Joseph James Forrester was the first foreigner to be awarded a Portuguese baronetcy. His travels throughout the Douro region meant that he came to be considered the person of his era most knowledgeable about the river and its wine. He produced two exceptional maps of the region, which have had a lasting impact. He published a pamphlet that criticised many of the practices of the port wine trade and, as a consequence, had numerous conflicts with other exporters, while receiving messages of appreciation from growers throughout the region. He was a pioneer of social-welfare activities for company workers, as well as a landscape and portrait painter and a photographer. He played a major role in overcoming the outbreak of powdery mildew that afflicted the Douro region in the 1850s. It has been said that he is the reason why the banks of the River Douro are today as productive and attractive as they are. Yet, strangely, Forrester has not previously featured in one of the Society’s articles. This paper sets out to redress that omission.

The wine business

Forrester was born of Scottish parents from Perth in Kingston upon Hull on 27 May 1809. He was the only son of Patrick Forrester, a jeweller and watchmaker, and Sarah Weddell. In 1831 he joined his uncle’s firm, Offley, Webber and Forrester, in Oporto, a firm that dated back to 1761. On the sudden death of his uncle in 1840 he became a partner with a one-quarter share of the business. When William Offley Sr. retired at the end of 1843, Forrester’s share was increased to one-third and he effectively took over the running of the business. In 1851 he decided to leave the company, which became Offley, Webber and Cramp. Until his death from drowning in the Douro in 1861, he traded port and unfortified wines with his four sons, as Joseph James Forrester & Sons, and continued to grow his own vines, being one of the few British exporters at that time who was also a grower. Apart from in 1853, when he exported around 1,500 “pipes”3, he was never a major exporter, shipping around one-fifth of the quantity exported by his former company in most years.4 His wines were well-appreciated, with one winning a Silver Medal at the 1855 Paris Exhibition. His company also produced olive oil, brewed beer and distilled gin.

Difficult times


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making French and Spanish wine more competitive on the UK market. Moreover, for Portugal, the first half of the 1800s was one of revolution, counter-revolution and civil war. From 1828, when D. Miguel was acclaimed king, a repression had been unleashed that would lead to the civil war of 1832-1834. The Liberal opposition, based in the Azores, organized an offensive which culminated in the return of D. Pedro to fight for the rights to the throne of Dona Maria II, his daughter. In July 1832, the Liberal Lt.-Colonel Schwalbach entered Oporto with his troops, closely followed by D. Pedro. The supporters of D. Miguel then besieged Oporto, occupying the other side of the river at Vila Nova de Gaia, where most of the port wine was stored. (The following portraits are by Forrester).

Their offices being in Oporto, the wine companies were effectively cut off from their stocks on the opposite bank of the Douro. In early 1833, Forrester was sent by his company to Gaia, which was controlled by D. Miguel’s supporters, to ensure that the stores were protected, with the main concern being pilferage by the troops. Apparently, the young Forrester acquitted himself well and a report was sent back to the London Head Office by his uncle saying that he was already fully competent to play a management role in the company.⁵ His correspondence with his uncle provides fascinating insights into the situation in Gaia. The wine traders were concerned about losing their stock, particularly the Portuguese who, fearing that their warehouses would be burned, tried to protect them by flying the Union Flag. Forrester reported that his life had twice been in danger.⁷

The urge to discover the Douro

Unlike many of the shippers of the time, he quickly became fluent in Portuguese and became known as ‘The Portuguese foreigner’ – someone who mixed freely with all, British or Portuguese, rich or poor. Generally, the English shippers only headed upstream from Porto or Gaia when it was time to buy the wine. While they no doubt appreciated the beauty of the river, all but the most intrepid avoided travelling due to the considerable deprivations in the region, such as the ongoing political situation, poor accommodation, dangerous boat trips, difficulties in travelling by horse on poor roads, and bandits. They normally relied on their agents or brokers for reports on the quality of the vintage and the wines from the individual vineyards.⁸

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⁶ Bennett, 2004, op cit
⁷ Cluny, Isabel. Joseph James Forrester, uma história do Douro. Published in Barão de Forrester. Razão e Sentimento, uma história do Douro (1831-1861), Régua, Museu do Douro, 2008 (pp. 11-42). https://www.academia.edu/4975032/Joseph_James_Forrester_uma_hist%C3%B3ria_do_Douro
However, from 1834 onwards, Forrester travelled up and down the river almost constantly. He would often stay at the Quinta da Boa Vista, owned at the time by the Barão de Viamonte, but now owned by Offley.

