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Title: Bringing a herbarium to life at Plymouth City Museum and Art Gallery

Author(s): Jessica Shepherd

Source: Shepherd, J. (2009). Bringing a herbarium to life at Plymouth City Museum and Art Gallery. *NatSCA News, Issue 17*, 43 - 51.

URL: <http://www.natsca.org/article/146>

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## **Bringing a herbarium to life at Plymouth City Museum and Art Gallery**

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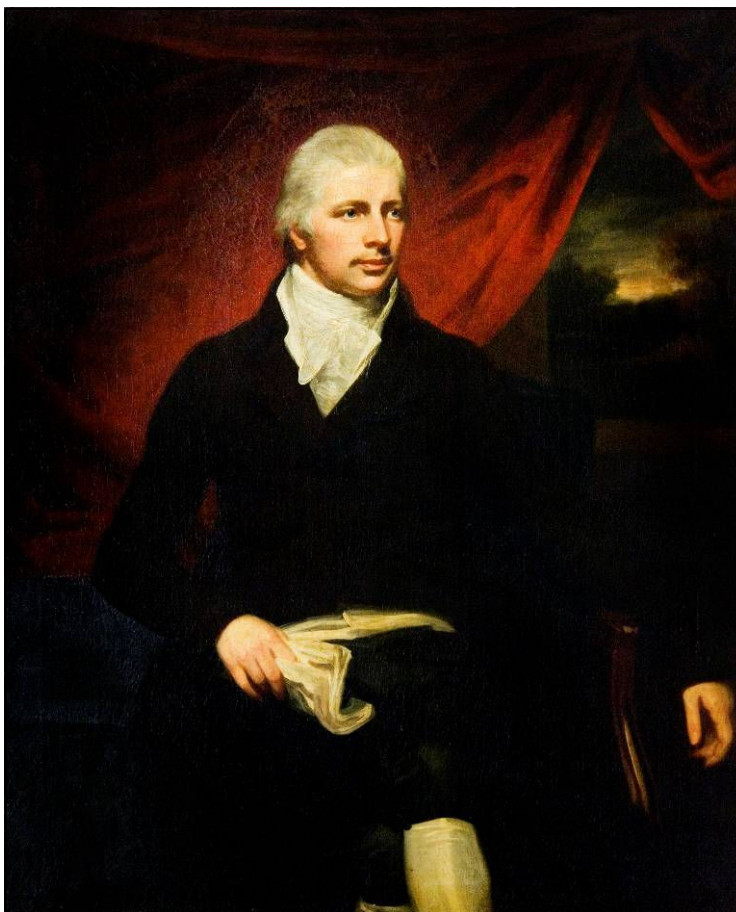
### **Abstract**

Sir John St. Aubyn (1758-1839) was a collector and facilitator to science and the arts. His particular interest was for mineralogy, but he also had interests in botany, which led him to create a sizeable herbarium containing many interesting plants. Most of these have been collected in the field, but there are also specimens from early plant nurseries and important gardens in Europe. The notes on the herbarium sheets are also exceptionally detailed. Adjacent to many species, the medicinal properties and domestic uses have been described.

Before his death, Sir John donated a folio containing his herbarium to the Civil Military Library at Devonport, which later moved to Plymouth City Museum in 1924, where it was hidden away. In 2007, Plymouth City Museum and Art Gallery secured a grant from the Esmée Fairbairn Foundation, enabling the museum's natural history department to conduct a variety of work on this historic collection. In the following article, I will recount my journey through time as I removed centuries of dust to reveal a collection of scientific and cultural importance.

### **Introduction**

Sir John St Aubyn, 5th Baronet (Fig 1.), was born at Golden Square, London on 17 May 1758. Sir John was captivated by science and the arts and was a keen collector. Sir John's father (the 4th Baronet) was brought up by a Dr. William Borlase (1695 to 1772), a passionate mineral collector and Natural scientist (Hartley, 1977). The influence of his father's learned interest is likely to have also assisted in creating Sir John's fascination with minerals and the natural world. St Aubyn succeeded to the baronetcy at the age of fourteen and was a clever and distinguished man. He served as High Sheriff of Cornwall (at the age of 23), and went on to become a Fellow of the Royal Society, Fellow of the Linnean Society, member of Parliament, Fellow of the Society of Antiquarians, Fellow of the Geological Society of London, Fellow of the Society of Arts and Provincial Grandmaster of the Freemasons. The St. Aubyn's were also well-known gardeners in their time, and on the 5<sup>th</sup> baronet's Royal Society election certificate, his interest in botany is mentioned.



