

had acquired Omnium at par and were able to take on holdings as large as they chose. Some made fortunes on a scale which Rothschild, arriving late in the market, was in no position to match.¹² In short, while Rothschild probably made a profit from his early news of Waterloo, it was by no means exclusive early news (Mr C’s story could already be read in at least three newspapers), he did not engineer a market panic, and he did not make a great killing. If any of this had been true it would surely have surfaced in his correspondence with his brothers elsewhere in Europe, but it did not. Nor was it mentioned in any newspaper report during his lifetime, or in his obituaries. And the evidence in The Rothschild Archive that Nathan was offered a knighthood a few weeks after Napoleon’s defeat (an honour he rejected) strongly suggests that he had done nothing that the government could have considered disreputable or potentially embarrassing.¹³

The legend of Nathan Rothschild and Waterloo is just that: a legend. As with most legends, there are underpinning elements of truth: he had relatively early information and he seems to have profited by it. The rest, however, is fiction, and not harmless fiction. The Nathan Rothschild of the legend is a Shylock, a Fagin, a Jud Süß – scheming, cynical, secretive and fanatically greedy. To stamp that character in the public mind was the aim of the writer who called himself ‘Satan’ and of the makers of *Die Rothschilds: Aktien auf Waterloo*. Of course others have repeated the tale with no anti-Semitic intent, but given its pedigree and the absence of supporting evidence it is probably time historians relegated this legend to the margins and the footnotes.

Brian Cathcart is professor of journalism at Kingston University London and is the author of The Case of Stephen Lawrence (1999) and The Fly in the Cathedral: How a small group of Cambridge scientists won the race to split the atom (2004). He was also a founder of the campaign group Hacked Off. His latest book, The News from Waterloo: How Britain learned of Wellington’s triumph will be published by Faber & Faber in April 2015.

NOTES

¹ Elizabeth Longford, *Wellington: Pillar of State* (London: Weidenfeld & Nicolson, 1972), 7–8; Niall Ferguson, *The House of Rothschild* vol.1: *Money’s Prophets* 1798–1848 (London: Penguin, 1998), pp.98–9.
² See for example Bertrand Gille, *Histoire de la Maison Rothschild* vol.1 *Des Origines a 1848* (Geneva: Droz, 1965); Rory Muir, *Britain and the Defeat of Napoleon 1807–1815* (Yale University Press, 1996); Neville Thompson, *Earl Bathurst and the British Empire 1762–1834* (Barnsley: Cooper, 1999); Encyclopaedia Britannica, 11th ed., vol. xxiii (Cambridge: Cambridge University Press); Encyclopaedia Americana vol.23 (New York: Americana Corp., 1977); Dictionary of National Biography (Oxford: Oxford University Press, 1897); Richard Bookstaber, *A Demon of Our Own Design: Markets, Hedge Funds, and the Perils of Financial Innovation*, (New Jersey: Wiley, 2007); William J. Bernstein, *The birth of plenty: how the prosperity of the modern*

world was created (London: McGraw-Hill, 2004); Aaron Levine, *Case studies in Jewish business ethics Library of Jewish law and ethics* vol.22. (Hoboken, NJ: KTAV publishing, 2000). In modern times the story has been challenged in two works: Victor Rothschild, *The Shadow of a Great Man* (London: privately published, 1982) and Herbert H. Kaplan, *Nathan Mayer Rothschild and the Creation of a Dynasty 1806–1816* (Stanford CA: Stanford University Press, 2006).
³ Rothschild, Shadow; ‘Satan’ was Georges Dairnvaell, a well-known left-wing activist and writer.
⁴ Frederic Morton, *The Rothschilds: A Family Portrait* (London: Secker and Warburg, 1962), p.54.
⁵ Ignatius Balla, *The Romance of the Rothschilds* (London: Eveleigh Nash, 1913).
⁶ See Notes and Queries v2, 4thS, (38) 19 September 1868, p.283.

