but these reduce with age and with flowering to half that size. The new growth is stunningly attractive with the purple red leaf bracts peeling back from the silvery haired leaf spears before erupting into full leaf. The leaf and flowers buds are purple-red.

Blooms are produced in a racemose-umbel made up of 12 to 25 waxy, 8 lobed, tubular-campanulate flowers coloured a rich purple-pink or reddish-purple, sometimes darker in the centre and nectar pouches. Some clones fade to lighter pink in the centre as they age. They are long lasting on the plant though much of that may be due to the fact that they flower so early in the season when the weather is cooler. The ovary is densely rufous-tomentose leading to rich brown or rust coloured large seed capsules, up to 6cm long.

Introduced by Frank Kingdon Ward after his discovery in 1931 in Northern Myanmar (Burma) at relatively low altitude, 1500-2400m, of the big tree mentioned above, covered with masses of flower. He eventually named it in 1935 and later found more in the same area in 1939. It remains a rare species in cultivation. The early collections were raised in the west of Scotland and most plants in cultivation come from these sources. It needs shelter from wind and cold, plenty of moisture and patience. It resembles *R. protistum* but flowers younger than that species and just a bit later in the season but still very early in February-March in the northern hemisphere and August-September in southern. Recent collections from adjacent Arunachal Pradesh could well be this species.

Award of Merit 1950, Corsewell, Stranraer to KW 9200.

First Class Certificate 1966 to clone 'Kildonan' KW 9200, Brodick, Isle of Arran.

The illustrated plant was originally imported from Reuthe's Nursery, Kent, England, in 1952.



ESAK HORTICULTURE



Rhododendron magnificentum – means ‘magnificent’

Subsection Grandia

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First Class Certificate 1966 to clone ‘Kildonan’ KW 9200, Brodick, Isle of Arran.

The illustrated plant was originally imported from Reuthe’s Nursery, Kent, England, in 1952.



Praestans



Rhododendron praestans

[*trans.*: excellent]

Subsection Grande

THIS IS A BROADLY UPRIGHT to spreading shrub or small tree with rough bark and can grow to 9m but more often in cultivation up to 5m x 6m. It has handsome oblanceolate to obovate leaves, distinctly wider towards the tip with a wedge shaped base that tapers into the short petiole. This petiole is more or less flattened and has a winged ridge along each side, following the leaf margin. The upper surface is dark green with hairs, slightly indented to give a bubbled appearance. The underside is covered with a thin, sometimes slightly scurfy layer of shiny indumentum, fawn to bronze when young but becoming grey-white with age. Leaves can be up to 40cm x 14cm on a young plant but usually less than that as the plant ages. It is a well clothed shrub, dense in habit but is very slow growing.

The racemose-umbel of 10-25 oblique-campanulate flowers with 8 lobes are held in a dense truss, often flat topped. Colour is white or creamy, sometimes flushed with reddish-pink, occasionally all magenta, usually with a crimson blotch and spots but sometimes without either of these. Stamens are 16-18, shorter than the tube and the ovary is covered with dense fawn to brown hairs, developing to rust coloured capsules up to 4.5cm long. Along with its slow growth habit it also is slow to reach flowering.

R. praestans is one of the hardiest of all large-leaf species. It was first collected by George Forrest in 1914 in N.W. Yunnan at the relatively high altitudes of 3400-4300m, growing in mixed pine and rhododendron forest. It was later found in S.E. Xijang (Tibet) and N.E. Myanmar (Burma) and has been collected many times because of its adaptability to colder conditions. Unfortunately some clones are shy flowering, even in old age, whilst others are prolific but you have to wait many years for a seedling to reach flowering. However the shrub will be extremely handsome to look at all the year round regardless of flowering and might just be the only one that you can grow successfully. Flowering from February-May in the northern hemisphere, August-October in southern.

Award of Merit 1963 to clone 'Exbury' exhibited as *Rhododendron coryphaeum*, which is now known to be identical to *Rhododendron praestans*. Exbury, Hampshire.

The plant illustrated from Pukeiti is grown from seed from the Award of Merit form, originally known as *Rhododendron coryphaeum*



Rhododendron praestans – means ‘excellent’

Subsection Grandia

This is a broadly upright to spreading shrub or small tree with rough bark and can grow to 9m but more often in cultivation up to 5m x 6m. It has handsome oblanceolate to obovate leaves, distinctly wider towards the tip with a wedge shaped base that tapers into the short petiole. This petiole is more or less flattened and has a winged ridge along each side, following the leaf margin. The upper surface is dark green with hairs, slightly indented to give a bubbled appearance. The underside is covered with a thin, sometimes slightly scurfy layer of shiny indumentum, fawn to bronze when young but becoming grey-white with age. Leaves can be up to 40cm x 14cm on a young plant but usually less than that as the plant ages. It is a well clothed shrub, dense in habit but is very slow growing.

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Hodgsonii



9

Rhododendron hodgsonii

[relates to Brian Hodgson, East India Co. resident in Nepal]

Subsection Falconera

A ROUNDED SPREADING SHRUB or small tree in the wild, reaching 3-12m high and as much across if there is room. It has most distinctive smooth, light brown, flaking bark which shows up in a mixed forest area. The leaves are leathery, obovate to elliptic, usually shiny above but can have a thin layer of tomentum initially giving a metallic grey cast. The undersides are woolly, made up of two layers (bistrate). The upper layer is of cup shaped hairs, light brown to rust coloured, and this often wears off leaving a patchy fawn or silvery layer below. The growth buds are very distinctive being pointed or conical and the leaf scales taper to long tails standing above the bud itself, the whole thing covered in greyish tomentum.