**Fig. 1.** Sir John St. Aubyn (1758—1839), by John Opie. (Copyright St Michael's Mount.)

Sir John was also interested in the arts and collected a huge number of engravings and etchings which were sold at Phillips's Auction Rooms in April 1840. The collection was so vast that the sale is said to have lasted for seventeen days. Sir John was also an early and constant patron and friend of the painter John Opie, and was a pallbearer at the artist's funeral in April 1807 (Hartley, 1977). The remaining few pieces of Sir John St. Aubyn's art collection can now be seen at St. Michael's Mount, Marazion and at Pencarrow House, Bodmin. Pencarrow is the home of the Molesworth-St. Aubyn family, which took its name when Sir John's sister, Catherine, married John Molesworth in 1790.

The St. Aubyn family had two estates in Cornwall – Clowance and St. Michael's Mount (Fig. 2), which Sir John inherited from his father in 1772. However, it appears that Sir John St. Aubyn found life in this part of the country rather uninspiring for his tastes in fine art and literature, and so he spent more of his time in London, or on estates closer to the city. Towards the end of his life, his family spent a brief time at Shortgrove Hall near Saffron Walden. The family did not seem to stay there for long, with Sir John auctioning his furniture and livestock in 1835 (Paul & Nash, 1835). Sadly, Shortgrove Hall is no longer standing, but the estate is still intact, along with its avenue of lime trees which line the driveway. There is also a small collection of minerals that Sir John donated to Saffron Walden Museum in August 1834.



**Fig. 2.** Clowance House near Camborne, Cornwall. Sir John St. Aubyn's family seat.

Sir John St. Aubyn is said to have spent a lot of time with a number of young ladies in his early years, but the first lady to live with Sir John at Clowance was Martha Nicholls (Hartley, 1977; Courtney, 2004). Her father, John Nicholls, came from an old Cornish family and was a well known landscape gardener. He was responsible for the grounds at Clowance, which are still very beautiful today. Astonishingly, Sir John St. Aubyn never married Martha, even though she had five of his children. Instead, he married the other lady in his life - Juliana Vinicombe (Fig. 3). Sir John met her when she was very young and sent her to be educated at Cheltenham. He eventually married Juliana, a blacksmith's daughter, in 1822 when he was 64 (Hartley, 1977).

On the 10 August 1839 Sir John St Aubyn died at Lime Grove, Putney in Surrey at the age of 81. His body was conveyed through Devonport on 23 August, on its way to Cornwall where it lay in state at St. Austell, Truro and Clowance. On 29 August he was buried, with a great ceremony, in the family vault in Crowan parish church (Hartley, 1977).

