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OF THE
ISLE OF WIGHT NATURAL HISTORY
AND ARCHAEOLOGICAL SOCIETY

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Isle of Wight Natural History and Archaeological Society

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The Society was founded in 1919. Its activities include the study and conservation of the flora, fauna, archaeology and geology of the Isle of Wight. General and section meetings, lectures and excursions are arranged throughout the year and advertised on the Society's website. Proceedings and a Bird Report are published annually; Bulletins and Programmes twice a year. A periodic electronic communication is available on request. All these publications are issued without further charge to members.

Subscriptions

Ordinary Membership	£20
Family Membership	£25
Full Time Student Membership	£10

(Application forms and other information are obtainable from the General Secretary or Society website)

Cover: Dor Beetle colour variety *(Anoplotrubes stercorosus),* Mottistone - Dave Trevan
Seaweed Pressing, Quarr Abbey - Mike Cotterill
Hazel (Hazel Trevan) in a field of Common poppies *(Papaver rhoeas),*
Chale 30 June 2018 - Dave Trevan
Wall Butterfly *(Lasiommata megera),* Brading Down - Mike Cotterill

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Proceedings of the Isle of Wight Natural History and Archaeological Society

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Contents

EDITORIAL

This is my fifth Proceedings editorial and I am pleased, thanks to the authors, to be able to present a wide mix of Natural History and Archaeological topics. Special thanks are extended to Dr Nick Draper, who gave a talk to the Isle of Wight branch of the Historical Association on slavery and agreed to write an article based on his talk. Slavery is a dark part of our nation's history and as the article demonstrates, the Isle of Wight was 'not immune.'

As for the last two years, the moth paper by Iain Outlaw is a short summary of a comprehensive report that can be found on the Society's website (Resources/Downloads/Moth report). In future years, the Proceedings hopes to make use of this medium in providing electronic, supplementary appendices for readers with a special interest in particular articles. In addition, the aspiration is for back copies of the Proceedings to be made available electronically, perhaps with a three-year rolling 'members only' restriction on the most recent issues.

I continue to be grateful to Mike Cotterill who attends many of our meetings with his camera and records member participation. Mike has provided four of the photos in this issue, but other contributions would be welcome. Also in spite of what is said above, at 103 pages, this issue is slightly shorter than it has been in recent years. Submission of suitable material is actively encouraged; please contact the Editor if you are interested in contributing an article to discuss the process.

The Society commences its Centenary year this November and to get members reflecting I have included an article about our founders. Next year if things go to plan, it is hoped to bring out a general volume in August 2020 and a special volume dedicated to Archaeology in February 2021.

I continue to be indebted to David Biggs, Sheila Caws, Rosemary Cooper, Anne Marston and Colin Pope who have proofread articles. The responsibility for typographical errors of course remains mine.

Paul Bingham

(Editor)

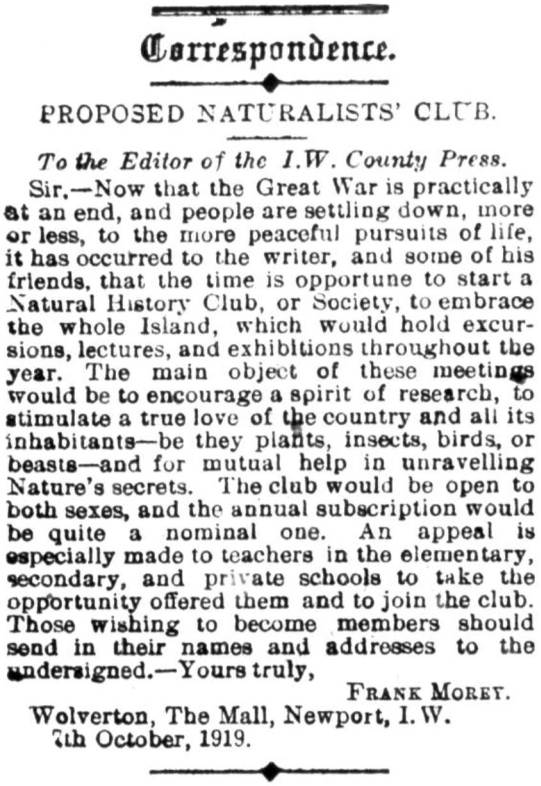
FORMATION OF THE SECOND ISLE OF WIGHT NATURAL HISTORY SOCIETY (IWNHS) – THE CONTEXT AND IN PARTICULAR THE PART PLAYED BY FRANK AND CATHERINE MOREY

Paul Bingham

Friday 8th November 2019 will mark the centenary of the 'Inaugural Meeting' of the IWNHS. This was the second IWNHS. The first society was short lived and founded in 1814 with Rev. Daniel Tyerman drafting an 'Introductory Paper' (Bingham 2015). The remit agreed in 1919 was geology, zoology, botany and meteorology. Archaeology was deliberately not included (Damant 1969), and added only in 1927, after Frank Morey's death (Morey 1926).

His intention to start a Natural History Club or Society on the Island was advertised by Frank Morey in the County Press on 11th October 1919. Of note, there was a special call to teachers to join. The response to Frank's proposal was positive, and in the County Press of 1st November 1919, the date of Saturday 8th November 1919 was set for an 'Inaugural Meeting', to be held at the premises of the Newport Literary Society in Quay Street. Frank Morey predetermined the agenda for the meeting, (Capt Damant felt he was slightly dictatorial), but the plan was endorsed. The proceedings of the inaugural meeting can be summarised by the following bullet points:

- 100 individuals applied to join the Society and about 50 attended the inaugural meeting.
- The meeting agreed that a Society should be formed and named the IWNHS.
- The constitution/rules proposed by Frank Morey were agreed with one amendment.
- The subscription was set at 2s 6d per year.
- George Colenutt was elected as first President.
- Frank Morey was elected as Hon Secretary.
- Members were elected to Council to represent the various districts of the Island.
- Mainland Honorary Members were elected to assist the Society in identifying specimens.



Correspondence.

PROPOSED NATURALISTS' CLUB.

To the Editor of the I.W. County Press.

Sir,—Now that the Great War is practically at an end, and people are settling down, more or less, to the more peaceful pursuits of life, it has occurred to the writer, and some of his friends, that the time is opportune to start a Natural History Club, or Society, to embrace the whole Island, which would hold excursions, lectures, and exhibitions throughout the year. The main object of these meetings would be to encourage a spirit of research, to stimulate a true love of the country and all its inhabitants—be they plants, insects, birds, or beasts—and for mutual help in unravelling Nature's secrets. The club would be open to both sexes, and the annual subscription would be quite a nominal one. An appeal is especially made to teachers in the elementary, secondary, and private schools to take the opportunity offered them and to join the club. Those wishing to become members should send in their names and addresses to the undersigned.—Yours truly,

FRANK MOREY.

Wolverton, The Mall, Newport, I.W.
7th October, 1919.

Figure 1: Notice of Frank Morey's intention to start a Natural History Society that appeared in the County Press on 11th October 1919

Hampshire Field Club (HFC)

The HFC was established in 1885 for the study of 'Natural History and Antiquities of Hampshire', (a county that until 1890 included the Isle of Wight). The Club started with 5 members and ended its first year with 110. An annual 'Proceedings' was published from 1887 onwards, but in that year, out of 167 members only George Colenutt a solicitor from Ryde (subsequently the first President of the IWNHS) gave an Isle of Wight address. George acted for many years as the HFC 'local secretary for the Isle of Wight' and was a member of the HFC committee. Between 1887 and 1939, (the war suspended visits), Colenutt arranged 64 HFC field trips to the IOW. These were generally reported in detail in the County Press.

In 1910, the year following the publication of Morey's Guide (which was likely to have stimulated interest in the natural history of the Island – see overleaf), out of a HFC membership of 251, only 18 (7%) members gave an Isle of Wight address. The annual subscription of the HFC at that time was 10s 6d, (more than four times the subscription set for the IWNHS when it formed in 1919), plus a one off joining fee of 5s.

At the 1912 and 1913 annual general meetings of the HFC, it was suggested that the Club would be strengthened if, in addition to local (district) secretaries, subject secretaries were also appointed. The implementation of this idea was gradual, and the concept lasted for only just over ten years. George Colenutt was appointed subject secretary for Isle of Wight Geology and Frank Morey for Isle of Wight Natural History. Both made Isle of Wight specific reports in 1916 (Frank's apparently included too much detail to be included in the HFC Proceedings), and this focus on the Island may have been one of the factors that prompted the formation of the IWNHS.

Morey's '*Guide to the Natural History of the Isle of Wight*'

It appears from his 'Introduction', that Morey conceived his *'Guide'* (a book of 570 pages) sometime during 1906, in consultation with his friend Frederic Stratton, who had already brought out a work on the flora of the Island (Stratton 1900). Frank did not go to college/university but spent what leisure time he had collecting natural history specimens on the Island and becoming familiar with its flora and fauna. His Guide comprised 45 sections, and where he could, Morey enlisted the help of an expert in each topic to write an introduction and then to formulate a species list from the literature. They also helped to identify Isle of Wight specimens sent to them by a collector(s), if they themselves were not able to visit the Island and collect. For example, the section on Freshwater Algae was written by the distinguished expert Mr G. S. West. Mr S. W. Pring and other Island-based naturalists searched the Island's ponds and streams, and a list of over 100 species was subsequently generated, including one species new to Britain.

Frank Morey himself contributed no less than 16 of the sections, including the Introduction, Marine Algae, Protozoa (introduction), Foraminifera, Porifera, Coelenterata, Echinodermata, Worms, Mollusca, Crustacea, Myriapoda, Insects (introduction), Diptera, Tunicata, Summary and Meteorology (general).

Six of the sections did not relate to flora and fauna: one was on geology, one earthquakes, one palaeolithic implements and three meteorology.

Morey's Guide was published in 1909 by the County Press, quite likely at Frank's expense, and retailed at 10s per copy. It is not known how many were printed, but copies were still available in December 1921.

It is interesting that the book review of Morey's Guide in the Proceedings of the HFC [6(3) 1909 p281-283] was generally quite positive but singled out George Colenutt's section on geology for criticism, for not including a list of fossils and for restricting his bibliography to one reference.

Biography of Frank Morey (1858-1925)

The following biography of Frank Morey appeared in the 1913 publication 'Who's who in the Isle of Wight', and it is possible that it may have been written by Frank himself or approved by him:

> *'Born March 4, 1858, at Newport; son of Henry William and Eliza Morey; married in 1886; one daughter; is a timber merchant and educationist; has been associated with local educational movements, such as the University Extension Lectures, the Newport Literary Society, the I.W. Museum, etc.; and is a manager of the I.W. Savings Bank; is a Fellow of the Linnean Society, and a member of the Geologists' Association, Ray Society, Selborne Society, Conchological Society, and Hants Field Club; has travelled in India, Ceylon, Egypt, Palestine, and several countries; has published a comprehensive work, entitled "A Guide to the Natural History of the Isle of Wight' (1909); is especially interested in the maintenance of local museums to illustrate the fauna, flora, and antiquities of the district. Recreations: Natural history and antiquarian research. Address: Wolverton, Carisbrooke Road, Newport. Telephone: 14 Newport.'*

The fact that Frank had been married (and had a daughter in 1887) did not appear in his obituary in the County Press, the HFC or the IWNHS Proceedings. By the 1901 census, Frank was living with his father (who died in 1906), his sister Catherine and a servant. Frank's daughter, Immanuelle Isabella Owen Morey died in 1933 aged 45, and his wife appears to have died in 1945.

Figure 2: Frank Morey

IWNHS Proceedings

The first IWNHS Proceedings were published in December 1921, for the year 1920. In a preface Morey noted:

> *'I consider the main object of the publication of these annual Proceedings should be to continue the work of the 'Guide to the Natural History of the Isle of Wight,' published in 1909. This work, through the efforts of its many contributors, may be said to have laid the foundation of systematic study of Nature in the Island, and it is up to us now, as a Society, to build well and soundly upon this foundation'.*
>
> *'The present work is uniform in size with the 'Guide', and when several parts have been published can be bound so as to make a companion volume, and ultimately perhaps a series of volumes, if our Society, now in its vigorous youth, attains to maturity, or better still to a permanent place in the intellectual life of the Island'.*

In his review of the history of botanical recording in the Isle of Wight, David Allen (2003) referred to the 1920s as the 'Morey revival' and stated that 'the existence of the Society had imparted a greater degree of cohesion to the Island's natural history community, and once again provided that with a regular local outlet for placing on record finds that might otherwise have escaped notice or not even have been made in the first place.'

Wolverton – the Moreys' home *and* IWNHS/IWNHAS HQ: James Frederick Jackson

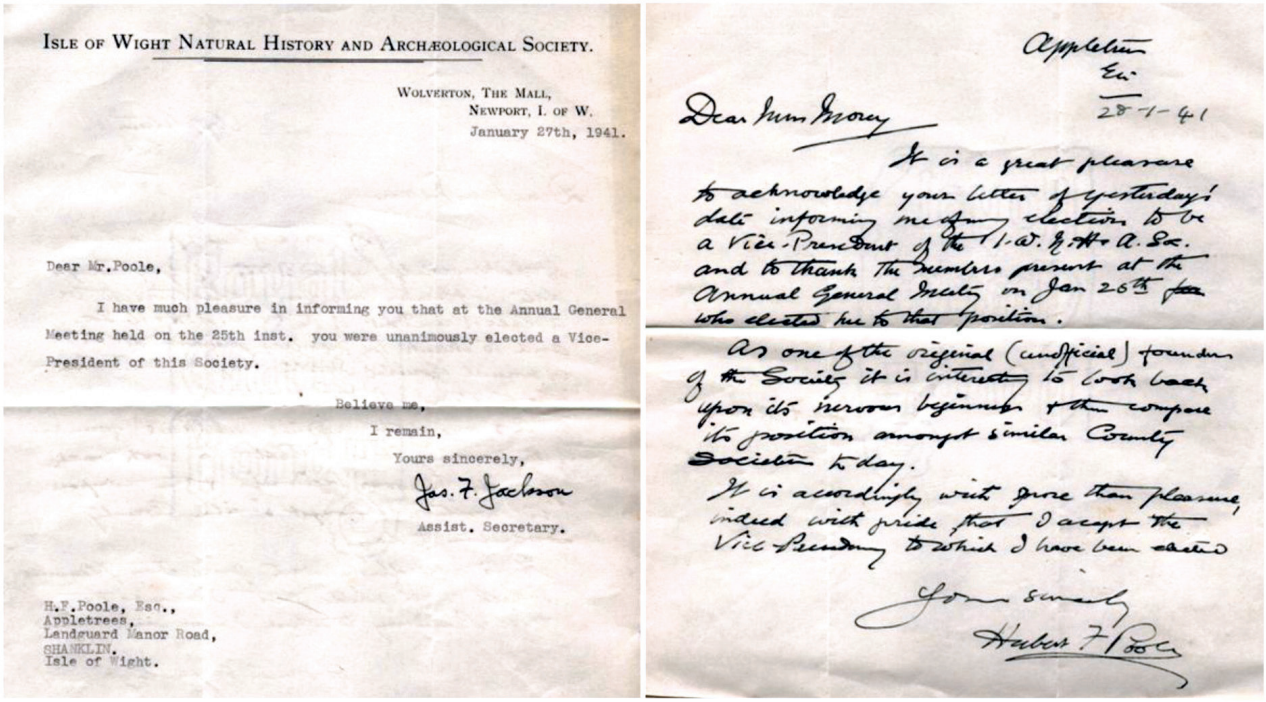
At some point between 1908 (Kelly Directory) and 1911 (census), Frank Morey moved into 104 Carisbrooke Road (The Mall) with Catherine his sister and a servant. The name of the house was changed from 'Seething' to 'Wolverton'. This was a large detached house and was used by the Moreys as their home and, after 1919, effectively as the office of the IWNHS.

In January 1924 Frank Morey employed James Frederick Jackson (1894-1966) to act as his personal assistant (Howe 1994). Morey had first met Jackson in 1913, during a collecting trip to the Island. Jackson's duties included acting as assistant secretary to the IWNHS, collecting geological specimens and assisting at the Carisbrooke Castle Museum and also particularly at Sandown Museum where he became curator. Jackson faced a period of uncertainty when Frank died, but Catherine kept him on until her death.

> *'Throughout his time on the Island Jackson never felt his position to be secure; he was constantly aware that he was reliant on the goodwill of Catherine Morey, by this time an old lady with gradually deteriorating health. In 1934 he remarked that nine-tenths of his time was spent in all sorts of odd jobs 'including reading the newspaper to a dear old lady'. Although desiring more secure employment, as her health and sight declined further Jackson felt more tied to his employer. He did 'not like to abandon an old lady who has treated me very well' despite knowing that she was making no provision for keeping him on the Island to look after the museums and the Society after her death. Although a permanent job in any Museum* (mainland) *would have sufficed'.* (However, no such post was offered to JFJ)

Catherine Morey (1855 – 1943)

As noted above, at the 1901 census Catherine, Frank's elder sister was living with her father, Frank and a servant. By the 1911 census, Catherine was at Wolverton with Frank, (her father having died in 1906), and a servant. (Miss R. M. Stay was mentioned in Catherine's obituary as having cared for her for 29 years). Catherine never married.



ISLE OF WIGHT NATURAL HISTORY AND ARCHÆOLOGICAL SOCIETY.

WOLVERTON, THE MALL,
NEWPORT, I. OF W.
January 27th, 1941.

Dear Mr. Poole,

I have much pleasure in informing you that at the Annual General Meeting held on the 25th inst. you were unanimously elected a Vice-President of this Society.

Believe me,
I remain,
Yours sincerely,
Jas. F. Jackson
Assist. Secretary.

H.E. Poole, Esq.,
Appletrees,
Landguard Manor Road,
SHANKLIN.
Isle of Wight.

Appletrees
Esq
28-1-41

Dear Miss Morey

It is a great pleasure to acknowledge your letter of yesterday's date informing me of my election to be a Vice-President of the I.W. Nat. & Arch. Soc. and to thank the members present at the Annual General Meeting on Jan 25th for who elected me to that position.

As one of the original (unofficial) founders of the Society it is interesting to look back upon its nervous beginnings & then compare its position amongst similar County Societies to day.

It is accordingly with more than pleasure, indeed with pride that I accept the Vice Presidency to which I have been elected

Yours sincerely
Herbert F. Poole

Figure 3: Letter to Hubert Poole, typed by James Jackson from Wolverton, and Poole's handwritten draft reply written on the back. Document in the Carisbrooke Castle Museum (D.1986.1086).

Catherine was very important to the IWNHAS for which she acted as Hon. Secretary and the Editor for the Proceedings. She continued James Jackson's employment who acted as Assistant Secretary, and as time went on almost certainly did most of the work.

The County Press carried the following obituary for Catherine Morey:

> *...She fully shared her late brother's interest in natural history, archaeology and antiquities, and since his death had carried on his work both as hon. Secretary of the IWNHAS in association with Mr JF Jackson FGS and*

as curator of the Carisbrooke Castle Museum for some years until that office was taken over by the late Mr GA Sherwin FSA. Also in association with Mr Jackson she had maintained a meteorological recording station at her home. As long as health permitted she was a regular attendant at the meetings of the IWNHAS and at Island tours of the HFC. She had at times attended the meeting of the South-eastern Union of Scientific Societies and the Geologists' Association.

...she was most generous in anonymously giving to many good causes in the Island particularly in Newport. Her kindness had benefited the District Nursing Association, of which she was a vice-president, the Literary Society, the War Hospital Supply Depot and many other charities.

...Her ashes rested in Carisbrooke Church over night and following a memorial service, they were scattered in Borthwood Copse, which her late brother gave to the National Trust as a bird sanctuary and where his ashes rest.

...the memorial service was conducted by Rev H Ewbank. In the course of a tribute to the deceased lady he said she had spent a long life in the district and had built up a great reputation for generosity and kindness. A woman of strong personality, with a first-rate intellect, she shrank from publicity, preferring to exercise influence by personal contact rather than by the more usual channels of public service. She had constantly shown her interest in that ancient church by generous gifts and shrewd advice on its preservation. Miss Morey would be remembered with gratitude by many who had experienced her great kindness of heart. Her very nature repudiated sentimentality, yet she found it difficult to refuse any appeal for help, and many had been given new hope by her generous sympathy.

Figure 4: Catherine Morey

Newport Literary Society (NLS)

From its 1919 'Inaugural Meeting' until the mid 1940s, (when meetings moved to Newport Secondary School), general meetings and the AGMs of the IWNHAS were held in the Lecture Hall of NLS in Quay Street. The NLS was thus very important to the Society.

The NLS had been founded in 1876 as Newport's 'Young Men's Literary Society', but at some point changed its name to the 'Newport Literary and Recreation Society'. It prospered for many years, owned premises at 30 Quay Street Newport and celebrated its Jubilee with a dinner in 1927. However by 1955 the membership had declined and the Society was wound up, having taken legal advice, as the Society was registered under the Literary and Scientific Institutions Act 1854.

Some members of the NLS were themselves very interested in archaeology and natural history. In 1883, an initiative was undertaken that proved controversial with members; the NLS acquired the contents of the old Newport Museum and then opened a museum at their Quay Street premises (Bingham & Cooper 2015). General dissatisfaction of the NLS members with the presence of the museum came to a head in 1911, when Frank Morey paid £100 for the contents that were transferred to Carisbrooke Castle Museum, with the geological specimens being sent to Sandown library.

Conclusion

Although others contributed, the IWNHS was founded and sustained by Frank Morey and later continued by Catherine, who after Frank's death facilitated the participation of those interested in archaeology. James Jackson, who was effectively a paid member of staff, also made significant contributions. The IWNHAS had a significantly lower subscription than HFC, and consequently was accessible to a wider section of IOW residents. It is probably fortunate that the IWNHS was not launched earlier, for example in 1909 when Morey's Guide was published, as any society would have been difficult to 'keep going' during the First World War. For some 25 years, the IWNHAS owed the NLS a debt of gratitude in allowing them access to their meeting room. In addition, it should perhaps be kept in mind that although the NLS owned their own premises, (a long held aspiration of IWNHAS), that society sadly demised. No society should rest on its laurels!