![Photo of Quinta de Boa Vista by Forrester](image1)

![Quinta de Roriz by Forrester](image2)

Although he was brought to Portugal to sell port, it is clear that he had more interest in the production of the wines than in their marketing.\(^9\) By 1840 other merchants followed his example, such as John Wright and John Fladgate, and soon English exporters were commonly found riding from quinta to quinta to ensure that the wine was being made properly. The coming of the railway in 1879 further incentivised travel.\(^11\)

![View of the Douro](image3)

In 1835, Forrester took on more of a managerial role in the company following the death of one of its employees, António Bernardo Ferreira. This brought him into close contact with the Ferreira family, particularly D. Antónia Ferreira. Known affectionately as Ferreirinha da Régua, she became the largest landowner of the Douro region. Forrester became her financial advisor, in particular to help her deal with the consequences of having two spendthrift husbands.

\(^9\) Sellers, 1899, Chapter VIII


\(^11\) Bennett, undated, *op cit*
Marriage and family

In 1836 Forrester married Eliza Cramp in Hull. She was the daughter of Yorkshire’s Head of Customs. His new brother-in-law, Francis Cramp, became a partner of Offley, Forrester, Webber and Cramp in 1846. Unfortunately Eliza died of typhoid during the Oporto epidemic of 1847, together with their new-born daughter. They had six other children, who Forrester then sent to school in England. He appears to have increased his visits to England as a consequence, joining several clubs there. The four sons eventually joined him in the wine business, two in the Oporto office and two in London.

A painter

Forrester’s artistic skills began with painting. He had been an active painter before arriving in Oporto, having, among other places, painted the new Junction Dock at Hull, which had opened two years before he left the city. His work in Portugal included a detailed watercolour of the Rua Nova dos Ingleses, which was the favoured location for the offices of the British port companies as it was close to the river crossing to Gaia. The British Factory House was on the same street. Forrester’s painting identified 34 British and 9 Portuguese traders, including himself. Sadly, the original no longer survives, as it was lost when Offley’s offices in London were bombed during WW2; fortunately, a number of lithographs were made.

Painting by Forrester of the Rua Nova dos Ingleses

12 Bennett, 2004, op cit
14 Since 1883, it has been the Rua do Infante D. Henrique. See Oporto: Rua Nova dos Ingleses, http://www.grimpilsretrogress.com/p/blog-page_4983.html
15 ibid
Considering the achievements of Forrester in his lifetime, it is amazing that he had any time for painting. He produced many portraits of rich and poor residents of Oporto and important visitors to the city. These included King Carlo Alberto of Sardinia, who later died in Oporto; D. Miguel, who signed his portrait in London, where he was in exile; the Duke of Saldanha, who had been Governor of Oporto and had fought with D. Pedro against Miguel; José da Silva Passos, a Liberal politician and well-known parliamentary orator; the Viscount of Guiães, of Lamego, who was nicknamed Calças, or trousers, as he was the first Douro man to stop wearing breeches; Edward Rumsey, the British Factory chaplain; Lt.-Colonel John Schwalbach, who fought on the Liberal side during the Siege of Oporto and sat for Forrester’s first portrait; Sá da Bandeira, five times Prime Minister and a leading opponent of slavery, and the Bishop of Oporto. Evidently Forrester did not rank in the top echelon of portrait artists; nevertheless, his paintings provide a fascinating record of the times and show how well-connected he was.\textsuperscript{16}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{images.png}
\caption{Sá da Bandeira, The Duke of Saldanha, D. Miguel, 1851 (signed), E. Rumsey, Chaplain\textsuperscript{17}}
\end{figure}

His watercolours are also impressive, mainly consisting of paintings of Oporto and landscapes of the Douro. The two depicted below are of great historical interest as they are eye-witness accounts of strategic points of Oporto that were damaged during the Civil War.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{landscape_images.png}
\caption{The Serra Convent after the siege of 1832-1833, The Serra Convent, looking down river in 1834}
\end{figure}