⁷ James F. Gallatin, ed., *A Great Peace Maker: The Diary of James Gallatin, Secretary to Albert Gallatin* (London: Heinemann, 1914), p.76.
⁸ Raymond Walters, jnr ‘The James Gallatin Diary: A Fraud?’ *American Historical Review* lxxii July 1957, 878–85.
⁹ Letter from Nathan Rothschild to Carl Rothschild, 20 June 1815. RAL x1/82/7. The reference to Roworth is a post-script.
¹⁰ Caledonian Mercury, 24 June 1815.
¹¹ RAL x1/112/51 and T3/341.
¹² David Ricardo and Bridges Trouwer were among those who made large sums. See Piero Sraffa, ed., (1951–73) *The Works and Correspondence of David Ricardo* (Cambridge: Cambridge University Press, 1951–1973).
¹³ Letter from John Roworth, Paris, to Nathan Rothschild, London, 27 July 1815, x1/112/77.

An Absolute Passion: The Rothschilds’ orchid collections at Gunnersbury Park, Tring Park, Exbury Gardens – and London’s East End

Francesca Murray reveals an unexpected link between nurseries and a refinery in her study of the Rothschild family’s passion for orchids.

Orchids held a special fascination for the Rothschild family throughout the nineteenth and twentieth centuries. They were amongst a number of plants that the family collected; however, the orchid was exceptional, providing the beauty and varieties of form with the horticultural challenge of its cultivation, which made it a cherished family asset. The rarity of the orchid and its high price at auction was a fitting trophy for the richest family in England and its exotic flowers complemented the lavish interiors of the Rothschild houses. The orchids were also a pleasurable distraction from the business of banking and for sharing with friends.

The provision of manpower and horticultural expertise, together with the installation of the latest glasshouse technology needed to grow the orchids, was a demonstration of the wealth of the family and the high standards of excellence espoused by its members. But it also revealed their personal devotion to these new, peculiar plants that flooded into the nurseries of the early nineteenth century. Early exposure to orchids as a child led to Ferdinand de Rothschild’s (1839–1898) patronage of the orchid expert Frederick Sander (1847–1920) and ensured the family were at the vanguard of the introduction of the genus into Europe and England.¹ Indeed some orchids were named after family members in appreciation.² It appealed enough to 1st Lord Rothschild, Nathaniel de Rothschild (1840–1915) and his son Walter (1868–1937) at Tring Park and later Lionel de Rothschild (1882–1942) at Exbury to join the group of orchidologists of the Royal Horticultural Society, namely the Orchid Committee, which gave them an opportunity to be involved scientifically. As orchid species became more rare, and in order to extend the orchid flowering period for cutting, orchid hybridisation became the objective in the professional and amateur glasshouses of England and Europe. The Rothschild gardeners were no exception, cultivating numerous orchid hybrids, which won many RHS awards.³ A further step taken in the early twentieth century by Lionel de Rothschild at Exbury was to experiment in the germination of orchid seed, a field that had been thus far unsolved.

All of these were more than enough reasons for a Rothschild to become passionately attached to this genus. But, perhaps more fundamentally there was an emotional connection in England between the family and the imported orchid plants. Both the family and the orchid genus were outsiders, seen as exotic, curious and yet ultimately fascinating. Both were expensively bound in their uniqueness, subjects of envy, tricky to look after, with seemingly eccentric characteristics that needed special care and handling.⁴ When cultivation and treatment of these exotic specimens was fruitful, the results were often breath-taking. Orchids collected from distant lands by plant collectors who often risked their lives searching for these unique specimens were part of global networks that as bankers the Rothschilds shared.

Gardening and collecting rare plants have many parallels to banking in terms of the planning, cultivating and growing, anticipation and legacy. And despite the limitations of their time, an interest in horticulture between Nathan Rothschild (1777–1836) and his four brothers for furnishing their gardens with the latest exotic plants available in new glasshouses, naturally included orchids.⁵ Horticultural changes were afoot in England: the glass tax was abolished in 1845, the brick tax in 1850, and with an easing of the timber duty in 1851 new glasshouse suppliers sprang up from the 1850s.⁶ The heating of greenhouses had changed with hot water boiler systems becoming popular to create the ideal environment for tender stove plants. The plants still had to get to the customer's glasshouse in one piece first. The invention around 1829 of the Wardian case helped transport the live plants to England.

