
MR. LIONEL AND HIS AZALEAS

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The history of the modern deciduous azalea can be traced back to around 1825, when a baker in Belgium originated the Ghent strain, made by crosses involving *R. luteum*, and four American azaleas: *viscosum* (the Swamp Azalea), *periclymenoides* (the Pinxterbloom), *calendulaceum* (the Flame Azalea) and the bright red *speciosum* (1) [*R. Speciosum* is an illegitimate name; the plant usually so identified is *R. flammum*, ed.]. The 19th and early 20th centuries saw a rapid increase in plant-hunting expeditions. Reginald Farrer and Robert Fortune made early forays into the Asian wilds. Frank Kingdon-Ward, Joseph Rock, and George Forrest followed, sending back such plant treasures as seeds of new Asian rhododendron species. In 1855 Anthony Waterer, Sr. imported a quantity of Ghent azaleas to his nursery at Knap Hill, south of London. Here he began an intensive breeding program to improve the race, using the so-called mollis hybrids to add size, *calendulaceum* and *occidentale* for large flowers and scent, and *arborescens* as well for scent. "The resulting Knap Hill azaleas seemed to have everything—size, scent, glorious autumn tints and a scheme of flower colors ranging from flame, orange-red, pinks and yellows to pale cream and white with gold or orange blotches" (2). The stage had been set for the development of the finest azaleas.

In 1919, Mr. Lionel de Rothschild bought the Exbury estate, near Southampton, England. Initially, the garden covered only four to five acres, but in 1922, he began to expand the gardens to accommodate the many plants arriving from plant hunters around the world. He immediately set a small army of 150 gardeners to double digging, a task which lasted them for the next 30 years. "The ground is so stony that it really shouldn't grow anything but weeds," Paul Martin told me when I visited the Gardens in June 1996. Paul has been Head Gardener at Exbury Gardens since June 1995. "The lads had to use forks because no spade could penetrate that ground. They double-dug all the way to Gilbury Lane, and thought they were finished. But Mr. Lionel—as he was and still is always referred to by his staff—just built a bridge and the gardeners kept on digging on the other side."

Mr. Lionel joined other contemporary plant enthusiasts in sponsoring many plant expeditions, particularly those of George Forrest and Frank Kingdon-Ward. Exbury originally became known for its extensive plant collection; not until after World War II did it become famous for rhododendrons.

"I think he didn't go on plant expeditions himself," smiled Mr. Martin, "because he had to show his face at the bank now and again."

Cotoneasters, daffodils, nerines, and cymbidiums are among the myriad of plants that benefited from Rothschild's work. One of the most breathtaking sights at the time of my visit to Exbury was an exquisite *Wisteria sinensis*, which draped itself in glorious abandon over a sturdy pillared arbor at one end of the Rose Garden. Its lavender panicles hung nearly to the ground, heavy with rich fragrance.

"He was totally fascinated with all plants, I think; if it grew, he wanted to improve it. So, true to his nature," Mr. Martin told us, "Mr. Lionel probably selected this variety of wisteria. We don't really know for sure, though. It was

planted sometime in the twenties or thirties."

Mr. Lionel de Rothschild created an immense, two-acre rock garden to suit the desires of alpine rhododendrons. *R. leucaspis*, the scarlet *R. sperabile* var. *weihsiense*, and the pygmy *R. campylogynum* all thrived in the open situation of the rockery. Honey fungus destroyed many of the rockery's fine, selected plants, including one hundred plants of *R. russatum* and many from the Sanguineum sub-series. What survived was ultimately wiped out by the deprivations of World War II, and the rockery remained a jungle until it was reclaimed in the late seventies by Mr. Edmund de Rothschild, with Douglas Harris as head gardener. Even since then, some of the fine species have now grown too big and are covering up some spectacular rockwork.

When Mr. Lionel recognized that the work being done with azaleas at Knap Hill Nurseries (3) was necessary to his own, he purchased control of their collection. In 1920, he received, among a batch of azaleas from Knap Hill, 'George Reynolds', "an outstanding azalea in soft yellow and pink with a wavy-petalled flower that sometimes measured six inches across"(3). By crossing this fine plant with some of Waterer's unnamed orange seedlings, he arrived at the brilliant 'Hotspur', which ushered in a new epoch for azaleas.

