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Hidden beauties: Using an orchid collection to provide an initial analysis of the Henry Leopold Foster Guermonprez Herbarium

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Abstract

In the early 1970's a large natural history collection from Bognor Regis Museum was transferred to Portsmouth Museums. Within it was a collection, estimated at between 60,000 – 80,000 specimens, mainly from West Sussex, amassed by Henry Leopold Foster Guermonprez. During his lifetime Guermonprez was well known in Bognor Regis where he lived but has since faded into relative obscurity, and aside from occasional references, his work remains under-recorded in the Sussex biological record. Accompanying the collection was a large archive of correspondence and over 3000 watercolours painted in the main by Guermonprez and his sister. A few of the watercolours are cited in 'Wild Orchids of Sussex' (Lang, 2001), although it appears that the herbarium specimens had not been consulted as several Guermonprez records for rarer species are missing. As one of the few areas of the collection to have been cited, Guermonprez's orchid specimens, watercolours and related correspondence were consulted to make a preliminary assessment of the quality of his botanical skills and knowledge to determine whether these could be applied across the herbarium.

Keywords: Guermonprez, West Sussex, orchid, herbarium, museum, Portsmouth, natural history

Guermonprez and his collection

Henry Leopold Foster Guermonprez (1858-1924) (Figure 1) was born on 5th July 1858, the eldest of two children of Jean Henri, a Belgian émigré and his English wife, Charlotte (Crane, 1974a). The family were originally based in Chelsea, but moved to Bognor Regis, West Sussex in 1891 following several vacations to the area. In 1892, following the death of Jean Henri, the family moved to Albert Road into a larger house called 'Dalkeith'. Henry married Clara Sophia Phelps in 1897 and the first of their four children was born the following year (Figure 2).

He appears to have been a self-taught naturalist, an interest shared by other members of his extended family. His cousin Amy Foster was a member of the Conchological Society and sent gastropods and bivalve molluscs back to Henry from her travels in the UK and abroad. Amy's specimens can be still found in Guermonprez's mollusc collection which is housed at Cumberland House Natural History Museum in Southsea, Portsmouth. Guermonprez's Aunt Harriet (Amy's mother) painted flowers and her work is thought to have had a stylistic influence on the early watercolours by Guermonprez and his sister Harriet (Crane, 1974b).



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Figure 1. HLF Guermonprez in his study.
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Guermonprez trained and qualified as an architect, although there is very little evidence to suggest that he stayed within the profession, preferring to focus on Natural History and devoting much of his time building up an immense collection of plants and animals, mainly collected from West Sussex. His architectural background proved useful when drawing up plans for a private museum in the grounds of the family home to house the growing collection.

A neighbour and contemporary of Guermonprez's children recalled the layout and contents of the museum to which visitors and school children were welcomed. *'The birds, the eggs, the minerals to the right, the pile of flower drawings by the entrance, the fish, the crustacea.....the butterflies and insects, and the visitor's book. I remember the wonderful assemblage, as if I had been there yesterday'* (Fleming, 1957).

Although Guermonprez published very few papers, he edited and contributed articles for 'The Selborne Notes', a weekly column in the West Sussex Gazette (WSG) from 1906 until his death in 1924. He had been persuaded to take on the column by the Editor of the newspaper, Mr Robinson, following the death of the previous contributor Rev Dr Arnold. Robinson noted in his letter as



Figure 2. The Guermonprez family in the garden of their home. ©Portsmouth Museums

that Guermonprez had contributed to the column on several occasions he was satisfied that he was *'thoroughly well acquainted with the subjects of which the column treats'* (Robinson, 1906).

Guermonprez's weekly column in 'The Selborne Notes' attracted attention and enquiries from members of the public, often enclosing a plant for identification. Some of these letters, with the plants attached, are still in the Guermonprez Herbarium.

Guermonprez's main contact with other natural historians appears to have been through correspondence, or welcoming visitors to his museum and home. He did not belong to many local clubs or societies and took little part in activities of the few societies that he did join.

Guermonprez appears to have walked to many collecting sites within Sussex and occasionally Hampshire, sometimes covering great distances. On one occasion he is known to have walked from Bognor Regis to just outside of Southampton hunting for crabs (Fleming, 1957). He is known to have left the house for days at a time, his granddaughter recalling *'I never heard that he travelled but would go on extensive walks from which he sometimes forgot to return home!'* (pers comms).

During the summer months, Guermonprez took his family in their two-horse chaise on field collecting

expeditions to collect specimens, travelling as far as 18 miles from Bognor Regis to Graffham or Selham (Bognor Regis Post, 1957). The family is known to have assisted with the collection in other ways. His son Jean 'smoothed the way the way to paternal approval by making some herbarium cabinets' although having little interest in the collection himself, while his daughter Clara (1900-1961), known as 'Stella' painted some botanical watercolours (Crane, 1974b).