Trusses are a flat topped racemose-umbel of 12-25 tubular-campanulate flowers, 7-8 lobed. Colour is very variable from pink to purple, cerise, pinky-lilac or crimson, with or without a dark blotch and usually fading with age. Some forms become distinctly muddy in colour and not so attractive. The trusses can be compact or quite open and the ovary is densely tomentose leading to fawn to rust coloured seed capsules.

Discovered by Griffith in Bhutan in 1838 it was not introduced until 1850 by Sir Joseph Hooker from Sikkim. It is now known from Nepal through to Arunachal Pradesh and S.E.Xijang (Tibet), occurring between 3000-4200m, often as unbroken scrub or under tall conifers. In very cold conditions this species will roll its leaves and hang straight down to reduce surface area damage and transpiration. As soon as conditions improve the leaves unfurl and assume their usual position. The flowering season can be quite long and different clones can be spread through 3 months. It is a slow growing species and takes a while to build up a substantial shrub. Flowering from March-May in the northern hemisphere, September-November in southern.

Award of Merit to a clone 'Poets Lawn' 1964, Windsor Great Park, London.

The plant illustrated was sourced from the Dunedin Botanic Gardens, South Island, New Zealand.



GEORGE ENGELMANN



Rhododendron hodgsonii – relates to Brian Hodgson, East India Co. resident in Nepal

Subsection Falconera

A rounded spreading shrub or small tree in the wild, reaching 3-12m high and as much across if there is room. It has most distinctive smooth, light brown, flaking bark which shows up in a mixed forest area. The leaves are leathery, obovate to elliptic, usually shiny above but can have a thin layer of tomentum initially giving a metallic grey cast. The undersides are woolly, made up of two layers (bistrate). The upper layer is of cup shaped hairs, light brown to rust coloured, and this often wears off leaving a patchy fawn or silvery layer below. The growth buds are very distinctive being pointed or conical and the leaf scales taper to long tails standing above the bud itself, the whole thing covered in greyish tomentum.

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Falconeri

Ssp. Falconeri



10

Rhododendron falconeri Ssp. *falconeri*

[named for Hugh Falconer, Superintendent of the
Saharanpur Gardens, India.]

Subsection Falconera

OFTEN A TALL COLUMNAR TREE in the wild, up to 15m, it forms a large round topped shrub or tree in cultivation. It is distinctive because of the smooth, light brown, flaking bark and branches which stand out from other members of mixed forest communities. The leaves are elliptic to obovate, matt dark green above with indented veins. Young leaves are covered with silvery-buff hairs initially but this is quickly lost on the upper surfaces with just vestiges left. The undersides are covered with a thick bistratate indumentum made up of dense rust to dark brown funnel shaped hairs over a basal layer of thin, plastered whitish hairs. Young leaves can be up to 35cm x 17cm, like big paddles, and they reduce with age to about half this size.

The best forms in flower are those with clear yellow trusses, with a crimson blotch in the base. The racemose-umbel has 15-25 oblique-campanulate flowers, waxy in texture, 8 to 10 lobes and with 12-16 stamens, shorter than the tube. The ovary is densely covered with brown glandular hairs developing into rust coloured capsules up to 6cm long. Flower colour can range from creamy-white, pale to deep yellow, sometimes pink or pink flushed and the blotch can be prominent or not. The truss is usually dense and large, and flowers are long lasting on the plant, often giving a month of bloom.

First described by Sir Joseph Hooker in 1849 from Sikkim at an elevation of 3000m it has been since found from Nepal through to Bhutan and into Arunachal Pradesh in N.E. India. The first introduction came from a Colonel Sykes who actually collected seed in 1830 and the earliest plants in the U.K. came from his collection. Quite a number of Hooker original plants still exist in Scottish gardens attesting to their longevity in cultivation. It is a common component of mixed forests in the wild up to 3700m and has proven to be reasonably hardy, providing good shelter is available from cold winds and severe frosts. Flowering from April-May in the northern hemisphere, October-November in southern.

Award of Merit 1922 to Messrs.Gill, Falmouth, Cornwall.

The illustrated plant was grown from seed collected by Peter Cox in Bhutan 1988.





Rhododendron falconeri Ssp. *falconeri* – named for Hugh Falconer, Superintendent of the Saharanpur Gardens, India.

Subsection Falconera

Often a tall columnar tree in the wild, up to 15m, it forms a large round topped shrub or tree in cultivation. It is distinctive because of the smooth, light brown, flaking bark and branches which stand out from other members of mixed forest communities. The leaves are elliptic to obovate, matt dark green above with indented veins. Young leaves are covered with silvery-buff hairs initially but this is quickly lost on the upper surfaces with just vestiges left. The undersides are covered with a thick bistrate indumentum made up of dense rust to dark brown funnel shaped hairs over a basal layer of thin, plastered whitish hairs. Young leaves can be up to 35cm x 17cm, like big paddles, and they reduce with age to about half this size.