\textsuperscript{16} Sellers, 1899, \textit{op. cit.}

\textsuperscript{17} \textit{ibid}
Mapping the Douro

Despite the brief peace that came with the ending of the Civil War in 1834, Portugal soon experienced further turbulence, with the Septembrist movement being followed by the coup of Costa Cabral in 1842. The Patuleia revolution of 1846-47 provided particular difficulties for Forrester when he wanted to travel outside of the Oporto and Gaia area, as he constantly encountered road blocks and minor skirmishes. The Patuleia also witnessed another example of the ability of Forrester to mix with both sides of the Portuguese political divide. On one occasion, he is said to have entertained the opposing Generals at his house in Oporto on the same day, but in separate rooms.

While Forrester’s willingness to rough it while travelling around the Douro region, at least during his early years in Portugal, has been noted, he certainly did not eschew comfort. This is clearly illustrated by his boat, a luxurious barco rabelo, or shallow-keeled river boat, of the type which usually transported wine barrels up and down the river. The ability to turn a rabelo into a luxury means of transport still surprises. According to a contemporary, Forrester’s boat was furnished with a table, dining tables, chairs, kitchen, beds, and good storage. He used this rabelo during his mapping trips and would often offer dinners on it, served by a uniformed crew.

At a scale of 1:57,000, Forrester’s first map, The Wine District of the Alto Douro, was printed in around 1845. As can be seen from the illustration on the following page, this was a detailed topographical map and must have required considerable work. Forrester was assisted by several friends who were interested in his work, including Hugh Owen, a long-time resident of Oporto (not to be confused with the photography pioneer from Bristol who visited Portugal a decade later), Diogo Köpke, a mathematician, and Augusto Roquemont, who was an artist. Copies of the map were printed in London, as Forrester was not convinced of the capabilities of Portuguese printers. The first edition was dedicated to Queen Maria II and the map was reproduced in both English and Portuguese. Various versions were produced, although the changes made related to the additional information provided rather than to the map itself. How Forrester obtained the expertise to prepare such a topographical map is unclear. The work required was considerable and would normally have involved an entire team. Much of his knowledge probably came from his friend and companion on the mapping journey, Diogo Köpke, from the family that ran Köpke & Co., the oldest port wine exporter, that dated back to 1638, who was a professor of Mathematics in Oporto. Köpke died in 1844: perhaps if he had lived longer more credit would have been given to his contribution than Forrester’s note that he had had his work checked by a mathematics professor. Writing about the second map he produced, Forrester said: “I threw a chain of triangles over the country from the wine districts to the frontiers of Spain, the angles being repeated by the theodolite that I worked alone, often risking my life to obtain an observation or angle.” This second, larger, map was published in 1848. It covers the course of the river from the Spanish border to the mouth of the river at Sao João da Foz and was named The Portuguese Douro and the adjacent country and so much of the river as can be made navigable in

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18 ibid
20 ibid
Spain. It was published as three separate sheets due to its size, each measuring 68cm x 100cm. Several versions were produced, with the inclusion of additional information in the legend and insets.\(^{21}\)

Forrester’s first map, *The Wine District of the Alto Douro*

*The Portuguese Douro and the adjacent country and so much of the river as can be made navigable in Spain*

The new map was universally commended. Resolutions were voted by the Municipal Chamber of Oporto, the Agricultural Society of the Douro, and others and it was officially adopted as a national work by the Portuguese government. A more tangible appreciation as far as Forrester was concerned was that, after the Minister for Agriculture intervened, he was exempted from all taxation.\(^{22}\) The utility of his maps led to Forrester being rewarded with the first baronetcy to be granted to a foreigner, when he was made the Barão de Forrester in 1855.\(^{23}\) Other, smaller, maps showing the geology and the various quintas were to follow. The contribution of Forrester was not just that he produced such comprehensive maps but that there was an almost complete lack of knowledge of the topography of the area among people in Oporto, which was a fact that was bemoaned by both sides during the Peninsular War.\(^{24}\) The importance of these and other maps

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\(^{21}\) ibid

\(^{22}\) Cluny, *op cit*

\(^{23}\) Clerke, Ellen Mary. *Forrester, Joseph James*. Dictionary of National Biography, 1885-1900, Volume 20  
https://en.wikisource.org/wiki/Forrester,_Joseph_James_(DNB00)

\(^{24}\) Bennett, undated, *op cit*
was also recognised internationally, namely by the House of Commons and the international jury of the Universal Exhibition of Paris in 1855, which awarded three “honourable mentions” to Forrester for his maps.