In 1937 the Exbury azaleas were "introduced to the gardening public at the Chelsea Show—a new strain developed via the azalea 'George Reynolds' from the already good Knaphill [sic] azaleas and selected and re-selected until every seedling could be relied upon to give a perfect flower. Hardy and vigorous, with a wide colour range, wonderful scent and fine autumn tints, the Exbury strain has the last word in hybrid deciduous azaleas" (4). George Reynolds, incidentally, was the gardener at Gunnersbury Park, a house just west of London belonging to Lionel's father, Leopold de Rothschild.

"In the International Rhododendron Register the Exburys are included in the Knap Hill group, since the same blood (of nine species) flows in both, but Lionel de Rothschild, by ruthless selection and the infusion of new blood, created a very superior strain, with special characteristics of its own" (5).

Mr. Lionel's eagerness to try every possible avenue to a beautiful plant took him into diverse areas. He wrote frequently about his work, and founded and served as president of the Rhododendron Association, which, unfortunately, no longer exists. In the 1934 Year Book of the Rhododendron Association, Mr. Lionel wrote about the intriguing possibilities of, for example, crossing elepidote and lepidote rhododendrons. He then described his own attempts at making Azaleodendron crosses:

Crossed together, deciduous with deciduous azaleas and evergreen with evergreen, they have produced some of the most glowing flowers which beautify our gardens, but mated with other series, the results are few and far between, very often difficult to grow or to propagate and in every case a mule. Though difficult they are very beautiful, and 'Broughtonii Aureum', 'Glory of Littleworth', 'Dr. Masters', 'Gallop Light' and the very old hybrid 'odoratum' always attract admiration in the garden. Bean [W. J. Bean, Curator of Kew Gardens], who has done much to help me, suggested one day that I should try and make some more Azaleodendron crosses. I am always ready to listen to him and, having just flowered one which was raised by Lowinsky [Thomas Lowinsky] (6) and which, though a bad grower, is very beautiful, was fired with enthusiasm to try. For two years running I crossed any hybrid rhododendron I had

in flower of any value with four different types of azalea—*lutea*, the old *pontica* (the old *ponticum*), 'Floradora' (a *mollis-sinensis* hybrid), 'George Reynolds' (a yellow large-flowered azalea raised by Anthony Waterer, which has produced some of my best azalea hybrids) and one of Koster's *occidentalis* hybrids, I forget which. I also crossed the azaleas with pollen from the rhododendrons and I must have made fifty to sixty crosses each year. From all those crosses I only got one pod of seed and that contained mostly chaff, and I think I only raised three Azaleodendrons from all that labour, and those three have not yet flowered. I have tried to cross 'Broughtonii Aureum' time and time again and have never seen a vestige of a seed pod upon it (7).

On Exbury—as on all of Europe—World War II took a heavy toll. Mr. Lionel de Rothschild died in 1942, just before Exbury House was requisitioned by the Royal Navy and commissioned first as HMS *Mastodon*, and later as HMS *Hawk*, which name was eventually given to one of Exbury's finest rhododendrons. The fields in front of the House and to the side of the Gardens were covered by 1500 men in nissen huts. A bare, skeleton staff remained to care for the garden and greenhouses, of which only the cymbidium house was allowed to continue.

Gone were the exotic plants in the tropical houses. Gone were the tender and sweet-scented species in the rhododendron house. Gone were tens of thousands of orchids, among them being quantities of seedlings that had excelled all others in existence, being the fruits of Lionel's most mature and experienced breeding. The houses of all those treasures became invaded by the plebeian tomato and cucumber to help feed a hard-pressed nation...on the resound-

ing bare boards of Exbury House... "there began in great secrecy the Royal Navy's initial preparations and trials for the Normandy invasion...on the water and banks of the Beaulieu River strange and prophetic forms began to assemble where once the ships of Nelson's age had been launched" (8).

During the war years—a time of unavoidable neglect for the gardens—many plants were lost, or at least lost track of. In 1946, after having served in the Royal Artillery, Lionel's eldest son, Edmund, returned to supervise Exbury's return to life.