Acknowledgments

I am grateful to Richard Smout and his staff at the Isle of Wight Record Office for all their help, cheerfully given.

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Appendix: Some key dates

1906	Frank Morey elected a Fellow of the Linnean Society
1906	Henry William Morey Sr died aged 83
1907	Southampton Natural History Society formed
1909	Frank Morey published '*A Guide to the Natural History of the Isle of Wight'*
1909	Henry William Morey Jr (elder brother of Frank and Catherine) died. Frank became head of the family firm
1910	OGS Crawford (later archaeologist to the Ordnance Survey) visited the Island and made contact with the Moreys over saving the contents of the Newport Museum. (Was no longer wanted by NLS)
1911	NLS agreed to sell the contents of its museum to Frank Morey. Geology specimens transferred to Sandown, rest to Carisbrooke Castle
1913	Frank Morey appointed by Princess Beatrice to be curator of Carisbrooke Castle Museum (CCM)
1924	(Jan) James Jackson employed by Frank Morey.
1925	(Dec) Frank Morey died
1926	Catherine appointed curator of CCM
1937	(July) Catherine resigned as curator of CCM
1943	(Jan) Catherine Morey died. In the absence of employment, James Jackson had to return to the mainland

Frank Morey's childhood aspiration to record all the animals in the world, (noted in the introduction to his *Guide*)

'More than forty years ago, when a very small boy indeed, the idea came to me that it would be an excellent plan to write a list of all the animals that existed in the World. Having made known my intention to do this, a disused ledger, containing a few blank pages, was given me for the purpose, and I solemnly sat down with full intent to carry my project into effect. Things went very well for a time, and I was getting together a respectable list: elephant, lion, tiger, bear, crocodile, deer, antelope – but here a difficulty arose. My sister, who was older than I, told me she was quite sure there was more than one kind of deer, and she thought there was more than one sort of antelope, and that such general names as these were too indefinite to be of much use. This was disconcerting, but I might have recovered from the shock had not I received another blow immediately after – I was told that a bat was not a bird but some sort of animal! Now for a comparatively large creature which had wings, and flew about and caught moths and beetles, not to be a bird seemed to me to be unreasonable and altogether anomalous, and I felt so annoyed at this discovery that I decided to postpone my project until I knew more about Natural History'.

Author: Paul Bingham, 6 Forest Close, Newport, Isle of Wight, PO30 5SF

AN ISLAND JOURNEY IN 1825

John Margham

Sir Stephen Glynne (1807-1874), a gentleman of independent means, spent a lifetime visiting and recording churches throughout Britain. His observations were recorded in notebooks. These are now kept in Gladstone's Library at Hawarden, Flintshire, adjoining his family home of Hawarden Castle. Sir Stephen visited the Isle of Wight on several occasions up to 1863. The year of his earliest visit is uncertain. The catalogue of his notebooks prepared by Clwyd Record Office in 1977 merely states that this took place 'before 1840'. There is however good reason to date his first visit to the Island to 1825. His account states that he attended church at Cowes on Sunday 2nd October. In 1825 this date fell on a Sunday. It is possible that he is referring to 1831, when 2nd October also fell on a Sunday, but the earlier date is more likely. As the late Lawrence Butler pointed out 'tours made in 1825 were recorded in the form of an antiquarian diary with observations on the countryside, the mode of travel and the quality of the accommodation. Sir Stephen also visited and fully recorded the abbeys, and to a lesser extent the castles, as well as the parish churches' (Butler 2007, 6).

Sir Stephen Glynne's subsequent observations were confined to church architecture, and parallel those of Sir Nikolaus Pevsner in his county volumes of 'The Buildings of England' series from the later 1940s onwards. His account of his visit in October 1825 is of more general interest. Although he provides descriptions of church architecture using the terminology developed by Thomas Rickman (1817), for example the division of Gothic architecture into E.E. (Early English), Decorated and Perpendicular, this early notebook records more than this. The account includes a wide range of observations including the landscape, the appearance of settlements and the places where he stayed.

Sir Stephen visited more than half the surviving medieval churches in England and a greater proportion in Wales. '… his coverage was comprehensive in the Isle of Wight, where he visited 28 out of the 30 surviving medieval churches … most of them before 1840 and therefore prior to Queen Victoria's residence at Osborne which impelled many clergymen and patrons to restore their churches in the more suitable ecclesiastical fashion' (Butler 2015, 103). His visit in 1825 as a young man recorded several of these churches, and informs us about the Island in the early nineteenth century.

Glynne did not illustrate his notebooks, apart from the odd small sketch of a gothic window. The illustrations presented here are mainly by Sir John Gardner Wilkinson, now kept in the Bodleian Library at Oxford. These were produced in the 1840s. The John Nixon watercolours of Newport and Freshwater Gate date from about 1800. The illustration of Yarmouth church by Charles Tomkins was published in 1794.

The present author has made the following transcription of Sir Stephen Glynne's 1825 notebook entries relating to the Isle of Wight. His handwriting is not always easy to read. In the following text, (?) indicates uncertainty about a word, and square brackets [ ] indicate words totally illegible. Sir Stephen's account commences on Saturday 1st October:

….. From Netley we sailed back to Southampton which was extremely pleasant, as the day was then particularly fine, I determined on sailing to Cowes in the same small open boat as appearances were then favourable. The voyage was very agreeable for some time and the coast scenery very pleasing. We passed the fortress of Calshot Castle which is one of those built by Henry 8 and stands on a neck of land running out into the sea. After this the day became quite changed – the wind began to blow, and the sea became very rough, moreover it soon poured with rain, so that this part of our voyage was rendered very unpleasant, and the wind being very much against us the passage was very long and arduous, in all nearly 5 hours. However on approaching the Island the violence of the wind was much abated, and by then we landed quite safe at Cowes, but completely wet through. The appearance of things was soon greatly changed by the comfort of the (?)Vine Inn.

<u>October 2nd</u> This day was very changeable. It began with sunshine, but soon became cloudy and was visited by frequent showers. Cowes is divided by the river Medina into two parts – East and West Cowes. West Cowes is the most populous and is now a good sized town, much resorted to for sea bathing and affording very good accommodations. At East Cowes are two very pretty castellated villas, one belonging to Lord Henry Seymour, the other to Nash the Architect. They are both placed in commanding situations. West Cowes has a chapel which we attended today being Sunday. It is a very inelegant and unsightly structure built in a very bad style in a depraved period - the 17th century. The interior is totally commodious and has galleries but there is nothing at all appealing to elegance or in any way remarkable. It has a small organ, not sufficiently powerful for the church. After service we left Cowes in a gig for Newport - the day continuing gloomy and [ ]. Newport is the metropolis of the Island and is a very neat handsome town having several good buildings. The church however has no pretentions to beauty. It is rather a low building consisting of a nave with side aisles, a chancel with aisles and a tower at the west end. The exterior is very ugly, both from the rough appearance of the stone, and the (?)reputed injudicious alterations which it has undergone - scarcely one window throughout the church has not been cruelly mutilated and deprived of its tracery. The interior is very gloomy - the nave is divided from the side aisles by low arches obtusely pointed and very plain in their mouldings - the piers are Norman - being circular

and massive with round capitals - there is one arch on the south side of very singular form - being a very obtuse ellipse. Over some of the arches in the nave are plain EE windows or openings with sloped sides. The chancel is divided from the aisles by pointed arches much sharper than those of the nave and having octagonal piers. The pulpit in this church is a most beautiful work being most (?)intricately wrought with carving of about the 17th century and is the only beautiful thing about the church. It is very full of pews and galleries and has a good organ.

Figure 1: John Nixon- Newport: 'Newport is the metropolis of the Island and is a very neat handsome town having several good buildings'.

<u>October 3rd</u> The morning was ushered in by violent torrents of rain which went on in a most hopeless manner till about 11, when the sky began to clear and things took a very propitious [ ]. We then walked to Carisbrooke a village only a mile distant. The church is the mother church of Newport, and is a good structure although much curtailed of its former dimensions, the chancel being entirely destroyed. It now consists of a nave, south aisle, and a tower at the west end. The tower is a very beautiful composition of Perpendicular work, being lofty and having a noble appearance when seen from a little distance. It is divided into several stages by string courses enriched with heads and other ornaments - has an octagonal turret at the south west corner, a good battlement and eight crocketed pinnacles rising from small turrets which spring from the string course below the belfry windows. The south door is a fine EE one with shafts. The nave is divided from the south aisle by pointed arches springing from massive cylindrical Norman piers having rounded capitals. All the windows in the church are Perpendicular and there are some good ones with square heads on the south side. In the north wall is a very good Perpendicular tomb to Lady Wadham wife to Sir Nicholas Wadham, who was captain of the Island in the time of Henry 7 - it is an altar tomb, under a Tudor arch richly feathered - having panelled sides - and the whole very much enriched in the style of that period. Near the east end is a stone with an ornamental cross upon it - which probably commemorated one of the Priors. Suspended to one of the pillars is a wooden tablet commemorating William Kieling groom to the chamber of James 1st. In the west gallery of the church is an organ.

The village of Carisbrooke is neat and pretty - abounding in neat gardens and fine trees. The castle stands on an eminence considerably above the village, and the keep seated on a high hill forms a very fine object in the surrounding country. The castle does not now present many vestiges of its former consequence. The gateway is the finest and most perfect position. This is adorned with machicolations, and is flanked by two large round towers of bold appearance - the groove for the portcullis may be perceived and the whole is in tolerably good condition and the old wooden gate still remains. The outworks of the castle are very extensive, and several portions of the walls yet remain. The keep is placed very high up and commands a charming prospect. It is a polygon of irregular form and is smothered with very thick and luxuriant ivy. There are some portions of the castle from the age of Elizabeth, and the Governor's house appears to be of a period still later. The celebrated well is shewn, and is still in use. It is worked by an ass - its depth is 210 ft, and when anything is thrown down it, a curious sound is produced on its arriving at the bottom, which it does not reach for several seconds. On the south side of the great gateway is a small plain chapel in good repair, but not now used.

Figure 2: Sir John Gardner Wilkinson - Carisbrooke Castle gatehouse:
'The gateway is the finest and most perfect position. This is adorned with machicolations, and is flanked by two large round towers of bold appearance – the groove for the portcullis may be perceived and the whole is in tolerably good condition and the old wooden gate still remains'.

The day fortunately cleared up very much, and became as fine as could be wished for our expedition round the Island which was to be performed in an open car hired at Newport, and which indeed seems to be by far the best mode of making the tour of the Island. We went first to Wootton bridge through open country enlivened frequently by fine views. From thence to Binstead a very pretty neat village interspursed[sic or typo?] with trees and containing some very beautiful cottages. Its church is small but very neat, consisting only of a nave and chancel. The south doorway is of plain Norman

work. The arch which divides the nave from the chancel springs from brackets having the billet moulding. In the nave there are some plain lancet windows - in the chancel they are in a style between EE and Decorated - those in the north and south side of 2 lights, with trefoil in a circle between them, the whole being under a pointed arch with a dripstone. The east window is in the same style but is of 3 lights and has 3 circles with trefoils.

Figure 3: Charles Tomkins- Binstead church:
'Its church is small but very neat, consisting only of a nave and chancel'.

From Binstead to the neat maritime town of Ryde, about four miles distant. The appearance of this town seated on the declivity of a hill is very pleasing the houses being universally neat and the streets regular. The town is much frequented as a bathing place and has many handsome villas. The sea view on this charming day was very beautiful. A pier has been erected of great length and pretty in a handsome style, which forms a pleasant promenade. The town of Portsmouth with its extensive docks is nearly opposite at about 7 miles distance and is seen very distinctly, together with a large portion of the Hampshire coast. From Ryde we went over some very pleasing country well wooded and with delightful sea views. We passed St Johns and the Priory rather large and pleasant residences. A mile beyond the Priory is St Helens church a plain modern building. Further on is St Helens green - a good view of Brading harbour now is seen - which when the tide is in has a very pleasing appearance - it is an arm of the sea running a good way into the land, nearly as far as Brading Town. The surrounding scenery is well wooded and pleasant. We now (?)enter the small town of Brading, which is merely one long street of very neat houses, mostly having neat gardens and many of them beautifully covered with vines, [ ], creepers etc. The church is a good structure and one of the most spacious and handsome in the Island. It consists of a nave with side aisles, a chancel with side aisles, and a tower at the west end. The tower is supported upon 4 open pointed arches which form a kind of west porch. It has a belfry window of EE appearance and a plain parapet. It is surmounted by a short stone spire. The nave is divided from the side aisles by pointed arches with dripstones, and massive circular piers having square capitals. The windows throughout the whole church are Perpendicular and mostly with square heads. The chancel is divided from its north aisle by 2 pointed [word missing] with architrave mouldings, and springing from an octagonal pier - from the south aisle it is divided by 2 wide arches without any (?)curvature, springing from a pier of clustered columns in lozenge form. Within the altar rails a slab of stone is engraved [possibly with?] a very fine figure of a knight in armour beneath a very rich canopy covered with figures of saints and ornamented in the Perpendicular style. It is in excellent preservation, and round it runs an inscription which is partly concealed by the altar rails ....Hic jacet nobilis dux .... arming[ ] vivebat connestabularius castre de Porcester qui obit anno dom mille quadringe primus die ultima octobus (?)meusil amen. In the chapel north of the chancel are two fine altar tombs of Perpendicular work, much enriched with panelling and quatrefoils. In the south chapel are numerous monumental erections to the Oglanders, some of which are of good Perpendicular work, others of late Italian work. The church is very neatly pewed, and has a large organ at the west end. At the east gable is a good stone (?)cusp. The church yard abounds with practical epitaphs, and among others is a beautiful one beginning "Forgive blest (?)shade" which has been finely set to music by Callcott. [I think the composer's name is Callcott, but of course Sir Stephen might have spelled it incorrectly]

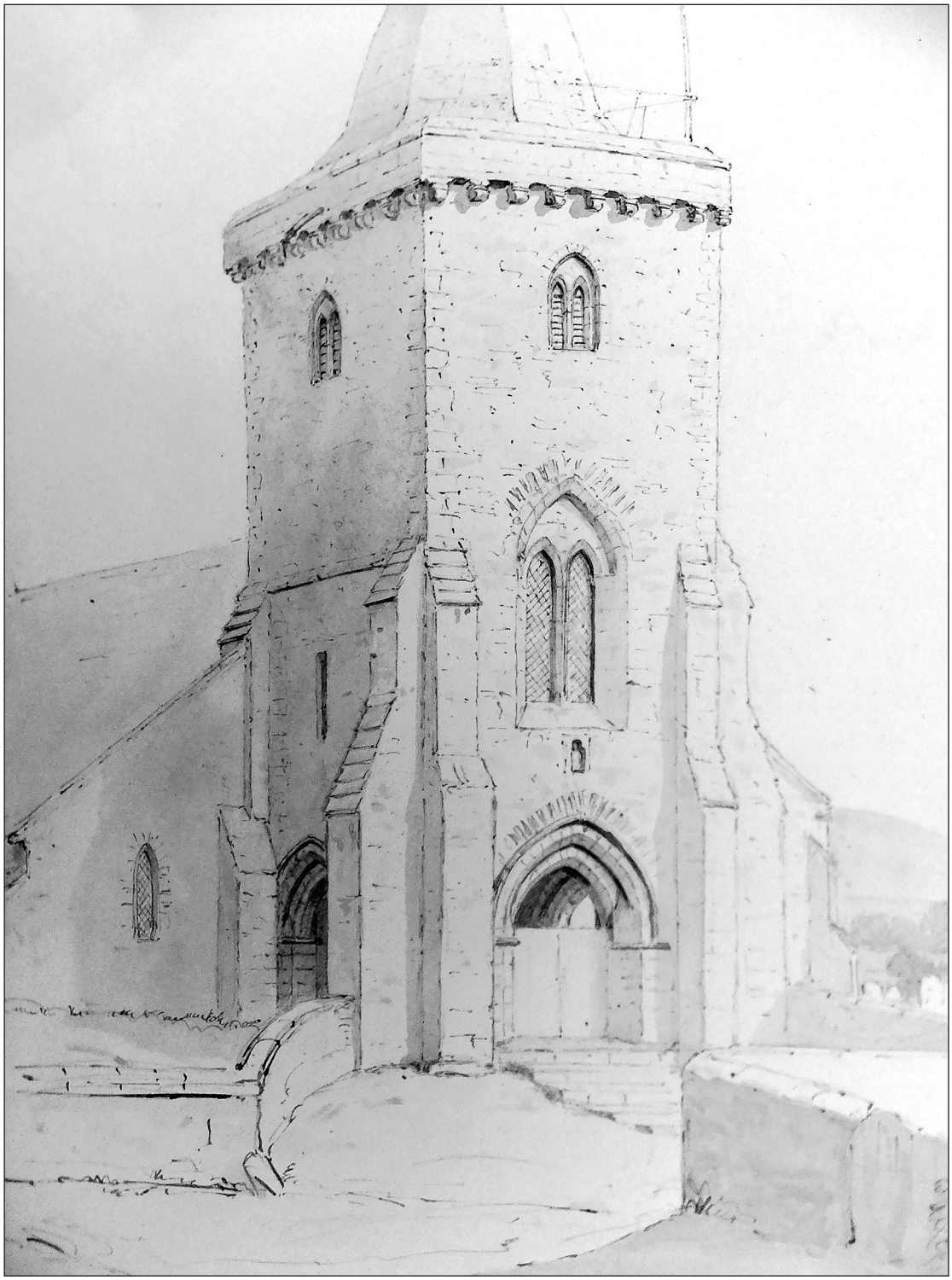

Figure 4: Sir John Gardner Wilkinson- Brading church tower:
'The tower is supported upon 4 open pointed arches which form a kind of west porch.
It has a belfry window of EE appearance and a plain parapet. It is surmounted by a short stone spire'.

From Brading we passed on to Yaverland having a fine sea view all the way. Yaverland contains a small church surrounded by a grove of yew trees, with some Norman work but we did not examine it. The parsonage house is ancient and stands in a beautiful garden and covered with creepers. After this the face of the country is changed - we came into open downs with but few trees. The sea view is now much more magnificent than it had been before, as it was always somewhat confined and bounded by land till the present noble prospect. This part is called Sandown Bay, and has for its left form the promontory of Bembridge with the white Culver Cliffs. The country is bleak and bare for some time but afterwards it gets gradually less open till we arrive at the delightful village of Shanklin which consists entirely of beautiful cottages covered with vines and creepers, and mostly let out for lodgings. They are scattered about in no regular order, nearly (?)whole way to the sea, and some are delightfully placed just at the opening of that romantic work of nature, Shanklin Chine, which is a chasm in the rock very narrow at its beginning and gradually getting wider till it meets

the sea shore. The [ ] opening to the sea shore is very wide and beautifully wooded, and in it some pleasant cottages. A delightful walk extends on a ledge of rock by the side of the chine and terminates at a fine cascade. The church of the delightful village is a humble and unassuming structure of small dimensions, consisting only of a nave and chancel with a small wooden turret at the west end. The windows are mostly plain lancets with trefoil heads - others have square heads and the eastern one is Perpendicular.

We spent this evening at the Shanklin Hotel which is formed of three cottages thrown together, and is a very comfortable place for lodgings. The house is covered with creepers and vines as most of the cottages are in this country.

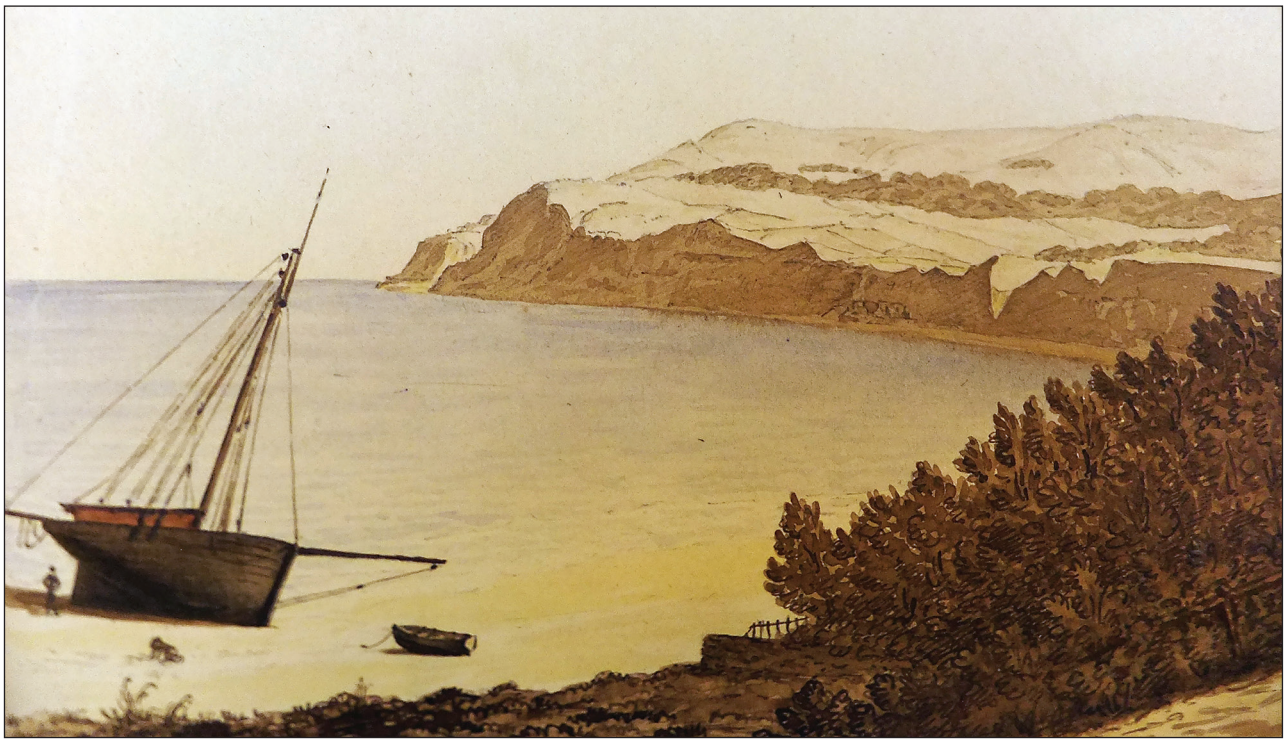

Figure 5 (above): Sir John Gardner Wilkinson - Sandown Bay: 'The sea view is now much more magnificent than it had been before, as it was always somewhat confined and bounded by land till the present noble prospect'.