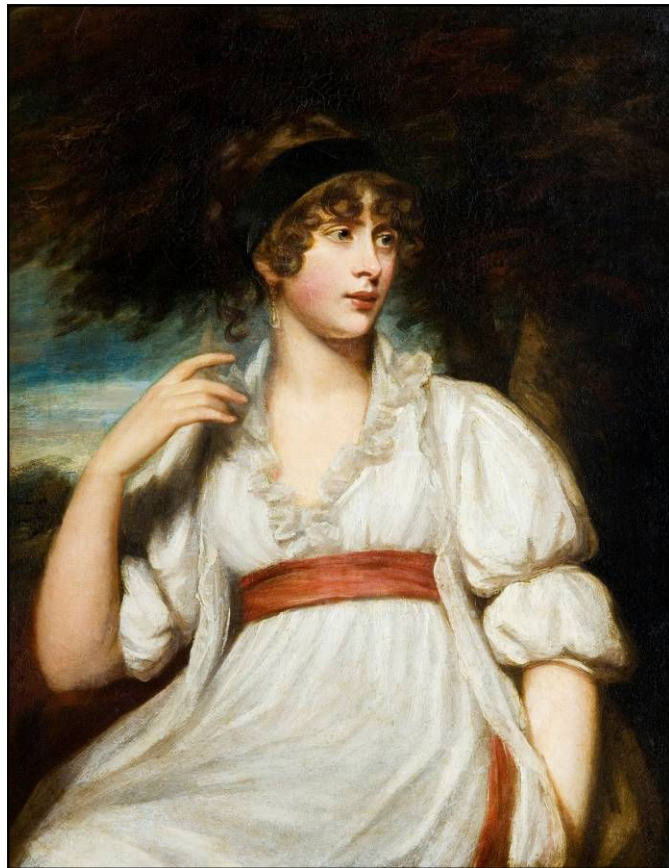
**History of the collection**

When St. Aubyn died, his own estate was deeply in debt, and much of his property had been sold. The mineral dealer Isaiah Deck (1792 to 1853) had been commissioned to help dispose of his extensive mineral collection in 1834. A small collection was formed for Lady St. Aubyn (Fig. 4) and another for Mrs Parnell (his daughter). Sir John then donated a large proportion of minerals to the Civil Military Library at Devonport (Cooper, 2006). The Devonport collection was later presented to the Mechanics Institute of Devonport in 1876 and subsequently transferred to the Devonport Museum in 1881 (Collins, 1880; Hunt, 1902). Then in 1924, the St. Aubyn mineral collection was relocated to Plymouth City Museum and Art Gallery (Plymouth City Council minutes, 1924a, 1924b, 1924c).

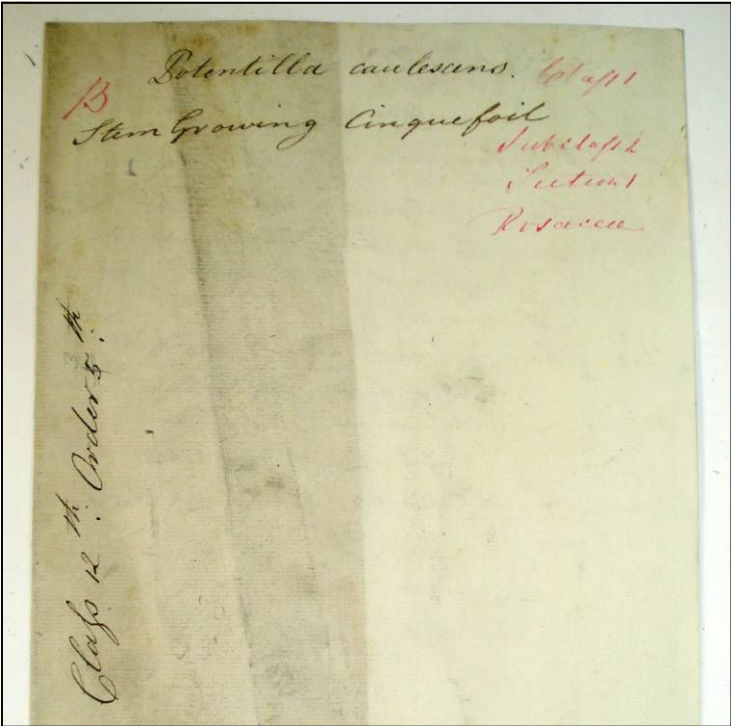
The movements of the mineral collection in Devonport and Plymouth are well documented; however the herbarium is never referred to. With the confusion of the mineral collection coming to the museum as a loan, and then the occurrence of World War II, the documentation starts to become rather woolly after its transfer in 1924. One can only assume therefore, that the herbarium came to us with the minerals, and neither collection was accessioned because it was considered to be a loan. It wasn't until the 1990s when one of our then documentation officers, Simon Hayhow, discovered the true importance of this herbarium (Hayhow pers. comm., 2008). Apparently he was looking at the specimens and made the connection to Sir John St. Aubyn when reading all of the place names. Later, in 1991, the specimens were accessioned.

**Herbarium notes**

I find herbaria to be great places for inspiration – rather like a three-dimensional library. There is always something very exciting about unwrapping and then seeing a ‘mummified’ plant, but when I first saw the St. Aubyn herbarium in December 2007, I couldn't believe how pristine it was. Every plant had been pressed so well that they had kept their vivid colours. All the geraniums were bright pink (Fig. 5), and most of



**Fig. 3.** Juliana Vinicombe (1769-1856) by John Opie (Copyright St Michael's Mount)



**Fig. 4.** *Urtica dioica* specimen from the St Aubyn Herbarium. (Copyright Plymouth City Museum and Art Gallery)

the specimens still were coloured green. The leaves and petals were intact; there was no trace of mould or insect. My first thought was that Sir John must have treated the specimens with some type of poison in order for them to survive in this immaculate condition, but the tests were negative. There was only a trace of arsenic, about the same found in bottled water.