The main repository for all the knowledge about the Rhodos and Azaleas was Lionel's wife, Marie Louise. ...it was she who taught and passed on all the knowledge to Peter Barber and Mr. Eddy, as [Edmund] is known. The third person who contributed so much to the revival of the Gardens was Freddie Wyniatt. Freddie had worked at Exbury before the war before being drafted. He had been captured by the Germans and made to work in some sort of mine, either salt or coal. On his demobilisation he came back to Exbury and asked for a job. He was created Head Gardener. He really had the first-hand knowledge and was responsible for the continuation of the breeding programme (9).

Today, botanists work at identifying the species in one section of the garden at a time, and many varieties previously thought lost have been re-discovered. Fifteen thousand plants have been tagged and recorded on computer, involving 7,000 varieties or types covering approximately 24 genera of shrub or tree. Sixty to seventy percent of these plants are rhododendrons.

Surprises lurk in the Witcher's Wood, an area of the Gardens named after a family of charcoal burners that

once lived there. Witcher's Wood is the place to rummage if you are an expert with time to spare. Here is the location where unselected seedlings and the rejects from plant expeditions were stashed. Many seedlings which were reportedly lost or purposely destroyed by Mr. Lionel were, in fact, just tucked into the welcoming ground of Witcher's Wood, where they grew quietly, awaiting rediscovery.



A brilliant segment of Exbury's Spring show

The Exbury register in the back of Peter Barber's excellent book lists the many cultivars that have received the RHS's highest awards over the years. The awards of merit are, of course, decided only on show days; sometimes those are not the peak bloom days for a plant. But that is when the committee sits, so that is when the judgments are determined. Oftentimes a breeder is sure that, if the committee had only met a day earlier or later, his variety would surely have won!

For azaleas, the maximum season of bloom is May 1-June 1 during normal years. When I arrived at Exbury on June 10, 1996, I was in time to receive the glorious impact of the spring

show, just barely past its prime, for the spring had been so wet and cold that everything was considerably delayed; the normal bloom season of rhododendrons at Exbury is considerably longer, beginning in February and continuing through July.

Although Exbury's name was very familiar to me in connection with azaleas from years of reading, I did not find a great many varieties offered in our catalogs, except from the specialized rhododendron nurseries. In preparation for my visit to Exbury, I asked William C. Miller III about the reasons for that, and he replied:

Given that deciduous azaleas, in general, are more difficult to propagate than evergreen azaleas; that the hybrid groups in question are imports; and that both of the above contribute to a price differential in favor of evergreen azaleas, I would imagine that market forces favor the production and availability of evergreen azaleas. Further, evergreen azaleas have received a great deal of attention over the years in the form of R & D programs, both government sponsored (the Beltsville and Glenn Dale hybrids) and privately sponsored (Gable, Girard, and Harris). While the yellows and oranges are exquisite, incomparable, and not to be found in the evergreen sphere, there is very little that is attractive about the typical leggy, deciduous azalea during the rest of the year that would warrant committing the space and paying a premium. ...There are also other options. In some cases, the desire for a yellow azalea can be satisfied with some of the American native azaleas over which there seems to be a renaissance of interest. ...Then there are the breeders that have developed their own. There is Girard in Geneva, Ohio which has its own line of deciduous azaleas, [and the] Arnesons in Canby, Oregon [among others]. It is possible that

there are comparatively few Exbury and Knap Hill cultivars available today in the US market because there were never many available to begin with, and newer and better cultivars have subsequently been developed here (10).

After considering the above comments from William C. Miller III, Mr. Nicholas de Rothschild responded:

The reason for the lack of Exbury Azaleas in the US is quite prosaic. We sold quite a few into the Oregon/Washington State area in the early 60s, where I believe they still flourish. However the Department of Agriculture put a stop to the trade by imposing heavy soil restrictions and quarantine regulations. The Solent range of azaleas—named for the Solent, the body of water separating the Isle of Wight from the mainland—are, in my view, on a par with the best new States-side hybrids. It was the introduction of these that ended the supremacy of the older Exburys. We have, this year, for the first time, managed to get a few of them to replicate in tissue culture, though the lab has yet to get them to root out of the culture. They come fairly easily from cuttings, and our Nurseries have been concentrating on producing several hundred each year. But, as you say, their deciduous nature often predicates against their sale when competing against the more compact evergreens. However, pruning does create a tighter format. It was Fred [Wyniatt, Head Gardener at Exbury for many years] who placed much greater importance on azaleas within the plantings, especially the evergreens, and the feel that one gets in the gardens today was started by him. It was also through him that Exbury acquired the Solent strain of deciduous azaleas which had been bred by George Hyde at his nursery near Ferndown in