Figure 6 (left): Sir John Gardner Wilkinson - Shanklin church: 'The church of the delightful village is a humble and unassuming structure of small dimensions, consisting only of a nave and chancel with a small wooden turret at the west end'

Figure 7: Sir John Gardner Wilkinson - Shanklin Chine: 'Shanklin Chine, which is a chasm in the rock very narrow at its beginning and gradually getting wider till it meets the sea shore'.

October 4th This also proved a very bright and pleasant day which was particularly fortunate for our tour. The roads in the Island are generally extremely bad and impassable for a carriage larger than the cars which may be hired. The road which we took was of this character, but commanded very fine sea views, together with pleasing land scenery. At Luccombe we left the carriage and walked as far as Bonchurch. Luccombe Chine is a chasm something similar to Shanklin, but not quite so romantic. It is mostly covered with low brush wood and has a rough and wild appearance. From thence to Bonchurch is a charming walk, there begins what is called the Undercliff the scenery of which is of a particularly singular and wild appearance. Great heaps of rock are seen scattered about and frequently covered with luxuriant ivy - there is also much brushwood and low trees. The Undercliff was originally formed by [ ] the subsidence of the rocky hill, and thus was formed the ledge on which runs the present road. On one side appears a line of rocky hills almost perpendicular, but of craggy and rough appearance. On the other side is a steep precipice of the base of which is the sea. The whole is singularly romantic, and presents varied scenes, there being many villages, woods and delightful cottages in the Undercliff. The village of Bonchurch is probably one of the most romantic and beautiful in England. It consists of beautiful cottages scattered about partly on the declivity[or sic] of the rock, partly in the hollow and the whole interspersed with very thick wood. The cottages are adorned in the manner before mentioned with vines and all kinds of creepers, and there are many which would form very delightful summer residences. The parish church is a very small and humble fabric, which at a little distance would not be taken for a church. It is very low and consists of a body and chancel without either tower, or steeple of any kind. It has some EE lancet windows, and others quite plain with round heads. The south doorway is semicircular and of rude Norman work. The whole has an air of rustic simplicity which is very pleasing.

Having emerged from the enchanting scenes of Bonchurch we came upon St Boniface Down. Further on is Ventnor where there is a very nice looking [sic?] in commanding a fine sea prospect. About a mile beyond Ventnor is Steephill Cottage a most charming villa belonging to Lady [ ], having beautiful gardens commanding fine sea views. Near the house is a beautiful spring which keeps always full and stone bevel cut in the form of an escallop shell. A mile beyond Steephill is the village of St Lawrence prettily interspersed with trees and containing some neat cottages. But the principal

feature of the village is its singularly diminutive church, which is far too small for the population of the parish, although that is not great. The church only measures 20 feet in length and 12 in breadth and height proportionate. It seems strange that any one should ever have built an edifice of such ridiculous dimensions for a parish church. It consists of a single aisle with an arched turret at the west end containing a bell. The windows are mostly small lancets. The eastern one is filled with painted glass. South of the altar is a plain pointed niche. The font is not in proportion to the church being of large size - of square form on a square pedestal. This little church is kept in an extremely neat condition and the exterior has some ivy which gives a pleasing appearance.

Figure 8: Sir John Gardner Wilkinson- St Lawrence church: 'But the principal feature of the village is its singularly diminutive church, which is far too small for the population of the parish, although that is not great'. The church was enlarged in 1842 shortly before Wilkinson produced this watercolour.

Beyond this village the scenery continues much the same. On the top of the high rock on the right are extensive open downs. Numerous cottages and villas are seen near the road, and the sea views continue to be very fine. At length we reached the Sand Rock Hotel situated about a mile from the village of Niton and about half a mile from the sea. This was where we were to stay for the night. The external appearance of the house is very interesting, having an open colonnade before the lower windows and being beautifully covered with creepers. The house unfortunately happened to be very full which in a great measure destroyed the comfort which it might otherwise have afforded. We walked to the mineral spring which is a mile distant and called the Sand Rock Spring - it issues from a rock at a considerable height above the sea. The spring is very disagreeable to the taste and contains a great deal of alum [ ]. From there on by winding paths among the rocks we descended to the sea shore and in a short time came to Black Gang Chine which has a grand and awful appearance. It is a rugged chasm in the rock and from the dark colour of the soil has a black appearance - down its sides are some streams, and the whole is completely bare and naked, not a tree or plant growing in the chine. It has a bold and wild appearance, although quite destitute of picturesque beauty. Ascending the rock we got upon the high downs from whence there is a most magnificent sea view which appears boundless. The white cliffs of Freshwater form a feature in the distance. Having walked some way along the downs we came in sight of Chale church, to which we hastened and examined. It stands in a bleak position, there being but two trees around it, and not many houses. The church consists of a nave, chancel, south aisle, and tower at the west end of the nave - the tower is of Perpendicular work - is embattled and crowned with 4 crocketed pinnacles, and has a staircase turret at the N.E. corner. It has a good string course, and at the west end a very good Perpendicular window - and doorway with deep mouldings, with a dripstone returned and continued round the buttress. Round the base of the tower is a very good band of panels and quatrefoils. The tower is open to the nave by a pointed arch. The nave is divided from the south aisle by pointed arches springing from circular

pillars with square capitals. One of the pointed arches has architrave mouldings, the other is quite plain - the western arch is low and segmental. The chancel is divided from the south aisle by a plain semicircular arch. The door which then opened into the rood loft may be seen between the nave and chancel. There are several Perpendicular windows with square heads. The east window of the nave seems very early Decd - it is of 3 lights within one pointed arch - the lights have trefoil heads and between their heads are trefoils. At the west end of the south aisle is a plain window with a trefoil head. The font is attached to the western pier of the nave - it is octagonal and entirely plain.

We returned to the hotel over the downs, but did not ascend St Catherine's Hill from whence there is said to be a most magnificent view over the whole island. This hill is about ¾ of a mile from Chale church and is almost in a line between it and Niton. The Sand Rock Hotel is seated immediately under the cliffs at the top of which are the high downs.

October 5th We again had the infinite satisfaction to see a bright and fine morning. This was to be the last day of our expedition and we were to reach Yarmouth - and from thence to embark for Lymington. Setting off at an early hour we passed first through the village of Niton a mile distant. The church of the village consists of a nave with south aisle, a chancel, and tower at the west end. It had formerly a north aisle, as may be seen by the arches on the north aisle walled up. The tower is plain and has a door like that of Chale, and is surmounted by a short stone spire ribbed at the angles. The nave is divided from the south aisle by 3 wide plain obtusely pointed arches with massive round piers having round capitals. The piers of the north aisle had square capitals. There is no clerestory and the windows are mostly perpendicular with square heads and labels. The door to the rood loft remains. The chancel is divided from its aisle by a wide pointed arch. The font is circular with a rope moulding round the top - it is attached to a pillar as that at Chale. The south porch is within arched with stone. The east window of the chancel is of 3 lights within one pointed arch.

There is much resemblance in the architecture of most of the churches in the Island and they are all built of the same stone which is of a rough appearance. Leaving Niton we proceeded by Chale, and over some bare country to Kingston. The sea views are [ ] but one can not help remarking that there is a very great [missing word?]of this in this part of the Island. The villages are in many cases very pretty and have fine trees. The village of Shorwell to which we came next is situated in a valley and very delightful, being full of trees and gardens. Near to it are two very large and handsome old houses.

Shorwell church (St Peter) is one of the neatest and best in the Island. It consists of a nave and chancel with side aisles, and a tower at the west end crowned with a stone spire which though not very lofty is the highest in the Island. The tower is Perpendicular and has a square staircase turret on the north side, which seems common to all the churches of the Isle of Wight. The west window in the tower has somewhat of Decorated character and the belfry windows have plain stone lattice work. The south doorway is pointed and has EE shafts with a dripstone moulded with the toothed ornament. The windows of the whole church have an appearance of Decd work. The nave is divided from its north and south aisles by pointed arches springing from octagonal pillars - in the chancel the pillars are circular but have octagonal capitals. The pulpit is of stone, and good Perpendicular work, being ornamented with panelling and tracery. The font is octagonal and attached to one of the piers on the south side of the nave, as those of Chale and Niton. On the cover is the following passage from scripture 'And the Holy Ghost descended in a bodily shape like a dove upon him' Luke 9.1.22. In the chancel is a good brass to Sir Richard Bethell formerly vicar of this church. The inscription runs thus and in black letters – 'of [ ] charity pray for the soule of Sir Richard Bethell late vicar of this churche of Shorwell [ ] whiche decesed the XXIIII day of marche the yer of our lord MDXVIII on whose soule [ ] have mercy'. In a chapel at the east end of the north aisle are several gorgeous Italian monuments to the Leighs mostly of the age of Elizabeth. There are also some modern monuments in the south aisle of the chancel. The tower has a good stone groined roof open to the lower storey and contains 3 bells. On the north side of the tower is a kind of shed which is common to most of the churches in the Isle of Wight and in many cases appears to be of no recent date.

From Shorwell the road lay over a dreary country with the sea on the left at about a mile's distance, and upon the right were high open downs. The next village was Brixton, where we breakfasted comfortably at the New Inn.

The church at Brixton is a tolerably large and good structure, and kept in a state of great neatness. The church consists of a nave, chancel, south aisle and tower at the west end of the nave. The tower is very plain having a battlement and string course of Perpendicular character, a square turret on the north side, and a short leaded spire. The church is divided from its aisle by pointed arches with octagonal piers. The chancel is divided from its aisle by pointed arches with piers of a lozenge form having a shaft at each angle. The windows are chiefly square headed, with labels and of tolerable Perpendicular tracery. But there is one very strange window at the east end of the south aisle, which may probably be a recent work or alteration. It consists of 5 lights, the three (?)central of which are contained within a pointed arch, but the two external ones are much shorter and not included under the arch. Over the whole is a large pointed arch, with slight curvature. The font is octagonal, on an octagonal pedestal and very plain. The south door is pointed and moulded with plain dripstone. The north door has E.E. shafts. There is here on the north side of the tower the shed before mentioned. The tower contains 5 bells.

The next village was Mottistone about 2 miles distant. This contains a small church of mean external appearance but not within. It consists of a nave, with narrow north and south aisles, a chancel, a plain south porch, and a tower of very rude workmanship at the west end, and surmounted by a heavy wooden spire of no graceful appearance. The tower is of rough stone, and has a plain belfry window. On the north side is a shed. The interior is neat although plain and humble. The nave is divided from each aisle by pointed arches with octagonal piers having square bases. The chancel has a north aisle from which it is divided by obtuse Tudor arches with lozenge piers having shafts and capitals of octagonal form. These appear to be Perpendicular. The east window of the chancel is good Perpendicular having a dripstone with squares at its extremities containing roses and shields. The rest of the windows in the church have square heads, with labels and are mostly of two lights. The font is a large square, with round shafts at the angles. In the steeple is only one bell. It may be observed that all of the churches we saw in the Isle of Wight not one had a clerestory. This church is somewhat damp within.

About a mile beyond is Brook church, a small but very neat edifice, the greater part of which has been entirely newly done up and almost rebuilt in a very neat although not entirely correct manner. The church is prettily situated on a small eminence and is a small structure consisting of a single aisle with a chapel on the north side, and a low embattled tower on the south side which forms a porch. The whole church is wainscoted within, and the ceiling panelled and neatly painted. The windows are of a bad modern (?)side. The chapel on the north is the burial place of the Bowerman family.

After examining this church we pass over Brook Down a very extensive open down without any trees, and at a very considerable height above the sea. The road is up an extremely steep hill for some time, and from the summit is a most extensive and grand view over a great part of the Island, and a magnificent prospect over the wide expanse of the sea. The white cliffs of Freshwater form conspicuous objects, and on the other side appear the village and church of Freshwater, the town of Yarmouth, and the channel beyond it with the coast of Hampshire and town of Lymington, Hurst Castle, and an extreme but somewhat base prospect over those parts of the Island between Yarmouth and Newport. After some time we arrived at Freshwater gate where there is a small but good inn. The sea was very rough and had a very grand appearance, with its foam waves dashing against the rocks. From this place, having left the car, we proceeded on foot over the high downs on the top of the cliff, in order to see Alum Bay. We walked over these downs for two miles and a half before reaching Alum Bay. The walk is tedious and fatiguing from being so much up hill. At the extremity of the land in this direction is the Needles Lighthouse 3 miles distant from the Inn - and just off the point are the rocks well known by the name of the Needles to which we did not go, as there was a good view of them from Alum Bay. The great curiosity of this bay, is the curious colours of the sand which forms the cliffs surrounding it. There are many different shades from deep red to pure white which have a very singular and beautiful appearance. The sea view is also very extensive and magnificent. The Isle of Portland is just visible in the distance, and the cliffs of Purbeck, and the bay of Christchurch, and the castle of Hurst situated at the extremity of a very narrow neck of land running into the sea, form objects in the near view. The lofty tower of Christchurch may also be distinctively seen.

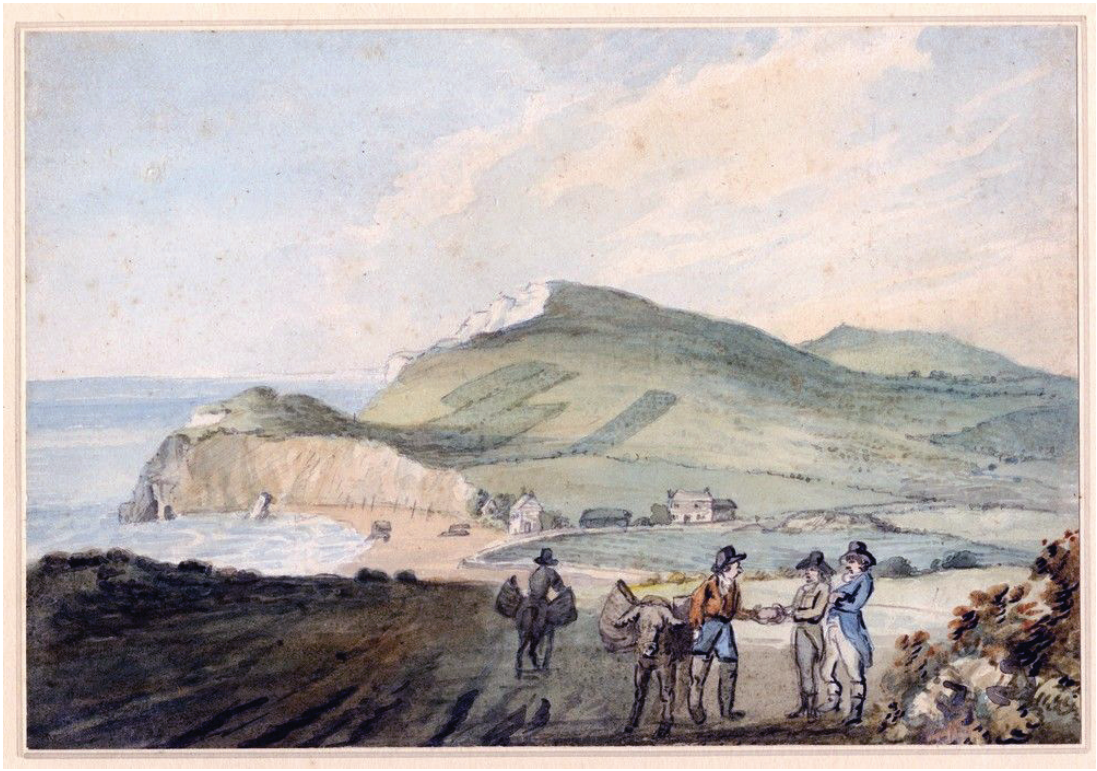

Figure 9: John Nixon - Freshwater Bay: 'After some time we arrived at Freshwater gate where there is a small but good inn. The sea was very rough and had a very grand appearance, with its foam waves dashing against the rocks'.

Having returned to Freshwater Gate we set off again for Yarmouth which we reached after passing through some tolerably pretty country, but not particularly interesting. Yarmouth is a small town, much decreased in size and consequence, and now containing little remarkable. The town is tolerably neat but the streets are mostly narrow. The church has not much beauty either externally or internally. It consists of a nave with side aisles, a chancel, and a plain and very low tower at the west end, with an embattled parapet. The roof of the body is high, so that the west tower rises but a little above it. The nave is divided from the north and south aisles by high pointed arches springing from octagonal piers. The windows are mostly Perpendicular with square heads but there are some narrow ones with obtuse heads. In a small modern chapel built on the south aisle of the chancel is a sumptuous monument to Admiral Sir Robert Holmes who died in 1692. The figure is full length and well executed. The pulpit has a good carved sounding board, and an iron stand for an hour glass.

October 6th We left Yarmouth and passed over in the packet to Lymington – the passage tolerably good and although the morning was gloomy and unpromising, yet it did not absolutely rain during the passage, but afterwards .....

Figure 10: Charles Tomkins- Yarmouth church: 'The church has not much beauty either externally or internally. It consists of a nave with side aisles, a chancel, and a plain and very low tower at the west end, with an embattled parapet'.

Acknowledgements

I am grateful to the staff of Gladstone's Library for arranging for me to view and photograph all of Sir Stephen Glynne's notebooks relating to the Isle of Wight. Sian Morgan was especially helpful in answering my queries and providing an electronic copy of the catalogue of Sir Stephen's notebooks. Thanks are also due to Chris Rowlin, National Trust Rights Manager, for permission to reproduce the illustrations produced by Sir John Gardner Wilkinson, to the staff of Bodleian Library for providing access to Wilkinson's notebooks, and to Carisbrooke Castle Museum for providing digital copies of the two Nixon watercolours and permission to reproduce them. I am also grateful to Rosemary Cooper for proof reading and suggestions for improving this paper's presentation.

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A HISTORY AND NATURAL HISTORY OF GOLDEN HILL, FRESHWATER, ISLE OF WIGHT

Colin R. Pope

Figure 1: From Golden Hill Country Park looking across to the Western Yar valley

Introduction

Golden Hill is a low hill rising 50m to the west of the Western Yar between the settlements of Freshwater and Norton Green affording wide ranging views of the West Wight. The site comprises a nineteenth century military garrison, with later additions, surrounded by open ground. The garrison has been converted to housing whilst the surrounding open ground is now a Country Park, one of the first to be designated in the country.

From an early date, Golden Hill was common land for grazing sheep, collecting timber and furze (gorse) for fuel and for providing a supply of clay. To the west lay the extensive Colwell Common and to the north, Norton Common. The soils of Golden Hill comprise the calcareous silty clays of the complex Headon Hill Formation, with an area overlain by the superficial deposits of the Freshwater Gravel Member. The area of gravel deposits has a poor, slightly acidic soil resulting in a heathland landscape from which the nearby Heathfield Farm and Heathfield Lane derive their name. The clay components on the high ground are poorly drained and the land here is seasonally wet resulting in cycles of very dry, hard ground and wet boggy areas. The tithe map of Freshwater (23rd August 1837) shows Golden Hill lies within a land parcel called Pound and Middle Gouldings and the land use was described as principally 'rough' or 'furze' (Margham 2011).

Various suggestions have been put forwards to explain the origin of the name Golden Hill. One of the most popular refers to the abundance of gorse or furze giving a golden colour to the hill early in the season. Indeed, Bromfield (1856) refers to the site as Furzy Goldens. Another suggestion was that the name refers to an historic landowner, Gauden. However, Kokeritz (1940) records the earliest reference in 1299 as *Gauldoune*, which occurs in a royal survey, and concludes, "Its first element seems to be Old English for gafol 'payment, tax,' as in Gaveldone ... the land on the down was apparently subject to some kind of tax." The place name element 'dūn' is an Old English term used to signify 'a hill', later becoming the Middle English word 'doun' – 'a hill, an expanse of open hill-country'. Hence Gaveldone would have been the hill subject to tax. In a royal survey of the manor of Freshwater in 1608, the area was referred to as "The Gauldon Common" and was used as pasture for sheep.

Fortifications

The Freshwater area was sparsely populated and pastoral in the 1850s and 1860s, but then saw a significant increase in the population accompanying the building of forts in the 1860s. The West Wight underwent a plethora of fortification building after the French invasion scare of 1859. The French navy was already building iron clad warships which required much heavier artillery to pierce the hull. In addition, heavily armed warships had to be prevented from penetrating too

close to the shore from where they could bombard land targets. The Isle of Wight forts were the first in line to protect Portsmouth dockyards.

Golden Hill occupied a prominent position giving magnificent visibility from the Channel to the Solent. In 1862, the War Department bought an extensive area of poor grassland and rough gorse on which to build the fort and in 1863, construction began with the excavation of a large hexagonal hole. The clay sub-soil was cast up at the edges of the hole and spread down the slope on all sides. This slope suffered from poor drainage and between 1864-86, large sections of it slipped into the moat. Brushwood and clay drainage tiles were introduced to cure this subsidence issue. A sunken hexagonal two-storey barracks was built in brick on the floor of the hole, around a central parade ground. The fort was constructed such that its flat roof, which acted as a gun and small arms platform, was level with the surrounding ground level. As with many barracks, the fort was hidden from public view. The building was completed in 1867. A brickworks was established on the eastern edge of Golden Hill next to Copse Lane in the mid 19th century and may have been constructed to produce the red bricks used to build the fort, using clay dug up during construction.