The Douro of today is unrecognisable from that of the mid-1850s. At that time, the river was certainly not navigable by the ships that take tourists on enjoyable holidays these days, for it was full of shallows, rocks, rapids and weirs, which eventually took Forrester’s life. A trip along the Douro was far from plain sailing. Forrester’s travels on the Douro convinced him that improvements to the river’s navigation could not only benefit the port industry, but also the whole economy of the region. This was particularly the case because there was only a limited possibility of using roads as an alternative, as they were in poor condition for the most part.

These problems began to be resolved with the introduction of the railway a decade after Forrester’s death. Construction began in 1873 and the quintas quickly began to make use of the line, with at least one building its own siding. There had been plans to improve the river’s navigability during Forrester’s time, however a lack of resources prevented their implementation. It was not until the 1950s that significant efforts were made to address the problems identified by Forrester, but it appears that this was mainly done to resolve the serious flooding from which the river suffered, with improved navigation and the growth of tourism being side benefits.

**Adulteration and other shady practices**

Early port producers and shippers were constantly experimenting with ways of improving the product. However, by 1727 experimentation had become mixed with adulteration. The use of baga (short for baga de sabagueiro, the English elderberry), became widespread. Originally introduced to enhance the colour of the wine, it was also added to improve the flavour of port produced with poor-quality aguardente.25 Nefarious practices employed by some included the use of weak and colourless wines from outside the Douro region and even Spanish wines, and fortification with spirits not derived from Douro grapes. The shippers also complained about the fermentation techniques used by the growers. As the decline in quality came to be recognised in England, demand for port collapsed.26 Unlike nowadays, when unfortified wines from the Douro are growing in stature, growers in those days had no alternative market.

As with so many other issues of the time, in stepped the Marquês de Pombal. In 1756, he established the Real Companhia das Vinhas do Alto Douro, which was given the power to control production practices, demarcate production areas, register vineyards, fix prices and raise taxes. The Real Companhia functioned rather like a growers’ cooperative, with the British Factory shippers being excluded, as the Marquês de Pombal considered that they were extracting too much profit from the marketing chain. The new body caused considerable protest, both from the British and also from tavern owners in the Oporto area, as the company had the power to decide which taverns could sell port. To try to stamp out adulteration, Pombal also decreed that all elderberry bushes should be uprooted and that vines immediately outside the areas demarcated for port should be destroyed. While clearly attempting to strengthen the port industry, Pombal did not fail to ensure that he also benefitted personally. One of the demarcated areas for port production was his own estate, at Carcavelos near Lisbon27,28.

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25 A clear spirit distilled from grapes, often erroneously referred to as ‘brandy’
27 *ibid*
28 The vineyard continues to produce fortified wines.
Perhaps inevitably, the Real Companhia rapidly became corrupt. Many of the most impressive quintas of the Douro were built by board members or officials with their ill-gotten gains. The importance and effectiveness of the body diminished after Pombal was sacked by Maria I in 1777. By 1831, when Forrester arrived in Oporto, the industry was apparently returning to some of its bad old ways, with the renewed use of elderberry (if it had ever stopped) and *jeropiga*, as well as of Spanish wines. The Real Companhia was in considerable difficulties due to the “fees” imposed by both sides of the civil war and also because of a fire at its warehouse in 1833 that destroyed some very valuable wine. Between 1834 and 1838 it functioned as a simple company, regaining some of its regulatory functions in 1838, but soon losing these again in 1852, when it returned to being an ordinary wine company. The port industry as a whole continued to face difficulties after 1852, which had been caused by the removal of preferential access by the British in 1831 and the failure of the Costa Cabral government to negotiate more-favourable trading arrangements.