In 1835 Nathan Rothschild bought Gunnersbury Park, a substantial and established estate near Ealing, just outside London, previously owned by Princess Amelia (1783–1810), George III's aunt.⁷ After Nathan's untimely death in 1836, his widow, Hannah (1783–1850) followed by his son Lionel (1808–1879) and daughter in law, Charlotte (1819–1884) continued to develop Gunnersbury Park and expand the grounds. Charlotte's invitations were even more popular than the Queen's, who was a frequent visitor.⁸ The garden tour was a feature for visitors and orchids and fruit were given away to guests as gifts. Leopold de Rothschild (1845–1917), Charlotte's son, gave George V a Fabergé vase dressed with orchids for his coronation and dinner tables were frequently decorated with orchids.⁹

The Rothschilds used their established international networks of bank agents to obtain rare and exotic plants including orchids for Gunnersbury.¹⁰ Often these agents would have little knowledge of what they were being asked to source, and this sometimes led to impatience with seemingly unintelligible new plant names.¹¹ Orchids were grown in the extensive glasshouses and Charlotte published her own catalogue of her orchids at Gunnersbury Park.¹²

Committee of head gardeners of the estates of England, including James Hudson (1846–1932) of Gunnersbury House and George Reynolds of Gunnersbury Park, James Smith (1837–1903) of Mentmore, John Jennings of Ascott.

RHS Lindley Library



Since the sixteenth century, there had been a tradition of the rich and wealthy cataloguing their newly acquired exotic plant collections in richly illustrated books called *Florilegia*.¹³ Charlotte's catalogue is modest and unillustrated, simply listing the thirty-four different species of orchid at Gunnersbury. However it is packed with contemporary detail of the world of orchid collecting. It notes the geographical origin of each orchid and states from whom the orchid was sourced with a short description of its botanical name giving clues to dating it to around the 1870s. The names include James Veitch of Chelsea, Dominy and Seden his orchid hybridisers; orchid hunters, Hutton, Lobb, and Ross; Lady Tankerville, the Duke of Devonshire (a celebrated orchid collector) and Joseph Hooker of Kew.¹⁴ It demonstrates how exclusive her collection was whilst revealing an expert knowledge of orchids. The *Vanda teres* is also detailed in the diary of Thomas Hobbs, a gardener at Gunnersbury Park who noted over 200 of their blooms, a feat that was fêted in the *Gardener's Chronicle* and shared around the family. On 27 April, 1898 he sent '33 spikes for Lord Rothschild and 3 dozen for Newmarket'.¹⁵

Cultivation in the glasshouses was managed under the professional eye of the head gardeners, George Reynolds and James Hudson, who joined the estate when Leopold de Rothschild bought the neighbouring small mansion and consolidated the two gardens in 1899. Unusually Hudson and the older Reynolds continued to run the sites separately.

Famous orchids included *Dendrobium formosum giganteum*, *Odontoglossums* and *Vandas*.¹⁶ They used different techniques and growing media for their orchid houses, which can be seen in their orders from Wood and Son, Reynolds preferring the old style sphagnum moss while Hudson tried out the newer orchid-growing medium.¹⁷ The achievements of these gardeners demonstrated the standards that the Rothschilds expected in their gardens and also the trust they placed in their employees. The men wrote many articles for the gardening press on their interests as well as orchids including hybrid waterlilies, fruit production and floristry. The Rothschilds had become advocates of the science of hybridisation, underlined by the agreement of Leopold to host a visit from delegates of the RHS Conference of Genetics (where the term *genetics* was first coined) of 1906. The delegates visited Gunnersbury Park for tea and enjoyed a tour of the gardens and glasshouses.¹⁸ Lionel de Rothschild (1882–1942) addressed the delegates at dinner, confident of this new scientific approach. He would later apply these early lessons at Exbury.¹⁹