Guermonprez collected specimens belonging to most areas of natural history. Conservative estimates of the size of each area of the collection are in brackets below:

- Dry vertebrate material – uncased taxidermy, birds' eggs, birds' nests, and osteological material (c1300)
- Spirit collections (c100 jars, some with 30+ specimens in them)
- Vascular plants (c9000 sheets, many with multiple specimens)
- Marine algae (c1600)
- Bryophytes (c300)
- Fungi (c200)
- Lepidoptera (c13000)
- Coleoptera (c6000)
- Hymenoptera (c3000)
- Diptera (c6000)
- Hemiptera (c3000)
- Other insect orders – including Orthoptera, Odonata and Psocoptera (c1500)
- Mollusca (c4000 unit trays)
- Crustacea (c1400)
- Echinodermata (c150)
- Fossils (c1000 unit trays)
- Watercolours of specimens (c3000)
- Correspondence (c2000)

Following Guermonprez's death in 1924 the collection of 60,000 – 80,000 specimens remained in the family home until a bomb dropped in nearby Clarence Road in February 1943 (Getty, 1977) which shattered all the windows to the house and the glass of the display cases. Guermonprez's daughter and E.M. Venables, salvaged the collection, which mainly comprised plants, insects, crustaceans, molluscs, birds' eggs, taxidermy and fossils, relocating it to temporary accommodation at 'The Dome', a large late 18th century house in the vicinity. (Bognor Regis Urban District Council, 1959). In 1946 the collection was relocated to Lyon Street School where it remained until 1963. During this time the honorary curator, Venables focussed on the taxidermy specimens and little work appears to have been carried out on the

remainder of the collection. (Getty, 1977). While at Lyon Street School the collection was exhibited at the local Methodist Church Hall in 1954 for a week which was sponsored by the Bognor Regis Urban District Council, followed by a second exhibition at St John's Hall, Sudley Road from 3rd to 10th July 1959. (Bognor Regis Urban District Council, 1959).

Recent work on the collection

Until 2018 work on the collection had taken place intermittently over several decades. The collections were held in crowded storage conditions making access to them difficult. Following the appointment in 2018 of a natural history curator to deliver the 'Wild about Portsmouth' funded by the National Lottery Heritage Fund, work to upgrade and increase collection storage areas has improved access. An overhaul of the database to create more structured records for the dissemination of data, and to improve access to them digitally is still ongoing. Due to its size and variety, there are still large areas of the Guermonprez Collection, that require cataloguing, data restructuring and rehousing.

Guermonprez's Herbarium

Guermonprez's herbarium, held at Portsmouth Museum and Art Gallery (PMAG), comprises approximately 9000 sheets of plants collected between 1880 and 1924 (Figure 3). As many of the sheets have multiple specimens, it has been estimated that there are between 40,000 - 50,000 individual plants (Getty, 1977). Some of these additional specimens are duplicates of the same species collected at the same time, others appear to have been added to the sheets at a later date when presumably Guermonprez ran out of herbarium paper.

The herbarium, which surpasses Guermonprez's other collections in the quantity of specimens and the volume of correspondence referring to plants, demonstrates his almost encyclopaedic knowledge in many areas of botany, providing a contemporary and detailed description of plant biodiversity in Surrey. However, there were botanical areas where Guermonprez was not so proficient as he sent many specimens sent to the Royal Botanic Gardens, Kew (RBGK) for identification.

With the pending demolition of the school, the Guermonprez and contents of Bognor Regis natural history collections were moved to temporary premises in The Manor House in Chichester Road, Bognor Regis in 1971 where they were assessed prior to the bulk of the

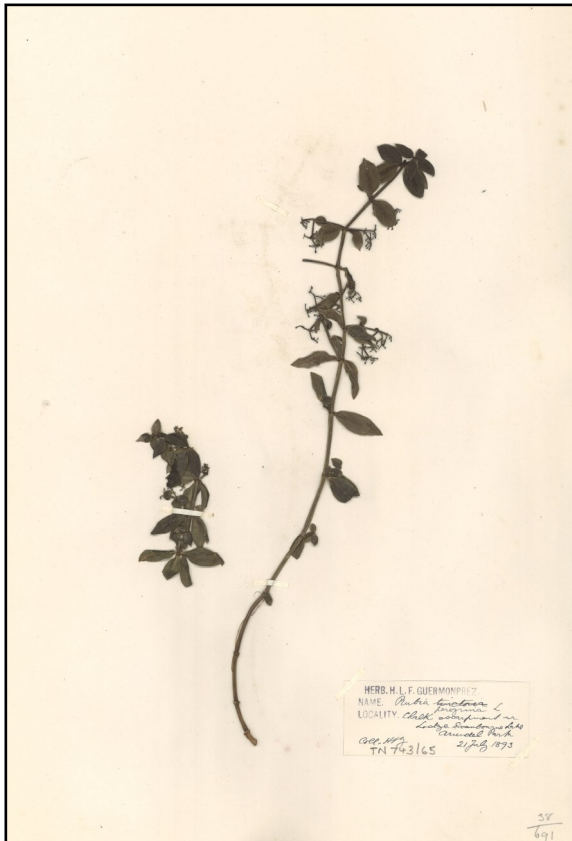


Figure 3. Herbarium specimen of Wild Madder (*Rubia peregrina* L.) at PMAG (PORMG : TN743/65)
©Portsmouth Museums