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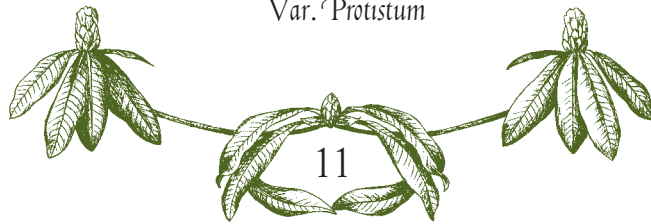
Award of Merit 1922 to Messrs. Gill, Falmouth, Cornwall.

The illustrated plant was grown from seed collected by Peter Cox in Bhutan 1988.



Protistum

Var. *Protistum*



Rhododendron protistum (Var. *protistum*)

Subsection Grandia

THE PAINTING SHOWS the flower of a seedling from *Rhododendron protistum* 'Pukeiti' KW 21498. It is from a pair of plants grown from hand pollinated seed using another *R. protistum* as the pollinator, in an attempt at negating the self-incompatibility shown when using the same parent pollen. The fact that it has obviously worked reinforces the need to cross pollinate and in this case the offspring is as good as the parent. However it cannot be labelled as 'KW 21498 Form' as it has different parents of the same species.

The shrub is very vigorous, being young, but has flowered at a much earlier age than the original which is a positive trait. At 2.5m tall by 3.5m wide it has made a very handsome plant, clothed to the ground and with leaves up to 45cm long. Marginal indumentum under the leaf is present.

The flower truss is impressive with up to 25 rich pink flowers making a dome that is 25cm in diameter, much larger than on its 68 year old parent. Flowering takes place in winter, July-August in New Zealand, and is susceptible to frost of more than a few degrees. A sheltered position with a high canopy may be needed for protection in cold areas and wind prone sites are not ideal if the large leaves are to provide that essential majestic presence in the garden.

All other details remain the same as for Plate 1.



SUSAN VORSTERHOUT



Rhododendron protistum (var. *protistum*)

Subsection Grandia

The painting shows the flower of a seedling from *Rhododendron protistum* 'Pukeiti' KW 21498. It is from a pair of plants grown from hand pollinated seed using another *R. protistum* as the pollinator, in an attempt at negating the self-incompatibility shown when using the same parent pollen. The fact that it has obviously worked reinforces the need to cross pollinate and in this case the offspring is as good as the parent. However it cannot be labelled as 'KW 21498 Form' as it has different parents of the same species.

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All other details remain the same as for Plate 1.



Falconeri
Ssp. eximium



12

Rhododendron falconeri Ssp. *eximium*

[*trans.*: excellent]

Subsection Falconera

A ROUNDED TO BROADLY UPRIGHT small tree in the wild, up to 12m, this species tends to be a large spreading shrub in cultivation, up to 7m x 10m. The bark is fairly smooth and flaky, reddish-brown in colour. The foliage is one of the great strengths of this species being ovate-elliptic and covered with thick rufous indumentum. Unusually it has this covering on both surfaces and it is semi-persistent on the upper surface for at least one season. Even older leaves have a visible vestige of rusty hairs over most of the semi-glossy surface whilst the undersides range from a rust to cinnamon layer of cup-shaped hairs over a thin white layer of hair. Buds, branchlets and new growth are all covered with this thick rusty tomentum. As a shrub it stands out like no other with its brown foliage which can be picked out at a distance in a collection of rhododendrons.

A racemose-umbel of 12-20, oblique-campanulate, 8-10 lobed flowers, range from deep-rose to pink or cream with pink lobes, all of which fade with age. The trusses are fairly dense and compact but some forms can be open and lax. Stamens number 10-14, all shorter than the flower tube and the ovary is densely glandular, not hairy.

This species was first discovered by Thomas Booth before 1853 in Bhutan at between 2500-3400m, growing in exposed forest on icy ridges. Introductions from this time can still be seen in old gardens in Scotland and they are still fine plants, now over 150 years old. They grow fairly densely in open positions and flower from March to May in the northern hemisphere and September-November in the southern. Given their age and size it can be seen that this species is slow growing in cultivation and very long lived.

The differences between this species and *Rhododendron falconeri* are now considered small and *Rhododendron eximium* was merged as a subspecies of *Rhododendron falconeri* in 1979.

More recent collections have extended the known boundaries to include Arunachal Pradesh in N.E. India and some exciting looking foliage plants with superb dark indumentum are now being grown from these sources.

Award of Merit 1973 as a foliage plant, Royal Botanic Gardens, Wakehurst Place.

The plant at Pukeiti was grown from a 1952 import from Reuthe's Nursery, Kent, England.





Rhododendron falconeri Ssp. *eximium* – means ‘excellent’

Subsection Falconera

A rounded to broadly upright small tree in the wild, up to 12m, this species tends to be a large spreading shrub in cultivation, up to 7m x 10m. The bark is fairly smooth and flaky, reddish-brown in colour. The foliage is one of the great strengths of this species being ovate-elliptic and covered with thick rufous indumentum. Unusually it has this covering on both surfaces and it is semi-persistent on the upper surface for at least one season. Even older leaves have a visible vestige of rusty hairs over most of the semi-glossy surface whilst the undersides range from a rust to cinnamon layer of cup-shaped hairs over a thin white layer of hair. Buds, branchlets and new growth are all covered with this thick rusty tomentum. As a shrub it stands out like no other with its brown foliage which can be picked out at a distance in a collection of rhododendrons.