Golden Hill Fort was built as a principal base for the garrison covering the two main coastal forts of Fort Albert and Fort Victoria, supplemented by batteries along the coast between the Needles and Fort Victoria. It also served as a protective defence and as a training centre for various military units.

It accommodated 8 officers and 128 men and had its own hospital which could hold 14 patients. The military hospital was located on the opposite side of Colwell Road, outside of the current Golden Hill park boundary. Further information can be found in Cantwell & Sprack (1986).

When the fort was built and whilst it was operational, the surrounding vegetation was cleared to allow an uninterrupted and free field of fire all around for some distance. Livestock may have been used to keep scrub growth in check. However, many forts encouraged the growth of thorny shrubs around the immediate perimeter to act as a further barrier.

Figure 2: Golden Hill Fort viewed from the entrance off Colwell Road around 1900. The surrounds of the fort are open grassland (presumably grazed) and gorse scrub. Some of the supplementary buildings on the right survive as industrial units. Photo taken by Frederick Broderick junior.

Supplementary buildings were added during the First and Second World Wars, principally on the northern slope and including buildings now on the light industrial estate. Subsequently, Golden Hill became the headquarters of the Needles Fire Command from 1932, and a training centre for Territorial gunners. The site provided accommodation for a number of military units during the Second World War. From 1941, the fort also served as one of the three Island supply depots for the Royal Army Service Corps (the others were at Ryde and Albany Barracks) and, in 1945, it was employed as overspill barrack accommodation for the men of 42 Water Transport Unit RASC. The Corps' Water Transport Training Company took over both forts in 1946 and Golden Hill was used by the WTTC until the fort was given up in 1962. (Searle 1989). Golden Hill Fort (buried remains and outer defences) was listed as a Scheduled Monument by Historic England in 1976.

The Country Park

The Army relinquished the fort in 1962 and the premises were sold in 1964 when the fort was converted to an industrial estate for light industry. The land surrounding the fort was acquired by Freshwater Parish Council and an article published on 23rd November 1968 in the Isle of Wight County Press announced that, 'work will commence shortly on what has been described as the most ambitious project ever undertaken by an Island parish council – the transformation of approximately 60 wasteland acres of scrub and brambles into an attractive natural park.' The plan was to turn it into a country park. It was officially opened as a Country Park in 1970 under the Countryside Act 1968 with the support of the Countryside Commission, one the first in the country. In 1984 the fort was converted to a tourist attraction with a tea room, a pub and museum. For a period in the 1990s, Golden Hill became a notorious open-air party venue, *impromptu* raves at which drugs circulated were organised. Subsequently, it lay empty and derelict for many years. Planning permission was

granted in 2003 for conversion to residential use. It was converted to 18 dwellings between 2008 and 2011. Some of the surviving outbuildings to the north of the fort are now used as workshops.

Golden Hill Country Park occupies an area of some 20 ha. The extent of this land today is the same when Golden Hill Fort was operational. The field to the south of this land, which lies outside the park, is shown as plantation on 1946 map and remains as plantation/rough ground today although many of the trees have been cleared. At the time that the Parish Council acquired the land surrounding the fort, a report described unauthorised dumping and burning on the site and stated that 'there has been little to stop farm animals straying over the area, or the passage of tractors, lorries and motorcycles, and even poachers have not been unfamiliar figures.' A detailed plan for the development of the Country Park was drawn up by Mr. R. J. (Bob/Noddy) Streets, a retired Forestry Commission officer living at Gotten Manor Farm, Chale. He was commissioned for a three year period to get the project off the ground. He had a clear idea as to what he wished to see and, as his background was in forestry, it is not surprising that his plans included planting a tree-lined avenue on the road approach from Colwell Road, planting groups of trees and shrubs and the creation of tree-ringed vistas on the four best view points on the contour track around the fort. He wanted to screen the fort with 'a broken belt of fast growing conifers (pine, cypress and larch). Mr Streets also stated that 'The preservation of wild life should be ensured by the prohibition of gun carrying, trapping of animals, collection of eggs, and the removal of plants. Personally, I would like to see some ecological studies made of both flora and fauna, preferably by local schools, the reports on which could be submitted to the council as a guide for future policy.'

Golden Hill was opened as a Country Park in 1970. A mounted plaque at the entrance to Golden Hill says: 'Golden Hill Park was officially opened by his Excellency Admiral of the Fleet The Earl Mountbatten of Burma K.G.P.C. G.C.B. O.M. G.C.S.I. G.C.L.E. G.C.V.O. D.S.O. F.R.S. Governor of the Isle of Wight on 4th July 1970: European Conservation Year.' In the same year, Freshwater Parish Council set up a Management Committee, chaired by Harry Chandler. The newly established Isle of Wight Council Countryside Management Service gave advice and carried out much of the practical management.

Figure 3: Left: Mounted plaque to commemorate the official opening of the Park in 1970.
Right: Entrance to Golden Hill Country Park in 2018 from carpark with Gift to Nature information board.

The Parish Council planted many trees on the site from 1969 and in subsequent years. 1973 was a tumultuous year in Britain. Galloping inflation had led to the imposition of a three-day working week, there were powercuts and trade unions were constantly in the media. Government funded schemes to help the unemployed included work experience tree planting projects. This was at a time that huge numbers of elms in the countryside were succumbing to Dutch Elm Disease. The Government supported a national tree planting year which became known as the 'Plant a Tree in '73' campaign. The objective, to remedy a general lack of young, non-woodland trees, was wholly laudable but the campaign was unduly hurried. Many organisations, including local authorities, youth organisations, schools, businesses and communities supported the campaign by planting or donating trees, or making land available. The Forestry Commission donated some 90,000 trees to schools and a further 70,000 for joint projects with local authorities, as did other organisations including the Crown Estate Commissioners. There were difficulties about where the trees to be planted were to come from, the workforce often did not have the skills to plant trees properly and there was little or no aftercare.

At Golden Hill Country Park, a mix of tree species were used and many of those planted in the early days failed to survive. Groups of Monterey Pine (*Pinus radiata*) and Macrocarpa (*Cupressus macrocarpa*) survive around the perimeter walk around the fort, and a few remain alongside the approach road. Elsewhere, most of the planted trees are located north-east of the car park. Here there are Poplars, several Italian Alder (*Alnus cordata*), Norway Maple (*Acer platanoides*) and Wild Cherry (*Prunus avium*). There are two Algerian or Mirbeck's Oaks (*Quercus canariensis*) near the entrance to the Park; this is an oak which keeps most of its foliage over winter. There are still a few Rowans (*Sorbus aucuparia*) but they are in poor condition. A group of Apples (*Malus* sp) were planted on southern slope by western upper walk and some of these survive.

Elm was frequent along the southern boundary of the park and suffered heavily from Dutch elm disease. Today, many suckers here are again growing quite tall but will eventually succumb to the disease.

Figure 4: Left: 'Plant a Tree in 73' Campaign logo Right: Golden Hill moat around fort and group of Monterey Pines, Pinus radiata, planted around the fort perimeter walkway.

In addition to planting trees, another pre-occupation in the early days of Country Park was fire. There was an extensive gorse fire on the south-eastern part of the site in the summer of 1972. The resultant charred stumps were ploughed in, bringing the yellow clayey subsoil to the surface and burying the thin, acidic humus layer. In order to try to contain any future fires, large blocks of scrub were broken up into smaller patches by cutting firebreaks through them.

Mr Streets had suggested in his original report that he would like to see ecological studies carried out and submitted to the council as a guide for future policy and both Freshwater Parish Council and the Isle of Wight Council began to appreciate the need for this.

A general meeting of the Isle of Wight Natural History & Archaeological Society, led by Edwin Burn, a local resident from The Sheilings off Heathfield Road, was held on 19th May 1985 to carry out a general survey of Golden Hill following a request from Freshwater Parish Council. The report of the meeting in the Society's Bulletin (Bulletin No 3) said that about 30 members attended. 'Mr Burn then appointed ten leaders, showed them a section each, and after the rest of the members had divided themselves between the ten leaders, the survey began. The botanists were very excited about some of their finds; several species of birds were seen and heard including the nightingale; a few butterflies were observed and some larvae found. All sections returned to the Fort to hand in their reports and enjoy a cup of tea in a well-appointed area in the complex.'

Subsequently, the Society produced a report on the area and a management plan (Pope 1985). In 1987, the Isle of Wight Council commissioned Dr Bob Gibbons, botanist and ecologist previously employed by Nature Conservancy Council, to produce a report comprising an assessment of the site and management proposals.

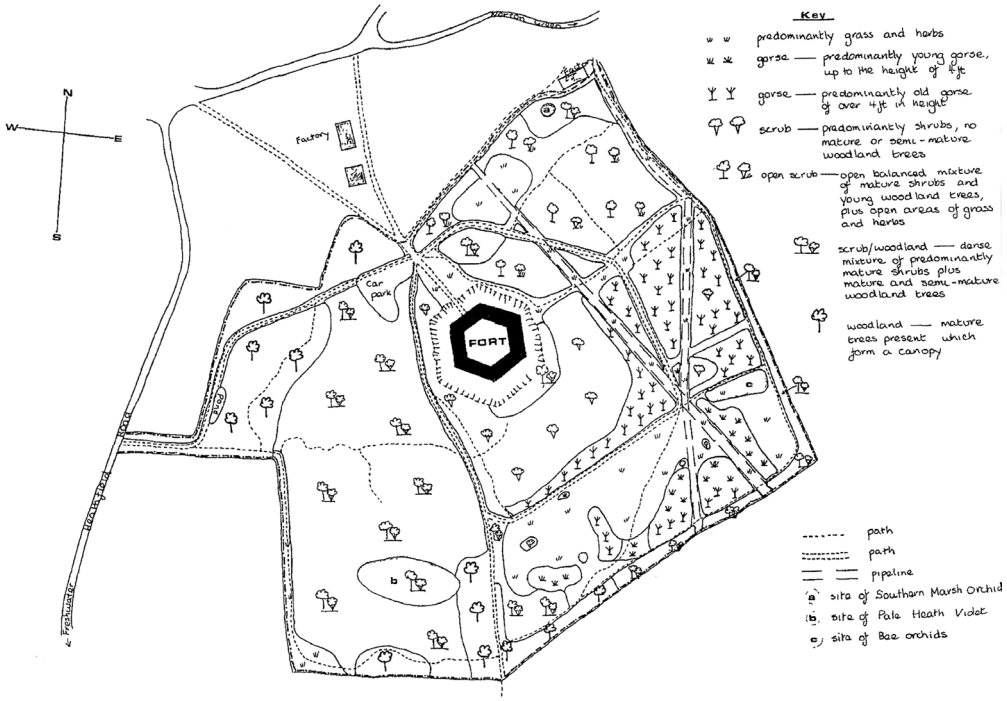

Figure 5: Bob Gibbons Vegetation map of Golden Hill (1987)

Bob Gibbons concluded 'Overall it is difficult to find another site with a similar range of species and characteristics and I would rate it as an important site, close to SSSI status. It could undoubtedly be improved and enhanced by sympathetic management.' The site comprises a mix of grasslands, secondary woodland and scrub, each with different management requirements. The management recommendation for the grassland was sheep grazing using electric fencing but he appreciated that this might be difficult to implement. Grazing was never introduced to the site but the grassland was maintained by cutting and removing the aftermath at the end of the season. In addition, management has involved cutting and keeping open rides through the scrub blocks to act as fire breaks.


Figure 6: Left: Wooded northern aspect of Golden Hill dominated by trees planted in the early years of the park. Right: Southern slope of Golden Hill comprising species-rich grassland affording fine views.

The vegetation map prepared by Bob Gibbons for the site (1987) shows that blocks of Gorse dominated the south-east quadrant of the site and that most of this was 'old gorse over 4ft in height'. This is where most of the gorse is situated today, but it could no longer be described as a feature of the site. When the Council's Countryside Management Service began managing the site, large amounts of Gorse were cut, and rejuvenated, in the south-east of the park. This has not happened for many years and the blocks of gorse have developed into blocks of mixed scrub with Gorse present as an occasional species, mostly around the edges. This natural succession is as a result of long term lack of gorse scrub management. Around the north-eastern boundary, the perimeter hedgerow has grown up into woodland.


Figure 7: Left: Area of once gorse-dominated scrub on south-eastern slope now developing into mixed scrub. Feb 2019
Right: Area of recently cut scrub showing dogwood regrowth amongst prolific teasels and thistles. Nov 2018.

Woodland has developed on land to the west of the fort. In the 1980s, there was an understorey of dead and dying gorse and thorn scrub, indicating that this woodland had developed over originally more open ground. Indeed, the southern half of this woodland was known to be open ground in 1970. There are also three ponds here. Some of these may originally have been survivors of earlier diggings for clay when the ground was open; there is reference to ponds here in the 1850s. In more recent years, conservation volunteers have dug out some of the ponds. One pond, alongside the footpath from Heathfield Road (F14), formed along a springline when quantities of yellow clay were deposited alongside of the re-routed footpath at the time that new housing was being built off Heathfield Close. Today the ponds are fairly shaded, reducing their wildlife value. Of greater concern, they have become dominated by the invasive alien, New Zealand Pigmyweed (*Crassula helmsii*) which is a very difficult plant to control (Fig. 8).

Figure 8: Pond at Golden Hill dominated by New Zealand Pygmyweed, Crassula helmsii. May 2018

The management regime of cutting the grassland at the end of the season, removing the arisings and maintaining the fire breaks has been continued by Gift to Nature, who took over the management of the site from the Council in 2016. This has succeeded in arresting the incursion of scrub and has allowed the majority of the rich grassland flora and many of its associated invertebrates to survive. In 2018, Gift to Nature produced a management plan for the site to accompany funding bids aimed at improving facilities at the Country Park and enhancing management. Rotational cutting of scrub blocks is now being considered in addition to the on-going grassland management.

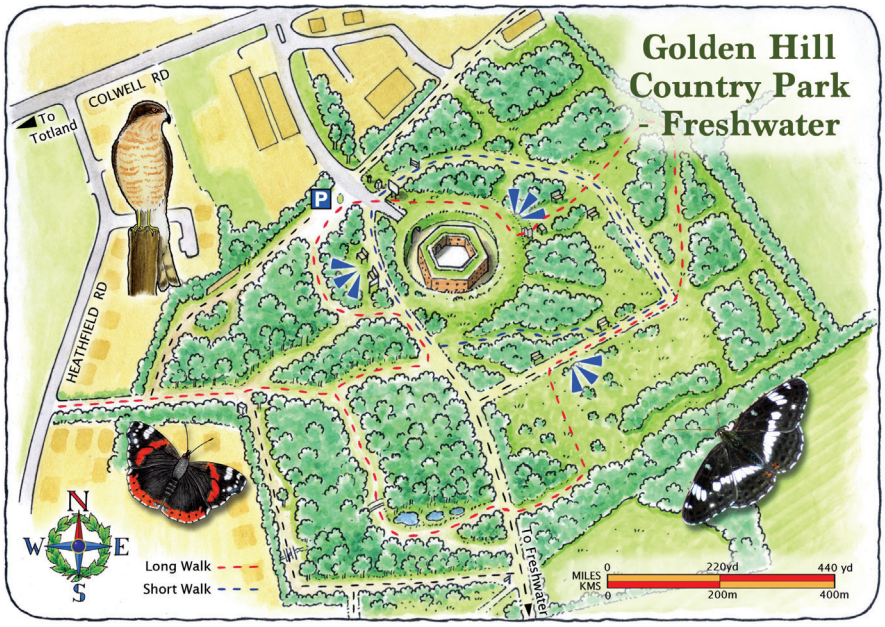

Figure 9: Plan of site by Gift to Nature

Botanical exploration of Golden Hill Country Park

There are very few early botanical records for Golden Hill. Whilst Golden Hill Fort was operational, it was probably out of bounds to the general public. Ordnance Survey maps published in 1899 and in 1908 show military roads constructed over Golden Hill but the fort itself is not shown at all and appears as a blank space!

The earliest botanical record relating to the general area of Golden Hill was a record of Bristle Bent grass, *Agrostis curtisii,* recorded in Snooke's *Flora Vectiana,* published in 1823 and located at Hill Farm. Dr William Bromfield records three scarce aquatic plants of interest in *Flora Vectensis* (1856). Lesser Marshwort, *Apium inundatum,* was found 'in a pool on a common at Goldens in Freshwater parish'; Marsh Speedwell, *Veronica scutellata,* was recorded from the 'edges of a pool on a common called Goldens, Freshwater'; and Lesser Water-plantain, *Baldellia ranunculoides* was probably growing in the same place, 'in a pool on a large furzy common called Goldens, Freshwater'. These plants are characteristic of lowland nutrient-poor (oligotrophic) water bodies on sandy, acidic sites such as still survive today in the New Forest. There are three pools, now largely overgrown within secondary woodland, on the western side of Golden Hill approached from the footpath from Heathfield Road. It is possible that one of these might have been one of the ponds referred to by Bromfield.

In 1871, H.C.Watson recorded a few bushes of Barberry, *Berberis vulgaris,* 'in a hedge between Furzy Goldens and More Green' (More, 1871). He considered that they were probably planted.

There are two interesting early records of scarce wild peas. P.D. Radcliffe found Tuberous Pea, *Lathyrus tuberosus,* in 1838 on Golden Common and Frederick Stratton recorded Marsh Pea, *Lathyrus palustris,* from Golden Hill, Freshwater. It seems odd that two scarce *Lathyrus* species should both be present on Golden Hill. There are no other records of Marsh

Pea from the Island and no herbarium material survives to support the record. Tuberous Pea however, was recorded from a scatter of sites between 1887 and 1949, and there is herbarium material of collection from Totland made in 1931.

Charles Bailey collected specimens of Branched Bur-reed (*Sparganium erectum*) from a 'field pit in the neighbourhood of Golden Hill fort' on 11th October 1888.

Golden Hill began to attract the attention of botanists following the acquisition of the land by Freshwater Parish Council and the extensive gorse fire in 1972 which destroyed much of the gorse scrub on the south slope. Edwin Burn was particularly active in carrying out botanical surveys. It was he who led a Botany Section visit on 15th June 1974, 'to see how the flora responds to habitat', no doubt encouraged by Bob Streets' advice for ecological surveys to be carried out to inform the Council as a guide for future policy. The group discovered that an interesting grassland heath had developed over the burn sites supporting good populations of several local species including Pale Dog Violet (*Viola lactea*), Pill Sedge (*Carex pilulifera*) and Bristle Bent Grass (*Agrostis curtisii*).

The Flora of the Isle of Wight (Bevis, Kettell & Shepard 1978) was the first published account of the Island's flora for almost seventy years. It included the novel idea of a botanical calendar of sites to visit throughout the year to observe as much of the Island's flora as possible. Golden Hill was entered into the Botanical Calendar twice. It was recommended to visit the site on 7th May for the mixed flora, including some heath plants, Pale Dog-violet (*Viola lactea*) etc. On a return visit on 13th June it was recommended to follow the footpath from Heathfield Road through 'heathy copse' for Pale Dog-violet, Pill Sedge (*Carex pilulifera*), Spiked Sedge (*Carex spicata*), Bristle Bent (*Agrostis curtisii)* etc. Reference was also made to the extra-ordinary number of apple trees.

The grasslands at Golden Hill have always been the most botanically interesting areas of the park. Acid grassland, once more widespread, has become overgrown although some of the interesting species persist in areas kept open by scrub clearance. Bristle Bent has not been seen since 1992, but Pale Dog-violet (see below) and Spiked Sedge survive and, in 1998, Flea Sedge (*Carex pulicaris*) was discovered, another small plant typical of acid grasslands. These areas are probably associated with patches of gravel.

Figure 10: Left: Flea Sedge, *Carex pulicaris,* a heathland plant surviving at Golden Hill 22 May 2018. Right: Early Gentian *(Gentianella amarella* ssp. *anglica)* at Golden Hill. 20 May 2008.

There are old military foundations in the middle of the southern slopes which are believed to have been the kitchens and ablutions block, but the richest grasslands are now to be found here where the soil is thinnest, and the marls support a neutral to calcareous grassland. This is one of our few remaining grasslands communities on the Headon Hill Formation. It does not fit easily into any of the prescribed NVC grassland communities but is probably nearest to MG5 species-rich neutral grassland. Locally frequent species include Carnation Sedge (*Carex flacca*), Bugle (*Ajuga reptans*), Ground Ivy (*Glechoma hederacea*), Self-heal (*Prunella vulgaris*), Fleabane (*Pulicaria dysenterica*), Ox-eye Daisy (*Leucanthemum vulgare*) and Burnet-saxifrage (*Pimpinella saxifraga*) and Corky-fruited Water Dropwort (*Oenanthe pimpinelloides*). Dyer's Greenweed (*Genista tinctoria*) was formerly frequent; it is still present but is now restricted to a few patches at the southern end of the open grassland. In addition, the presence of a number of calcicolous species implies that there are more base-rich parts of the site where Quaking Grass (*Briza* media), Fairy Flax (*Linum catharticum*), Common Milkwort (*Polygala vulgaris*), Salad Burnet (*Poterium sanguisorba*), Yellow-wort (*Blackstonia perfoliata*), Early Gentian (*Gentianella amarella* ssp *anglica*) and Lesser Centaury (*Centaurium pulchellum*) occur. Wild Carrot (*Daucus carota*) can be found as a tiny plant hugging the ground (Fig. 11). The distinctive dwarf form may be associated with grazing by rabbits, which help to keep the grassland short in years that their numbers are high. Areas of slightly more acidic grassland have Heath Speedwell (*Veronica officinalis*), Heath-grass (*Danthonia decumbens*) and Cat's Ear (*Hypochaeris radicata*). Southern Marsh-orchid (*Dactylorhiza praetermissa*) is very much a feature of the site in May/June, particularly where there are seepages associated with springlines.