collections, including books, correspondence and paintings, being transferred to Portsmouth Museums between December 1972 and May 1974. Other areas of the collections were transferred to Littlehampton Museum (newspapers, drawings, horns, taxidermy heads), West Sussex Library (books), British Deer Society (taxidermy heads and horns), Chichester Museum (archaeology, paintings and mammoth tooth), Horniman Museum (exotic natural history), Weald & Downland Living Museum (agricultural implements) and Hitchen Museum (miscellaneous natural history).

Wolley-Dod (1937) in his introduction to the Flora of Sussex described Guermonprez as 'a botanist who should have been better known. His name appears in Salmon's lists and in one or two entries in Arnold's Flora' and 'He formed a first-class herbarium there, mostly from his own neighbourhood but embracing the whole county' He went on to rank Guermonprez's herbarium as one of three making up the west part of West Sussex (known as Division I).

The quality of Guermonprez's preparation and mounting of plants suggests that he didn't have as much time to spend on the collection as he would

have liked, a point lamented by Wolley-Dod (1937): 'The specimens are well named and well preserved from insects, but many of them are not mounted and therefore not easy to consult, and liable to injury or misplacement of labels in going through them'.

Unfortunately, the years between Guermonprez's death and the collection being transferred to Portsmouth Museums realised Wolley-Dod's concerns regarding misplacement of labels. There are over 100 labels which have become disassociated from their specimens, including two orchids, which are now presumed lost. The herbarium has been subject to insect attack in the past.

Aside from family members, Guermonprez does not appear to have worked in the field with other botanists and there is no evidence to suggest the contrary on the data labels of herbarium specimens consulted to date. The correspondence archive certainly indicates that he had been invited on botanical excursions on several occasions. Bernard Reynolds (dates unknown), whose herbarium also resides at PMAG wrote in March 1911 suggesting that Guermonprez accompany him and another botanist, Charles Edgar Salmon (1872-1930), on an excursion. 'I have lately succeeded in interesting Mr Salmon of Reigate (who as you are no doubt aware is one of our best authorities on British plants) in my list of Horsham plants and he has promised to take some excursions with me in the district. Would it not be good if you could come up for one the expeditions?' (Reynolds, 1911).

Guermonprez's main collecting periods for plants (based on 3271 restructured records) appears to have been in the early 1890s and a more intense period between 1907 and 1914 (Figure 4).

Guermonprez, his sister Harriet and his parents moved to Bognor Regis around 1891 which could explain a small flurry of plant collecting activity around this time. There may be vascular plants collected prior to this date as Guermonprez is known, from other specimens in his collections, to have collected insects from at least 1880.

Unsurprisingly, given that Guermonprez was based in the county, most plants in the herbarium were collected in West Sussex, followed by Surrey (Figure 5). Kent and Derbyshire are counties which regularly appear in records for other areas of the Guermonprez Collection. There may be a family connection living in these counties or simply places where the family went on vacation. The family is known from correspondence (Greenwell, 1914) to visit Buxton in Derbyshire for Mrs Guermonprez to visit the mineral baths for an unspecified medication condition.