**Forrester’s criticisms**

While he was convinced that good port wine was the best in the world, Forrester had many criticisms of its production practices and of the control exercised by the Real Companhia. He called a meeting on 18 October 1844 at his home in Régua, attended by at least 18 people representing organisations connected with the wine trade. Giving the final speech, he talked about the “apathy” affecting the trade, despite the large quantity of unsold stocks in Gaia, which were caused in part by the illegal purchase and sale to England of wines that were not from the demarcated port area. He also stressed the issue of adulteration, arguing that the practice was so extensive that adulterated wines were what the British “lower classes” now believed represented the true port wine. The answer to the problem seemed obvious to Forrester. It was imperative to return to the old production processes that he practised, which he had learned from local winegrowers when he first arrived in Portugal.

His pamphlet of 1844 echoed these sentiments. Entitled *A Word or Two on Port Wine*, it was published in Oporto and London (for one shilling) and rapidly went through eight editions. In it, he drew attention to the lack of controls on wine purchased from the grower and the practice of harvesting grapes when they were unripe. He argued that the *aguardente* used in port was made from poor-quality grapes, but the government was reluctant to do anything about this for fear of upsetting its main suppliers, who came from Extremadura. Forrester also argued against the draconian levels of export tax imposed by the Real Companhia, as well as the creation of an artificial scarcity in Britain through limits on both the quantity and quality allowed to be exported. He severely criticised the expertise of the Real Companhia tasters, who decided what could and could not be marketed, and who accepted bribes.

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29 According to Forrester, this was made up of 56lbs of dried elderberry, 60lbs of coarse brown sugar or treacle, 78 gallons of unfermented grape juice and 39 gallons of the strongest “brandy.”


<https://www.academia.edu/1204649/_Forrester_o_pai%25C3%25A9s_vinhateiro_e_o_retorno_ao_velho_m%C3%A9todo_de_fazer_vinho_do_Porto>

31 Cluny, *op cit*

32 *ibid*

33 Mayson, *op cit*

34 Cluny, *op cit*
Although the pamphlet was initially published anonymously, Forrester was easily identified as the author and he was bitterly attacked, particularly by the other shippers. On 23 January 1845, he nearly had a duel with John Wright on the issue. The police prevented it from taking place. A written response soon appeared, entitled *A Word of Truth about Port Wine addressed to the British Public*, making it clear that Forrester had been *persona non grata* amongst many English exporters long before this pamphlet was published. The pamphlet accused him of having no intention to defend the purity of wines. The anonymous author claimed that Forrester’s words were moved by an attempt to insult “the most respectable and oldest Port Wine dealers, from whose private homes he has been excluded for many years because his conduct is unworthy of the honourable name of dealer”. Regarding his allegations of adulteration, the pamphlet states that other dealers can only say “Doctor, heal thyself”. The *Associação Comercial do Porto* added to the criticisms by noting the “vague and unfounded assertions spread by Mr. Joseph James Forrester”. Others accused him of contributing to the poor reputation of port wines, effectively blaming him for the drop in demand.35

These critical views appear unlikely to have been universally shared. The Treasurer of the British Factory, Robert Woodhouse, became the godfather of the Forresters’ son in 1845, and their daughter who was born later was named after Woodhouse’s wife. Some of the Portuguese considered that their interests had been damaged. Although he was attacked by some for allegedly attempting to discredit Portuguese wines, others defended him as someone whose main intention was to benefit Portugal by advocating the production of unadulterated wines, which he himself practised.37 Many growers supported him, and he received addresses of thanks from 102 parishes of the Upper Douro. Others agreed with him, while pointing out that he put too much blame on the winegrowers and insufficient blame on the shippers themselves. Forrester initiated a campaign in his defence in the *Periódico dos Pobres do Porto*, writing several letters in support of his views. He also inserted some advertisements in the same journal, announcing the sale of his company’s wines and stressing their purity.38