Interestingly, Bob Gibbons' botanical survey (1987) revealed a few plants of chalk grassland which have not been subsequently recorded. These were Kidney Vetch (*Anthyllis vulgaris*), Carline Thistle (*Carlina vulgaris*) and Dwarf Thistle (*Cirsium acaule*). In addition, Hoary Plantain (*Plantago media*) has not been recorded post 2000. These losses suggest that that the quality of more calcareous grassland may have declined.

Figure 11: Left: Southern Marsh Orchid, *Dactylorhiza praetermissa* 22 May 2015.
Right: A remarkable dwarf form of Wild Carrot, *Daucus carota* 22 July 2018

Early Gentian

Early Gentian, *Gentianella amarella* ssp. *anglica,* is a species of fine parched chalk grassland, so not something you would expect to find at Golden Hill. Indeed, there we no records until June 2003, when Phil Le Masurier found 108 flowering plants in a restricted area on the south facing grassland slope. This was the site of two Southern Water pipelines which were dug in the early 1980s, a water distribution trunk main and a sewer rising main. Following construction, the disturbed ground was colonised by tall, weedy plants such as Weld, Ragwort, Scentless Mayweed and Wild Parsnip but, over time, more permanent grassland dominated by False Brome and Glaucous Sedge became established. It may have been that the trenches were partly infilled with chalk rubble, which together with the naturally occurring calcareous clays, allowed a chalk grassland flora to develop. Early Gentian has persisted in this site and spread slowly into the surrounding grassland (Fig. 10). A maximum count of 350 plants was recorded by Anne Marston in early June 2005 but in more recent years, numbers of flowering plants have been less than 100.

The violet dilemma

Violet species and their hybrids are not always straightforward to identify. Early botanists frequently mistook the common and widespread Common Dog Violet, *Viola riviniana,* for the more local and restricted Heath Dog Violet, *Viola canina.* In 1974, the nationally scarce Pale Heath Violet, *Viola lactea,* appeared abundantly in an area of some 0.05ha recently cleared by fire (Bevis *et al* 1978). This was a 'new' station for this rare plant, discovered by Edwin Burn in May 1974 and confirmed by Professor D.H. Valentine of Manchester University. The site was visited by members of the London Natural History Society in the same year and they also recorded *Viola canina* x *lactea* hybrids. This record was questioned by local botanists at the time, who did not realise that *Viola canina* was also present at Golden Hill. Indeed, Heath Dog Violet was not confirmed from the site until 1983 (C. Pope) and in 1985, it was found to be frequent on the open, southern slope. By this time, Pale Heath Violet appeared to have been lost from the site. It is probable that the open ground where it had been frequent had become colonised by gorse. Therefore, it came as a surprise when Caroline Dudley reported finding a clump of Pale Heath Violet in 2010. She had been photographing violets for a display being put together by Freshwater Parish Council and, although she correctly recognised the plant as *Viola lactea,* she thought nothing further about it at the time. In 2011, she met up with staff of the Countryside Section of the Isle of Wight Council and learnt that the plant was believed to have become extinct at Golden Hill. In fact, the plant was growing in the same area as the plant had first been discovered. Subsequent management (scrub clearance) has permitted the plant to survive. Today, Heath Dog Violet

Figure 12: The two rarer violets found at Golden Hill. Left: Heath Dog-violet, *Viola canina* 20 May 2008.
Right: Pale Dog-violet, *Viola lacteal*. 27 April 2011

is locally frequent on the south sloping grassland and Pale Heath Violet occurs in very small quantity in one small area separated from the grassland by a tree and scrub belt.

Elsewhere, the grasslands at Golden Hill comprise a mix of colourful, largely ruderal species. These occupy ground that has been disturbed in the past but these 'tall ruderal meadows' can be very colourful and are attractive to insects. They comprise a catholic mix of common ubiquitous species.

Soils are deeper on the northern slopes and support mostly mixed scrub with patches of damper lime-rich grassland. Secondary woodland on land to the west of the fort is well established, comprising a mix of Oak, Birch, Ash, Field Maple and Sycamore with Willows in the damper areas. The ground flora is dominated by Ivy, with ferns and some Stinking Iris, Tutsan and Wild Madder.

David Allen recorded several bramble microspecies from Golden Hill. Amongst the more unusual finds, *Rubus vigorosus* was formerly widespread on the Island in wet acid habitats but is now rare. It has a largely western distribution in the UK and is much more frequent in Dorset than it is in Hampshire. *Rubus altiarcuatus* is another western species which David Allen recorded from here. There is a suggestion that these species may be spread by migratory birds following a westerly migration route.

Figure 13: Examples of flowery ruderal grassland at Golden Hill with Wild Parsnip, Teasel, Common Knapweed, Red Bartsia, Ragwort and Wild Carrot. 22 July 2018

Bryophytes

Surprisingly, there are very few historic records of bryophytes from Golden Hill. In 1985, when the Society was actively recording the site, Lorna Snow, the Island's bryologist, appears not to have made any bryological records from here. George Greiff visited the site on 22nd May 2018 and recorded a total of 53 species including a suite of species characteristic of calcareous grassland. These included *Ctenidium molluscum* and *Homalothecium lutescens*. Also were *Campyliadelphus chrysophyllus* and *Campylium protensiu,* the latter being infrequently recorded on the Island. *Tortella flavovirens* was also present, an exclusively coastal moss of chalky, probably slightly salty soil. *Pseudoscleropodium purum* was found in more acidic grassy patches. A return visit by George with John Norton on 14th March 2019 added a further ten species including some infrequently recorded grassland bryophytes including *Bryum radiculosum, Protobryum bryoides, Brachythecium mildeanum* and *Tortula modica.* George also came across *Bryostroma trichostomi*, an ascomycete fungus parasitizing the moss *Didymodon fallax.* There are only a tiny handful of records nationally of this fungus.

The scrubby woodland proved to be interesting and *Frullania tamarisci,* a leafy liverwort which is generally an old woodland species, was found on a Crab Apple. The ponds had abundant *Leptodictyum riparium* growing around them, as well as a patch of *Riccardia chamedryfolia*, rather rare for the Island.

Figure 14: Left: *Ctenidium molluscum,* a characteristic moss of chalk grasslands. Right: *Campylium protensium,* another species of calcareous grassland otherwise only recorded from Shide Quarry on the Island. Photo George Greiff

There is far less information on the fauna of the site, with plenty of opportunities for further study. The following is an account of currently available information.

Insects

Butterflies have been better recorded than other groups. Common meadow species such as Common Blue, Gatekeeper, Meadow Brown, Marbled White, Speckled Wood, Ringlet and Small Heath are regularly recorded. Essex Skipper is found on the grassy slopes around fort.

More unusual species which are still found include Brown Argus, Green Hairstreak on the Gorse, and Dingy and Grizzled Skippers which may be found in sheltered, sunny patches amongst Gorse at the eastern side of the site.

Figure 15: Two of the more unusual butterflies at Golden Hill Left: Green Hairstreak. Right: Grizzled Skipper

The woodland holds White Admiral and Purple Hairstreak. White-letter Hairstreak was present along the southern boundary of the park where there was much elm but this butterfly has not been seen here for many years. It is an elusive species and it may still survive undetected living on the increasingly tall elm suckers. A group of disease-resistant elms has been planted close to southern boundary in the hope that they will provide a food source for White-letter Hairstreak larvae.

Other insect groups have been poorly recorded. The Robin's Pin Cushion on wild rose caused by the Fire Gall Wasp, *Diplolepis mayri* occurs regularly (D. Biggs, pers. comm.). This is an infrequently recorded species, much rarer than the common Robin's Pin Cushion. Great Green Bush Cricket, Long-winged and Short-winged Coneheads occur and Meadow Grasshopper is frequent. Hoverflies are abundant but poorly recorded. The striking yellow and black striped leafbug, *Evacanthus interruptus*, was recorded commonly on the southern slopes during an entomological meeting in July 2018. The Notable A' hemipteran, *Adelphocoris seticornis* a species associated with old lowland meadows, was recorded from here on 13th August 1936 by W.R. Frazer, Oliver Frazer's father. Bob Gibbons' report (1987) says that, 'The presence of several snails lying dead on the grassland suggests the presence of glow-worms.'

230 different moth species have been recorded from Golden Hill post 2012. There have been a few moth trapping sessions on the site, principally by Stephen Plummer (several occasions in 2013, 2014 and 2015) and once by Ian Fletcher (2011). Six-spot Burnet and Yellow Shell are frequent day flying moths. Six-belted Clearwing (Notable B' species) was recorded by Tim Norris on 4th July 2014.

Birds

There is very little historical information about the birds using Golden Hill but references to Dartford Warblers by Henry Rogers (1865) in The Zoologist suggest that these birds nested here in the nineteenth century. He wrote, 'I fear we shall shortly lose this interesting bird; the Government works are destroying its usual habitats'. Despite the abundance of gorse scrub, there has been no suggestion that Dartford Warblers have bred here in more recent times, although a single wandering individual was recorded on 17th November 1999.

The most notable breeding birds use the scrub and hedgerows for nesting. Two singing Nightingales were recorded by members of the Natural History Society during their survey in May 1985 in the wooded area in the southwest, and an Isle of Wight County Press report of 1969 refers to breeding Nightingales. A singing Nightingale was heard in May 2005 but there is no evidence to suggest that they have been present in recent years. Yellowhammers used to breed here but have not been recorded recently. Species known to breed in recent years include Linnet, Whitethroat, Lesser Whitethroat, Chiffchaff and Blackcap. Bullfinch is often heard (C. Dudley, pers. comm).

Mammals

Rabbits are present in fluctuating numbers. They can be useful in grazing species-rich grassland. Red Squirrels use the secondary woodland and feed in gardens along northwest boundary.

The Future

Golden Hill Country Park belongs to the Isle of Wight Council and is managed on their behalf by Gift to Nature. Ecologically, there is nowhere else on the Island quite like it. Gift to Nature has dedicated 2020 to celebrate the 150th anniversary of the completion of the fort and the 50th anniversary of the designation of the Country Park. They are seeking additional funding to support improved signage and interpretation of the site and to enhance management. Their vision is to increase awareness of the site, encourage greater usage, improve the visitor experience and make the Park a destination of choice. Provided that appropriate management to maintain and enhance the wildlife value of the site is continued, we can hope that Golden Hill Country Park will continue to be a special place into the future. There is a need for more research to better understand the ecology and wildlife of this interesting site.

Acknowledgements

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NEMATODE GALLS IN THE ISLE OF WIGHT

Dr. D. T. Biggs

The phylum Nematoda contains amongst other worms the eel-worms, some of which are gall-inducing parasites. Their galls are small undifferentiated swellings on their host plants. Swanton in his 1939 paper on Island Galls did not mention them. The eel-worms themselves are microscopic (up to 1mm in length) and transparent and therefore difficult to find. They may, however, be teased out in water.

Anguillulina ? sp. on Cat's-ear *Hypochaeris radicata*
Colin Pope found a small group of infected plants at Redcliff SZ620854 on March 12th 1989. The gall is a small irregular swelling of varying proportions on the midrib of the leaf or major side-vein or, occasionally, on the leaf-blade. It is visible on both sides of the leaf, a yellowish-green in colour, spongy in nature and wrinkled in appearance. Although not recorded in Swanton's 1939 list of Island galls, it was described in his 1912 textbook. Possibly this gall is caused by *Ditylenchus dipsaci.*

Anguina graminis (Hardy 1850) on Meadow Fescue *Festuca pratensis*
Sue Blackwell and I visited Newtown Rifle Range June 10th 2018. On one plant of Meadow Fescue at SZ439912 Sue noticed a bright red spindle-shaped gall 11 x 2mm on the leaf-blade. The blade was slightly bent at the site of the gall. The gall-inducer is called the Fescue Leaf-gall Nematode. The gall contained a mass of juvenile eel-worms. Plants growing in coastal areas are particularly affected.

Aphelenchoides fragariae (Ritzemer Bos 1851) on Lesser Spearwort *Ranunculus flammula*
Colin Pope found this gall at Cridmore Bog SZ498825 on July 1st 1998; this is the only record so far of this gall. It is more usual on Strawberry, *Fragaria* or Anemone, *Anemone.* The stem of the plant is considerably thickened, amounting sometimes to fasciation. In Strawberry the internodes can be shortened, the buds increased in number and the whole plant can take on the appearance of a small cauliflower. Leaf-lobes are reduced from three to one.

Ditylenchus dipsaci (Kühn) Filipjev on various plants
Although this gall was not described by Swanton in his 1939 paper, I have now recorded it from each of our 10 10km squares and from 45 of our 123 tetrads. Plantains *Plantago* spp. are the commonest hosts, *P. lanceolata* and *P. media* especially, with 17 and 11 records respectively. Altogether it has been recorded in England from more than 450 hosts. On *Plantago* the nematodes induce small elongated, rounded or irregular swellings on the leaf, often distorting it. It can also produce stunting and distortion of the flower stalks.

Subanguina guizotiae (Van den Berg 1986) on Niger *Guizotia abyssinica*
Niger is a bird-seed alien. Colin Pope was asked to look at a plant new for the Isle of Wight, Yellow Dodder *Cuscuta campestris,* growing parasitically on *Guizotia* plants beneath a bird-seed feeder in a garden at Wootton Common SZ5391 on September 7th 2013. On the leaves of the Niger plant were many dark green hemispherical swellings on both leaf-surfaces, which were themselves wrinkled. Colin asked me to look at these galls. When I sectioned them, I was surprised to find them containing numerous eel-worms, instead of a Dipteran larva as I had expected. Dr Rebecca Lawson of the Central Science Laboratory identified the gall-causer for me, and confirmed that this was the first record for Europe.

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ADDITIONAL RECORDS OF PLANT GALLS FROM THE ISLE OF WIGHT, 2018

Dr. D.T. Biggs

During 2018, one new Nematode gall was found. In addition, a new Dipteran gall was found although the causative agent is not yet on the British list. A Smut is described as galling although the fungus itself was recorded in Morey.

FUNGI: BASIDIOMYCOTA: USTILAGINALES

Ustilago avenae (Pers.) Rostr. on False Oat-grass *Arrhenatherum elatius*
This is called the Loose Smut of Oats and Oat-grass and was recorded in Morey (1909). Authors disagree as to whether this smut fungus induces a gall or not. It attacks the spikelets, initially causing enlargement of the ovaries and then filling them with powdery black spores, subsequently often completely destroying the ovaries and leaving the rachis quite bare. Colin Pope found an affected plant at Merstone Station SZ527845 on June 23rd 2018 at a Botanical Section Meeting. This is one of the most widespread of smut species. The spore mass in this specimen measured 1 x 1mm.

NEMATODA: TYLENCHIDAE

Anguina graminis (Hardy), Filipjev on Meadow Fescue *Festuca pratensis*
A bright red spindle-shaped gall, 11 x 2mm was found on June 10th 2018, on a leaf-blade of Meadow Fescue at Newtown Rifle Range SZ439912. The leaf-blade was bent at the site. On sectioning the gall a mass of eel-worms emerged. This gall is caused by the Fescue Leaf-Gall Nematode. It is more common in coastal areas. Sue Blackwell found this new gall.

DIPTERA: CECIDOMYIIDAE

Contarinia acrocecis Stelter 1962 on Lady's Bedstraw *Galium verum*
Merstone Station SZ527845 was again the site of this new gall on June 23rd 2018. At a Botanical Section Meeting I found several plants with malformed flowerbuds and flowers. The inflorescence consisted of an elongated bunch 10 – 15mm in length, formed of extremely shortened leaves and atrophied buds. Sectioning the galls revealed bright orange free-living Dipteran larvae. This gall-midge is not on the current list of English Diptera (Chandler 1998). However Keith Harris (2014) described a specimen from Suffolk, the species originally having been found in Germany by Stelter in 1962.

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NEW AND INTERESTING FUNGI IN THE ISLE OF WIGHT, 2018

Colin Pope and Jackie Hart

There never seems to be a 'typical' autumn weather wise and, as the appearance of fungi is very much triggered by the right combinations of warmth and humidity, autumn forays are always unpredictable. This autumn was particularly dry, following a hot, dry summer and macro-fungi proved to be quite a challenge to find. Our main foray weekend, 29th and 30rd September, was disappointing but with our visiting experts Alan Outen and members of the Hampshire Fungus Recording Group, we still managed to record 89 taxa from Brighstone Forest on Saturday and 94 taxa from Briddlesford Copse on Sunday.

Throughout the season, some twenty-three taxa were recorded for the first time on the Island. As in recent years, they include a number of resupinates (crust fungi) and small ascomycetes, specialist groups which are greatly under recorded as they have only recently started to receive serious attention. Moreover, George Greiff recorded a number of microfungi, including several bryophilous Pezizales which were new to the Island some of which were firsts for the UK. These have not been included here, but may form the subject of a subsequent paper as our understanding of them develops.

AGARICS

Russula melitodes
An uncommon Brittlegill associated with oak trees. Found in Briddlesford Copse by Eric Janke.

[*Stropharia rugusoannulata* (Fig. 1)
The King Stropharia is not a native species. It is a large edible species which can be grown in cultivation. When an old beech tree at Ventnor Botanic Garden was felled, the timber was chipped and the wood chippings were spread around the base of the tree. Chris Kidd, curator, introduced spawn into this wood chip mix and during the autumn, a succession of fruiting bodies appeared.]

Tubaria confragosa
Brighstone Forest Alan Outen

Coprinus stercoreus (Fig. 1)
This is an attractive little inkcap growing in clusters on herbivore dung. It was found by a track in Firestone Copse on one of our forays and confirmed microscopically by Colin Pope.

Figure 1: Left: *Stropharia rugusoannulata* growing on woodchip at Ventnor Botanic Garden 10 Sept. 18
Right: *Coprinus stercoreus* in Firestone Copse 27 Oct. 18 Photos: Colin Pope

Arrhenia spathulata (Fig. 2)
The genus *Arrhenia* comprises small, greyish gill fungi which grow in association with mosses and lichens. *A. spathulata* grows in association with moss *Syntrichia ruraliformi /ruralis* and was found on Ventnor Down by George Greiff.

TOOTHED FUNGI

Coral Tooth *Hericium coralloides* (Fig. 2)
Coral Tooth, one of our most beautiful and rarest fungi, is of particular interest because it is considered to be one of the old-forest fungi. It is confined to large logs or stumps, principally in ancient beech woods. Most records are from Windsor Forest and the New Forest. Even in the New Forest it is scarce, known from only a handful of trees. It was a complete surprise when Dave Dana found it in Span Copse on a fallen ash bough in 2015. It did not show in 2016, but reappeared on the same trunk in 2017 and again in 2018, when there were two fruiting bodies.

Figure 2: Left: Young fruiting body of *Hericium coralloides* on ash 14 Aug. 18 Photo: Dave Dana
Right: *Arrhenia spathulata* on Ventnor Downs 4 Dec. 18 Photo: George Grieff

RESUPINATES

Hyphodontia pallida
On a fallen trunk of Douglas Fir in Firestone Copse, Alan Lucas. This is a common resupinate species but this is the first confirmed Island record.

Botryobasidium subcoronatum
On Sycamore in Brighstone Forest, Alan Lucas. Another common resupinate species, with this being the first confirmed Island record.

Ceriporia purpurea
A nationally uncommon purple crust found on fallen Beech in Brighstone Forest by Mike Cotterill (det. Alan Lucas).

Hyphoderma roseocremeum
A nationally uncommon rose tinted crust found in Briddlesford Copse by Eric Janke.

Sistrotrema brinkmannii
A white crust found on Beech in Briddlesford Copse, Alan Lucas.

Gloeocystidiellum clavuligerum
A nationally rare cream coloured crust found in Brighstone Forest by Sue Rogerson.

Junghuhnia lacera
A nationally rare crust found on a fallen Hazel branch in Firestone Copse by Alan Lucas & Sue Rogerson. Macroscopically, it resembles the common *Schizopora paradoxa* but is softer and more easily detached.

Lagarobasidium detriticum (syn. *Hyphodontia detritica*)
A nationally rare crust found on Oak in Brighstone Forest by Alan Lucas.

RUSTS & SMUTS

Melampsora allii-fragilis
A rust found on Crack Willow (*Salix fragilis*) in Briddlesford Copse by Alan Outen *et al.*

Puccinia kusanoi
A rust found by Alan Outen on bamboo leaves at Ventnor Botanic Garden

ASCOMYCETES

Elaphomyces muricatus (Fig. 3)
A false truffle found in Brighstone Forest by Jillie Pope by scraping away leaf litter beneath Beech trees. (det. Alan Outen). There is one previous record for the related *Elaphomyces granulatus* found in Firestone Copse by Derek Reid in 1993.

Hypoxylon subticense (Fig. 3)
Found in Brighstone Forest by Alan Lucas.

Figure 3: Left: The False Truffle, *Elaphomyces muricatus* under beech Photo: Colin Pope
Right: *Hypoxylon subticense* Photo: Alan Outen. Both from Brighstone Forest 29 Sept. 18

Hymenoscyphus fraxinea (Fig. 4)
Found on rotting ash petioles in Brocks Copse, Whippingham, by George Grieff. This is the sexual (fruiting) stage of ash die-back. Although ash die-back has been around on the Island for a few years, this is the first record of fruiting bodies.

Figure 4: *Hymenoscyphus fraxinea,* the causative organism of ash die-back Brocks Copse 18 June 18
Photos: George Greiff

Hymenoscyphus albidus
Briddlesford Copse, Alan Outen. This small white cup fungus grows on leaves of fallen Ash trees. Unlike the similar *H. fraxinea,* which is pathogenic, this species is saprophytic.

Calycellina punctiformis
A tiny stalked cup fungus found growing on a fallen Oak leaf in Firestone Copse by Sue Rogerson.

MICROFUNGI

Microsphaera mougeotii (Fig. 5)
This mildew, specific to Duke of Argyll's Tea Tree, was found by Alan Outen at Bembridge Point.

