From Cangshan to cultivation – Rhododendron collecting in China and establishment of plants at the Dunedin Botanic Garden

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It is now nearly ten years since I returned from an autumn visit to China in 1996. Based in Shanghai Botanic Garden as a sister city exchange visitor, the broad purpose of my visit was to help foster the existing relationship of our two cities by establishing contacts and friendships over a period of four months, by working, studying the Chinese language and collecting seed. It was with seed collecting in mind that we chose the months between August and November as most suitable.

I had many remarkable and interesting experiences, but none more memorable than the seed-collecting trip I made with the assistance of Shanghai and Kunming botanic gardens’ staff, to Mt. Cangshan near Dali in West Yunnan. It was here that my time in China assumed its key purpose giving me the opportunity to collect wild seed for cultivation in the Dunedin Botanic Garden.

Amongst the seed collected were 13 species of Rhododendron. One of the invaluable aspects of being able to collect the seed personally was the opportunity to observe their natural growing conditions. The text book requirements of moisture retentive, free draining, acid soil were profiled clearly by all but one of the thirteen species which grew in a relatively thin humus layer over solid or broken gravelly rock in mixed scrub and pine forest. The exception was Rhododendron neriflorum growing in deep loam in pine forest with bamboo understory.

Renovation in one area of the Rhododendron Dell and development of another allowed us to create space for the first seedlings vigorous enough to be planted out in the Dunedin Botanic Garden.

These included R. decorum, R. edgeworthii, R. heliolepis, R. maddeni, R. racemosum, R. rubiginosum, R. scabriolium, R. trichocladum and R. virgatum. Some of these were quick to flower with some specimens of R. edgeworthii, R. racemosum and R. scabriolium producing trusses within the first year whilst still in RX 90s (90mm pots).

Rhododendron decorum is renowned for its vigour but it was still gratifying to watch it produce up to 30cm of new growth which on one specimen was a startling 2cm in diameter, thrusting up from a PB12. It was even more rewarding to see the flowers open. Accustomed to R. decorum in its guise as a white flowered species, it was delightful to discover seedling variability offering white through to exquisite pale rose, flushed yellow in the centre, appearing through November and December. R. decorum is known also for its tolerance of hostile conditions and with seed collected from plants growing in pine litter on a rocky bank, with overhead pine shade, the resulting seedlings are doing well on a shaded bank under a Quercus robur canopy.

The greatest satisfaction of the seed-collecting trip was discovering a straggly specimen of R. edgeworthii growing amongst scrub on the edge of a moist shady rock face. With elliptic to ovate leaves, so far averaging 12cm long and 5.5cm wide, but with some up to 15cm by 6cm, the young plants now growing in Dunedin have more than lived up to the promise of the parent plant. They are a beautiful dark green with the current year’s growth retaining vestigial traces of white tomentum along the midrib. The indumentum varies from orangey-tan to light fawn and persists on the stems in darkening stages of maturity along three years’ growth. They exhibit a strong apical dominance, with usually one main stem and one or two laterals. At the base however, many also have a cluster of young growth that can be encouraged into vigour by cutting out the dominant stem. The flowers have the species’ typical delicate beauty of mainly white flowers, yellow at the centre, with irregular splashes of light pink spreading towards the margins of two or three lobes.

R. heliolepis have yet to produce flowers, but have grown into 40cm

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plants of bushy habit, sending out red-brown shoots in the current year’s growth. The scaly foliage is tinged bronze as it emerges, with the bronzing lingering around the apical margins on maturity. The leaves, typical of the Heliolepida Subsection are pungently aromatic when crushed.

*R. maddenii* takes the prize for longest new shoots, with up to 40cm now quite common from this year’s growth. Extending down from each leaf petiole on the current growth there is an alternating pattern of yellow-green and red-brown creating an attractive striped effect. The foliage is characteristically dark green, scaly, very glossy and glaucous underneath and like *R. heliolepis* is doing well in a sunny open site with considerable exposure. As growth is the apparent priority, flowering specimens have been few. Those flowers that have appeared are predominantly white, lightly flushed pink on the outside with that beautiful lustrous texture we associate with many of the Maddenia Subsection.

*R. racemosum* specimens grown from my collection on Mt Cangshan are at the pale end of the colour range for that species, and compared to a 1992 accession collected on the Zhongdian Plateau (in north-west Yunnan) by Alan Matchett (Dunedin Botanic Garden Team Leader), they are definitely the poor cousins. The new growth is mid pink lightened by yellowish lenticular speckling, with the buds offering a similar balance of colour that open as clusters of light pink. Alan’s accessions on the other hand, which were collected from the margins of a dry stream bed, within the competitive root zone of adjacent birch trees, have rose pink flowers, and stems of deep burgundy of which not only are the buds infused with this colour but also the newest leaves. The foliage in general is darker than the Cangshan accessions and more glaucous underneath. Interestingly the Cangshan specimens have leaves nearly 5cm by 2.5cm whilst the Zhongdian accessions are only 3.5 by 1.5cm, the latter indicating a genotype adapted to the comparatively drier conditions in which it was found. It will be of continuing interest to watch how these accessions perform in the garden in coming years.

Returning to the Heliolepida Subsection, *R. rubiginosum* resembles a large *R. heliolepis* with dark green shiny leaves and striking red new shoot growth, currently averaging 15–30cm in length. To date, the plants have developed an open upright habit between 1–1.2m tall. Enjoying moist soil and shade from nearby karka, lemonwood and mature rhododendrons, these have given us lilac-pink flowers with darker spotting.

**Image courtesy of Dunedin Botanic Garden**

In the coming years, further renewal and development in the Rhododendron Dell will allow us to plant out more of the above selections, along with *R. cyanocarpum*, *R. neriiflorum*, *R. taliense* and *R. wardii* also collected on Mt. Cangshan. In the meantime, this material is still growing on in the propagation unit of the Dunedin Botanic Garden.

**Image courtesy of Dunedin Botanic Garden**

Doug Thomson is Plant Collection Curator of the Dunedin Botanic Garden. His job involves looking after the four-hectare area called the Rhododendron Dell, and managing the grounds.

He says the end of September and October is when the Rhododendrons look their best and he enjoys seeing people’s wonderment and receiving their feedback.

Doug received his National Certificate in Horticulture qualification in Scotland, and completed his National Diploma after gaining a job at the Botanic Garden shortly after he arrived in Dunedin, where he has been working since 1986.