Tring Park was given to Nathaniel de Rothschild, or 'Natty' as he was known, in 1872 by his father. It became known as a centre for the zoological research of his son, Walter, at his purpose-built private museum. However, in the glasshouses there was scientific experimentation too. Natty had a keen interest in botany and orchids were his favourite plant.²⁰ He was appointed Vice President of the RHS in 1902, an honorary post he held for 13 years and became known as 'a patron of the science of horticulture'. He attended meetings of the RHS Orchid Committee and even presented photographs of his newly flowered orchids.²¹ Varieties cultivated by hand at Tring, such as *Cattleya Maroni* 'Tring Park' var, *Cattleya Hardyana* 'Tring Park' var, were awarded First Class Certificates and he was deeply involved in supervising their cultivation for year round spectacle.²² Both his head gardeners served on the RHS Orchid committee: Edwin Hill (d.1904) and Arthur Dye, carried out pioneering work with the orchids especially the *Phalaenopsis* species for which Tring Park became well known.²³ Walter inherited an avid interest in orchids from his father. He wrote to Colonel Prain at Kew, 'rarities now growing are a number of *Lissocbilus giganteus* and *Doryanthes gillfoylei* and numbers of rare *Bulbaphyllums* *Cinnopetalums* and other orchids of botanical interest'.²⁴

Fertilising orchids was not an easy task as Darwin himself had noted in his paper of 1862.²⁵ Walter Rothschild had been fascinated with fertilisation of orchids by insects and argued his theories in the *Orchid Review* with other orchid specialists.²⁶ The 1919 catalogue of Tring



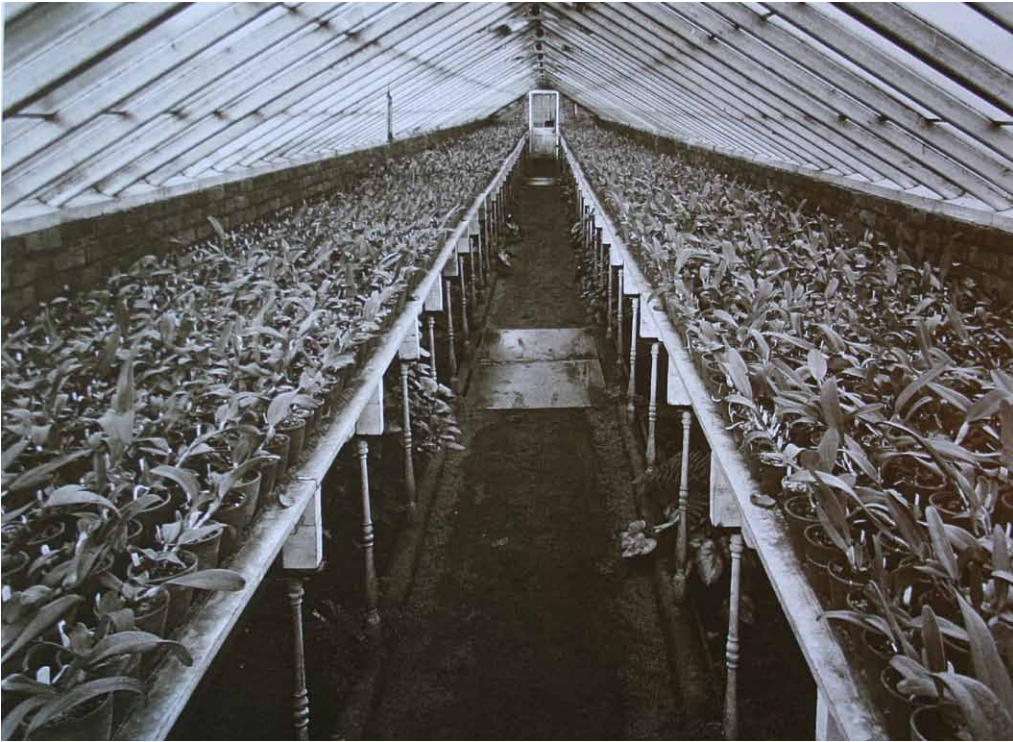
View of Tring Park, where
Nathaniel, 1st Lord Rothschild
established his greenhouses.