Phyllosticta hypoglossi
A leaf spot on Butcher's Broom. Found by David Biggs in Locks Copse, Newtown.

Phoma polygramma
A coelomycete on Ribwort Plantain leaves. Found by Barry Angell on Newtown Rifle Range (det. David Biggs)

Septoria polygonorum
A leaf spot on dock leaves. Found by Barry Angell at Lock's Copse Farm (det. David Biggs).

Paecilomyces farinosus (Fig. 5)
This is an entomopathogenic fungus: in other words, the spores can germinate inside of an insect and spread throughout its body, eventually killing it. The fungus then sends out long spore bearing conidia. Various insects can be infected. One such infected insect was found by Natalie Bone at Brighstone Forest (det. Alan Outen). It is not the first Island record but currently we have only a handful of records of this interesting fungus which could have potential to control insect pests.

Figure 5: Left: Mildew *Microsphaera mougeotti* on Duke of Argyll's Tea Tree, Bembridge Point 28 Sept. 18
Right: *Paecilomyces farinosus* attacking an insect, Brighstone Forest Photos: Alan Outen

Recorders
AL Alan Lucas; AO Alan Outen; CC Chris Kidd; CP Colin Pope; DB David Biggs; ER Eric Janke; GG George Greiff; SR Sue Rogerson; JP Jillie Pope; MC Mike Cotterill: DD Dave Dana.

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FLOWERING PLANTS AND FERNS IN THE ISLE OF WIGHT, 2018

Colin R. Pope

The list below covers the new records and other interesting records. I am grateful to everyone who submits their records; all of them are valuable and all records have been stored whether reported here or not and have been submitted to the BSBI.

Abbreviations used at the start of the accounts are an attempt to establish the status of the records, namely: N. Native; C. Casual Alien; E. Established Alien; P Planted.

Long-headed Poppy (*Papaver dubium)*
N. At least 100 plants in fruit on top of old wall, Quarr Abbey ruins (SZ566925) JC.
[Prickly Poppy has been recorded from here in the past but was not present in 2018.]

Tree Spinach (*Chenopodium giganteum)*
C. On disturbed ground alongside Dodnor Lane (SZ503917) PS. New IW record

Maple-leaved Goosefoot (*Chenopodium hybridum)*
C. On disturbed soil by new road, Place Side, Cowes (SZ485948); on disturbed ground alongside Dodnor Lane (SZ503917) PS

Green Amaranth (*Amaranthus hybridus)*
C. 2 plants in vegetable patch, Howgate Road, Bembridge (SZ649873); 5 small plants in parched ground old railway track, Carpenter's Farm, St Helen's (SZ623884) AC

Common Amaranth (*Amaranthus retroflexus)*
C. On disturbed soil by new road, Place Side, Cowes (SZ485948) PS

Upright Chickweed (*Moenchia erecta)* (Fig. 1)
N. Westbrook Centre. In abundance in open grassland south of bend in Oakhill Road, Nettlestone with very fine Green-winged Orchids (SZ617914) mo. This is a previously unrecorded site for this scarce plant of dry, acid grassland.

Four-leaved Allseeed (*Polycarpon tetraphyllum)*
C. Pavement weed in Coronation Avenue, Northwood (SZ490935) PS

Annual Baby's-breath (*Gypsophila elegans)*
C. Fifty plants at back of storage yard, Northwood (SZ485947) PS, conf. EJC. New IW record

Corncockle (*Agrostemma githago)*
C. On disturbed ground at southern end of Northwood Cemetery (SZ495947) SB

Perennial Wall-rocket (*Diplotaxis tenuifolia)*
E? On disturbed ground alongside Dodnor Lane (SZ503917); 2 plants at Hunnyhill, Newport (SZ496895) PS

Brookweed (*Samolus valerandi)*
N. A few plants in ditch at Sandown Meadows Wildlife Trust reserve (SZ590852) mo. A new record from this site.

Ascending Cotoneaster (*Cotoneaster ascendens)*
E. A few bushes on the floor of Shide Chalk Pit (SZ506880) PS & JT conf. J. Fryer. New IW record

Godalming Cotoneaster (*Cotoneaster transens)*
E. A number of bushes on waste ground at Parkhurst (SZ491907) PS conf. J. Fryer. New IW record

Helmqvist's Cotoneaster (*Cotoneaster hjelmqvistii)*
C. One bush on bank, Shide Chalk Pit (SZ505880) PS conf. J. Fryer

Crimson Clover (*Trifolium incarnatum)*
C. Several plants in field at Ningwood (SZ401894) PS

Reversed Clover (*Trifolium resupinatum)*
C A single large plant by balancing pond at Pan Country Park, Staplers (SZ505886) PS

A spurge (*Euphorbia serpens)*
C. Single plant in Thompson's nursery, Newchurch (SZ552841) PS New IW record

Water-purslane (*Lythrum portula)*
N. Large patch in single flooded ride, Briddlesford Copse (SZ551904) CRP. First record from this site.

Little-Robin (*Geranium purpureum)* (Fig. 1)
C. Weed in Forest Road nursery, Newport (SZ484897); also a single plant in Garfield Street carpark, Ryde (SZ590925) PS. Little-Robin is a scarce plant of shingle beaches on the Solent. There are a handful of nineteenth century records from the Island but, without supporting herbarium material, these are all unconfirmed. Some of these may relate to the coastal form of Herb Robert. The discovery of a population growing as a weed in Forest Road nursery came as a big surprise. It proved to be one of a clutch of unexpected alien species found at this nursey, accidentally introduced with imported ornamental plants. Little-Robin is known from elsewhere in the UK as a casual alien.

Figure 1: (left) Upright Chickweed *(Moenchia erecta)* growing in grassland at the Westbrook Centre, Nettlestone on a botany group meeting. A new Island site.
(right) Little-Robin *(Geranium purpureum)* growing as a weed at Forest Road nursery, Newport.

Tall Nightshade (*Solanum chenopodioides)*
C. Single plant in Forest Road nursery, Newport (SZ484897) PS New IW record

Somerset Skullcap (*Scutellaria altissima)*
E. Established weed in garden at Culver Road, Shanklin (SZ585818) VB, det CRP. It has been known from here for at least 35 years. The garden was originally part of a larger Victorian garden.

Weasel's-snout (*Misopates orontium)*
N. Frequent on disturbed ground alongside Dodnor Lane (SZ503917) PS

Marsh Valerian (*Valeriana dioica)*
N. Still present at Plaish water meadows, Bowcombe (SZ481874) JC. At least two patches in shorter, more open fen meadow. This is the first record from here for 24 years.

Tubular Water-dropwort (*Oenanthe fistulosa)*
N. Seen on a visit to Sandown Meadows Wildlife Trust reserve (SZ590852) where there was just a handful of flowering plants in tall fen, mo. This has become a very rare plant on the Island. Always confined to the Eastern Yar, Sandown Meadows reserve is now its principal site.

Jo-jo (*Soliva pterosperma)*
E. Several hundred plants at Waverley Park camp site, East Cowes (SZ506960) PS

False Daisy (*Eclipta prostrate)*
C. A scarce weed in Forest Road nursery, Newport (SZ484897) PS conf. EJC. This is another unexpected weed found at Forest Road nursery. It is a roughly hairy annual plant with reddish stems and small white daisy flowers. It is a native of Asia which has been spread in contaminated seed. It can become a weed on damp soils. There are only 2 other post 1930 UK records, each of a single plant. New IW record.

Jersey Cudweed (*Gnaphalium luteoalbum Laphangium luteoalbum*) (Fig. 2)
E? Locally frequent in pavement cracks at Prince Consort, Ryde Esplanade (SZ592929) PS Jersey Cudweed, has always been considered to be very rare and probably native in the UK but it is increasingly being found as an alien of waste places. Indeed, it has become widespread across the continents as a weedy species. New IW record.

Figure 2: (left) False Daisy *(Eclipta prostrata)* growing at Forest Road nursery. The third UK record. (right) Jersey Cudweed *(Gnaphalium luteoalbum)* growing in St Thomas' Street car park alongside of the Prince Consort.

Brown Galingale (*Cyperus fuscus)* (Fig. 3)
C. Scarce weed in Forest Road nursery, Newport (SZ484897) PS Another surprising weed at this site. Brown Galingale is a very rare native of damp mud, typically on the edges of dried up ponds and ditches, in southern England. Clearly, the Island plants arrived accidentally with ornamental plants. There are a very few records of this plant as an alien from other similar situations. New IW record.

Slender Tufted-sedge (*Carex acuta)*
N. Large patches in tall, mono-specific stands on Morton Marsh (SZ595854) GNT (conf. Mike Porter). This is an important rediscovery of a native species. Slender Tufted-sedge was described by Bromfield (1856) as occurring 'in several meadows in Sandown marshes abundantly; the last meadow but one on the right before coming into the village is full of it.' A.G.More collected herbarium material from here (now at BM) in June 1858. There have been no further records. When the Wildlife Trust acquired Morton Marsh, several botanists were puzzled by large, monospecific patches of a robust sedge but it was Geoff Toone who suspected that this was *Carex acuta* and this was eventually confirmed. Clearly, this sedge has survived in this locality in plain sight for well over 150 years. First modern IW record.

Orange Foxtail (*Alopecurus aequalis)*
N. Field pond at Fleetlands Farm, Newtown (SZ421899) PS. This is a second location for this rare Island grass, not far from the known field pond site at Fleetlands Farm. There may well be other, as yet undetected sites in the Newtown estuary catchment.

Drooping Brome (*Anisantha tectorum)*
C. 2 or 3 plants at Newport (SZ500890) PS

Yard-grass (*Eleusine indica)* (Fig. 3)
C. Scarce weed in Forest Road nursery, Newport (SZ484897) PS. Yet another unexpected weed from this garden centre. New IW record.

Solomon's-seal (*Polygonatum multiflorm)*
E. Clump of about 50 stems amongst bluebells in Standen Copse, Downend (SZ525875) PS Looking quite native in this ancient woodland but Solomon's Seal is not known as a native woodland species on the Island. It is likely that this clump was originally bird sown from seed. Although an isolated site, there are two gardens within 100m to the south and *Polygonatum multiflorm* is grown in gardens, as well as the commoner hybrid *P. x hybridum.*

In addition, Paul Stanley has recorded the following hybrids in 2018, all new to the Island:

Capsella x *gracilis* (*C. bursa-pastoris* x *C. rubella*) One plant on kerb edge with parents, Newport conf. Dr A. Leslie

Senecio x *thuretii* (*Senecio cinerea* x *S. erucifolius*) Gurnard conf. M. Wilcox

Pilosella x *longisquama* (*Pilosella officinarum* x *P. peleteriana*) Main Bench, Freshwater conf. T. Rich

Juncus x *surrejanus* (*Juncus acutiflorus* x *J.articulatus*) Sandown Levels conf. M. Wilcox

Festuca rubra x *Vulpia bromoides* Scrambling track at Haslett Farm conf. T. Cope

Glyceria declinata x *G. fluitans* field pond at Corfe conf. T. Cope


Figure 3: (left) Brown Galingale *(Cyperus fuscus)* and (right) Yard-grass *(Eleusine indica)*
Both growing at Forest Road nursery, Newport.

Slender Centaury (*Centaurium tenuiflorum)*
N. Was first collected in the British Isles in Guernsey and Jersey. It was first found in England on the north coast of the Isle of Wight. In 1870, Frederick Stratton reported specimens from 'salt marshy ground at King's Quay.' He described the specimens as being 'tall, quite a foot high, and stout and with an immense number of flowers densely packed in many-branched heads. Frederick Townsend did not see the specimens but records *Centaurium tenuiflorum* as occurring sparingly on the west bank of the River Medina between West Cowes and Newport in 1879 (Townsend, 1883).


Figure 4: Slender Centaury, *Centaurium tenuiflorum.*
Photographed at Medham saltmarsh, River Medina 28th July 2006

It was only sporadically recorded from both of these sites. Indeed, the sites were kept secret and, according to Eleanor Vachell's botanical diary, she was blindfolded before being taken to one site on the Medina in 1935 after it had been rediscovered by J.W.Long (Forty & Rich, 2006). There are herbaria sheets of the Medina material in several national herbaria. The last confirmed record was in 1967, from the 'marsh lying between Little London and the Rowing Club-house' (T. White).

The last confirmed record at King's Quay was by J.E. Lousley, 'On mudbank with *Calamagrostis epigejos,* east end of eastern spit near the sea' on 10th August 1952.

However, this plant has attracted the attention of resident and visiting botanists and there have been many unconfirmed records from both the Medina and King's Quay. The most notorious of these came from King's Quay where visiting botanist Mary Keens found specimens which she was convinced were *C. tenuiflorum* on 19th September 1982. A specimen was sent to G.A. Matthews at the Natural History Museum. He replied that 'It is not possible to give a certain determination from rather untypical material although in many respects your specimen would appear to be *tenuiflorum.*' Bill Shepard sent material to Mary Keens for exhibition at the Wildflower Society Annual Meeting where eminent field botanist, Francis Rose claimed that it was indeed *Centaurium tenuiflorum* and it was subsequently shown at the BSBI Exhibition Meeting on 27th November 1982. Not all botanists agreed with this determination, not helped by the somewhat conflicting descriptions of the characters of the species and a lack of a referee. Subsequently the site became overgrown; I carried out scrub clearance on the sloping clay bank where the plant occurred, but this was unsuccessful.

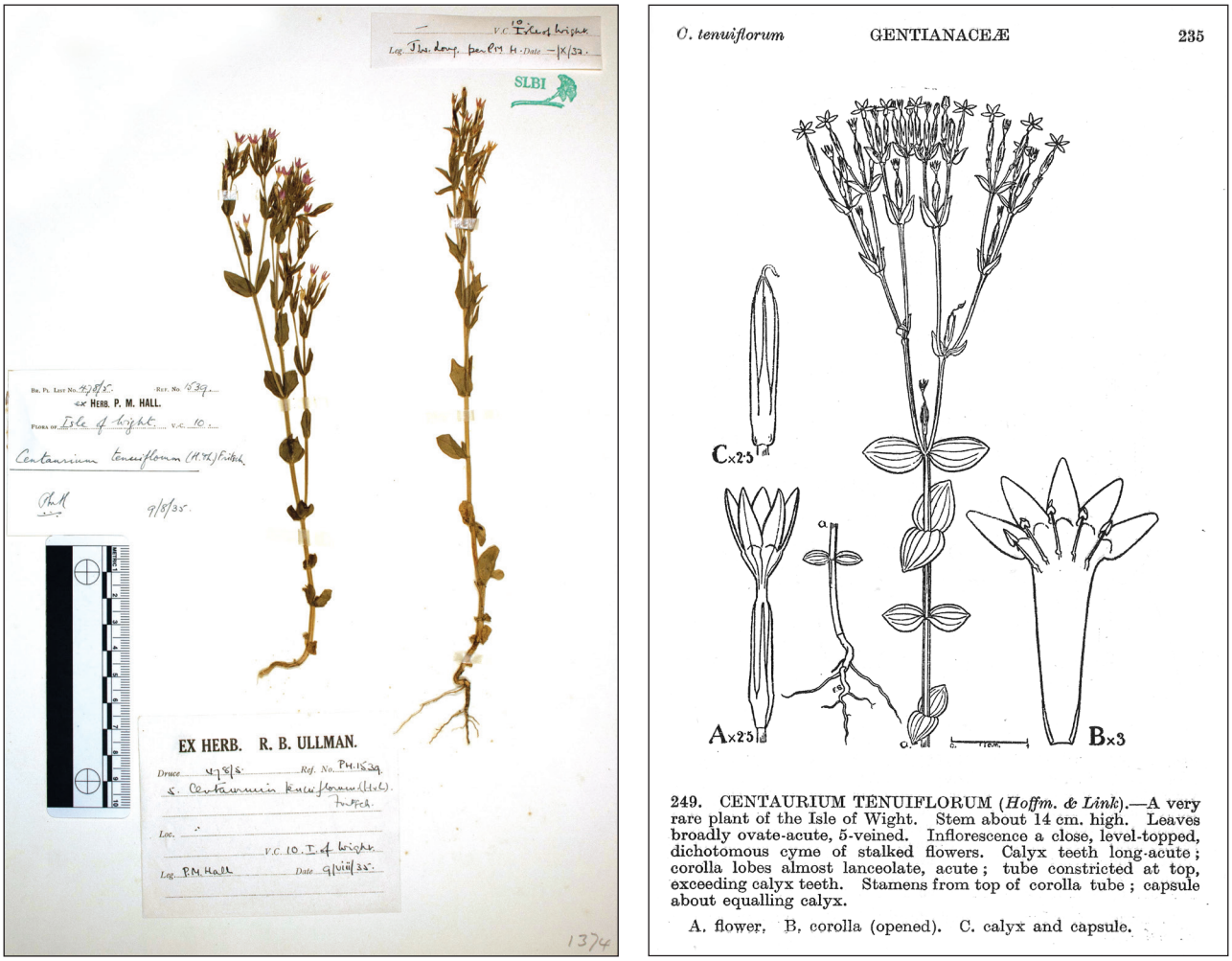

Figure 5: (left) Herbarium sheet of *C. tenuiflorum* collected by the Medina in October 1937 by J. Long. South London Botanical Institute.
(right) Drawing of *C. tenuiflorum* in Butcher & Strudwick (1944) from material collected by the River Medina

In 2005, Paul Stanley noticed plants growing on the saltmarsh at Medham, Medina Estuary, which he believed showed characters of *C. tenuiflorum.* They were accompanied by plants of Common Centaury (*C. erythraea*) and Lesser Centaury (*C. pulchellum*). On 28th July 2006, I visited the site with Paul and Eric Clement. The plants were clearly different but there was no *Centaurium* referee at the time to ask. Material and seed were collected. More recently, Tim Rich began working on a BSBI Handbook on the Gentian family and took a renewed interest in *Centaurium.* The DNA analysis of the Medham material proved inconclusive, probably because of technical problems. However, morphological studies led him to the conclusion that the Medham material is indeed Slender Centaury, *Centaurium tenuiflorum.* This is an exciting conclusion, meaning that this very rare plant is extant on the Isle of Wight. However, more recently, Paul Stanley has failed to re-find this plant and considers that the site has become overgrown and no longer suitable. This perhaps reflects a pattern whereby the species appears, flourishes for a few years and then is lost, to reappear again at either the same or another nearby site some years later.

All British material has been proposed as a new subsp. *anglicum* to account for its larger size, as a result of genetic drift by isolation (Rich et al. 2018). Subspecies *anglicum* occurs in southern England (hence the epithet) in the Isle of Wight, where it occurs at the top of saltmarshes, and in Dorset, where it occurs on damp, slumping, clay sea cliffs. The Isle of Wight material has pink flowers, and the Dorset material has white flowers. It is presumed to have arisen through isolation and local adaptation following reflooding of the English Channel after the last Ice Age.

According to Rich (in press), subsp. *anglicum* differs from subsp. *tenuiflorum* in being generally more robust, having relatively broader middle stem leaves 2-5x as long as wide and the longer corollas 11-16mm (subsp. *tenuiflorum* middle stem leaves 3-8x as long as wide and corollas 11-14mm). Subsp. *anglicum* differs from *C. pulchellum* in having more pairs of stem leaves, larger corollas and more elongated fresh stigmas *C. pulchellum* has 2-6 pairs of stem leaves but often fewer, and flowers with heart-shaped fresh stigmas.

The Isle of Wight Flora (Pope, *et al,* 2003) makes reference to a record of *C. tenuiflorum* from Freshwater, based upon an undated herbarium sheet originating from Cheltenham College. This is a surprising locality, but John Edmondson was convinced that this was correctly named. Tim Rich has now examined the herbarium sheet (2019) and determined the specimen as Lesser Centaury, *Centaurium pulchellum.*

Figure 6: Material of *C. tenuiflorum* collected at Medham, Medina estuary 3rd September 2011. Tim Rich says that at least the two larger plants 39 & 41 are this species; 40 is probably this species.

Recorders

AC Ann Campbell
CRP Colin Pope
EJC Eric Clement
GNT Geoff Toone
JC Jonathan Cox
JT Jesse Tregale
mo many observers (Botany section)
PS Paul Stanley
SB Sue Blackwell
VB Vic Barnett

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I am grateful to Eric Clement for useful comments on the draft of this paper. All photographs by the author.

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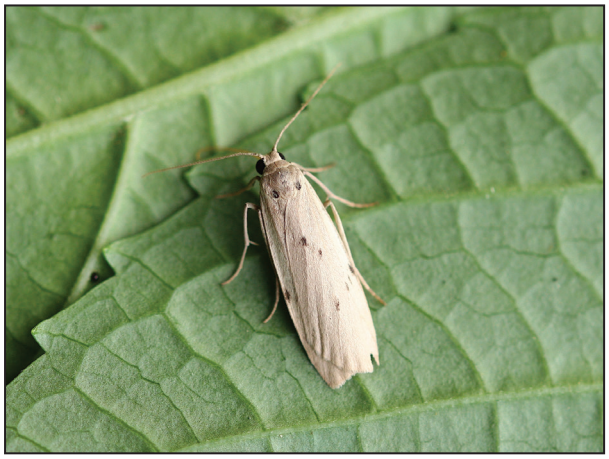
Notable Moths

Zelleria oleastrella Shanklin

Drepana curvatula Niton



Pelosia muscerda Niton

Spoladea recurvalis Shanklin

NOTABLE MOTHS IN THE ISLE OF WIGHT, 2018

Iain Outlaw

In what turned out to be a good year for moth recording there was a slow start to the season but a prolonged spell of hot weather in the summer resulted in record species diversity for June and July.

The summer months produced typical numbers of common immigrants and a good selection of scarcer immigrants including five records of *Agrotera nemoralis*, two Plumed Fan-foot (*Pechipogo plumigeralis*) and two Dewick's Plusia (*Macdunnoughia confusa*).