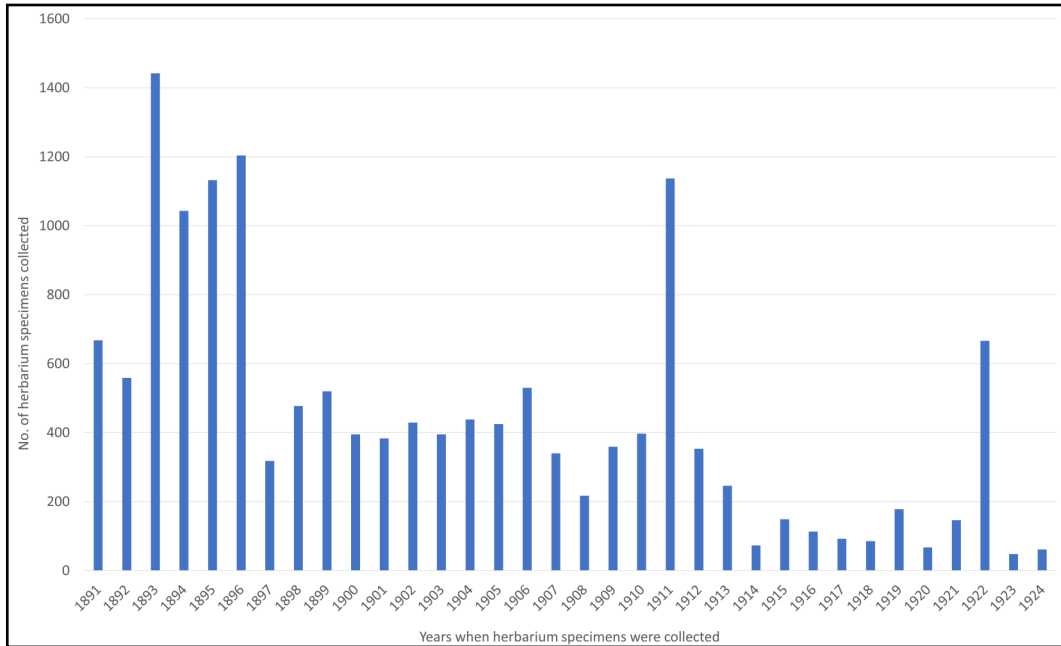


Figure 4. Number of plant specimens collected each year between 1891 - 1924.

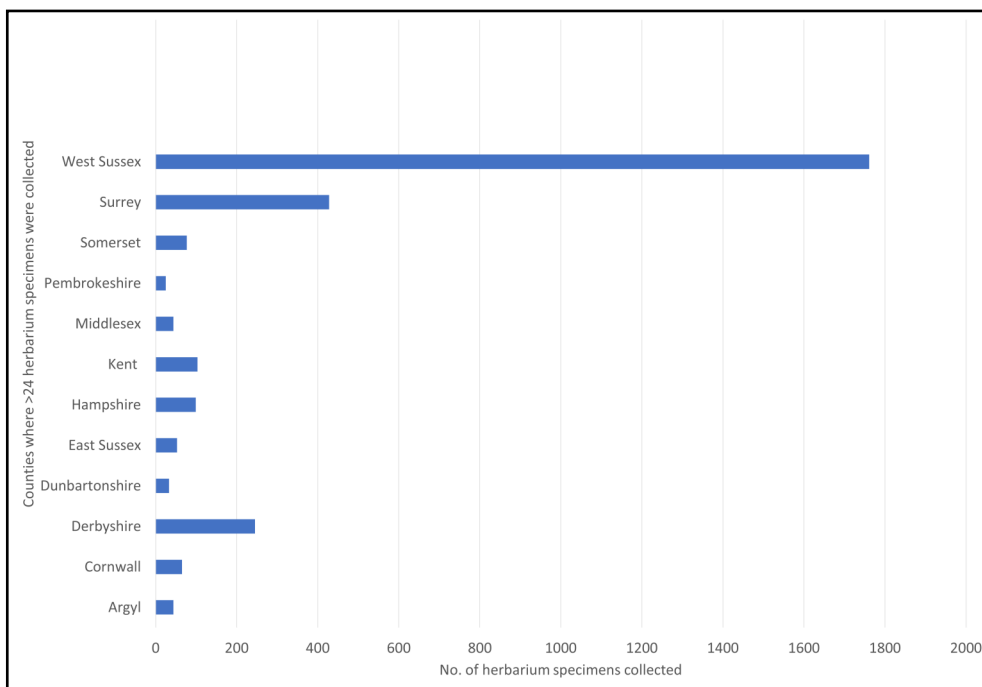


Figure 5. Counties where >24 plants were collected in the Guermontprez herbarium.

The herbarium has recently been the focus of two projects. In 2019 the entire Portsmouth herbarium, including Guermontprez’s herbarium was rehoused into purpose-built herbarium cabinets. The plants were placed into colour coded genus folders to denote each collection and stored in taxonomic order. Rehousing has improved access to the herbarium, enabling targeted work to capture missing data and remount any loose specimens.

A project, ‘Flora Explorer,’ funded by the Headley Trust (2022-2024) has provided an assistant curator to work specifically on the Guermontprez Herbarium. The project has enabled focussed work on the herbarium by continuing work to improve the herbarium database and cataloguing plant specimens.



Figure 6. Herbarium specimens of Green-winged Orchid (*Anacamptis morio* (L.) R.M.Bateman, Pridgeon & M.W.Chase at PMAG (PORMG : Z179/G/Hb-277) ©Portsmouth Museums

Guermoprez's orchid specimens

There are 284 orchid specimens in the Guermoprez herbarium, many collected by him, others were sent to him in the post knowing of his interest in the Orchidaceae family.

Guermoprez appears to have taken more of a pride in his orchid collection compared to other areas of his herbarium, many specimens are well mounted, by his standards and often with additional provenance data (Figure 6). One detail, not seen to date on other herbarium sheets, is the inclusion of hand drawn sketch maps (Figure 7) on several orchid data labels which illustrate the exact location of where the plant was found.

With the exception of a few 'hot house' examples and specimens from Europe, the orchids specimens

were collected from 21 vice-counties in Great Britain. Vice-counties (often abbreviated to VC) were a fixed geographical boundary defined in the mid-19th century still used in biological recording. Table 1 provides a list of orchid species in the Guermoprez Herbarium and indicates the vice-counties where they were collected.