Dorset. There are around 150 of these and they were bought by Exbury in about 1959-60... At the time I think that the aim was to infuse new blood into the breeding, but the Solents proved to be so good that they are hard to beat. Their other great advantage is how good they are in full sun. We always thought that they were like the other azaleas and had them in dappled shade, until the hurricane removed all their top cover. The following year and every year subsequent to that they have flowered better in full sun! We also tried to trim them back and found that they responded most positively to hard pruning. They are not at all straggly now (9).

The 1987 hurricane referred to by Mr. Nicholas wreaked tremendous havoc at Exbury, as it did at Kew and many other large British gardens.

The hurricane had no name as it came as a bit of a surprise. The weatherman on the early evening news said 'a lady from Jersey has just rung me up and told me that a hurricane is on the way, I can assure you that we have no knowledge of this, so do not worry!' Boy, did he have to eat his words! ...the hurricane-force winds... ripped ashore later that evening. There was no time to give it a name, let alone warn anyone of its arrival. Exbury lost 750 mature oaks and other trees in the space of an hour. The second hurricane force storm came in 1990, this time in February, when we lost a further 400-500 trees; this time it was the turn of the Scots Pine to take the brunt of the wind. The trees were not necessarily old!

What we did find was that the oaks were very shallow-rooted. We had always assumed that all oaks had a deep tap root. We found that the ones that came down had really rather small root structures for the size of tree. (This is not to say that in different soil conditions they would [not] have more root')(10).

Paul Martin adds, "It really was a great blessing, however, and did what should have been done years earlier. ...overgrown trees and shrubs were torn out, and forced a necessary renewal of the gardens. Our plan is to continue this renewal over the next 15 to 20 years.

"At this point, we are concentrating primarily on rhododendrons, having taken back the breeding work under our own auspices. The long-range plan calls for us to begin similarly extensive work again with azaleas in



Exbury's Head Gardener Paul Martin

three to four years.

"The pH here is 4.5-5, which is very acidic. We do nothing to change that, because the plants are so big anyway, and seem to thrive on it. Initially, the soil was bulked up with humus, and the plants have been fed with a general fertilizer thereafter. Now, because of the size of the grounds, we sometimes resort to chemical weeding. We

have also hauled out load after load of invasive ivy, which was chopped and returned as mulch."

"The gardens remain very much a family concern," Mr. Martin said. "Today, Edmund's sons, Nicholas and Lionel, are taking an active interest in the work of Exbury. Recently, Mr. Nicholas has begun planting up a path along the top of the rock garden. The entire work is owned and run by a charitable foundation known as 'The Trust'; all profits go back into the gardens. The family are in it because they love it."

Lionel de Rothschild described himself as "a banker by hobby, a gardener by profession" (11). A clear picture of the man and his passionate, yet very generous attitude toward gardening emerges from the following story, extracted from an article on Knap Hill azaleas in *Rhododendron Year Book 1985/6* by G. Donald Waterer:

It was decided to resume the hybridization and selection of the Knap Hill azaleas, but in 1935 a devastating frost on 17 May destroyed the flowers of every azalea in the open ground. With his usual generosity Lionel de Rothschild invited the Knap Hill Nursery to make crosses at Exbury using azaleas which he had acquired from the second Anthony Waterer, Exbury having suffered no harm from the frost. These crosses were made at Exbury by Frank Knight. Further crosses were made at Knap Hill before the outbreak of war in 1939 (12).

"A nice story, I think," summed up Mr. Lionel de Rothschild, grandson of Exbury's founder. A very nice story with wonderful gardens, exquisite azaleas, and priceless contributions to the gardens of the world.

Thank you, Mr. Lionel.