Despite generally low immigrant totals the autumn season also produced a number of scarcer species. There were four records of *Spoladea recurvalis* and two *Antigastra catalaunalis*. Golden Twin-spot (*Chrysodeixis chalcites*) was found by day in Cowes with another to light at Bonchurch. *Duponchelia fovealis* was found indoors at Cranmore and the final immigrant of the year, a Red-headed Chestnut (*Conistra erythrocephala*) to light in Bonchurch.

It was a very good year for several colonist species with record numbers recorded for Sombre Brocade (*Dichonioxa tenebrosa*) and Jersey Tiger (*Euplagia quadripunctaria*). It was an outstanding year for Blair's Mocha (*Cyclophora puppillaria*) with three times as many recorded as in 2017, its previous best year. Presumed colonist Olive Crescent (*Trisateles emortualis*) was also seen in record numbers, counts of adults at light from Westover Plantation suggest it is established there.

The year closed with 890 species having been recorded, 40 fewer than in 2017 but including 9 new VC records and a tenth awaiting confirmation.

New vice-county records
Recorded at light unless otherwise stated.

4.074 ***Ectoedemia sericopeza*** (Zeller, 1839). Mines were found on samaras of Norway Maple *Acer platanoides* at Rylstone Gardens, Shanklin on 2nd July.

16.011 ***Zelleria oleastrella*** (Millière, 1864). This is a rare immigrant from southern Europe. Its larvae mine the leaves of Olive *Olea europaea*. One was recorded from Shanklin on 18th June.

21.002 ***Lyonetia prunifoliella*** (Hübner, 1796). The first of seven records involved tenanted mines on leaves of Blackthorn *Prunus spinosa* at St. Lawrence, with the larvae pupating on 4th July and imagines emerging on 15th July. Further records were received from Brading Marsh, Bonchurch, Redcliff, St. Catherine's Point and Freshwater.

35.071 ***Monochroa lucidella*** (Stephens, 1834). One at Freshwater Fruit Farm on 9th July, confirmed by dissection.

35.127 ***Tuta absoluta*** (Meyrick, 1917). There were two records from Freshwater with the first on 8th August and another on 13th November. The specimens were retained and are awaiting dissection. Originating from South America, this is a pest species of tomato and was accidentally introduced to Europe where it was first recorded in Spain in 2008. These would represent the first vice-county records 'in the wild' although it is known to have been found in the glasshouses of commercial tomato growers on the Island since 2009. DEFRA no longer takes enforcement action for *Tuta absoluta* with tomato growers responsible for their own control measures.

62.015 ***Delplanqueia inscriptella*** (Duponchel 1836). This species has only recently been confirmed as occurring in the UK and appears to be more common than *Delplanqueia dilutella*. Separation of these species requires dissection. Two males and one female were swept from Brook Down Quarry on 26th June and confirmed by dissection. A further five records were received.

72.039 Dotted Footman (*Pelosia muscerda*) (Hufnagel, 1766). One came to light at Niton on 20th July during a period of high migrant activity.

72.074 Beautiful Marbled (*Eublemma purpurina*) ([Denis & Schiffermüller], 1775). The first of two records was at Wheeler's Bay, Ventnor on 21st July with the second trapped at Bonchurch the following night.

73.088 Dark Mottled Willow (*Spodoptera cilium*) Guenée, 1852. This is a rare immigrant from southern Europe. One was trapped by a visiting lepidopterist at Bembridge on 16th October. It can be confused with Small Mottled Willow (*Spodoptera exigua*) but this specimen was confirmed by dissection.

73.288 Double Line (*Mythimna turca*) (Linnaeus, 1761). One at Moons Hill, Totland on 18th June.

There were so many noteworthy records during 2018 it would be impossible to include them all; the following is just a selection…

11.002 ***Narycia duplicella*** (Goeze, 1783). The third vice-county record and first since 1950 was at Shanklin on 23rd June. It was retained and confirmed by dissection.

14.006 ***Bucculatrix frangutella*** (Goeze, 1783). One at Freshwater on 3rd August was the first since 1975.

38.007 ***Elachista subocellea*** (Stephens, 1834). One at Rew Down, Ventnor on 1st July was the third vice-county record.

43.004 ***Scythris picaepennis*** (Haworth, 1828). Four were swept at Brook Down Quarry on 26th June with two males confirmed by dissection.

49.259 ***Zeiraphera ratzeburgiana*** (Saxesen, 1840). The second vice-county record was of one at Freshwater on 2nd August.

49.278 ***Gypsonoma minutana*** (Hübner, [1799]). Not recorded since 1975, one was at Freshwater on 7th July.

65.004 Dusky Hook-tip (*Drepana curvatula*) (Borkhausen, 1790). The second for the Island, a male, was trapped at Niton on 20th July. Another male was trapped in Shanklin on 22nd July.

69.011 Oleander Hawk-moth (*Daphnis nerii*) (Linnaeus, 1758). This is a spectacular immigrant from southern Europe. It has not been recorded on the Island since 1926. One was trapped at Moons Hill, Totland on 19th August.

70.056 Royal Mantle (*Catarhoe cuculata*) (Hufnagel, 1767). This is a species of chalk downland but is now rare. One presumed to be an immigrant was trapped in Bonchurch on 13th July and was the first on the Island since 1979.

72.087 Passenger (*Dysgonia algira*) (Linnaeus, 1767). One to light at Bonchurch on 3rd September is only the second vice-county record.

73.0301 Druid (*Aedia funesta*) (Esper, 1786). This rare immigrant has occurred annually in Britain since the first record in 2014. Here on the Island singles have been recorded in each of the last three years. One was trapped at Moons Hill, Totland on 1st July.

73.221 Suspected (*Parastichtis suspecta*) (Hübner, [1817]). Last recorded in 1963, there were two reports from 2018. Two at St. Catherine's Point on 4th July and one at Freshwater on 7th July.

Acknowledgements
My thanks go to everyone who submitted records, in particular Phil Barden, Andy Butler, Julian Clarke, Dave Cooke, Sue Davies, James Halsey, Sam Knill-Jones, Tim Norriss and Rob Wilson. I would also like to thank the Forestry Commission, National Trust, People's Trust for Endangered Species and Royal Society for the Protection of Birds for allowing access to their estates and to Natural England for their support.

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ODONATA, ISLE OF WIGHT, 2018

Jim R. Baldwin

2018 was another good year for Odonata with twenty four recorded species, the same as in 2017. Over 1,200 records were submitted during the year which was a 20% increase in recording effort on the previous year.

The cold and damp start to spring resulted in a delay before the first Odonata sighting, a Large Red Damselfly *(Pyrrhosoma nymphula)*, on 21st April, 12 days later than in 2017. The ensuing fine weather assisted the early emerging species although the exceptionally hot weather later during the summer resulted in some ponds completely drying out. As a result, this could have adversely affected the breeding of some species.

The final sighting of the recording season was a late Southern Hawker *(Aeshna cyanea)* seen hawking for insects over a garden pond at Wootton Bridge on 14th November.

There were many noteworthy 2018 records so the following is a selection of the more significant ones. The taxonomic sequence and nomenclature follow 'The BDS list of dragonflies recorded in the UK (up to 2016)'.

Emerald Damselfly *(Lestes sponsa)*
Away from its recognised breeding sites at Bouldnor, Clamerkin and Briddlesford Woods Nature Reserve, where it was recorded in 2018 at three of the ponds for the first time, this species was reported at Parkhurst Forest west pond for the first time with two adults seen on 8th August.

Southern Emerald Damselfly *(Lestes barbarus)*
Regular monitoring of the breeding site of this recently established species at Bouldnor by Peter Hunt resulted in a lengthy flight season recorded from 1st June to 10th October. As they are used to a Mediterranean climate, they thrived in the high summer temperatures and were not perturbed by their ponds drying out with ovipositing still being reported. A maximum count of 16 was recorded on 14th August.

Lestes barbarus (Peter Hunt)

Beautiful Demoiselle *(Calopteryx virgo)*
This species is known to disperse from the breeding pond after emerging but several records were received a considerable distance from any known breeding area. Singles were reported at Coombe Bottom, Ventnor on 14th May and Brook Green on 9th June. The final unusual record was two males at Shepherd's Chine on 24th July.

Calopteryx virgo (Peter Hunt)

Golden-ringed Dragonfly *(Cordulegaster boltonii)*
This species appears to be extending its range with two reported sightings from the Ryde area for the first time. A male was recorded from a garden in Binstead on 27th June and a moribund female was found in a garden in Simeon Street, Ryde on 21st August.

Downy Emerald *(Cordulia aenea)*
Four seen at Parkhurst Forest on 22nd May was the first time this species has been recorded at the site.

Scarce Chaser *(Libellula fulva)*
Up to three males were present along the Eastern Yar near Alverstone from 24-28th June. This is the first reported sighting of this species in the area, presumably from the Sandown Meadows population.

Four-spotted Chaser *(Libellula quadrimaculata)*
This species is known to wander far from its breeding area with west Wight sightings likely to have originated from the New Forest. Away from its main island breeding site at Brading Marshes RSPB reserve, it was reported for the third successive year at Briddlesford Woods Nature Reserve with a male seen on 21st May, 2nd June (seen at two ponds at the reserve on this date but possibly referring to the same individual) and 6th July. At Bouldnor, where one was seen on a single date in 2017, one was present on 26th May while a pair was observed mating and the female subsequently ovipositing on 4th June. There were also two reported at Corf on 2nd June.

Keeled Skimmer *(Orthetrum coerulescens)*
The Blackgang terrace population still appears to be sustainable, although numbers were slightly lower in comparison to previous years. However the area only gets minimal coverage due to the limited accessibility. The most seen was 30 on 25th June (20 at the terrace and 10 at Whale Ledge, east of Walpen Chine). At Rocken End, one was seen on 18th July at both the lower landslip pond and the slumped cliff.

Orthetrum coerulescens (Andy Butler)

Red-veined Darter *(Sympetrum fonscolombii)*
As in 2017, it was another good year for this migratory species visiting the south coast of England with the majority of the sightings on the Isle of Wight from 6-27th July. The first record was a male seen at Shepherd's Chine on 2nd June and at Wheeler's Bay revetment the following day. There were no further reports until 6th July when eight were at Leycroft Farm reservoir, with three pairs mating and two additional males present. Nine males at this site on 10th July highlighted a further passage movement and numbers continued to increase with a maximum day count of 15 on 18th July. Away from this site, at the nearby Atherfield Green Farm reservoir four were seen on 19th July comprising a pair ovipositing and two males. The final sighting was two at Leycroft Farm on 27th July. There were no reports of breeding success at either site although this species leaves the breeding pond soon after emerging so the site requires constant observation or the good fortune to find a larval skin (exuvia).

Sympetrum fonscolombii (Andy Butler)

Reference
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Acknowledgements
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NEW VICE-COUNTY RECORDS FOR HEMIPTERA IN THE ISLE OF WIGHT, 2017 & 2018

Iain Outlaw

New vice-county records for Hemiptera – 2017

Heteroptera: Miridae

Grypocoris stysi Wagner, 1968
This is a distinctive mirid apparently widespread in Britain but not previously recorded on the Island. It is found in woodland habitats and is often associated with nettles. One was found at Walter's Copse on 10th June by Stephen Plummer and me during the 1000 Species Challenge.

New vice-county records for Hemiptera – 2018

Nine species are described, four Heteroptera and five Homoptera (what are now regarded as Auchenorrhyncha and Sternorrhyncha).

Heteroptera: Tingidae

Andromeda Lacebug (*Stephanitis takeyai*) Drake & Maa, 1955
On 29th June whilst working in the study at home in Shanklin, I noticed an insect moving slowly along the window sill. I collected the specimen, examined it under the microscope and discovered it was *Stephanitis takeyai*, an introduced species that I had previously searched for without success. This species is primarily associated with Japanese Andromeda (*Pieris japonica*) so the two in our garden were checked regularly. A month after the original find, several more were found in the garden. From then until the year end they were seen in increasing numbers and were also found in other Shanklin gardens. Nymphs and adults pierce leaves to feed on plant juices causing blistering and leaving frass on the underside of leaves and a mottled appearance to the upper surfaces. It is regarded as a pest species.

Heteroptera: Miridae

Trigonotylus caelestialium (Kirkaldy, 1902)
A single specimen of *Trigonotylus caelestialium* was collected from a moth trap in Shanklin on 26th July. Measuring 5mm in length this is a species of dry grassland. Formerly considered to be a form of *Trigonotylus ruficornis* and very similar in appearance but identified by an distinctive white stripe on the first antennal segment.

Tupiocoris rhododendri (Dolling, 1972)
This naturalised species that feeds on Rhododendron is an accidental introduction from North America. Two were beaten from *Rhododendron ponticum* in Shanklin on 28th July. This species is superficially similar to *Campyloneura virgula* but the pronotum and scutellum are black and it has a distinctive white collar.

Alloeotomus gothicus (Fallén, 1807)
A single *Alloeotomus gothicus* was collected from a moth trap in Shanklin on 3rd August. The trap was being operated in a private garden at Upper Chine. It is a distinctive orange-coloured mirid that is associated with Scots Pine (*Pinus sylvestris*).

Auchenorrhyncha: Cicadellidae

Acericerus heydenii (Kirschbaum 1868)
A single specimen attracted to the kitchen light, flew into the sink on 18th February. The specimen was retrieved and its identity confirmed by Dutch entomologist, Marco de Haas. This species is associated with Sycamore (*Acer pseudoplatanus*) and was new to UK in 2010 but is increasingly common in southern England.

Sternorrhyncha: Aphididae

Variegated Oak Aphid (*Lachnus roboris*) (Linnaeus, 1758)
Small numbers of aphids were found on stems of an Evergreen Oak (*Quercus ilex*) growing at the edge of Shanklin Big Mead on 22nd August. The aphids were *Lachnus roboris*, a medium sized brown and black aphid with reddish legs, dark conical siphunculi and short antennae. They can be found on a number of oak species and have also been recorded on Sweet Chestnut (*Castanea sativa*). Alates appear later in the year and have dark-coloured forewings with clear patches.

Active Grey Pine-needle Aphid (*Eulachnus rileyi*) (Williams, 1911)
A single specimen was collected from Corsican Pine (*Pinus nigra*) at Upper Chine in Shanklin on 5th November. Very active when disturbed the aphid was identified as *Eulachnus rileyi*. Several adult apterae and immatures were collected from Scots Pine (*Pinus sylvestris*) at Pan on 9th November. Their colour is variable from brown to grey and a waxy coating builds up as the aphids mature.

Holm Oak Aphid (*Myzocallis schreiberi*) Hille Ris Lambers & Stroyan, 1959
Several small aphids were found on Evergreen Oak (*Quercus ilex*) at Westhill Road, Shanklin on 10 December. Specimens were collected and identified as *Myzocallis schreiberi*. The alate and adult apterae measured approximately 2mm in length, were pale yellow in colour with four rows of pale grey spots. This is one of ten aphid species known from Evergreen Oak in Britain.

Sternorrhyncha: Aleyrodidae

Honeysuckle Whitefly (*Aleyrodes lonicerae*) Walker, 1852
A pupa of *Aleyrodes lonicerae* was found whilst searching for Agromyzid mines. The specimen was collected from Snowberry (*Symphoricarpos albus*) on Manor Road, Shanklin on 08 November (SZ 5788 8083). This whitefly is polyphagous but is most often found on honeysuckles and related plant species.

Acknowledgements
My thanks go to David Biggs who has done excellent work as recorder of Hemiptera in recent years. I hope I am able to maintain the high standard David set. Thanks also to Marco de Haas and to Alan Outen for their assistance with identifications.

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Stephanitis takeyai

Alloeotomus gothicus

Lachnus roboris

Myzocallis schreiberi

COLEOPTERA, ISLE OF WIGHT, 2018

Jim R. Baldwin

There was an increase in the number of records received in 2018 principally due to the use of social media and requesting records in 'The Coleopterist' magazine. The latter resulted in over 2,000 historic records from visiting coleopterists. Three new species for the Isle of Wight were recorded in 2018.

New VC records
The taxonomic sequence and nomenclature for the species accounts below follow the standard checklist (Duff 2018).

Lordithon thoracicus
A female was trapped at Haseley Manor Nature Reserve on 14-18th September (exact date not known) (AG).

Woodland Dor Beetle *(Anoplotrupes stercorosus)*
One found near the Long Stone at Mottistone on 22nd April (DT, HT). The record and photographs were verified by Darren Mann, National Recording Scheme Organiser for the Scarabaeoidea (dung beetles, chafers and their allies). There were two further records in the year suggesting that this species, like many other species of beetle, is under-recorded on the Isle of Wight. One was seen and photographed in the woodland behind the Mottistone Estate on 6th May (EG) and the final sighting of the year, which was also photographed, was at Borthwood Copse on 28th October (TW).

Anoplotrupes stercorosus (Dave & Hazel Trevan)

Byturus ochraceus
One feeding on Hogweed *(Heracleum sphondylium)* at Holme Copse, Shanklin on 7th June was collected and examined (IO).

Other noteworthy records
There were many important records received; the following are a selection of the more significant ones.

Cliff Tiger Beetle *(Cylindera germanica)*
The beetle is a UK BAP Priority Species and appears to be faring well at Blackgang Terrace with c.500 present on 25th June (based on an estimate of five per square metre) (AB/IO). The fragile slipped cliff habitat continues to present a threat to this species' future.

Shore Sexton Beetle *(Necrodes littoralis)*
Two records of this species attracted to light at moth traps. One at Shanklin on 20th July (IO) and then another the following day at Rookley (JB). These are the third and fourth records for the Island and likely to be another species of beetle which is more widespread than records suggest.

Cytilus sericeus
One found on the external wall of the recorder's house at Shanklin on 31st May (IO). This is the third record for the Island.

Epuraea aestiva
One collected at Red Cliff, Sandown on 12th May during the Bioblitz event (IO). This the third record for the Island.

Epuraea melanocephala
One collected from Greater Stitchwort *(Stellaria holostea)* at Landguard, Shanklin on 4th May and another found in the recorder's house at Shanklin the same day (IO). These are the second and third records for the Island.

18-spot Ladybird *(Myrrha octodecimguttata)*
One came to light at a moth trap at Sandrock Road, Niton on 20th July (IO). This is the third record for the Island.

Alder Leaf Beetle *(Agelastica alni)*

Following the first sighting of this species at Osborne in 2017, records were received from a number of sites across the Island in 2018. Black Pan, Scotchells Brook and Haseley Manor Nature Reserve all had populations in excess of 1,000 during the first two weeks of September. This suggests that this species is now widespread.

Longitarsus flavicornis

A female was trapped at Haseley Manor Nature Reserve on 14-18th September (exact date not known) (AG). According to the Society's database this is the second record for the Island. However, the literature (Cox 2007, 209) identifies post-1980 records covering a further four 10-km squares which requires further investigation.

Longitarsus gracilis

Two were trapped at Haseley Manor Nature Reserve on 14-18th September (exact date not known) (AG). According to the Society's database this is the first record for the Island. However, as with *L. flavicornis,* the literature (Cox 2007, 212) identifies post-1980 records covering a further four 10-km squares which requires further investigation.

Agelastica alni (Jim Baldwin)

Cionus hortulanus

One was photographed in a garden at Arreton on 25th May (LM). The second record for the Island after it was originally seen at Eaglehead Copse in 2002.

There was also an interesting record regarding **Grape Wood Borer** *(Chlorophorus varius)*, a species not recorded in the U.K. A newly-emerged individual was found inside a house at Shanklin on 14th June and another discovered the next day. Both were caught and taken to the Isle of Wight Zoo, where the finder is an employee. After consultation with Paul Brock at the Natural History Museum (NHM), the identification was established and the specimens were subsequently sent to the NHM to add to their collection. It was considered that the larvae had hatched within some imported wood, or basket, in the house as the life cycle can last two to three years. The species, a member of the Longhorn beetle family Cerambycidae, is normally found in most of Europe (except the north) and the Near East (GH, TD).

Cionus hortulanus (Liz Miller)

Reference

Cox, M.L. 2007 *Atlas of the Seed and Leaf Beetles of Britain and Ireland.* Oxford: Pisces Publications.
Duff, A.G. 2018 *Checklist of Beetles of the British Isles*. Iver: Pemberley Books.

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BATS (CHIROPTERA) IN THE ISLE OF WIGHT, 2018

Colin R. Pope

Fourteen different bat species were recorded during 2018. As usual, several house roosts were monitored by householders. The Bat Hospital was kept busy with many bat calls dealing with 72 individual bats of a range of species and circumstances. I am grateful to them for allowing me to use their records in this report and to Donna Street for entering the records into Mapmate.

Greater Horseshoe Bat (*Rhinolophus ferrumequinum*)
There were two unexpected records this year. One was recorded from the Shide hibernaculum on the visit on 9th January (C&JP) as usual. However, there was also a bat detector recording (Ekon Batlogger) of an individual flying from the tunnel on 10th July (JH). This was particularly interesting as we did not consider that the roost was used in the summer months. It is possibly the traditionally used Carisbrooke Castle roost has become too disturbed.

One was present in Elephant's Hole hibernaculum at St Lawrence on 2nd March (DP).

Surprisingly, one was found hanging in an as yet unconverted part of Whitecroft (currently called 'Gatcombe Manor') in the northwest wing of the building on 23rd October (GS). Previous searches of Whitecroft in the past have failed to reveal any evidence of horseshoe bats. There were also Barn Owls breeding in this large roof void. It will be challenging to see how the developers deal satisfactorily with this unexpected find.

Daubenton's Bat (*Myotis daubentonii*)
One was recorded from the Shide hibernaculum on the visit on 9th January (C&JP). This species is only occasionally reported from here.

The Bat Hospital received a single bat in 2018. A female was grounded in South Street, Newport on 16th August (GS).

Whiskered Bat (*M. mystacinus*)
The long established house roost at Pallance Road, Northwood produced a maximum count of 25 bats on 20th May. The bats arrived on 1st May and vacated the roost in late May when hot weather arrived (SC).