While there is little doubt that many of his complaints were justified, Forrester went much further by arguing that the main cause of adulteration was to meet a misguided notion of what suited the English taste, i.e., “black, strong and sweet”, whereas he believed that that taste was rapidly changing to lighter, more fruity wines. He considered that most port should be unfortified and not the fortified wine “black, strong and sweet”, whereas he believed that that taste was rapidly changing to lighter, more fruity wines. He considered that most port should be unfortified and not the fortified wine which had become popular in Britain and that exporters should be entitled to export whatever type of wine they liked. Producers should make pure wines that were “well fermented and according to the taste of refined English wine connoisseurs”. His opinion was that producers in Bordeaux and Spain were adapting their wines to meet consumer demand and were increasingly able to obtain better prices for wines with less than half of the alcohol content of port. Going further with his advice to winegrowers, he urged them to cease grafting traditional varieties with introduced varieties that provided colour, but no taste, and gave them strict instructions on when and how to harvest and how to produce the wine.39 Although freedom to trade in wines of any type was clearly a suggestion that could at the time have jeopardised the incomes of the growers, shippers and their employees alike, who knows what the situation would be today had he managed to get his way. Perhaps unfortified Douro table wine would now be rivalling the *Premiers Crus* of Bordeaux?

**Setting up on his own**

In the United Kingdom Forrester was a member of the Whig Party and became a member of the Reform Club in London.40 Perhaps influenced by Whig ideas, he introduced various practices designed to improve the condition of his workers, including making their work less arduous and subsidising their meals.36

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35 *ibid*
36 The Treasurer was the most important position in the Factory. Forrester never joined the Factory (or British Association) and there is no record as to whether he was ever proposed for membership
37 Castanheira, *op cit*
38 Cluny, *op cit*
39 Andrade Martins, 2008. *op cit*
40 Sellers, *op cit*
Labourers were also given time off to attend school. Cluny makes a convincing argument that Forrester was a freemason: he studied masonic symbols in Portuguese medieval buildings and signed his anonymous entry for the Oliveira Prize (see below) as Le Chevalier Rose-Croix, which is a masonic rank.41

After parting amicably from Offley, Forrester and Cramp in 1851, Forrester traded port and unfortified wines as the firm of Joseph James Forrester & Sons, with his four sons, and continued to grow his own vines, being one of the few British exporters who was also a grower. Apart from 1853, when he exported around 1,500 “pipes”42, he was never a major exporter and shipped around one-fifth of the quantity exported by his former company in most years43. One of his wines won a Silver Medal (First Class) at the 1855 Paris Exhibition, which led Forrester to point out that this prize-winning port would be considered as little more than rubbish in Oporto. His company also produced olive oil, brewed beer and distilled gin. He designed an improved olive oil press and in 1844 published an Essay on the Most Approved Mode of Making Olive-Oil.44 His diversification into beer and spirit production was possibly in response to the outbreak of powdery mildew (oidium) in the Douro region, which devastated the grape harvest, as discussed below.45

A free-trade supporter

Over the years, Oporto’s free-trade orientation found itself in conflict with the protectionism of Lisbon. In 1852 Forrester appeared in the House of Commons to answer questions about the wine trade. He argued for a significant reduction of British import duties (from six shillings a gallon to one shilling a gallon), arguing that British manufacturers did not have to pay import duties in Portugal. He also argued for the removal of obstacles to free production and export by Portugal, including the ban on the export of naturally fermented wines made without the addition of aguardente spirit and the ban on the export of wines made from grapes grown outside the demarcated areas. To a certain extent he appears to have been arguing that Portugal should receive favourable treatment from the British because of the failure of Portuguese policies.

In 1853 Benjamin de Oliveira, the son of a London businessman of Portuguese origin, the Member of Parliament for Pontefract and an ardent free trader,46 announced that he was awarding a prize of 50 guineas, or a Gold Medal, for the best essay to “promote commercial and agricultural enterprise in connection with the design of the 1851 Great Exhibition with reference to Portugal – a country abounding in riches so little known – to direct the attention of enterprising individuals to that country, and thus invite the Government to open negotiations for a treaty based upon the principles of Free Trade”. There were four entrants and Forrester won the prize. His paper started with a brief description of Portugal and its people and then considered

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41 Cluny, op cit. p26
42 The ”pipe” seemed to be of a variable size but generally contained about 550 litres
44 Sellers, op cit
45 Bennett, undated, op cit
46 Delaforce, op cit
the condition of the country in the context of the objectives of the Great Exhibition. Chapters on Portuguese manufactures and on the capacity of Portugal to absorb products exported from Britain followed. The paper then went on to make some critical comments on Portuguese policy and to describe the infrastructure problems facing the country. Next Forrester addressed the question of duties on wine before describing Portuguese agriculture. A brief digression on the potential offered by railways was followed by his ideas on free trade. As an afterthought, he provided a few pages on fisheries, before drawing his 150-page paper to a conclusion. He also attached 30 pages of statistics. Forrester was quick to publish the winning essay together with four pages of positive reviews from the press. Subject to several editions, the paper is still considered a standard work.

