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Rhododendron baenitzianum, one of The Finest Vireyas

Norman E.G. Cruttwell, M.A.

When Paul Kores, an American Rhododendron expert, left Papua New Guinea about ten years ago, he left a lot of Rhododendron cuttings behind at the Wau Ecological Institute, where he had been working on the genus in this country. He invited me to take any of them I wanted for the Lipizauga Botanical Sanctuary, which I was just about to start up near Goroka.

In 1979 I went to Wau and took one or two specimens of each species of the Rhododendron cuttings. Unfortunately none were labelled, so I was unable to identify most of them, nor could I tell where they had been collected. I kept them at Goroka for a while in their black plastic tubes, and in 1981 planted them up at the Park on a thinly shaded bank. They all grew, and are still surviving, except for two, which were slashed down by drunken vandals.

Among them were two specimens which puzzled me very much. They were reminiscent of R. zoelleri, but had much larger narrower leaves of a darker green and slightly rougher texture. The two plants very slowly grew into rather strict plants, only branching at the base into a few erect shoots. The large leaves are very striking and distinct, and reminded me of the picture in Sleumer's monograph of R. javanicum, but I hardly thought Paul Kores would have collected that in P.N.G.

BEEJAY BAY - R BAENITZIANUM HHBRID BY GRAHAM SNELL (RHS)

Anyway, after six years of patient waiting I was rewarded in November 1987 by a huge spray of flowers on one of the plants. There were fourteen corollas, fully 10cm across, somewhat similar to R. zoelleri, but more spreading and slightly zygomorphic. They were on longer pedicels than in R. zoelleri, giving the huge spray a wide-spreading appearance. In any case R. zoelleri rarely has more than about six flowers to a truss. The colour is a rich buttercup yellow in the throat, and the lobes are a beautiful shade of 'salmon' orange (a different shade from R. zoelleri's scarlet orange). The whole effect was stunning. Moreover the flowers lasted for a full three weeks before fading. I am now eagerly awaiting seed.

I have not had my identification verified, but the plant perfectly fits Dr. H Sleumer's description of R. baenitzianum Lauterbach. It also tallies with dried material in the National Herbarium at Lae.

Sleumer's monograph in 'Flora Malesiana' only mentions it as having been found in the Torricelli Mountains in the Waria River region in eastern Morobe Province, but the Lae specimens are from the East Sepik Province at an altitude of 500m.and from Ik Tedi head

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waters at 2800m. (Western Province). The latter has completely different ovate foliage. The species seems to have a very wide altitude range and seems completely happy in our sanctuary at 2200m. It seems to occur as an epiphyte as well as a terrestrial. I have written to Paul Kores to enquire where he collected it, but have not yet received an answer.

In conclusion I will just say that it is a most beautiful and desirable Rhododendron, and I have not heard of it in cultivation. I am sending a colour slide of our specimen, and would be glad of a confirmation of my identification. I hope our plant will set seed, which I will be able to distribute and introduce this showy species into cultivation.

Reprinted from the Journal of the Australian Rhododendron Society June 1985.

Maybe we will see some very fine hybrids of R. Baenitzianum soon. From specie introduction to hybrid takes patience and planning but what rewards. See Graham's Photo Editor

Progress Review of Tip Cuttings

by Brian Clancy Reprinted from Journal Australian Rhododendron Society Sept.'71

Outstanding results have been obtained in the past two years in the propagation of rhododendron and other genera from small tip cuttings measuring from a quarter of an inch up to a maximum of one and a quarter inches. The percentage of germination has frequently been of the order of one hundred percent and the resultant plants have made more compact and sturdier bushes with appreciably quicker growth than the original seedlings.