Photograph by Ricardo Cavernelis.

Park orchids noted over 2,324 orchid hybrids developed at Tring, some of which may have been developed from plants shared by the Gunnersbury Park estate and from members of the family.²⁷ Walter was the youngest recipient of the RHS Victoria Medal of Honour in its inaugural year of 1897 for his orchid hybridisation. His brother Charles, an entomologist with a keen eye for the detail of classification, focused his orchid passion on native orchids in their natural habitats. An album of photographs taken by Charles of native orchids in situ shows a keen conservationist’s eye.²⁸ As the heir of Tring Park he bequeathed the Tring orchid collections to Kew Gardens on his own early death in 1923, having contributed many plants and seeds to the Herbarium in his lifetime.

Lionel de Rothschild created his first garden at the age of five and he is well known for the rhododendrons and azaleas at his garden at Exbury. However he collected a number of other plant groups, of which orchids were of special interest.²⁹ He developed a substantial orchid collection, which included *Cymbidiums*, *Cattleyas*, *Odontoglossums*, *Cypripediums*, *Miltonias* and *Calanthes* some of which may have been brought to Exbury from Gunnersbury Park and also exchanged with those of Tring Park.³⁰ In 1928, he was invited onto the RHS Orchid committee by Sir Jeremiah Colman (1859–1942) of Gatton Park and was voted Vice Chairman in 1929.³¹ Benjamin Hills became head of the orchid house which was housed in a large glass-house complex incorporating a specially built orchid laboratory.³² Lionel took the new genus extremely seriously. He wrote to Colman saying ‘my main aim is eventually to show only home grown orchids.’³³

To do this he wanted to be able to successfully germinate and propagate more orchids himself. For an amateur to invest in scientific experimentation to germinate orchid seeds was ambitious, as they needed a sterile environment and scientific process of treatment. However, Lionel immediately set to the task. The financial rewards to solving this botanical conundrum would have been colossal, as even the commercial nurseries struggled with propagating some orchid species. In this, however, Lionel had one unusual and unexpected advantage. The Rothschild bank had operated the Royal Mint Refinery in the East End of London since 1852;



Left
Orchid seedlings at
Exbury Gardens.



Ophrys apifera (bee orchid),
Cypripedium calceolus (lady’s slipper
orchid) and *Neottia nidus-avis*
(birds nest orchid) growing at
Ashton Wold, the home of Charles
Rothschild, c.1905, from an album
of Charles’ own photographs.

RAL 000/1323/8/5

A page from the catalogue of
orchids of Charlotte de Rothschild
at Gunnersbury.

RAL 000/529

ORCHIDS.		
<i>ADA</i> (<i>Ada</i> , supreme or golden god of the Assyrians).		
aurantiaca	golden colour	Colombia.
<i>AERIDES</i> (<i>Aer</i> , the air; air plants).		
affine	allied	Sylhet.
crassifolium	thick-leaved	Moulmein.
crispum	crisped flower	Bombay.
„ Warnerii ..	comp. to R. Warner, Esq.	Bombay Hills.
Fieldingii	comp. to W. B. Fielding ..	Assam.
Huttonii	compliment to Mr. Hutton, collector	Java.
Japonicum	common in Japan	Japan.
Larperntie	Lady Larperntie	East Indies.
Lobbii	comp. to Mr. Lobb, collector ..	Moulmein.
odoratum	sweet flowered	Rangoon.
quinquevulnerum	five purple stains	Rangoon.
roseum	rose-coloured flowers	Cochin China.
Schroderii	Schröder's var.	Bombay.
suavissimum	very pleasant	Straits of Malacca.
Veitchii	Veitch's var.	Moulmein.
virens	green-tipped flowers	Java.
<i>ANGRÆCUM</i> (<i>Latinized, from the Malay Angrec</i>).		
eburneum	ivory-tipped	Madagascar.
falcatum	sickle-leaved ..	Japan.
sesquipedale	spur one-and-half foot	Madagascar.