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The plant at Pukeiti was grown from a 1952 import from Reuthe’s Nursery, Kent, England.



Montroseanum



13

Rhododendron montroseanum

[named after the Duchess of Montrose, Brodick Castle.]

Subsection Grandia

THIS TALL TREE, up to 15m in the wild, with rough bark, makes a smaller, more upright to spreading large shrub in cultivation, up to 9m. The handsome leaves are oblanceolate, glossy, with impressed veins giving a bullate appearance. The undersides are strikingly silver in appearance made up of a single layer of dense hairs. The tips of the leaves are rounded. They can reach 60cm x 13cm on a young plant but halve that size with age. They often hang down when conditions are cold or excessively dry. Like most of the large-leaf species the new growth is very attractive, being covered with silvery-grey indumentum above the reddish bud-bracts that peel away.

The inflorescence is a racemose-umbel of 15-20 oblique-campanulate, 8 lobed flowers with no nectar pouches. Colour varies from bright pink through to purple-pink and paler, often with darker veins and a blotch in the base. The opening buds may appear red on the most vivid forms and stand out as in no other species, but they soften quickly, soon after opening. The ovary is fawn in colour, covered with dense short hairs and the capsules are light brown, up to 5cm long. In full flower this species is one of the finest in the Section Grandia, flowering from February-March in the northern hemisphere, August-September in southern.

Discovered in 1924 by Frank Kingdon Ward in the Tsangpo Gorge, S.E.Xijang (Tibet) between 2500-2800m in mixed forest it was initially labelled *R. sinogrande* KW6261. It was described in 1954 from a flowering plant growing at Brodick Castle under the seed collection number and named *R. mollyanum*, after Molly, the Duchess of Montrose at Brodick. Later this name was found to be invalid as a similar name had already been in use so in 1979 it was renamed *R. montroseanum*, after the same lady. The plant remains one of the few not found anywhere else and not seen or recollected until very recently. The initial recording of it as *Rhododendron sinogrande* was reinforced by Kenneth Cox when retracing Kingdon Ward's expedition in 1995. He found *Rhododendron sinogrande* growing abundantly with *Rhododendron lanigerum*, which is red flowered. The hybridising of these two species has probably produced what we know as *Rhododendron montroseanum*, now well established and breeding true. It still remains rare in cultivation and most plants have been derived from seed from the 'Brodick' form or 'Benmore' form.

First Class Certificate 1957 to 'Benmore' clone, Younger Botanic Gardens, Benmore.

The plant illustrated was grown from seed of the 'Benmore' clone from the American Rhododendron Society seed exchange.





Rhododendron montroseanum – named after the Duchess of Montrose, Brodick Castle.

Subsection Grandia

This tall tree, up to 15m in the wild, with rough bark, makes a smaller, more upright to spreading large shrub in cultivation, up to 9m. The handsome leaves are oblanceolate, glossy, with impressed veins giving a bullate appearance. The undersides are strikingly silver in appearance made up of a single layer of dense hairs. The tips of the leaves are rounded. They can reach 60cm x 13cm on a young plant but halve that size with age. They often hang down when conditions are cold or excessively dry. Like most of the large-leaf species the new growth is very attractive, being covered with silvery-grey indumentum above the reddish bud-bracts that peel away.

The inflorescence is a racemose-umbel of 15-20 oblique-campanulate, 8 lobed flowers with no nectar pouches. Colour varies from bright pink through to purple-pink and paler, often with darker veins and a blotch in the base. The opening buds may appear red on the most vivid forms and stand out as in no other species, but they soften quickly, soon after opening. The ovary is fawn in colour, covered with dense short hairs and the capsules are light brown, up to 5cm long. In full flower this species is one of the finest in the Section Grandia, flowering from February-March in the northern hemisphere, August-September in southern.

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Kesangiae



14

Rhododendron kesangiae

[named for the Bhutan Queen Mother, Kesang Dorjii Wangchuk]

Subsection Grandia

AROUND-TOPPED LARGE SHRUB or small tree, 3-12m tall, this species has slightly rough, grey to brown bark, not peeling. The leaves are obovate to broadly elliptic, 20-30cm × 10-16cm with a rounded apex and long petioles. Top sides are dark green with thin patchy greyish hairs which eventually wear off. The undersides are covered with a matted white to fawn layer of hairs which can be almost woolly but the hairs are not cup-shaped. The leaf buds are distinctive being squat and round, often red or purple in colour, which is unlike other large-leaf species. The petioles are apt to break in high winds as they spin and snap.

The attractive flowers are campanulate, with nectar pouches, held in a compact to loose truss of 15-25, ranging in colour from deep pink to pale pink to white, sometimes with a crimson blotch. The ovary is covered with dense glandular hairs. The dark coloured forms fade with age and some can look rather washed out. The loose trussed forms are flat topped and less desirable but the pure white forms, usually from eastern Bhutan, are delightful.