I hasten to add that this method of propagation was discovered late in 1968 by John Patrick of Richmond, California. Details were first published in the American Rhododendron Bulletin dated January, 1969, from which the following extract is quoted:

John Patrick, "in an attempt to obtain first hand knowledge of fast rooting possibilities experimented with cuttings taken from very young seedlings. He took cuttings from the seedlings when they showed the second set of true leaves. Cuticle scissors and tweezers were used to manipulate the very small cuttings. These small cuttings with two sets of true leaves were immediately dipped in Rootone, weakest strength, and inserted in damp sphagnum, loosely packed, about 1/2" deep in 2" plastic pots. The pots were immediately placed in polythene bags and sealed. All bags were then placed immediately under Grolux lamps. No nutrients were added. The small tip cuttings showed roots in ten days to two weeks. They were transplanted as soon as there was enough root system to support them. This was usually about 30 days. If left longer, the cuttings develop very long roots and tend to wilt on transplanting. In the experiments there were no cuttings that did not root. Results on 20 species and hybrids including lepidote, elepidote, azalea and Malaysians were 100% successful."

In mid-March, 1969, I received a letter from John Patrick . Some three weeks after submitting the article on tip cuttings to the American Rhododendron Society for publication, John read Arthur Headlam's article in the R.H.S. 1968 Year Book. He thought that he had stolen my thunder on earlier flowering from cuttings. However, my practice was to take the usual sized cuttings when the seedlings were 9 to 12 inches high and then grow them on under supplementary Gro-Lux lamps. After examining John Patrick's method I could not advance any good reason for waiting until the seedlings grew to 9 or 12 inches. In my opinion John Patrick's method was so superior that there was no comparison. I immediately set out to test the tip cutting method and by 30th March, 1969, I had put down 396 cuttings - tips out of every rhododendron seedling, elepidote and lepidote, hybrid and species, that I could find. The immediate results were most exciting. R.javanieum had visible roots in seven days. At the monthly meeting on 11th April, 1969 I exhibited three 4-inch plastic pots each containing 30 - 40 tip cuttings. Considerable interest and discussion followed when it could be seen that the 18 day old cuttings all had numerous roots. My good friend Mr Charles Carlsson, who is 78 years young was one of the more enthusiastic members at the April, 1969, meeting. At the next meeting (exactly five weeks later), he showed some of the very successful results he had obtained since the April meeting; his main problem was to find space in his glasshouse to grow the numerous tip cuttings he had struck.

As mentioned earlier, my initial batch comprised 396 tip cuttings. I did not obtain 100% as per John Patrick! I only got 392 plants out of the 396 cuttings.

Tip Cuttings Cont.

(Continued from page 2)

Four (out of 12) tip cuttings of R metternichii refused to sprout roots (because they were coated with an excess of cutting powder). All Malesians were particularly successful (with and without cutting powders) and appeared to grow stronger and thicker roots than the original seedlings. Most of the Maddenil series were also very good particularly crassum (from both Logan and Brodick), megacalyx, lindleyi and ciliatum. R.yakusimanum and Camellia reticulata (wild form) were also very good but the supply did not match the demand. In subsequent batches I have put good roots on such difficult things as Rhs. magnificum, sino-grande, siderum, falconeri (see Arthur Headlam's photograph of Charles Carlsson's plant in September, 1969 Journal) and many others. One irreplaceable batch of seedlings of R. longiflorum (from the wild) had developed what I call wire-stems or collar-rot and I tried everything to get them to grow but without success. I put down 11 tip cuttings of these in the initial batch under John Patrick's method and I now have 11 thriving plants of R. longiflorum whilst all the original seedlings died.

At the July, 1969, monthly meeting Mr Charles Carlsson gave me a plastic bag full of tip cuttings of practically everything in his three acre garden. There were too many cuttings to name individually and I needed an 80lb bag of sphagnum moss to plant them all. These cuttings included tips out of rhododendrons, azaleas, (Indica, Kurume and Knaphill), magnolias, maples, spruce, cedars, elders, etc. With John Patrick's method I put roots on practically everything supplied but I was not so successful in growing them on (I was swamped with plants). However, I produced some very good plants: Acer davidii is now nearly 3 feet high, four Knaphill Homebush now have flower buds, Daphne is now 2 feet high. Also good are many conifers, viburnums and azaleas.