There are 1163 herbarium sheets in total, and they have seaweeds, ferns, bryophytes, lichens, wild flowering plants and early cultivars mounted on them. The cultivars are particularly interesting as they indicate the growing enthusiasm for obtaining new plants and their availability during that time. There are very few duplicates, maybe three species in all. The plants are mostly mounted on gatefold sheets of paper (see Fig. 4), which have the names and taxonomic positioning labelled on the front. Once opened, the specimen is always found on the right side, and on the left either Sir John St. Aubyn or his wife has written notes (some of the specimens have the initials J. V. written in the bottom left corner). This layout is a pretty standard format used for all the specimens. However, a few sheets are in fact single, and on these there are relatively few notes. The specimens on these sheets are usually strapped in the middle, with paper strapping that usually has typeset writing on it. These straps or labels look like they may have been cut out of a book, and usually list the name of the plant, and its habitat (Fig. 6). As of yet, I have not been able to find out where these typed labels have come from, and am still searching. If anyone recognises them, then I would be grateful for any information.

The watermarks on the paper used by Sir John are varied. Several sheets of paper have been cut up so that the watermarks are not visible, other times the specimens block the view. Most of the seaweeds which have been collected by John MacCulloch have been mounted onto a separate piece of paper before they were given to Sir John. These specimens have been attached to the gatefold sheets with the original piece of MacCulloch's paper so the watermarks are not visible. However, on each of MacCulloch's sheets it is possible to see through the paper.



Fig. 5. *Geranium* sp. From the St. Aubyn herbarium. (Copyright Plymouth City Museum and Art Gallery)



**Fig. 6.** *Cherleria sedoides* - one of the many printed straps used on the St. Aubyn herbaria (Copyright, Plymouth City Museum and Art Gallery).

Visible on the reverse are some of MacCulloch’s sketches which are fascinating. However, apart from these specimens, the watermarks can be clearly deciphered:

- ProPatria
- E & P 1797
- W Elgar
- Wwilmott 1794
- GR 97 (Fig. 7)
- BM
- GB 97
- Floyd & Co 1796
- BG
- F Fincher 1796
- Band
- W. Elgar GR
- WM GR 97

Lastly, I feel it is important to talk about the detailed notes that have been written on his herbarium. There are two sets of writing, one in red ink and the other in brown. So far, I have managed to find out that the red writing belongs to John Hutton Balfour (1808-1884). He must have seen the herbarium during 1838, and updated all the taxonomy on the front page with a red pen. He has signed and initialled all the sheets, and has left one of his own herbarium specimens of *Pyrola minor* L. within the main batch. After chatting to the librarians at the Royal Botanic Garden Edinburgh, we think he was visiting one of his sons, who was in the Royal Navy at Devonport.

The brown writing however has become more of a challenge to narrow down, and I cannot say with confidence that the writing is exclusively Sir John’s, as his hand was almost identical to his wife’s – Juliana, whose initials appear on the occasional sheet. However, whoever wrote down these extensive notes did so with a great amount of detail. The most interesting descriptions explain how the plant would have been administered for different ailments, and how it would have been utilized for other purposes (Table 1). There are also detailed notes on flowering/fruiting times and descriptions of where the species was collected from and by whom (Tables 1 & 2). The notes in the herbarium are thought to represent a mixture of John’s and Juliana’s own observations with quotes from already published works.



**Fig. 7.** A sketch showing one of the watermark’s ‘G.B’ on the paper in the herbarium.

<p>Observations and medicinal uses of <i>Salix alba</i> L. (White Willow): 'Horses, Cows, Sheep and Goats eat it. The Bark is of great efficacy in curing intermitting fevers. It must be gathered in summer when full of Sap and dried by a gentle heat. A Dram of it powdered every 4 hours between the fits is the dose.'</p> <p>Culinary uses of <i>Polygonum aviculare</i> L. (Knot Grass): 'The Seeds furnish a nutritious meal; it is made into thin cakes called Crumpits.'</p> <p>Flowering times of <i>Solanum lycopersicum</i> L. (Tomato): 'Flowers in June and August. Imported from South America in 1596.'</p> <p>Common names of <i>Vaccinium oxycoccus</i> L. (Cranberry): 'Cranberry Whortle, Cranberries, Moss berries, Moor berries, Fen berries, Marsh Whorls, Marsh Whortle berries, Corn berries.'                  General characteristics of <i>Narcissus pseudonarcissus</i> L. (Wild Daffodil): 'Petals 6, equal. Nectary funnel formed, 1 leaved, Stamens within the Nectary.'</p>
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**Table 1. (above)** depicting the range of information which can found associated with specimens.