Nearly 70% of orchids were collected from two counties with 149 (52%) from West Sussex and 59 (over 20%) from Surrey Derbyshire and Kent (7 specimens from each) have already been identified as places frequented by the family on a regular basis. Orchid specimens from Scotland are of species that do not occur in southern England and appear to be from the collection of Harold Warren Monington (1867-1924), a botanist with whom Guermoprez corresponded with

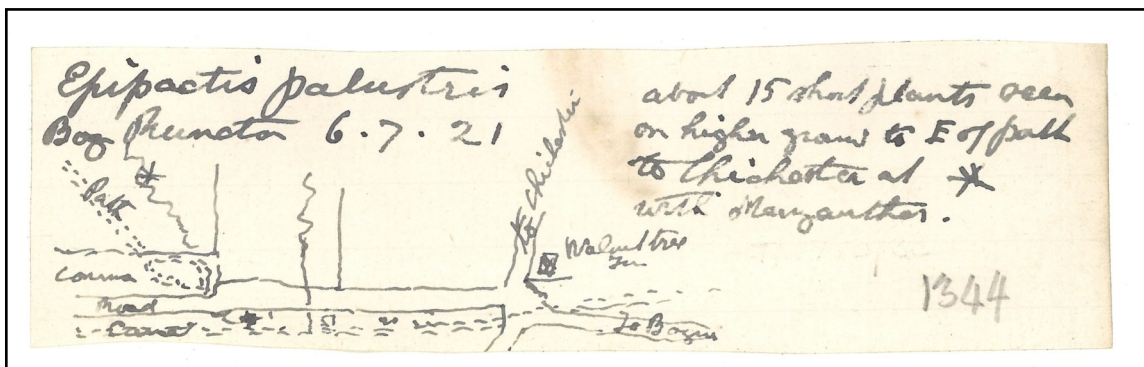


Figure 7. Detail of a label with a sketch map of the location that the plant was found. ©Portsmouth Museums

Table 1. Orchid species and their vice-county (VC) in the Guernonprez Herbarium. *Indicates the existence of a label of a second specimen which has subsequently been lost.

Genus / Species	No. from West Sussex VC 13	No. from Surrey VC 17	Other VCs in the orchid collection
<i>Cephalanthera damasonium</i> (Mill.) Druce	10	7	-
<i>Cephalanthera longifolia</i> (L.) Fritsch	12	-	-
<i>Epipactis palustris</i> (L.) Crantz	4	-	-
<i>Epipactis atrorubens</i> (Hoffm.) Besser	-	-	VC 7/8
<i>Epipactis helleborine</i> (L.) Crantz	20	4	VCs 24 & 49
<i>Epipactis</i> Zinn	-	-	VCs 7/8 & 57
<i>Neottia ovata</i> (L.) Bluff & Fingerh.	8	12	VC 57
<i>Neottia nidus-avis</i> (L.) Rich.	10	3	-
<i>Goodyera repens</i> (L.) R. Br.	-	-	VC 96
<i>Hammarbya paludosa</i> (L.) Kuntze	-	-	VC 96
<i>Coeloglossum viride</i> (L.) Hartm.	10	-	VC 57
<i>Herminium monorchis</i> (L.) R. Br.	8	-	-
<i>Gymnadenia conopsea</i> (L.) R. Br.	4	3	-
<i>Spiranthes spiralis</i> (L.) Chevall.	7	-	VCs 6, 11, 14 & 49
<i>Platanthera chlorantha</i> (Custer) Rchb.	6	-	-
<i>Platanthera bifolia</i> (L.) Rich.	9	3	VC 70
<i>Ophrys apifera</i> Huds.	4	2	VCs 6, 16
<i>Ophrys insectifera</i> L.	6	4	VC 11
<i>Himantoglossum hircinum</i> (L.) Spreng.	1*	-	-
<i>Neotinea ustulata</i> (L.) R.M.Bateman, Pridgeon & M.W.Chase	-	1	-
<i>Orchis mascula</i> (L.) L.	2	2	VCs 7/8, 15, 66
? <i>Dactylorhiza maculata</i> subsp. <i>ericetorum</i> (E.F. Linton) P.F. Hunt & Summerh.	-	-	VC 98
<i>Dactylorhiza maculata</i> (L.) Soó	6	9	VCs 57, 70, 98
<i>Dactylorhiza incarnata</i> (L.) Soó	8	1	VCs 1, 10
<i>Anacamptis morio</i> (L.) R.M.Bateman, Pridgeon & M.W.Chase	5	3	VC 15
<i>Anacamptis pyramidalis</i> (L.) Rich.	7	2	-

occasionally. Data from other areas of the Guernonprez Collection indicates that he visited Scotland on several occasions, but not in pursuit of orchids.

There are proportionally more orchids from Wiltshire (2% or 6 plants) when compared with the remainder of the herbarium (0.5%). These were collected by Krumholz who was based in

Surrey and contributed plant specimens from other families to the herbarium (Figure 8).

