

Vireya Species Regenerated

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Rhododendron species are seedlings which have been growing in the wild for millions and millions of years. As ancient, undisturbed species they have adapted to their particular habitat. Due to their adaptations of living in an undisturbed environment, these species in cultivation are generally difficult to grow, resent being disturbed and are reluctant to flower. Notwithstanding, remarkable improvement in ease of growth and flowering of a vireya species has been obtained by crossing distantly separated forms of the same species of *Rhododendron zoelleri*.

World authority on vireyas, Dr H. Sleumer, considered that the best way to see the extent of a given species was to grow a large number of seedlings. Species specialists have interpreted this advice to self seedlings or to cross with nearby siblings. To enhance genetic biodiversity, the best results are obtained by crossing the same species from distantly separated habitats. With this in mind I set out to cross the most distantly separated forms of *R. zoelleri*. *R. zoelleri* in the wild extends from the Ora Mountains in West Ceram (Moluccas, west of Irian Jaya), through the main island of Irian Jaya and New Guinea and extending to Goodenough Island in Milne Bay east of New Guinea - a distance of 2,615 km long and about 800 km at its widest point. Throughout this huge area *R. zoelleri* varies from a weak epiphyte clinging to tree tops in high forest to a terrestrial shrub up to nine metres high with some specimens so close to the sea that they are regularly sprayed with sea water. It has been found in secondary growths, in open grassland, hanging over precipices and rivers, in bogs and on cliffs, in limestone dust at the bottom of glaciers with no organic matter and in high scrubs from sea level to 1500m. In

other words, it should be noted that *R. zoelleri* has been found in all ecological areas of the main island of Irian Jaya / New Guinea except the dry savannas of the south. Each of these *R. zoelleri* seedlings has adapted to their particular habitat over millions of years but are still able to cross naturally with other members of that species from different habitats. Each seedling has its own separate individuality however these remote relatives when crossed together provide a certain vigour to the new seedling species.

To appreciate the great age of species it is necessary to go back to origins. According to recent scientific data from Hubble Telescope / NASA the Earth was created 12 billion years ago. The earth, land and oceans, is travelling through space at 119,440 km per hour and revolving with precision around a fixed circuit to provide night and day and the four seasons of the year. The diameter of the earth is 12,756 km compared to the magnificent sun with a diameter of 1,392,000 km. Consider the wonderful providence which is the multiplication of seeds that is renewed each year to provide for the continuation of the species. The little seed has 26 chromosomes and a lengthy DNA which determines what it becomes, when scattered by the wind and finds a favourable lodging place to germinate with the right quantities of light, water and heat.

R. zoelleri was first raised in Australia from seed sent direct to myself by Dr H. Sleumer from New Guinea. It was collected when he and a colleague were invited by the Forest Authority in Manokwari at the end of 1961 to join a brief expedition to the Arfak Range, Irian Jaya. So, on 8 January 1962, they flew by helicopter direct to a landing spot near the Anggi-Gita lake at a height of 1840m. This expedition was completed on 25 January and they were flown back to Manokwari on 29 January. Two days later, one of the helicopter pilots arrived at Manokwari with a large bunch of rhododendron flowers which he had seen hanging high above the Warjori River near the emergency landing strip on the north side of the Arfak Range. Naturally, Dr Sleumer has to see them in their natural habitat. So, two days later, he and the Chief of Forest Planning in Manokwari were flown right to the spot. It was an open, swampy

place overgrown with ferns, encircled by forest and located on a mountain ridge (1350m high) which was difficult of approach. Here they found the usual orange-yellow form of *R. zoelleri* (reddish at the last stage of blooming) and the pure white form of *R. phaeocephalum* which Dr Sleumer knew from the Wissel Lakes approximately 400 km away. After spending 21 hours at the site they were flown back to Manokwari in less than 20 minutes. This helicopter flight traversed the route taken by botanist Beccari, in 1875, and which took Beccari five days with great difficulty.



Rhododendron zoelleri 'Young Blood'

R. zoelleri 'Island Sunset' was raised by Don Stanton from seed collected on Goodenough Island and registered in 1972 with trusses of nine flowers. Goodenough Island is a small island in Milne Bay east of New Guinea. It is some 30 km long and about 25 km wide and consists of a nearly vertical range of mountains with a maximum height of 2554m. From the south the mountains rise dark and sheer from the water's edge. This cultivar is a very showy rhododendron and, being a terrestrial, it is easy to grow.

Without doubt, the best form of *R. zoelleri* collected from the wild is the cultivar selected by Michael Black from a large number of plants in full bloom on a bank near Aregenau, East New Guinea. This spectacular cultivar is well illustrated with Arthur Headlam's photograph on the cover of "The

Rhododendron", Year Book 1993. Being a terrestrial it is easy to grow and, given the right conditions, easy to flower.

Whilst I grow each of the aforementioned cultivars, after due consideration, I decided to cross 'Island Sunset' with pollen from the 'Michael Black' form mainly because they are both terrestrials and their habitats were separated by a great distance. The pollen utilised had been stored in a can of dry milk powder for just over 12 months and a good germination resulted in a large number of seedlings. Due to space limitations, I took five tip cuttings 2-3 cm high from the seedlings and gave the remaining seedlings away. The five cuttings produced good roots in pine bark, were easy to grow and all initially bloomed in 2 1/2 to 3 years.

All the flowers on the five tip-cutting plants were identical to the flowers of the 'Michael Black' cultivar with five petals and lobed half-way. The only variation in three seasonal flowerings was the number of blooms on each plant and, on one plant, the number of flowers in the truss. At five years of age, the height of the plants measured 48, 64, 68, 76 and 85 cm. The 85 cm plant was inclined to be a bit leggy and had no shoots from or near the base whilst, at its third flowering, it has five blooms each with 12 flowers to a very attractive truss. Each of the other four plants has shoots at or near the base but varied in compactness.

When trusses of the 'Michael Black' cultivar and the selected best of the regenerated species were staged side by side, two specialist vireya growers could not differentiate between them. Then one of the specialist growers asked to see the parent plants. The 24-year-old plant of 'Michael Black' had only one truss of flowers and no flower buds whilst the selected best of the regenerated species, just five years old and 64 cm high, had four trusses of flowers and ten flower buds ready to burst. Subsequently, this plant had 14 blooms each of eight flowers to a very showy truss.

Based on 40 years experience in growing and observing *R. zoelleri*, it is my considered opinion that each of the five plants of the regenerated species is an improvement, in one way or another, on the available plants of *R. zoelleri* in cultivation. The 64 cm plant selected as the best of the five, has been named *R. zoelleri* 'Young Blood' and, like *R. zoelleri* 'Michael Black' deserved to be registered for future generations.

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