**Table 2.** Other collectors, gardens and nurseries represented in the St. Aubyn collection

<i>Collectors</i>	<i>Gardens</i>	<i>Nurseries</i>
Dr. John Macculloch (1773-1835)	The Botanical Garden of John Simmons Esq., Paddington	Mr. Cree's Nursery Gardens near Chertsey, Surrey
John Stackhouse (1742-1819)		
Sir James Edward Smith (1759-1828)	Woburn Farm, near Chertsey, Surrey	Kennedy and Lee's Vineyard Nursery in Hammersmith
Mr. James Dickson (1738-1822)	Ludovisi Gardens near Rome	
Mr. James Hutton (1726-1797)	Hampton Garden	
Sir Abraham Hume (1748/49-1838)	Saltram Gardens, Devon	
Dr. Bellardi (1741-1826)	Tamerton Castle, Cornwall	
Mr. J. Rogers	Gardens at Pendarves	
Mr. Coryton	Penrose Gardens near Helston, Cornwall	
Mr. J. Symmons	Hot house at Clowance, Cornwall	
Revd. Dr. Wynne		
Mrs. Grylls		

They frequently use this piece of equipment to scan large maps, and with our herbarium sheets being larger than A3, this scanner was ideal for the job.

After all the images were taken, conservation work could commence, and this consisted of dusting with a soft goat hair brush and then rubbing out the ingrained dirt with a Staedtler Mars Plastic rubber no. 52650, and a white akapad where there was writing in pencil. Not all of the sheets needed the second stage. Helen and I were given a choice of treatments to use by our paper conservator Coral Langham, but we decided to use the Mars Plastic Rubber No. 52650, because more research had been carried out on its residues, and the pH of a smoke sponge changes across its surface, and can in fact be very high (pH 7.0-9.5).

In contrast to the conservation work, a lot of time was spent on updating the database. During my first months on the project I decided to transcribe all of Sir John's notes onto an excel spreadsheet and update all of the scientific names. This was a relatively easy task, but unfortunately my knowledge of bryophyte taxonomy was not up to scratch, so I asked Dr. David Long at Royal Botanical Garden Edinburgh to help. David was really impressed by the herbarium, as so few people were collecting moss at this time. After updating all the records, the documentation team got to work on putting all of the notes into the database, using my spreadsheets. After several months of hard graft, the herbarium is now clean and available online: [www.plymouth.gov.uk/staubynherbarium](http://www.plymouth.gov.uk/staubynherbarium), and if anyone is interested in seeing some specimens and reading more about the collection, we will be touring an exhibition across Great Britain, from January 2010.

### **Driving into the Past**

As part of the research on the herbarium, I tried to visit as many of the places mentioned within St. Aubyn's annotations, as well as those that played a role in his life. The most enjoyable and comical of these trips was with Helen in Essex. Initially, it was a trip to Saffron Walden Museum, where we were collecting their St. Aubyn minerals on a loan. However, we thought it would be a great idea to visit some of Sir John's houses while we were in the area. So there we were, following the St. Aubyn trail.

After packing the minerals ready for transporting them back to Plymouth, we decided to find Shortgrove Hall near Saffron Walden and Woolmers House in Hertfordshire. When we arrived at Shortgrove, neither of us was sure if we should enter the estate. The road was sign posted with big black writing: 'PRIVATE PROPERTY', but keen to research every nook and cranny, we continued. As soon as our car past the big entrance, I noticed an avenue of oaks. It was truly beautiful and very well kept. Towards the end of the road before the bend out of the estate we began to find small houses, and this helped us to relax. The estate no longer felt so 'private'. I knew before setting off that the house here was no longer standing, so I was not expecting much. I was indeed correct in this thinking – Sir John's house has been replaced by a replica Georgian style building which must have been built recently. Apart from the avenue of trees, the only other original parts were the two columns marking the entrance to the drive of the house, which were quite small with spheres on the top.

After seeing Shortgrove, Helen drove on to Woolmers. I have to admit, I was much more apprehensive about this house, as I was not sure if it was still standing or not. After a much map-reading on my part we found the Woolmers estate which had become a polo ground, and in the distance we could see a large white house. It was too far away to photograph properly so Helen and I turned into their driveway. Unfortunately, it was a fortress of gates and pointed railings, and everything was locked. There was an intercom, but neither of us had the nerve to use it. So I only managed to capture a small image taken from a huge distance away from the building (Fig.7).