from 1928 to 1933 a spare laboratory was used to test seeds of *Cymbidiums*, *Odontoglossums* and *Laelia Cattleyas*. Lionel’s instructions to Mr Williams at the Royal Mint Refinery gave a specific approach to experimenting using different chemical formulae.³⁴ He had researched the latest scientific theories, both symbiotic (with fungi) and asymbiotic (with sugars), methods that had been developed by Lewis Knudson and E.A. White of Cornell University, Dr Malcolm Wilson a mycologist at Edinburgh Botanic Gardens, Edinburgh University, Professor Wuyts at University of Ghent and in Europe by Hans Burgeff and Noel Bernard whilst he also communicated with other amateur orchidologists to seek their advice.³⁵ He tried a carrot-based recipe from Edmond de Rothschild (1845–1934) who had carried out orchid experiments at Armainvilliers with his gardener Gaston Bultel who had been influenced by Bernard.³⁶

Commercial suppliers such as Charlesworth and Sons had been trialing seed germination and Lionel paid them and others to supply him seed to grow as seedlings in flasks for Exbury.³⁷ He wrote to Colonel Durham at Kew in 1933 saying that he could successfully raise ephiphytal orchids, namely *Cattleyas*, *Miltonias* and *Odontoglossums*.³⁸ At the Chelsea Show in 1933 a large display of orchids including *Cymbidiums*, which had been grown from seed at Exbury, greatly impressed the orchid community. Lionel’s orchids informed his work on his rhododendron collection. As Chair of the Rhododendron Society, he urged his fellow rhododendron fanciers to follow the system of orchid classification for naming rhododendron hybrids.³⁹

By 1939 Lionel’s collection numbered 28,000 orchids in plant and seedling form, *Cymbidiums*, *Odontoglossums*, *Miltonias*, *Cattleyas*, *Vandas*, *Phalaenopsis*, *Cypripediums*, *Odontiodas*, but even he was unable to keep the collection going with the arrival of World War II. He started to approach buyers in America who had the financial resources to invest and no enemy bombs falling on their glasshouses.⁴⁰ His untimely death in 1942 changed the orchid collections of the Rothschild family forever. A Ministry of Agriculture edict allowed coal rations to be used to heat the *Cymbidium* glasshouse throughout the war.

After the war Lionel’s son, Edmund de Rothschild (1916–2009) returned to Exbury and continued to cultivate *Cymbidiums* and to win RHS awards with his successful cymbidium hybrids. If the whole orchid collection had survived Lionel may well have been as renowned for his orchids as his woodland collections.

Francesca Murray is a BA Hons graduate of King’s College London (1992) and completed her Master’s degree in Garden History at the University of Buckingham in 2015. Her enthusiastic horticultural research for this Masters topic has led her through many disciplines of garden history and design, plant hunting, science, botany, entomology, floristry, family history, architecture and finance to ensure that her plans to continue to study at PhD level are firmly rooted in the future.

NOTES

1 The Windmill Hill Archive. Ferdinand de Rothschild, Reminiscences, 1897, p.21. ‘I was taken to see the famous glasshouses of Mrs Lawrence, the mother of Sir Trevor [Lawrence, orchid enthusiast and later RHS president] and they much impressed me for at Frankfurt ‘glass’ was then unknown.’
2 *Cypripedium rothschildianum*, named by Frederick Sander after his patron and good client Ferdinand de Rothschild. Later reclassified in 1888 by Stein as *Paphiopedilum rothschildianum*. For posterity Sander recognised this patronage in his *Reichenbachia*, the volume of orchids that he published in 1882–92, attributing over 12 entries of orchid species to the Rothschilds.
3 RHS awards for orchids included First Class Certificate’s, Award of Merit and Botanical Certificate, Cultural commendation, Schroeder Cup, Cain cup, all awarded from 1889 when the Orchid