Daphne odora rubra is one of the sweetest scented flowers of our gardens and one of the best loved. It is winter flowering and at least one plant should be in every garden. It is no exaggeration to sayt that it is a favourite shrub throughout Australia. Reference books indicate that daphne takes up to six months to root when propagated by layers or (normal size) cuttings, and should not be disturbed - and constantly watered during that period. However, experience has shown that tip cuttings in sphagnum moss provide almost 100 percent reliability of striking and far more vigorous growth. What appears to be an added bonus is that tip cutting grown plants from virus affected stock appear to be remarkably green and healthy. Gardenia florida with its glossy foliage and rich fragrant white flowers is much sought after by florists for weddings, etc. I told one of my gardening neighbours how easy it was to grow plants from tip cuttings and she filled a plastic ice-cream container with Gardenia tips. After a few weeks she became apprehensive and gave me the container to mind in my glass house. However, I put the container down on the ground outside the glasshouse (where my 4 year old son would not kick it) and, inadvertently, forgot about it. Six months later I discovered my mistake and found that every tip had sprouted good roots. I then transplanted into a plastic tray of 15 healthy plants.

The effects of the unexpected frosts on Malesian rhododendrons in Melbourne in June. 1968. are described in detail by Arthur Headlam in the R.H.S. 1971 Year Book. Amongst others, he mentioned that my only plant of the Javanicum hybrid Pink Delight looked sad after the frosts and subsequently only made short growths. When the hot weather

Contributions

Please, any news to share, keep the Vireya Venture and valuable exchange of knowledge alive. Send your contributions to the editor.

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The Hawaii Chapter of the ARS has taken over from Bill Moyles the Vireya Seed distribution program. We welcome any contributions of seeds and requests to receive seed. There is a $1.00 charge per packet. For more details contact Sherla Bertlemann at tropical@greensand.net or write to HCR-1 Box4641,Keaau , HI 96749

Tip Cuttings Cont.

arrived in February, 1970 it was obvious that the plant was dying. I then took less than one inch cuttings out of each tip and, a few weeks later, the original plant was pronounced dead. However, thanks to John Patrick's method, I now have 23 thriving Pink delights (a 100% result). The young plants were given four hours supplementary Gro-Lux light until 4th November, 1970, when all were planted in fern logs. Would you believe that these plants are just fifteen months old!

I have maintained for many years that you cannot compare a seedling grown plant with one grown from a cutting. Cutting grown plants are more compact and sturdier even where the tip is taken from a seedling that is a straggly grower. For example this particular plant of R. laetum x macgregoriac, a tip cutting just over two years and two months ago, is compact and shrubby and cannot be compared with the seedling plant from which the tip was taken. As all future plants from any seedling would be cutting grown plants, it is necessary and logical therefore to test seedlings as cutting grown plants. Experience shows that cutting grown plants are frequently more compact and better shaped than their seedling parents.

As reported by Arthur Headlam in the R.H.S. 1968 Year Book, for some years I have been advocating and in actual fact growing cuttings of seedings to obtain earlier flowering. Records show that I have had considerable success in flowering the cutting grown plant long before the original seedling. At a monthly meeting several years ago, one alert member wanted to know that if my method was so good why hadn't I flowered R. konori. At that stage I had not tried growing cuttings of R. konori because of its rather large leaves. However, I put the theory to the test and I have now flowered five plants of R. konori; all from cutting grown plants. Flowers of these have been exhibited at monthly meetings over the past year. In this regard you will recall that the R. konori I showed at the March meeting had ten petals and a good scent. One final word on flowering; in the American Bulletin dated July, 1968 Ben Lancaster stated he had grown R. galactinum (falconeri series) for twenty years without flowering before discovering that cuttings from the seedlings flowered in one to three years, whereas, John Patrick's method stresses that this can be successfully done with seedlings from one to two months old.

Sphagnum moss is used in the tip cutting method because it possesses qualities that make it a very good medium for striking or germinating rhododendrons and other genera. It is readily available at chain stores and a 3 lb. bag, sufficient for several hundred cuttings, retails at 40 cents. Sphaagnum moss is so retentive of moisture that the young plants can only dry out with the grossest neglect. It is light and porous and its yielding texture allows the release of the young, fragile roots with the minimum of damage. It is suitably acid and its antiseptic qualities are highlighted by the fact that broken bits of debris which would decay with disastrous results in other media, cause no complications in sphagnum moss. In striking cuttings it is a competition between the production of roots and rot setting in but success is enhanced with sphagnum moss which inhibits fungi and associated rot.