The language used within the notes is also fascinating. Helen Fothergill noticed that Sir John never uses the word 'pink', and always described pink flowers as being 'a whitish reddish hue' or 'whitish with a tinge of purple'. The word pink is, however, used as a common name. Pink appears to be first used to describe a pale rose colour in the early 1700s, but perhaps it had not yet caught-on?! Even on the mineral collection there is a delightful description made by the Comte Jacques Louis de Bournon (1751-1825) about a piece of pisolite. He describes the spheres of stone being the same size as large peas (de Bournon, 1815), but as pointed out by Sarah Chambers and Margaret Morgan from the Royal Cornwall Museum in Truro – they are the size of small peas today. One can only conclude that the size of pea has changed a lot in the past 200 years, and maybe they were big to de Bournon's eyes all those years ago.





**Fig. 8.** Woolmers Polo Ground, Herefordshire; one of Sir John St. Aubyn's many houses.

### **The St. Aubyn Project**

Helen Fothergill, Kelly Chevin and Jan Freedman at Plymouth City Museum and Art Gallery started writing their applications to fund this project in 2005, and secured a grant from the Esmée Fairbairn Foundation two years later. The natural history department chose the Esmée Fairbairn Foundation as they prefer to support projects that are difficult to fund. They also have interests in culture, education and the natural environment.

### **Conservation and Documentation**

Work on the herbarium began in January 2008. This involved researching Sir John's contemporaries represented in this herbarium, and finding out more about the history of some of the collection sites. I also had to check that this was not a dispersed collection, like Sir John's minerals, by promoting the project in botanical journals and asking for any information.

In contrast to Sir John St. Aubyn's mineral collection, the herbarium did not need to have a great deal of time spent on its conservation. The first thing we did as a department was to make sure the entire herbarium was imaged, and this was done on a fabulous AO inverted scanner at Bristol Record Office.

Lastly, we decided to go home via Chertsey in Surrey to try and find Sir John's house at Woburn Farm. When we set off on the M25 we were in high spirits, but when we exited on junction 12 for Chertsey our spirits were dampened. Not only had we gone off on the wrong exit, we were racing towards London's congestion charge zone (I'm sure Sir John St. Aubyn never had this much trouble). After a flurry of panic, we did finally find Woburn Farm, but it was all fenced off with grandiose gates and pillars. Out of all the houses, this had to be the most private and non-accessible. So, we both quickly decided to give up. We turned our car around in the car park at St. Georges College, and went home.

I suppose many of you are wondering why I have written about one of our journeys on the St. Aubyn trail... It's mainly because I wanted to highlight how important (and fun) it is to try and re-trace your collectors footsteps, especially if you are trying to learn more about a collection, or bring it to life. Helen and I have been on many expeditions, and every time we have come across something of interest. On our last quest, we came across the old St. Aubyn manor house in Devonport, and met the owner, who was able to give us lots of information and new lines of research.

## Conclusions

In conclusion I feel that this project has demonstrated how important it is to undertake research on your natural history collections. Without this research, such collections are ineffective to the general public and research-based societies. By advertising and promoting the project, I have been able to highlight the presence of the collection, which in turn has attracted a lot of attention from other institutions. I think it is really important for museums to endeavor to bring collections to life. But sometimes of course, it is a funding-related issue that stops departments from spending more time getting to know their collections.

Sadly, it has become increasingly difficult to find funding for projects that may not reap results and therefore more and more places are applying for money for building projects, or for purchasing new acquisitions instead of spending money on finding out the true story behind the collections that they already own. I think Plymouth City Museum and Art Gallery were really lucky to get the grant from the Esmée Fairbairn Foundation, as they uniquely give money to projects that may not reap all the results originally hoped for. I think such optimism in a funding body is rare, but it does show that a little bit of faith can go a long way.

## Acknowledgements

Plymouth City Museum would firstly like to thank the Esmée Fairbairn Foundation and Renaissance South West for funding the St. Aubyn Project for two years. We would also like to thank everyone who has contacted us with information about the collection, and all our volunteers, especially Emily Woods, Holly Palmer and Bea Wilson who have helped us with our documentation and conservation. Naturally we are indebted to the St. Aubyn family and staff at St. Michael's Mount who have allowed us to take photographs of the family portraits, the Royal Botanic Garden Edinburgh for their help on the Balfour archives and bryophyte taxonomy, Bristol Record Office for allowing us to use their massive scanner and John Edmondson at National Museums Liverpool for all of his advice. Lastly, I would like to thank Plymouth City Museum and Art Gallery for giving me this incredible opportunity to work with the St. Aubyn collection, it's been great!

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