**Powdery mildew**

Forrester returned to writing in 1854, penning a series of letters to the newly established *O Comercio* of Oporto describing a 37-day trip to the Douro. He set off in July, 1854, travelling with an Offley employee, António de Oliveira Dias. He took his camera with the intention of preparing daguerreotypes of the points in the river that were most problematic for navigation. The camera would also allow him to respond to his detractors who alleged his reports of the river were exaggerated and inaccurate. However, the main purpose of this journey seems to have been to monitor the impact of powdery mildew, owing to the contradictory information reaching Oporto about its effect. His trip also enabled him to prepare a paper, which he called an *Illustrated paper of the vine disease in the districts of the Alto Douro*. This consisted of 19 coloured illustrations of the disease on the vine, accompanied by his views on the matter. He went on to produce another study in 1861, demonstrating the effect of the disease on the leaves and the grapes.

Together with Félix Manuel Borges Pinto de Carvalho, Forrester was a pioneer in the use of sulphur to treat vines against powdery mildew. He was actively involved in promoting this treatment in the Douro region and in advising how it should be done. In 1857 he decided to make an offer: he wrote to the owners of vineyards in *Covas do Douro*, proposing to treat their vines that were suffering from powdery mildew at his own expense, using a variety of remedies including sulphur. In return, he was to receive half of the difference between the vineyard’s output in 1856 and in 1857 and would be responsible for paying the proportional costs of harvesting his share of the wine, with an option to purchase the remaining production of these owners at the current local prices. Forrester’s offer was not widely accepted, as sulphur was already being used in that area. However, he received numerous requests both from vineyards outside the Douro demarcation area and also from growers in Minho and Estremadura.

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47 Forrester had hoped to exhibit at the Great Exhibition, however his numerous exhibits of wine, olive oil, etc. were sent to the organising committee for Portugal’s participation, based in Lisbon, and, unlike other contributions, they somehow got mislaid. He made great efforts to ensure that the same did not happen for the Paris Exhibition in 1855, to which he submitted over 400 items, including models of wine and olive oil presses with some improvements that he himself had made. However, once again, the Portuguese organisers appear to have treated him badly and his photographs were not included in the Portuguese display.


49 ibid

50 Sellers, 1899. *op cit*

51 Copies of the drawings can be purchased from the Royal Society. https://prints.royalsociety.org/products/grape-vines-rs-12840

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As it was impossible for him to have used the grapes from such far-flung vineyards, he contented himself with providing detailed advice on the necessary farming practices.\textsuperscript{52}

Awards and honours

In 1855 he published the Second Original Survey of the Bed and Margins of the River Douro, showing the Rapids and the Geological Formation of each Locality, which was also displayed at the Paris Exhibition. As Sellers points out\textsuperscript{53}, Forrester’s maps, charts, reports and drawings were done on his own initiative and at his own expense. The reward was to come in the shape of a Portuguese Baronetcy and numerous other awards from many countries.\textsuperscript{54} He was elected a Member of the Royal Academy of Sciences of Turin, a Member of the Royal Academies of Lisbon and Oporto and of the Royal Geographical Societies of London, Paris, and Berlin. He received awards from Russia, Austria, Spain and France, and also from Pope Pius IX. King Carlo Alberto of Sardinia and his son, Victor Emmanuel II, the unifier of Italy, gave him awards. On learning that Forrester’s Cross of the Knight of the Order of S.S. Maurice and Lazarus had not yet arrived, King Carlo Alberto pinned his own on Forrester, apologising that it was slightly worn.\textsuperscript{55}

In addition to those mentioned above, Forrester prepared other papers or essays, which were published in both English and Portuguese and included Wine Trade in Portugal in 1845; Essay Showing the Prejudicial Effects of Monopoly on the Interests of Portugal, published in 1849 and clearly inspired by the role of the Real Companhia, and one called a Statistical Account of the Rise and Progress of the Port Wine Trade.\textsuperscript{56}