Committee was established.
4 Ferdinand de Rothschild, ‘My partiality to orchids is based more on the eccentricities of their flowers than on their actual beauty.’ RAL 000/26
5 Amschel de Rothschild, Frankfurt, 11 March 1817, ‘God willing, I am building a small hothouse because I have no peace from the gentiles who are very cross that a Jew should have anything.’ RAL XI/109/6/2/27

6 At Ascott Foster and Pearson built the carnation house to accommodate Leopold’s 1,500 carnation collections. At Waddesdon Manor R. Halliday and Co. built ‘Topglass’, the glasshouse complex that housed Ferdinand’s plant collections.
7 Loudon (1783–1843) had described it as ‘a beautiful park studded with stately cedar, elm and forest trees’ and provided a plan in 1834 for a new entrance driveway which was not carried out. (Gunnersbury Park Museum)
8 Stanley Weintraub, *Charlotte and Lionel: a Rothschild Love Story* (New York: Free Press, 2003).
9 www.royalcollection.org.uk/eGallery/object.asp?searchText=coronation+king+george+v&pagesize=20&object=8949&crow=64&detail=about. Ann Collett White and James Collett White, Gunnersbury Park and the Rothschilds, (London, 2007).
10 Letter from Lionel Davidson, agent and Rothschild cousin, Mexico to Lionel de Rothschild, 29 July 1843, ‘You may tell your Mama that I shall send them to her, and I hope that among them may be found some specimens that will prove a valuable accession to the Conservatories of Gunnersbury.’ RAL XI/38/76–7.
11 Frederick Huth, a Rothschild agent in Peru organising clerks to name *Oncidium*s who then give up trying with the rest of the shipment, to Lionel de Rothschild, ‘generic name and common name, not to me to give it a name...’ RAL XI/109/61/2/13. Those named orchids sent to Gunnersbury would later appear in Charlotte de Rothschild’s orchid catalogue.
12 Charlotte de Rothschild, *Catalogue of Orchids grown by Baroness de Rothschild Gunnersbury Park*, n.d. Gunnersbury Park Museum
13 Alice Coats, *The Book of Flowers: Four centuries of flower illustration* (New York: Exeter Books, 1973).
14 RAL 000/84 Charlotte de Rothschild to Leopold de Rothschild, 12 May 1865. ‘We went to see Mr. Veitch’s flowers this morning, Natty and I, and there was, as usual much to interest us. –The perfume of the orchids was quite heavenly – and several novelties from distant lands arrested our attention.’ John Dominy (1816–1891) was an employee of Veitch’s nursery and the first to successfully create a hybrid orchid *Calanthe x domini* in 1851. Hutton and Lobb both collected for Veitch and Co. Hortus Veitchii, *A history of the rise and progress of the nurseries of Messrs. James Veitch and Son* (London: J. Veitch & Sons, 1906).
15 *The Gardeners’ Chronicle*, 1 May 1897, p.282,