This species must have the longest period of non-recognition amongst the large-leaves as it forms a major component of the Bhutanese forests (and now Arunachal Pradesh) yet was not named until 1989. It was introduced into cultivation in 1967 but was known long before this and always thought to be a natural hybrid of *Rhododendron hodgsonii* × *Rhododendron falconeri*. Given that both of these are members of the Section Falconera and have smooth pale bark it seems an unlikely oversight. Keith Rushforth realised this plant was different on his first Bhutan trip in 1985 but it was not in flower. His 1987 trip was in spring and he collected many specimens all with the same specific features and was then able to confirm it as a new species. He followed this up by naming the species after the Bhutanese Queen Mother, recognising the help the Royal Family had given him in accessing parts of Bhutan. The plant comes from 2900-3500m and appears to be reasonably hardy in cultivation, flowering freely when established in April-May in the northern hemisphere, October-November in southern.

The Pukeiti plant is one of a number grown from seed collected in Bhutan by Peter Cox and Keith Rushforth in 1988.





Rhododendron kesangiae – named for the Bhutan Queen Mother, Kesang Dorjii Wangchuk.

Subsection Grandia

A round topped large shrub or small tree, 3-12m tall, this species has slightly rough, grey to brown bark, not peeling. The leaves are obovate to broadly elliptic, 20-30cm x 10-16cm with a rounded apex and long petioles. Top sides are dark green with thin patchy greyish hairs which eventually wear off. The undersides are covered with a matted white to fawn layer of hairs which can be almost woolly but the hairs are not cup-shaped. The leaf buds are distinctive being squat and round, often red or purple in colour, which is unlike other large-leaf species. The petioles are apt to break in high winds as they spin and snap.

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Magnificum
× *Protistum 'Pukeiti'*



15

Rhododendron magnificum × *Rhododendron protistum*
'Pukeiti'

THIS HYBRID WAS MADE AT Pukeiti Rhododendron Trust Gardens, New Zealand by Graham Smith. A number of self-sown seedlings close to the two parent plants had flowered and were thought to be this cross so a deliberate attempt was made to confirm the parentage. The fact that the two parent species overlapped in flowering and that *Rhododendron protistum* 'Pukeiti' appeared to be self-sterile, even when hand pollinated, backed the assumption.

The resulting seedlings were extremely vigorous and produced enormous leaves, up to 60cm in length, very similar to both parents but closer to *Rhododendron magnificum* in outline, being narrower and with a thicker texture. It was interesting to observe that the thin marginal band of fawn indumentum started to appear at a young age and developed more quickly than in both parents. Growth buds again favoured *Rhododendron magnificum* in generally being pointed and crimson-purple coloured although some were greenish and closer to *Rhododendron protistum*. New growth was outstanding with the red bud bracts peeling back from huge silvery-grey spears of young leaves, soon becoming dark green as the hairs wore away.

Two seedlings were planted out and left to grow naturally in the rainforest conditions and surprisingly produced flower buds when about 16 years old, which is a much shorter time than for both species at Pukeiti. Twenty one to thirty years has been the general time scale for these to flower and in the U.K. this has been even longer. Flower trusses were both 20-25, tubular-campanulate in a racemose-umbel, deep purple-pink initially and paling after opening. The illustrated seedling remained darker and had a more prominent purple blotch in the basal nectar pouches.

These plants confirmed that the natural hybrids in the garden were the same cross. In a garden the size of Pukeiti and situated in an evergreen rainforest these are wonderful scene-stealers at a time when few other plants are flowering, mid-winter to early spring.

One natural seedling started life as an epiphyte on a huge fallen tree trunk and has grown into a fine 5m specimen. The roots wrap around the log and penetrate the ground below, giving excellent drainage. The foliage of this plant is impressive and flowers are outstanding, being deep purple-pink and hardly fading at all, with 25-28 per truss. We have named this Rhododendron 'Gordon Collier' after the well known New Zealand horticulturist and plantsman who served on the Pukeiti Board for longer than any other member and became Patron of the Trust.



— J. B. SMITH —



Rhododendron magnificentum x *R. protistum* 'Pukeiti'

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'Falcon's Gold'



Rhododendron 'Falcons Gold'

Rhododendron falconeri × *Rhododendron macabeaenum*

THIS DELIBERATE CROSS was made by the Gibson brothers at Glenarn, Rhu, above the River Clyde, west of Glasgow in the early 1950s. Seed was sent to Pukeiti and raised at a local New Plymouth nursery with one plant being returned to the garden. By 1969 it had grown to a wonderfully striking foliage plant combining the best of both good parents. The leaves were up to 34cm x 15cm, broadly-elliptic, dark green above with a slight sheen on the surface. The undersides were covered with a thick woolly layer of rust coloured indumentum and the new growth was covered with a similar, slightly paler tomentum.

The shrub was then a tall, 3.5m, slightly open specimen due to surrounding forest and had clearly outgrown its allotted space and was almost invisible to visitors to the garden. Displaying the foliage in a vase always evoked comments such as "Is that real?" Much reduction of shade and encroaching bush opened the plant up, enabling it to be seen more easily and encouraging flower bud production.

In 1970 three large round buds appeared, covered with a tan tomentum and we awaited the opening with great expectations. We were not to be disappointed when the flowers emerged a clear yellow in a full truss of 22-25 oblique-campanulate bells with a deep cerise blotch in the base. Lobes were 8 and the style, shorter than the corolla tube, has a bright green stigma. Waxy in texture they last well and take adverse weather, except heavy frost, in their stride. Showing a truss at a national rhododendron show caused a huge amount of interest and a demand for a name and propagation.