Guernonprez's orchid collecting activities in West Sussex appear to have mainly focussed on the west of the county (Figure 9). He may have been influenced by Rev. Frederick Henry Arnold (1831 - 1906) who was renowned for collecting from the same part of the county. Arnold's 'Flora of

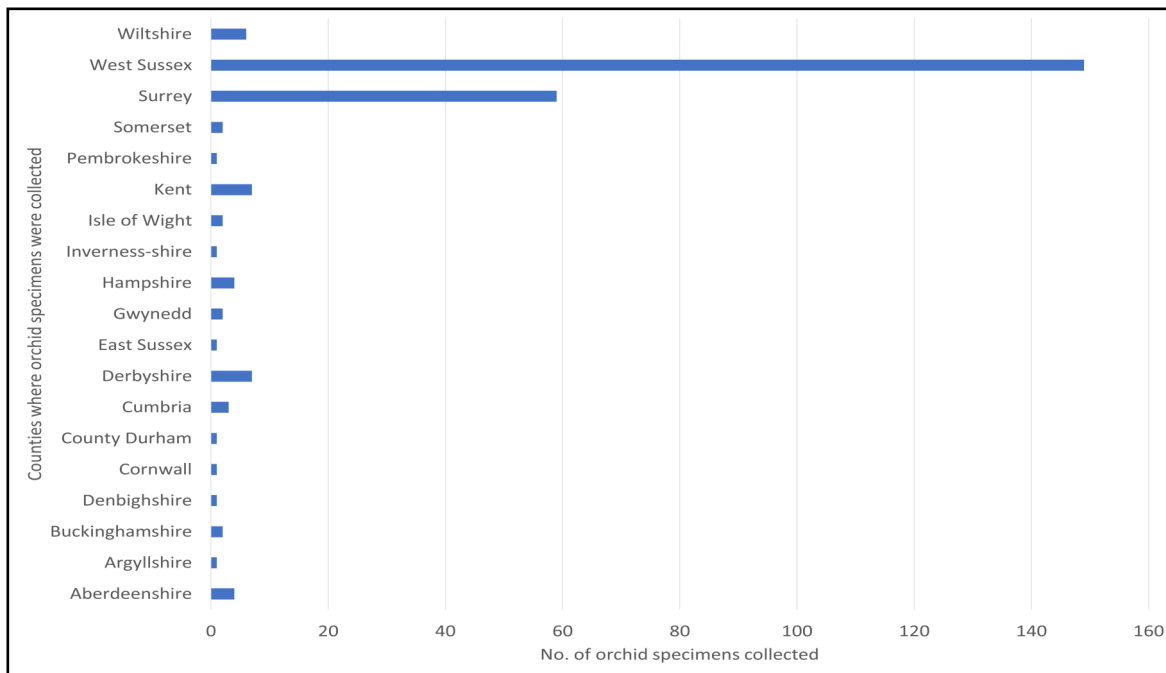


Figure 8. Showing counties where orchids were collected.

Sussex' (1887, revised 1907) was a starting point for many botanists at the end of the 19th century / beginning of the 20th century and is frequently referred to in the correspondence archive, often as a prelude to an enquiry to Guermoprez regarding an identification to a plant.

Guermoprez's annotations appear to be a compilation of notes from correspondence and his own observations from specimens in his herbarium or through watercolour paintings. In some instances, he added localities of plants not listed in the 'Flora of Sussex'. Other annotated details include sketches of flowers, collector / recorder and numbers of plants seen.

Of the 29 species of orchids listed in Arnold (1907) Guermoprez indicated that he had found 20 and underlined the localities of where he had found them or where he was informed of a record.

The most frequently visited orchid localities in West Sussex were Goodwood and Lavant, both

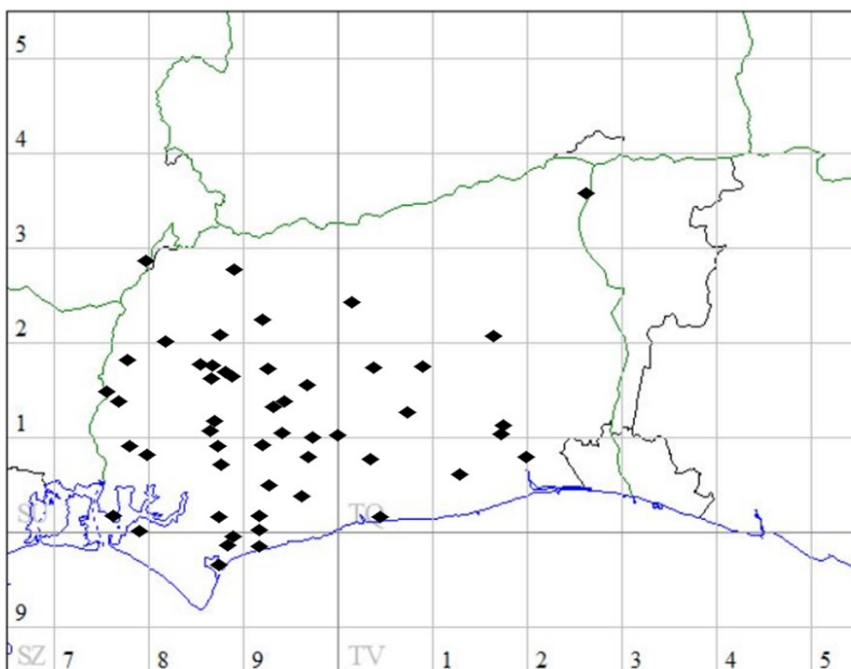


Figure 9. Map of West Sussex and bordering counties with orchid species locations plotted.