‘*Vanda teres*. This orchid is now to be seen in superb character at Gunnersbury Park. The plants...are now blooming abundantly, for there are fifty-four spikes of blossoms. The late Mr B.S. Williams once wrote of *Vanda teres* that it is a “shy blooming species” but shyness is hardly a characteristic of those under Mr Reynolds care.... as they are decidedly floriferous.’ It also won a Gold medal on 8 May 1900 from the RHS Orchid committee. Thomas Hobbs diary 1893–9. RAL 000/296.
16 *Journal of the Royal Horticultural Society*, Orchid Committee Minutes, 11 October 1898. ‘To Messrs de Rothschild Gunnersbury House, Acton (gr. Mr Jas. Hudson) Silver gilt flora medal, for a splendid group, consisting of thirty four plants, bearing together nearly seven hundred flowers.’
17 RAL XII/17/2 1907
18 Rev W. Wilks (ed.), *Report of the International Conference on Genetics and Hybridisation*, (London: RHS, 1906), p.21.
19 Ibid., p.88.
20 Obituary of Nathaniel de Rothschild, *The Gardeners’ Chronicle*, 10 April 1915, p.204: ‘Orchids, were perhaps his favourite and several beautiful hybrids bear his name.’
21 ‘Lord Rothschild showed a life sized photograph of a large specimen of *Phalaenopsis Schilleriana* grown in his gardens since 1881...bearing eighty–eight flowers...’ Journal of RHS Orchid Committee January 1905, CIVII.
22 *The Gardeners’ Chronicle*, 10 December 1904, p.397.
23 *Orchid Review*, 1929, p.154.
24 *Royal Archives Kew*, DC 1454, 25 September 1907.
25 Charles Darwin, ‘On the various contrivances by which British and foreign orchids are fertilised by insects, and on the good effects of intercrossing’ 1862.
26 ‘The fertilisation of Ophrys speculum, O. lutea and O. fusca’ in *Orchid Review*, April 1923, p.99.
27 The Tring Park orchid collection 1919–1921. RAL 000/1323/25/3. An example was Laelio crispa rosado given to Lord Rothschild by the late Major Evelyn de Rothschild. RAL 25/2 NO.724
28 Album of black and white photographs by Charles Rothschild of native orchids in their own habitat, possibly Ashton Wold. RAL 000/1323/8/5.
29 Obituary of Lionel de Rothschild, *The Gardeners’ Chronicle*, 7 February 1942, p.63: ‘He probably found the greatest pleasure in Rhododendrons and Orchids.’
30 Ibid., 62. Lionel grew up at Gunnersbury Park and the *The Gardeners’ Chronicle* acknowledged his good fortune to obtain

practical knowledge from such famous men as George Reynolds and James Hudson. Merle A. Reinikka, *A History of the Orchid* (Portland OR: Timber Press, 1972).
31 Letter from Jeremiah Colman to Lionel de Rothschild RAL XI/15/86/1. Colman, author of *Hybridisation of Orchids, the experiences of an amateur* (1932) had a collection of over 25,000 orchids at Gatton Park and was the chair of the RHS Orchid Committee. His fortune came from the famous Colman’s mustard. In his reply Lionel declares inexperience in the genus, which he was soon to fast track substantially.
32 Benjamin Hills was poached from Westonbirt by Lionel, where he had worked on the famous Holford orchids with H.G. Alexander.
33 RAL XI/15/66.
34 RAL XI/15/86. ‘My very clever chemist at my precious metals refinery in London.’ Williams would go on to manage the refinery 1937–1952. Michele Blagg, The Royal Mint Refinery, A business adapting to change 1919–1968, PhD thesis, King’s College London, 2012. Procedure adopted at the RMR for the non-symbiotic germination of orchid seeds, compiled by Mr Williams. 5 May 1932. RAL 000/2201/2. This location was perhaps used as the resources were already in place, and Lionel could keep a close eye on progress, it being only a brisk walk from St Swithin’s Lane to the refinery.
35 Using fungi that live at the base of the orchid, therefore ‘mycorrhizal’ association between fungi and the roots of the orchids to aid germination.
36 Marcel Gaucher, *Les Rothschild Côté Jardins* (Paris: Editions arts & systems, 2000), p.128. Marc-André Selosse, Bernard Boullard and David Richardson, Noël Bernard (1874–1911): Orchids to symbiosis in a dozen years, one century ago. Symbiosis, June 2011, vol.54 no.2, pp.61–8. In 1935, Bultel dedicated the orchid hybrid, x *Vanda- costylis bernardii* (*Vanda teres* x *Rhynchostylis retusa*) to Bernard.
37 RAL XII/15/58.
38 Lionel de Rothschild to Colonel Durham at Kew, 4 October 1933. RAL XI/15/66.
39 RAL XI/15/115/2.
40 RAL XI/15/36/6.