REFERENCES

- (1) C. E. Lucas Phillips and Peter N. Barber, *The Rothschild Rhododendrons*,

first published by Cassell, reprinted by Exbury Gardens, 1987, p. 35. This book is an invaluable source of information on Mr. Lionel de Rothschild's life and work, Exbury, and highly practical rhododendron culture. The book is a well-produced, hard-cover edition of 138 pages including 20 fine black-and-white illustrations, plus 65 full-page color plates of plants in bloom. Peter Barber had served as a major in the army with Edmund de Rothschild, and later become Managing Director of Exbury Gardens.

- (2) Berrisford, Judith. *Rhododendrons and Azaleas*. London: Faber and Faber, 1964, p. 45.
- (3) Berrisford, *ibid*.
- (4) Berrisford, *Op. Cit.*, p. 46.
- (5) Phillips and Barber, *Op. Cit.*, p. 35.
- (6) In 1926 (Mr. Lionel) acquired most of the collection of Thomas Lowinsky, one of the leading amateurs of the day and a RHS gold medallist, whose fine garden at Tittenhurst, Sunninghill, was celebrated also for some of the rarer forms of conifer, such as the curious pendulous cedars and the very odd weeping wellingtonias, or 'ghost trees'." Phillips and Barber, *Op. Cit.*, p. 26.
- (7) *Year Book of the Rhododendron Association*, 1934: pp. 113-114.
- (8) Phillips and Barber, *Op. Cit.*, p. 20.
- (9) Communiqué from Mr. Nicholas de Rothschild, 9 October 1996.
- (10) Letter from William C. Miller III, 12 May 1996.
- (11) Exbury Gardens, [Christina Dykes and Charles Orr-Ewing, produced by Exbury Gardens.] "An Introduction."
- (12) Communiqué from Mr. Lionel de Rothschild, 10 June 1996.

Jaacquelyn Kuehn writes from her home in western Pennsylvania, where she is eagerly anticipating the first blossoming of her young deciduous azaleas this spring. She is currently the editor-in-chief of Pomona, journal of the North American Fruit Explorers (NAFEX).

Photographs by the author

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PINE BARK AND AZALEAS

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Use of pine bark in container culture of azaleas

As anyone who has grown ornamental plants in containers in the southeastern United States knows, milled pine bark is a great ingredient for a growth medium. Its qualities include good drainage and heat release, acidity, lack of toxicity, and very slow decomposition rate. And anywhere that pine trees are harvested in quantity it has the additional advantage of wide availability and low cost.

The pine bark that I will be referring to throughout this article is described as being run once through a hammermill and at least six months old. This results in a range of particle sizes that is considerably coarser than bark that is usually sold as potting medium for greenhouse plants or houseplants. The coarser bark is considered a necessity for growing healthy plants in containers in full sun in the South. If you are growing azaleas under less severe conditions, a finer bark may be more desirable.

Azaleas can grow very well in 100% pine bark. However, one drawback to such use is the low water holding capacity of pure bark. Another property, which can be either a plus or a minus, is its light weight. For shipping, light weight is desirable, but plants in pure bark are easily blown over,

Plants grown in 100% bark or very coarse bark may also have difficulty in becoming established when planted out, especially into heavy soils. The roots can easily dry out before they grow beyond the original container volume, even if the surrounding soil is moist enough. Addition of up to 10% sand to the container medium helps overcome these problems.

Several years ago I compared the growth of various plants in media containing pine bark, 10% sand, and Canadian peat in percentages ranging from 0 to 90%. The results of these tests are shown in Table 1 (1).

Results obtained in two separate tests in consecutive years are shown as "Test I" and "Test II".

| PEAT | PERCENTAGES | | FRESH WEIGHT (g.) | |
|------|-------------|------|-------------------|---------|
| | PINE BARK | SAND | TEST I | TEST II |
| 0 | 90 | 10 | 33 | 63 |
| 5 | 85 | 10 | 52 | 73 |
| 10 | 80 | 10 | 55 | 84 |
| 20 | 70 | 10 | 55 | 84 |
| 40 | 50 | 10 | 68 | 92 |
| 90 | 0 | 10 | 76 | 100 |