both approximately 10 miles from Bognor Regis. The greatest distance travelled by Guernonprez for an orchid was 45.2 miles to Seaford, East Sussex on the 22nd August 1910 where he collected an Autumn Lady's-tresses Orchid (*Spiranthes spiralis* (L.) Chevall.).

There appears to have been an initial burst of collecting activity in the early 1890s, shortly after the Guernonprez family moved to Bognor Regis, followed by the most productive year for the collection of orchids, with 25 specimens representing 10 species collected in 1893. The years 1907 and 1914 were also productive collecting periods for Guernonprez, with a peak of collecting activity during 1911 and 12 orchid species collected that year. A final plant and orchid collecting flourish took place during 1921. (Figure 8) The collecting spikes in Guernonprez's orchid records mirror dates on other plant records in his herbarium.

Guernonprez's watercolours

The Guernonprez collection of watercolours comprises some 3,000 natural history images, mainly of plants, painted in the main by Guernonprez and his sister Harriet, with a few by their aunt, Harriet Foster (1891 -1903). Crane (1974b) suggested that Harriet Foster had a stylistic influence on her nephew and niece, although he dismisses her watercolours as of 'no botanical and little or no aesthetic note'.

The watercolours provide an indication of scale or are painted at life size and are annotated with notes and illustrations of key features including petal shapes and key features (Figure 10). They also capture the plant subjects in a more life-like pose than herbarium specimens which have often faded. Guernonprez's annotations on some of the paintings also state how close the colours used compare to the living plant.

There are 51 watercolours of orchids which are thought to have been painted after collecting given the detail of the watercolours and the quantity of plants collected on some excursions. A Bird's-nest Orchid sent in the post to Guernonprez in 1913 to identify by Mrs Pocock from Surrey, subsequently illustrated and added to the herbarium, has a note (possibly by another member of the family) 'I have put it safe in your vase to keep it for you' (Pocock, 1913).

Twenty-four watercolours are of orchid specimens in the herbarium, many providing more precise localities and dates than the plant specimens. Fourteen watercolours may represent specimens



Figure 10. Watercolour of herbarium specimen of Narrow-leaved Helleborine (*Cephalanthera longifolia* (L.) Fritsch) at PMAG (PORMG:2014/117) ©Portsmouth Museums

that were unsuitable for mounting or have since been lost as the plants are not in the herbarium.

One of the watercolours depicts a rarer orchid, the Lizard Orchid, *Himantoglossum hircinum* (L.) Spreng., found by H Tyler at Steyning, and given to Guernonprez on 25th June 1911. This painting appears to have been overlooked by Lang, although a later painting from Halnaker in 1924 by Miss Joop is referenced. Sadly, this latter specimen has been lost, although the original label survives which shows that it was collected from a chalk pit at the base of Halnaker Hill on 23rd June 1924 when it was first painted. A second illustration of the plant on the same sheet is dated just over a week later on 2 July shows the flowers more fully opened. (Figure 11)

During his research for 'Wild Orchids of Sussex' Lang (2012) appears to have focussed on watercolours to capture data rather than Guernonprez's herbarium sheets and correspondence, presumably because the latter two were unavailable or not easily accessible at the time of research.

Work on the Guernonprez Herbarium to match up illustrations with the database, linking watercolours with their specimens is planned for 2023/2024 as a volunteer project.



Figure 11. Watercolour of missing herbarium specimen of Lizard Orchid (*Himantoglossum hircinum* (L.) Spreng.) at PMAG (PORMG:2014/1113) ©Portsmouth Museums

Guermontez's Correspondence

Guermontez appears to have been a prolific writer spending an inordinate amount of time replying to correspondence. There are over 2000 letters in the archive, with many correspondents acknowledging Guermontez's kindness and patience in answering their enquiry and generosity with sharing his data, even with casual correspondents.

Many letters were written in response to the weekly column 'The Selborne Notes' in the WSG which published Guermontez's address. Other correspondents shared Guermontez's passion for natural history, possibly having met him while collecting or by reputation, often exchanging specimens and data with him. Letters appear to have been answered within one or two days of receiving them, certainly within a week as the top left-hand corner of many letters is annotated with *ans* [answered] with a date along with Guermontez's identification of a specimen(s).

The column also generated interest from biologists working in the field, including Charles Baynard Tahourdin, (1872-1942) who wrote following an article Guermontez had written about orchids and was looking for a specimen of *Epipactis palustris* (L.) Crantz., Tahourdin, whose herbarium is housed

at Reading University, was in the process of painting orchids for his forthcoming book.