The name 'Golden Falcon' came to mind as a play on the parentage but when submitted to the Royal Horticultural Society in the U.K. we were disappointed to learn that we had just been beaten to that selection and had to submit another. So 'Falcons Gold' was born and although 'gold' is too strong a descriptive colour it is easily remembered. We also made sure we had another plant by grafting, realising that the original plant was always going to be under threat of competition from nearby trees. The second plant is now a wide spreading large shrub in very open conditions, 3m x 6m and flowers heavily most years. The leaf size is smaller on this plant due to exposure and the amount of flower and seed capsules that it produces unless dead-headed.

I had the privilege of visiting 'Glenarn' in the 1970s and talked to Archie Gibson about this plant and was able to see their seedlings of the cross. Interestingly their plants had taken after the macabeaenum parent regarding foliage, being silvery-grey rather than rust coloured below the leaf.

The painting shows the new flowers emerging from the constraints of the tan tomentose bud scales.



ILLUSTRATION BY [unreadable]



Rhododendron 'Falcons Gold' – *R. falconeri* x *R. macabeanum*

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'Ina Hair'



Rhododendron 'Ina Hair'

Rhododendron macabeum × *Rhododendron* 'Pukekura White hybrid'

THIS IS AN OPEN POLLINATED HYBRID, from seed collected off *Rhododendron macabeum* in New Plymouth's famous Pukekura Park, New Zealand. Expert nurseryman George Huthnance was ever on the lookout for new material in the late 1940s-early 1950s and he raised hundreds of new plants from seed. The assumed parentage was guesswork allied to what was flowering along with the seed parent and the unknown and unnamed white hybrid fitted the bill. Some of his seedlings were planted at the newly developing Pukeiti Rhododendron Trust, some 20km along the same road from the nursery and many survive 60 years on providing masses of pastel colours early in the spring on handsome foliated large shrubs.

Rhododendron 'Ina Hair' was selected by Graham Smith as one of the outstanding performers of this grex and is named for the wife of an earlier Curator of the Trust, Rob Hair. It is one of the more compact plants of those seedlings planted and at 60 years is 3.5m x 6m and reasonably dense in habit. The foliage is elliptic, 20cm x 10cm, dark green above and covered with a thin layer of silvery indumentum below. The new growth is an attractive silvery-grey initially before the top surface indumentum wears off.

Trusses are in a tight compact racemose-umbel of up to 20 campanulate flowers, pink in bud, opening cream with pink edges and then fading to warm white. A small red blotch and spotting in the base adds to the attraction. The leaves tend to be held in a tight ruff under the flower truss, each setting off the other. They are long lasting on the plant and flowering can be over a six week period in early spring, normally opening a couple of weeks ahead of *Rhododendron macabeum*.

There are a number of other named hybrids from this grex, some registered, and these include 'Eystoper', 'Mrs George Huthnance', 'Golden Dawn', 'Jean Church', 'Les Boison' and 'Pink Frills'. These all tend to be easier to cultivate than the straight species and where conditions are not ideal provide a hint of grandeur in the garden.





Rhododendron 'Ina Hair' – *R. macabeanum* x *R. 'Pukekura White hybrid'*

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'Barbara Hayes'



Rhododendron 'Barbara Hayes'

Rhododendron hodgsonii x *Rhododendron grande*

GROWN FROM SEED collected by Des Hayes, New Zealand, in Sikkim in 1978, and raised by Bruce Campbell in Dunedin this plant was originally labelled as *Rhododendron grande* because of the plastered grey indumentum below the leaves and the rough bark. The collection site was on a hillside just above 3000m, at the top end of *Rhododendron grande*'s altitude range and the lower level of *Rhododendron hodgsonii*'s range. The plant came to Pukeiti when Des and Barbara Hayes had to leave their property for health reasons and donated key plants from their collection. Planted out in lush rainforest this specimen grew quickly but showed no desire to flower. One aspect of the plant concerned me in that the buds were distinctly like *Rhododendron hodgsonii* with long whiskery points to the scales, quite unlike those of *Rhododendron grande*, yet the rest of the plant resembled *Rhododendron grande*.

In 2003 the tree produced 3 flower buds for the first time, 25 years after collection, and they were quite a surprise when the dense trusses opened rich purplish-pink gradually fading to pink and then blush, with a bright crimson blotch in the base. The inflorescence has about 25 flowers, tubular-campanulate, 5-6cm long, 8 lobed and with a distinctive bright green stigma on a style as long as the tube. Each truss is very full and generally higher than wide at 18cm x 16cm.

It was 2008 before the next flowering and about 30 trusses were produced making for a striking almost two-tone colour display. In 2011 more than 80 trusses appeared and it was one of the most popular rhododendrons in the garden that year. Foliage has remained large, up to 30cm x 14cm, obovate in shape and silvery below. The leaves look heavier and broader than typical *Rhododendron grande* and the flower truss is much closer to that of *Rhododendron hodgsonii* but the bark and indumentum are allied to *Rhododendron grande*. Unfortunately there is no note on what the seed parent plant looked like.

Whatever this plant's parentage is and probably only DNA testing might confirm this, it is a fine addition to the Pukeiti collection and unlike any other plant that we grow. We have provisionally named it after Des Hayes' wife Barbara, who accompanied him on the early tour of Sikkim. They made several trips to Pukeiti in the hope of seeing it in flower but it was not until the 2011 flowering that they eventually achieved their goal, 33 years after collecting the seed.