No problems have been encountered in striking tip cuttings but some care is needed in transplanting the young and fragile roots. I prefer to leave the young plants in the sphagnum moss until they have a good root system. They are then transplanted into plastic trays with a very loose mixture. The numbers of plants in each tray depends upon the size of the tray but varies between 3 and 20 plants. These trays are then placed in polythene bags which are sealed and placed under Gro-Lux lamps. After three weeks I harden off the plants and then completely remove the polythene bags. Progress then depends on the amount and frequency of application of T.L.C.

Two years experience has shown that John Patrick's tip cutting method provides easier and more reliable strikes, greater multiplication of plant material, more compact and better shaped bushes together with earlier flowering. This method is recommended as an exciting and rewarding venture for all young of heart gardeners especially those who have not yet reached their 79th year.

Reprinted from
The Australian Rhododendron Society Journal, September, 1971

This is a very interesting article and will I am sure be enjoyed by new and old Venture readers. Thanks Brian . Have other propagators tried this method ???
Editor

The use of Paclobutrazol (Bonzi) in dwarfing vireyas

Sylvia Saperstein

Gardeners and therefore retailers prefer low bushy plants of whatever variety. This takes precedence over all other factors where vireyas are concerned. Retailers who come to my nursery chose those plants over tall plants in flower.

Plants such as azaleas have been selected and bred for this characteristic over many generations, but vireyas are relatively new to garden culture so their genetic inheretance is largely unmodified. Apical dominance in juvenile vireyas is very strong in many species. In their mature form they tend to become more spreading with shorter internodes.

In the long term breeding will overcome this problem, but in the meantime is it legitimate to use a naturally occuring plant hormone to induce the appearance of maturity to satisfy the tastes of the public? Is this an essentially different manipulation of plants from artificial light, or heating?

"unless we make Vireyas more appealing to the gardening public they are unlikely to gain the recognition they deserve"

One of the side effects of paclobutrazol is that it also induces juvenile flowering in some hybrids. The fears that I have heard expressed by growers is that the public will be deceived. I believe this fear is groundless for the following reasons:

1) If the hormone is used at the rate of 60ml per litre when cuttings first initiate roots (applied as a light mist to the cutting bench) its effect is exhausted in 18 months. This means that the plant will then be about 20 months old when internodes tend to be shortening anyway in the normal course of maturation.

2) The hormone used in this way tends to increase the number of laterals as well as shortening them. This establishes early on a denser growth habit so that subsequent flushes of growth will not need to be so rigorously tip-pruned.

3) Commercially viable vireyas will flower by the age of two years without artificial assistance if they are well grown, therefore the few flowers induced by the hormone give the customer a good idea of what they are buying and can more confidently incorporate them into their garden plan.

4) I have as a breeder used paclobutrazol at the same rate mentioned above to induce flowering in seedlings that are 7 years old. This way ones nursery is not cluttered with plants that are a financial liablility. I have found however that this only works if the plant is close to flowering naturally, so the time gained is not significant.

Vireyas initially showed great promise in the subtropical areas of Australia, but this promise has not been fulfilled despite the perseverance of many retailers. A number of factors have contributed to this, namely a poor understanding of the light and drainage requirements, but most importantly it has been the legginess of the plants available and their lack of flower. Vireyas are not likely to become as cheap as azaleas to produce, so unless we make them more appealing to the gardening public they are unlikely to gain the recognition they deserve.

The Editor,
Vireya Venture.

The extract from Pacific Horticulture dated 1977 published in VV#41 Oct 2000 under the heading Rhododendron and Drought tolerance is misleading to new growers and not good cultural practice. Without doubt, best results with Vireyas are obtained with regular watering.

Peter Sullivan, of Strybing Arboretum, USA, advanced the method of not watering Vireyas until they were wilting as a means of hastening the initial flowering. This stress method was tried in Australia by many growers; the flowers obtained were far from satisfactory and this method was discarded more than 20 years ago.