Photography

Forrester had a new house built in Gaia between 1854 and 1860, which contained a library and art and photographic studios. This enabled him to dedicate time to his new hobby. His first contact with photography probably took place when fellow-Scotsman David Octavius Hill took six photographs of him sometime between 1844 and 1846. He was friends with Hugh Owen, a pioneer of photography who visited Oporto in the 1850s, and then received lessons from Hugh Welch Diamond in London, another pioneer. Forrester quickly received recognition and was accepted into the social circles of the leading amateurs. He became a member of the Photographic Society in the UK, being elected on 6 July 1854, just 18 months after its establishment. He also joined the Society’s dining club, which was limited to just 20 members.\textsuperscript{57} It is likely that he provided technical training in calotype photography to Frederick William Flower, who also worked in the wine trade in Oporto and whose story was featured in the Society’s Annual Report of 1994.\textsuperscript{58} Many of Forrester’s photographs survive and a good collection of his portraits of Portuguese people is held by National Galleries of Scotland,\textsuperscript{59} while his photographs of views of the River Douro are held by several other collections. However, Figueiredo concludes that many of his photographs have been lost, having identified a document that refers to “220 views” by Forrester.\textsuperscript{60}

\textsuperscript{52} Andrade Martins, 2008, \textit{op cit}
\textsuperscript{53} Sellers, \textit{op cit}
\textsuperscript{54} Sellers, \textit{op cit}
\textsuperscript{55} Sellers, \textit{op cit}
\textsuperscript{56} For a full list, see \url{http://onlinebooks.library.upenn.edu/webbin/book/lookupname?key=Forrester,+Joseph+James,+1809-1861}
\textsuperscript{57} Figueiredo, Filipe. 2008. \textit{Forrester - An amateur photographer in Portugal.}
\url{https://www.academia.edu/12658502/FIGUEIREDO_Filipe_2008_Forrester_An_amateur_photographer_in_Portugal_in_Isabel_CLUNY_ed_Baron_Forrester_Sense_and_Sensibility_A_story_of_the_Douro_1831_1861_Peso_da_R%C3%A9gua_Museu_do_Douro_120_133}
\textsuperscript{58} Flower, Jane, 1994. \textit{Frederick William Flower.}
\url{https://www.bhsportugal.org/library/articles/frederick-william-flower}
\textsuperscript{59} \url{https://www.nationalgalleries.org/search?search=Joseph%20James%20Forrester}
\textsuperscript{60} Figueiredo, \textit{op cit}
Death

On 12 May, 1861, after a visit to Quinta do Vesúvio, which was owned by the Ferreira family, Forrester was heading downriver together with D. Antónia Adelaide Ferreira, her second husband, and her daughter and son-in-law, the Count and Countess of Azambuja, together with several others – 16 in all. It appears that he was not in his own rabelo, which was undergoing repairs, and that the boat they were using was perhaps smaller than desirable.\textsuperscript{61} Tragically, the vessel was wrecked at the Cachão da Valeira falls, with Forrester being one of three to perish, allegedly because he was weighed down by gold sovereigns which he used to pay his employees. His body was never found. Apart from the cook, Gertrudes, all the women survived. Legend has it that this was due to the flotation afforded by their large crinolines.\textsuperscript{62}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{cachao-da-valeira-falls.jpg}
\caption{Two photos taken by Forrester near Cachão da Valeira}
\end{figure}

\textsuperscript{61} Delaforce, \textit{op cit}
\textsuperscript{62} Mayson, \textit{op cit}
Despite having been a controversial character, Forrester was much mourned. The Gentleman’s Magazine recorded that his passing had caused great national distress in Portugal, noting that all vessels in port in Lisbon and Oporto flew their flags at half-mast on receiving the news. Many Portuguese newspapers paid tribute. In a eulogy, António Martins Leorne noted that despite the controversies, envy and jealousy that had surrounded Forrester over the years, the voices that were heard on his death were not those of his detractors, but rather of his admirers – who attested to how esteemed he was in Portugal.63

A print of a rabelo at Cachão da Valeira, where Forrester drowned in 1861

63 Castanheira, op cit