Other correspondents identified to date include botanists CE Salmon, BR Reynolds, FH Arnold, Anthony Hurt Wolley-Dod (1861 -1948) and HW Monington. All of them appear to have accepted Guermontez's credentials as botanical orchid authority.

Further plant related correspondence, which provides anecdotal references to species will be analysed and transcribed to identify further areas of Guermontez's botanical expertise and possibly areas where he was not so proficient.

Discussion

Guermontez's orchid specimens provide good anecdotal evidence of where and when the plants were collected. Although grid references were not in use at the time of collection, the herbarium sheets nevertheless provide an accurate locality (occasionally with a hand drawn map), with a date and often with habitat data or an indication of numbers present. Hand drawn maps have not been found on specimens in other areas of the herbarium to date, these may, if located, provide an indication of the importance of a specimen to Guermontez.

Herbarium specimens ensure that any incorrectly identified or indetermined specimens can be re-examined and reassessed if a record is in doubt. Wolley-Dod (1937) notes in his introduction to the Lesser Butterfly-Orchid, *Platanthera bifolia* (L.) Rich.: 'Some records may belong to the next species [Greater Butterfly-Orchid], since the early botanists, and some of the recent ones, do not distinguish it'.

As Wolley-Dod had access to Guernonprez's herbarium following the latter's death, (Wolley-Dod, 1939) it may be assumed that the identities of these were correctly recorded at the time.

Historic herbarium specimens were not always prepared and pressed to highlight diagnostic characteristics or may have been collected before a plant had fully flowered making identification very difficult to check easily. This is certainly true of some of Guernonprez's orchid specimens and of other plants in the herbarium.

Fortunately, the watercolours provide a secondary identification resource as Guernonprez and his sister often included detailed close-ups of parts of the plant with annotations. These were checked by local members of the Hardy Orchid Society in 2022 and, aside from a few which were not to the same standard as the other examples, (possibly the work of Guernonprez's Aunt Harriet?) deemed to be good representations of the living plants.

Can Guernonprez's and Harriet's watercolours of orchids be taken at face value and used as a biological record? Lang (2001) certainly had no issue accepting them. Some watercolours provide evidence of specimens that no longer exist. There are over 100 disassociated plant labels in the archive and there may be further examples of watercolours in the archive relating to some of these lost herbarium specimens.

However, relying on the watercolours for identification cannot be applied across the whole herbarium. In September 1913 Guernonprez deposited an unspecified number of drawings at the Royal Botanic Gardens, Kew for identification. They were returned the following week commenting that while some identifications could be suggested, the drawings were '*not sufficiently detailed to admit of further determination*' (Kew, 1913).

The correspondence from Tahourdin, Reynolds and other botanists clearly accept Guernonprez's competency with the Orchid family. Working through the rest of herbarium and correspondence may identify further botanists associated with the collection as well as other areas of his botanical expertise or gaps in his knowledge.

Data on Guernonprez's orchid specimens demonstrates that many of the plants collected in West Sussex were from the west side of the county. This may be a result of more habitats suitable for orchids in these areas or a bias caused by basing collecting activity on Arnold's sites listed in his 'Flora of Sussex'. Many sites from where orchids were collected reflect those represented in the herbarium identified to date, apart from the paucity of orchid specimens from Bognor Regis.

Over 900 plant specimens from Bognor Regis have been identified in the herbarium to date, and the town is also heavily represented in other areas of the collection. Habitat therefore needs to be considered when making comparisons with other areas of the collection. There may be other sites that have been overlooked which could come to light as work on the herbarium progresses.

The specimens of Marsh Helleborine, *Epipactis palustris* (L.) Crantz, provide evidence of habitat loss as most of the historic sites where the plants were recorded have now been drained, resulting in a sharp decline of the plant in Sussex. Further work on the Guernonprez Herbarium and other areas of the Guernonprez Collection may provide additional evidence of habitat loss or environmental change.

Two copies of Arnold's Flora of Sussex (1097), previously owned by Guernonprez, were recently donated to Portsmouth Museums in 2022 along with a transcription by Francis Abraham (1995) of Guernonprez's annotated notes written in the margins. These currently provide an indication of the contents of the herbarium until it can be fully catalogued.

Conclusion

The orchid collection has proved an excellent focal point in which to begin an analysis of the Guernonprez Herbarium. Focussing on a smaller dataset has indicated a tentative collecting range of dates and sites for the not just the remainder of the herbarium but potentially for the remainder of the collection. With its life-like illustrations and magnified details of parts of plants, as well as provenance data, the watercolour collection provide an additional layer across the herbarium. Work is still required to determine whether the watercolours represent all of the plant families collected by Guernonprez. The correspondence archive provides evidence of Guernonprez's attention to detail and expertise, from answering plant enquiries to consulting with experts in the field, indicating where the strengths and weaknesses of Guernonprez's botanical expertise might lie.

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