An article I wrote titled "To water or not to water" was published in The Rhododendron 1977 (copy below) and was reprinted in the American Rhododendron Bulletin 1978. The American reprint prompted Peter Sullivan to write to Dr.John Rouse, of Melbourne, that I was having a shot at him. Early in the 1970's the Vireyas in the glasshouse at the National Rhododendron Garden, Olinda, were degenerating mainly as a result of a direction to the Head Gardener that the Vireyas were not to be watered. It was then that I was given approval with my friend Arthur Headlam to take over their maintenance. With regular watering and foliar feeding the languishing Vireyas immediately started to prosper. In addition, I provided to the glasshouse some four hundred plants of Vireyas including 20 ten-year-old plants of R.lochiae and most of my Vireya species. Over the seven years I maintained the Vireyas in the glasshouse, I was always able to show flowers of R.lochiae whenever sought by visitors, including German and Japanese visitors and on two occasion by Vice-regal vistors.

Most Vireya Venturers would have a copy of J.Clyde Smith's book titled "Vireya Rhododendrons." Featured on the cover of this book is a beautiful photograph of "Sunny" which was raised by myself by Crossing R.christianae with pollen from R.macgregoriae. Most of these hybrids flowered at three years from seed. The most floriferous of the seedlings had 21 trusses, each with 14 flowers and provided an attractive show of "sunset orange" flowers. From this plant I exhibited a well-balanced spray on nine trusses at the 1970 Rhododendron Show, held at Olinda. This exhibit won for me first prize, the Award of the Society's Certificate of Merit (for an entry considered by the judges to be of exceptional merit) and the Special Pacific Rhododendron Conference Trophy for the best exhibit in the Show. One of the first to congratulate me was Dr.Bob Withers and he asked if he could have the spray after the Show. I agreed and Bob was fortunate that he was the first to ask as many others wanted it over the four days of the Show. Subsequently, Bob told me that he had obtained seven plants of "Sunny" from my exhibited spray.

If Vireya Venturers would look closely at the base of the above-mentioned photo you will see that the plant is growing in a fern log. This hybrid is one of 34 Vireyas that I planted in fern logs at Bob's home in August 1973. At the base of the picture, just below the author's name, you will notice that the fern log is automatically watered by a drip system and the results featuring some 80 trusses of flowers demonstrate the advantages of regular watering.

Another classic example highlighting the results of correct watering is related in Geraldine Roelink's article titled "Three Vireya Gardens" contained in The Rhododendron 1995. In describing John Rouse's garden, Geraldine wrote "all visitors (of the Rhododendron Society) stood in awe before a 30 year old plant of R.konori from West Irian, 1.9 metres high and 3 metres across, covered in large fleshy white flowers with a carnation scent; a classic example of what can be achieved in any rhododendron garden with a mild climate." The above measurements were precise and the whole plant was absolutely covered in white, scented flowers in trusses impossible to count accurately; but estimated to number between 140 and 170 magnificent trusses. It is important to note that this magnificent specimen was automatically watered with its own drip system.

The seed of R.konori from West Irian was sent direct to myself by Professor Sleumer in Feb 1962 with the Following packing slip:- "Rhododendron konori Beccari, Arfak Mts, Anggi Lakes, common from 1840 m to 2600(2750) m, always in more open places in devastated Nothofagus forest, forest edge, also in more open summit heath-vegetation. Corollas 9-12 cm long in all in the lower parts of the mountains, becoming gradually bigger (12-14 cm long in all) in higher altitudes, pure white or white with greenish tinge, or pinkish, rarely really pink all over. Often with pink blotch at angles of lobes inside corolla. Shrub, 0.5-2 m, sometimes attaining 4 m,few-stemmed and erect, with 6-8(12) flowers per inflorescence Corollas heavily scented (carnation-like), especially during the night. One of the finest (and biggest) Rh. of New Guinea."

Vireyas will tolerate drought but without regular watering their performance in growth and flowers is second-rate. Conversely, the enormous potential of Vireyas is illustrated in the descriptions of the aforementioned magnificent plant of R.konori and the beautiful plant of "Sunny" both of which are watered by drip systems.

Brian Clancy