Rhododendron 'Barbara Hayes' – *R. hodgsonii* x *R. grande*

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'Spiced Honey'



Rhododendron 'Spiced Honey'

Rhododendron macabeatum × *Rhododendron* 'Unique'

THIS HYBRID WAS MADE BY THE New Zealand Rhododendron Association in the late 1960s and was an attempt at introducing a compact rhododendron with large-leaf characteristics that would suit the domestic garden. R. 'Unique' was already an extremely popular hybrid that was available from many nurseries and grew well even in the warmer regions. *R. macabeatum* was also well established and the most amenable in cultivation of all large-leaf species in New Zealand. Many seedlings were raised and distributed to members of the Association as small plants, relying on feedback and observations for news of the best performers. This resulted in several selections being named by individuals.

The selection above was grown by Mr and Mrs L. Grant near Temuka in the South Island and amongst a large collection of fine plants this one stood out. It has a tidy compact habit, growing to 2.5m × 3m, with elliptic foliage up to 18cm x 10cm when young, with grey woolly indumentum below. The leaves are held for two years and so form a dense shrub, the new growth being silvery-grey as it emerges.

It flowers at a relatively young age and buds are soft pink, opening to an amber colour tinged pink, with a red blotch in the base. The colour fades to cream with age. The racemose-umbel has up to 20 flowers in the truss, funnel-campanulate in form and with a cream style tipped with a green stigma. The truss is dense and compact and the plant is very floriferous making for a great garden display. It flowers in mid-spring, September-October in New Zealand and whilst not really looking like a large-leaf rhododendron it has characteristics in foliage and flower that sets it apart.

I was shown this plant on a visit to the Grants in the early 1980s and was so impressed with it that I obtained cuttings and agreed to take the details for registration of a name. The Grants were quite happy for me to decide what to call it and 'Spiced Honey' was chosen for the amber and pink colouration with a red eye and not for any hint of scent that it might have. The name has been well accepted and the plant grows well from cuttings, unlike most of the large-leaf species. It remains in commercial production, more than fifty years after the cross was made, a sign of a good plant.



J. VAN WAGENINGEN



Rhododendron 'Spiced Honey' – *R. macabeanum* X *R. 'Unique'*

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'Jack Anderson'



20

Rhododendron 'Jack Anderson'

Rhododendron magnificentum × *Rhododendron macabeaenum*

THIS WAS ANOTHER DELIBERATE CROSS made at Pukeiti by Graham Smith to assess the likely parents of some very large tree-like rhododendrons that would have originally come from Scottish garden seed. Various labels *Rhododendron protistum*, *Rhododendron mollyanum*, *Rhododendron magnificentum*, they are all hybrids but magnificent plants for a rain forest garden. The best yellow *Rhododendron macabeaenum* was chosen to mate with the deepest purple-pink *Rhododendron magnificentum*.

A group of three were planted in the large-leaf area of Pukeiti whilst others were placed at the back of deep borders for long-term evaluation. In their young stages they had very impressive dark green leaves up to 70cm long, with silvery-fawn undersides developing after a few years. Some had red pointed buds like *R. magnificentum* whilst others were more rounded and greenish. They grew rapidly and the group of three soon met, even at 6m spacings, but had no flowers. Those tucked in behind other plantings became arboreal and soon reached 4-5m in height.

The first flowering from seed took about 21 years and produced a very large truss of 20 cream flowers with a slight basal blotch from pale pink buds, impressive in size but lacking in colour. The other two plants of the group flowered several years later and the one in the middle had what we were looking for. From deep pink buds came bright pink flowers each with a red stigma-style, 22-25 in a truss, and of good texture. Remarkably they paled to rich cream with a wide pink band around the corolla edge. This was quite stunning and with the large ruff of big leaves supporting the truss it commanded attention. It was also what I had been looking for as a clue to the parentage of the early seedling plantings, which displayed similar characteristics. Not an exact science but near the mark for answering questions about what the big tree-like rhododendrons were.

Two of the tall specimens have also flowered since the group of three and both are pink-cream bicolours, possibly as good as the first one but too tall to contemplate comparisons. They are all useful in that they flower in early spring, September in New Zealand and are in bloom for at least a month. The main dilemma we now have is reducing the size of the two cream flowered forms away from the central pink one to give it real space. This will probably mean the eventual removal of both.

The pink specimen has the provisional name of 'Jack Anderson', named for the long serving Secretary of Pukeiti who did so much to help build the Trust he was passionate about, without ever knowing anything about plants. The painting shows the three different specimens in the group with 'Jack Anderson' at the top.





Rhododendron 'Jack Anderson' – *R. magnificentum* x *R. macabeanum*

This was another deliberate cross made at Pukeiti by Graham Smith to assess the likely parents of some very large tree-like rhododendrons that would have originally come from Scottish garden seed. Various labels like *R. protistum*, *R. mollyanum*, *R. magnificentum*, they are all hybrids but magnificent plants for a rain forest garden. The best yellow *R. macabeanum* was chosen to mate with the deepest purple-pink *R. magnificentum*.

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Magnificum

Seed Capsules



Rhododendron magnificum Seed Capsules

Subsection Grande

THE SEED CAPSULES DEPICTED are typical of most of the large-leaf rhododendrons in that they are large, slightly curved, tomentose and the style remains for a long time.

The rachis still retains the covering of short, dense greyish hairs and clearly shows the 16-17 pedicels that make up the initial inflorescence. The capsules themselves are covered with grey to rust coloured hairs. No remains are visible of any flower calyx but they do last for almost the whole of the main growing season before crumbling away.

The style, with enlarged stigma, remains in a dried up state through to the splitting longitudinally of the capsules, often 12 months after flowering. Many capsules do not produce fertile seed and these remain much smaller than fertile pods, dropping off much earlier in the season. A mature fertile capsule can be up to 5cm long and 1.5cm in diameter and contains many hundreds of seeds, large by rhododendron standards. The seed is wind dispersed.

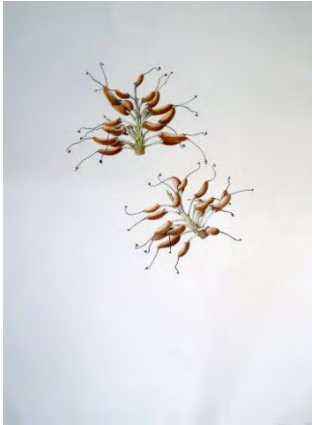
Large seed heads can be an attraction in themselves, particularly in the autumn and winter. However it is thought to be prudent to remove as many as possible to concentrate energies into producing healthy new growth and flower buds for the next season. It is observed that a large-leaf rhododendron flowering heavily and producing large numbers of seed capsules can often have a much reduced flowering the following season if capsules are not removed early. Biennial or occasional flowering is common in wild populations.

Rhododendrons readily hybridise with any other rhododendron flowering nearby and pollen is both wind dispersed via long threads or through insect or bird visitation. Some large-leaf species appear to be self-sterile and will not produce seed from their own pollen. If the species needs to be kept true then another clone of the same species must be used to produce true seed. Open pollinated seed from large-leaf rhododendrons invariably produces a large proportion of hybrids.

Plant description as for Plate 7.



2014. MIMULUS



Rhododendron magnificum Seed Capsules

Subsection Grandia

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Plant description as for Plate 7.



Protistum
Var. *Protistum · Foliage*



Rhododendron protistum (Var. *protistum*)

Foliage

Subsection Grandia

THE TWO LEAVES ILLUSTRATED give an indication of the size and grandeur of this species and are what makes specimens of it so attractive as garden plants all year round for those fortunate to be able to grow them. They are rightly considered the 'Giants of the Race' and indeed at the Pukeiti Rhododendron Trust Gardens in New Zealand the special area that these are grown in is called the 'Valley of Giants'. With giant tree ferns and large-leaf rhododendrons it is not difficult to think of dinosaurs lurking in the forest.

These leaves show an almost elliptic-lanceolate leaf shape but this can vary with different clones. Even on the same plant there can be some variation, particularly with maturity, and leaves on older flowering specimens are invariably smaller and with a thicker texture. There is no indumentum on these leaves which would indicate a juvenile specimen but it is interesting that these were taken from a layered plant, removed and replanted, and which was already flowering, as had the original parent plant. The undersides of the leaves have marginal fawn indumentum and which increases in width annually. The layered plant seemingly is caught between juvenility and semi-maturity. Herein lies the doubtful distinction between var. *protistum* - a glabrous plant and var. *giganteum* - with indumentum, which is much more to do with maturity than a significant botanical difference. Plants in the mild New Zealand climate grow and mature much faster than those in the United Kingdom and cooler climes but probably will not live as long.

The impressed veins are clearly visible on the upper surface giving a slightly raised profile between them. The reverse occurs below the leaf where the veins are very prominent. This is for a good reason, supporting such a large expanse of leaf blade and capturing as much light as possible to grow the massive framework of the plant. The petiole is rounded with a small groove along the upper side with no wings or ridges but has thin fawn to white tomentum along its length.

Plant description as for Plate 1





Rhododendron protistum (var. *protistum*) Foliage

Subsection Grandia

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Plant description as for Plate 1



Protistum
Var. giganteum 'Pukeiti'



Rhododendron protistum (Var. *giganteum*) 'Pukeiti'

KW 21498

Subsection Grandia

THIS IS THE FIRST PAINTING that Susan Worthington made of *Rhododendron protistum* 'Pukeiti' and shows a few more botanical details than the previous illustration. The open corolla shows the arrangement of stamens and stigma with its style. A young new growth bud is illustrated and a rachis of seed capsules from the previous year's flowering shows the longitudinal splitting to release seed. The two larger seed capsules are likely to contain fertile seed but the smaller ones will have few, if any, fertile seed. Many other capsules did not form and have already dropped away leaving scars on the rachis.

All other details remain the same as for Plate 1.





Rhododendron protistum (var. *giganteum*) 'Pukeiti' KW 21498

Subsection Grandia

This is the first painting that Susan Worthington made of *Rhododendron protistum* 'Pukeiti' and shows a few more botanical details than the previous illustration. The open corolla shows the arrangement of stamens and stigma with its style. A young new growth bud is illustrated and a rachis of seed capsules from the previous year's flowering shows the longitudinal splitting to release seed. The two larger seed capsules are likely to contain fertile seed but the smaller ones will have few, if any, fertile seed. Many other capsules did not form and have already dropped away leaving scars on the rachis.

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