The Bat Hospital treated 8 grounded Whiskered Bats. On 9th June a male was found in High Street, Newport; on 19th June a male in Watergate Road, Newport; on 1st August a female at Morrison's store, Lake Road; on 21st August a male at Millers Lane, Carisbrooke; on 29th August a male at Riverway Industrial Estate, Newport; on 3rd September a male in Bettesworth Road, Ryde; on 4th September a female in High Street, Cowes; and on 18th September a female at High Street, Newport (GS).

There were no records of the closely related Brandt's Bat, nor of Alcathoe's Bat.

Natterer's Bat (*M. nattereri*)
There was a bat detector recording (Ekon Batlogger) of an individual flying from Shide tunnel on 10th July (JH). This was interesting as we did not consider that the roost was used in the summer months.

The Bat Hospital treated three bats in 2018. On 13th March, a male was grounded in The Broadway, Totland. On 23rd July, a male was grounded at Chatfield Lodge, Newport. On 17th December, a male was found at Brickfield Lane, Totland, in mild weather conditions. (GS)

Bechstein's Bat (*M. bechsteinii*)
The Bat Hospital treated four individuals, all male, in 2018. On 21st July, one was grounded in Victoria Avenue, Shanklin; on 24th August, surprisingly one was disturbed during building works at Southern Water Pumping Station, Merstone; and individuals were found at Southford Mill, Whitwell on 26th June and again on 26th July. (GS)

Noctule (*Nyctalus noctula*)
The Havenstreet Station Cottage house maternity roost continues to hold both Noctule and Serotine bats. The highest count of Noctules was 25 on 6th June (JL).

Several Noctules were seen emerging from a tree roost in Appley Park on 25th August (CP).

Serotine (*Eptesicus serotinus*)
At the long established maternity house roost in Lower Adgestone Road, numbers continue to decline (JG). A gradual decline in numbers at this colony has been recorded over the past three years, suggesting that breeding success rates are falling. There have been no significant changes to the building.

The Havenstreet Station Cottage house maternity roost continues to hold both Noctule and Serotine bats. The highest count of Serotines was 17 on 6th June (JL).

A Serotine was seen during a loft inspection of the traditional Grey Long-eared Bat roost in Niton on 2nd June (CP).

A male was disturbed during building work at All Saints Church, Calbourne on 14th May. A male was grounded at Afton Barns, Freshwater on 21st May and a female at Palmers Brook Cottages, Wootton (GS).

Pipistrelle (*Pipistrellus pipistrellus* / *P. pygmaeus*)
Pipistrelle bats are the most frequently treated at the Bat Hospital. They dealt with 34 Common Pipistrelle (*P. pipistrellus*) and 3 Soprano Pipistelles (*P. pygmaeus*) in 2018 (GS).

Nathusius' Pipistrelle (*Pipistrellus nathusii*)
A male was grounded at Puckpool Park on 22nd October (GS).

Kuhl's Pipistrelle
This very rare bat was recorded by the Bat Hospital from Norton, near Yarmouth. A female was found grounded on 12th September (GS). This is the fifth Island record, all post 2000.

Brown Long-eared Bat (*Plecotus auritus*)
Despite being the second most frequent bat, the Bat Hospital treated very few bats of this species: just eight individuals was a fairly typical number for the Hospital.

Grey Long-eared Bat (*P. austriacus*)
The Island is a stronghold for this nationally endangered species. Only a single active individual was seen during a roost inspection of the traditional Niton nursery roost on 2nd June (CP).

The Bat Hospital dealt with three individuals. A male was grounded in Newport High Street on 7th September; a female in Town Lane, Newport on 9th September; and a female at Wootton on 22nd September (GS.

Barbastelle (*Barbastella barbastellus*)
Just one record, of a female grounded at Sandringham Hotel, Sandown on 9th October (GS).

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LEPROSY IN ISLE OF WIGHT RED SQUIRRELS

Helen Butler MBE

Although leprosy was common in Europe during the Middle Ages, for at least two to three hundred years, the disease has been all but unrecorded by health services within the British Isles. Cases still do occur in certain endemic countries, (for example India, Brazil and Indonesia), and from time to time a case is imported into the UK. Until relatively recently, leprosy was thought only to affect humans and be caused exclusively by the bacterium *Mycobacterium leprae*. However, it has become apparent that leprosy can also be caused by the related bacterium *Mycobacterium lepromatosis*. Nine-banded armadillos have been found to be naturally infected with *M. leprae.* Most cases of leprosy amongst humans are through prolonged close person-to-person contact with a human case. How frequently, if at all, leprosy spreads from infected animals to humans, is not known.

In 2014, laboratory testing by scientists at the Moredun Research Institute found *M. lepromatosis* DNA amongst red squirrels (*Sciurus vulgaris*) in the wild in Scotland. Subsequently, laboratory testing detected DNA of leprosy bacilli in red squirrels from Brownsea Island (*M. Leprae*) and the Isle of Wight (*M. lepromatosis*). Testing to date of grey squirrels in Britain has found none positive for leprosy bacilli. Also no other wild animal species in Britain has been found to be infected with leprosy bacilli.

In all areas of the UK, including the Isle of Wight, red squirrels that are found dead are collected for post mortem and where pathology is suspected, samples are sent for analysis. Red squirrel bodies have been collected for post mortem examination on the Isle of Wight since the mid-nineties, and since 2013 tissue has been retained from all animals collected. Ear pinnae are collected primarily for use in DNA studies and a small part of each sample is also tested for leprosy. Red squirrel bodies are collected from all areas of the Island and none of the squirrels examined so far have exhibited clinical signs characteristic of *M. leprae* or *M. lepromatosis* infection. It is, however, known that *M. lepromatosis* DNA can be present in asymptomatic red squirrels (Avanzi and others 2015).

Of the red squirrels tested from the Isle of Wight, deaths as a direct result of human activity, especially road traffic, accounted for 67% of mortality and 33% of cases to natural or unknown causes. *M. leprae* DNA was not detected in any of the squirrels tested and only one out of the 92 samples proved positive for *M. lepromatosis*. The affected animal was an adult male that died in 2016 at Wilmingham Lane in Freshwater as the result of road kill. As the squirrel was a road traffic casualty and the body very badly damaged, a detailed post-mortem examination was not possible, however, the pinnae showed no visible signs of leprosy.

Figure 1 of a red squirrel with typical signs of leprosy was photographed in 2017 in Quarr Wood. In 1996 a very sick squirrel was found at Quarr and taken to the vet, who was unable to determine what was wrong with the animal. The squirrel died. At that time samples were not taken or bodies given a post mortem examination. Looking at a 1996 photograph of the animal now, it is very likely it was suffering from advanced leprosy. The squirrels at Quarr are generally thriving with no signs of an increase in mortality due to disease, leprosy or otherwise.

In retrospect, based on historic observations and photos, leprosy has probably been affecting red squirrels in the British Isles for a very long time, possibly centuries. It is unknown how British red squirrels acquired leprosy. There is a theoretical risk of leprosy spreading from red squirrels to humans, especially if humans handle infected squirrels. The risk must, however, be very low as there is no known recent case of leprosy acquired in Britain without exposure to a human case or a visit to an endemic country

Similarly, leprosy appears to exist at a low level in the Isle of Wight red squirrel population and has almost certainly been present on the Island for very many years, although it is rare to see a red squirrel with the pinnae or skin lesions characteristic of the disease. It is therefore unlikely that leprosy is a significant cause of mortality on the Island, especially when compared with those of anthropogenic origin (Simpson and others 2013).

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Figure 1: Red squirrel with typical signs of leprosy. Photographed 2/1/2017 in Quarr Wood.

Figure 2: Red squirrel, apparently healthy.

SLAVE-OWNERS OF THE ISLE OF WIGHT

Dr. Nicholas Draper

Abstract
Although Britain vividly remembers its abolition of the slave-trade in 1807, we are slower to remember our participation in the institution of slavery itself, which in Britain's American and Caribbean colonies dated from the early 1600s until the final abolition of slavery in 1834. This article presents evidence for the presence on the Isle of Wight in the late 18th and early 19th centuries of several dozen slave-owners, local men and women who owned enslaved people in the British colonies of the Caribbean. These 'absentee' slave-owners on the Island were among a wider population of several thousand such slave-owners in Britain who have been identified through the records of the Slave Compensation Commission, set up to pay compensation to slave-owners in the British Empire in 1834, and whose histories when aggregated suggest that Britain's entanglement in slavery contributed to the formation of modern Britain.

Introduction

The Isle of Wight is not readily associated with slave-ownership. The Hampshire Record Office's pack for schools on the Transatlantic Slave-Trade has a single entry for the Isle of Wight, which shows the 1694 will of Ann Newland of the Isle of Wight, leaving half her fortune to her nephew 'now a slave in Barbary': this forms part of the contextualization of transatlantic slavery, but concerns 'white slavery'. It is known that Cowes was a key port in the trade in rice from Georgia and South Carolina before the American Revolution, but it is probably better known that the Isle of Wight sent petitions to Parliament in 1788 for the abolition slave-trade and in 1824, 1828 and 1831 for the abolition of slavery. So connections of the Isle of Wight with white slavery, with the plantation economy and with abolition have been researched and established: but on slave-ownership itself there has been silence. This elision of slave-ownership for the Island reflects a wider privileging in Britain's national memory of abolition over slavery. Reflexively when thinking of Britain and slavery, we 'remember' abolition, rather than the two centuries of entanglement in slavery that preceded it. This article seeks to re-inscribe slave-ownership in the history of the Island as one of the contributory forces shaping its development in the late 18th and early 19th centuries.

The background of British colonial slavery

It is important to signal immediately that chattel slavery did not exist in Britain itself as a legal and social institution. There were certainly Africans in states of unfreedom in Britain in the 17th and 18th centuries, in a form of 'slavish servitude', but the large-scale ownership of human beings in heritable slavery (where a child born to an enslaved mother was herself or himself automatically enslaved and 'belonged' absolutely to the owner of the mother and where the enslaved people were bought and sold as property without rights) was never established in Britain. Instead, Britain's involvement in slave-ownership was in colonial slavery, thousands of miles away across the Atlantic.

Britain was a late (although enthusiastic) entrant into this transatlantic slave-system. Even before Columbus reached the New World in 1496, Portuguese traders had established recognisable slave-sugar complexes in its near-Atlantic possessions of Sao Tome and Madeira. Expansion of chattel slavery into the Americas proceeded under Spanish and Dutch rule in the 16th century. The European powers drew on the sophisticated polities of West Africa for the supply of enslaved people, but the arrival of European slave-traders on the African coast transformed the nature and scale of pre-existing systems of African slavery, just as the use of enslaved Africans transformed the Americas.

It was only in the early 1600s that England began to secure trans-Atlantic colonies of its own, beginning with Jamestown in modern Virginia in 1607 (in 1637 the naming of Isle of Wight County, also in Virginia, is thought to have reflected the origin of some of the early colonists). In the 1620s the English settled Barbados and several of the Leeward Islands, and in 1655 we seized Jamaica - which became the largest of our slave-colonies - from the Spanish. There was a second round of expansion in 1763, when Britain (formally created by the Act of Union in 1707 between the Kingdoms of England and Scotland) took Grenada, St Vincent, Dominica and Tobago as part of the peace agreements ending the Seven Years War against France. Finally, in the early 1800s, at the very moment that Britain was abolishing its own slave-trade, we further increased our slave-Empire at the expense again of France and its allies with the addition of Trinidad, St Lucia and what became British Guiana in the Caribbean and mainland South America, and Mauritius and Cape of Good Hope in the Indian Ocean. Sugar was the major slave-grown commodity, but at different points tobacco, cotton and coffee assumed importance while tropical products such as indigo and mahogany were long-term staples.

Deepened involvement in the slave-trade went hand-in-hand with Britain's colonial expansion. John Hawkins had undertaken several slaving voyages from Plymouth in the 1560s but these were isolated examples of English involvement in the 16th century. In the later 17th century, however, England became a serious actor in the slave-trade, initially through the Stuart court-sponsored Royal African Company and then through independent traders operating mainly from London, Bristol and Liverpool but also from the out-ports: for example, the records show a slave-ship called the Isle of Wight, making a slaving voyage in 1714 from Portsmouth to Africa where it embarked 154 captive Africans and then to Barbados, where 123 were disembarked - one in five had died en route.[1] In the 18th century Britain was the biggest European power

in the transatlantic slave-trade. In total, British slave-traders shipped more than 3 million captive Africans, most between 1680 and 1807. Over the entire course of the international trade, from the early 16th century to the mid-19th century, European slave-traders embarked on the coast of Africa at least 12.5 million captive Africans, of whom more than one million died in the Middle Passage between Africa and the Americas.

Abolition and compensation

There was always opposition to slavery and to the slave-trade, beginning of course with the resistance of the enslaved people themselves. But abolitionism only became politically significant in Britain in the late 1780s, and was at its most intense in the period 1788-1792. However, its progress was derailed by a war of national survival against Revolutionary France, and it was only in 1807 that the effort to stop the slave-trade finally succeeded. This, however, left the institution of slavery itself untouched for another 25 years, with three quarters of a million people in slavery in Britain's colonies. Anti-slavery campaigning revived in the 1820s, and in the Parliament elected after the Great Reform Act of 1832, the Whig government passed an Act that abolished slavery as of 1st August 1834, replacing it with a system of 'Apprenticeship' which imposed obligatory unpaid labour for 45 hours per week on the formerly enslaved people. Apprenticeship was designed to last for 4 years for domestic workers and 6 years for field workers (in the event was it terminated for both classes on 1st August 1838). As part of this package, the slave-owners were paid £20 million in compensation. The enslaved people themselves received nothing. Where they could, formerly enslaved people left the estates and became self-sufficient farmers on marginal land; where they could not do this, they were obliged to continue to work on the plantations as wage-labourers. In some colonies, notably British Guiana and Trinidad, the former slave-owners began to import large-scale indentured labour from south Asia immediately after Emancipation to replace or compete with the former enslaved people.

The £20 million compensation awarded by the British state to the slave-owners represented 40-45% of the value of the enslaved people, and was paid by the British tax-payer (in those days, largely through regressive taxes on consumption of both necessities and luxuries); the unpaid labour under Apprenticeship was worth a further 35% or so of their value (paid by the enslaved people). The rest of the cost - 20-25% of the total - was absorbed as a loss by the slave-owners.[2]

The £20 million was distributed to 45,000 individual slave-owners in a period of 3 years, an extraordinary administrative achievement for the fledgling modern British state. The process of awarding the compensation money generated a unique set of records, now held at The National Archives at Kew. These records of the Commissioners for Slave Compensation have formed the basis of the Legacies of British Slave-ownership project at University College London, which has transcribed the lists of compensation awards and sought to identify the major slave-owners. Twenty years ago, it would not have been possible on this scale to trace so many individuals, but today with the resources available online we have succeeded in tracing most of them.

Slave-owners in Britain

We now know that of the 45,000 slave-owners, some 3,500 lived in Britain and owned half the enslaved people. The other half were owned by the more numerous class of slave-owners resident in the colonies themselves, comprising small-scale urban entrepreneurs and professionals as well as resident 'planters'. Strikingly, 40% of the slave-owners were women, often reflecting the greater economic agency of women in the colonies than in metropolitan Britain.

All the results of our research up to 31st December 2018 are available on our searchable website, www.ucl.ac.uk/lbs. In future, this website will be updated each year with a release of new information as our work continues on slave-ownership between 1763 and 1833, but the compensation records for the 1830s will remain a stable and complete component of the publicly-accessible database. The material can be searched by many different criteria, including family name of the slave-owner, estate (plantation) in the colonies, and address in Britain.

The particular focus of the LBS project has been on the impact of the slave-ownership in Britain, in the formation of our modern society and economy. To track this, we established six 'Legacy Strands': commercial (what businesses in Britain did slave-owners invest in or run?); physical (what country houses, urban development and memorials did slave-owners build?); political (what offices did slave-owners hold, how did slave-owners secure and use political power, and how did they lose their grip?); cultural and philanthropic (what art did slave-owners buy and collect, and what charitable and educational institutions did they support?); imperial (where else in the British Empire did slave-owners and their families deploy their financial and human capital as slavery came to an end?); and historical (how did slave-owners after Emancipation represent their previous involvement in slavery, as in novels and non-fiction they portrayed themselves as the victims of Emancipation and the formerly enslaved as the perpetrators who now refused to work?). Together, these strands show a dense body of connections between many things we value today and their origin in money derived from slavery.

We can now also map the absentee owners, those living in Britain while owning people in the Caribbean. There were clearly concentrations of such owners in and around London, Liverpool, Glasgow and Bristol, but the whole of Britain was permeated. There are few towns without any connection to the slave-owners.

The Isle of Wight in the slavery records

The LBS database offers a number of ways of tracing links between the Island and the slave-economy. One way is through the naming of estates or plantations in the Caribbean. Many estates in the Caribbean were given normative names – 'Hope' or 'Profit', for example. Many others carried family names. But still more were named after places in

Britain and must imply an original connection. On the Estates section of the database (found in the bar running along the top of the Home page of the LBS website) is the facility to search the estates by name. There was for example an estate named Ryde in Manchester parish, Jamaica, with 106 enslaved people in 1832, belonging to John Pusey Wint in the early decades of 19th century. There are several other estates named Yarmouth and Newport, but it is not possible at this stage to determine whether the estates relate to the towns of the same name on the Island or elsewhere.

Most striking of all, however, more vivid in evoking connections between the Island and slavery than the naming of a slave-ship as Isle of Wight or of an estate as Ryde, is the discovery in the Slave Registers of enslaved people named 'Isle of Wight.' Slave-owners had - and used - the power to impose new names on captives arriving from Africa and to name children born into slavery in the Caribbean. In 1817 on Flatpoint estate in St Ann, Jamaica appear two enslaved men - conceivably son and father - named Isle of Wight, one aged 25 or 35 (the image is indistinct), a 'creole' (i.e. born in Jamaica) and the second aged 60, an 'African', i.e. born in West Africa and a survivor of the Middle Passage. This older man was shown in a later Register as having died in 1820 aged 63. Separately, in 1817 on the Orange Valley estate, again in St Ann, an enslaved man named Isle of Wight, 27 'creole' 'son of Fidelia' (also creole and aged 51) was registered. By 1832 this Isle of Wight had died, aged 40. Finally, on Unity Pen in 1817, an enslaved boy named Isle of Wight aged 2 was registered, reportedly son to Mademoiselle ('aged 51', which seems unlikely), while the same Slave Register also showed a second enslaved person of the same name, Isle of Wight, aged 41, 'creole about 5' 7" high, runaway Feb 7 1808' (in other words, this man had self-liberated and if alive in 1817 was possibly living free elsewhere in Jamaica). The concentration of this practice of naming enslaved people after the Island, confined as it was to a single parish in Jamaica (and on estates where no other enslaved people bore comparable place-names), suggests specific and as yet unidentified links between the slave-owners or their managers and the Island. We know that Orange Valley and Unity Pen were both owned by an absentee slave-owner in Britain named John Blagrove and shared an attorney (a local manager) called George Mackay, but to date we have found no link to the Island for either man.

Such fragments as their names in captivity, their approximate ages and (sometimes) the names of their mother are often the only information we can retrieve about enslaved people, whose histories are truly lost. For the slave-owners, mostly white and often absentee living in Britain, we very often know more. The LBS website allows any user to search for individual slave-owners. Entering 'Isle of Wight' into the Quick Address Search in the current version of the LBS database yields 27 individuals: these are slave-owners with known and mapped addresses. The next section of this article will explore half a dozen of these individuals and the places with which they were associated in the Isle of Wight, to illustrate the diversity of the connections to slave-ownership.

Nelson House, Ryde

In the census for 1861 (a quarter-century after slavery had ended), Nelson House, Ryde was shown in the occupation of the Rev. John Simeon Barrow, and also his father Simon Barrow, aged 74. Simon Barrow (who had been Mayor of Bath in 1837) was described in the census form as 'Fundholder' (i.e. he was living off the interest on his holding of government stock). But Simon Barrow had previously been a London merchant, a partner in Barrow and Lousada, a consignee of sugar from the Caribbean and the holder of mortgages over estates and enslaved people there. He became a slave-owner in Jamaica, and was awarded the compensation for over 100 enslaved people on the Banks estate in St Ann with his partners the Lousadas (who were responsible for developing Sidmouth) and claimed for others in Barbados. Simon Barrow died at Ryde on 30th December 1862, leaving £2000 (around £1.6 million in today's terms). By the time of the 1871 census, the Rev. John Simeon Barrow had moved and Nelson House was occupied by three women born in Barbados: Louisa Easty, her mother Mary Clairmont[e] and her unmarried aunt [Harbourne] Barnwell Jones. Louisa had been born in 1833, on the eve of the end of slavery, but her mother and aunt had been born around 1800. We can find Harbourne Barnwell Jones (who died at Ryde aged 92 in 1894 – longevity was often a notable characteristic of white Europeans born in the colonies who survived to return to Britain) as the owner of one enslaved person in Barbados in 1834 in the compensation records: she received £19 8s 4d (around £15,000 in today's terms). Harbourne Barnwell's sister Kezia Jones also owned one person in the 1830s: in 1861 Kezia Jones was living at The Elms, St Helens, Isle of Wight, and she died at Ryde in 1870 aged 65. Louisa Easty's father, John Clairmonte Abrams, of Brookfield, and a merchant and owner of three and possibly five enslaved people in Barbados in the 1830s, had died in 1858 and is buried at Binstead Cemetery in Ryde alongside his widow Mary (the family dropped Abrams after the father's death) who died in 1881. From the examples of the Barrows and the Clairmonte and Abrams family it is possible already to see different types of absentee slave-owner: male/female; large-scale/small-scale; and plantation/domestic.

Customs House Cowes

Richard Estwick served as the Controller of Customs at Cowes, working from the Customs House. He lived at Moor House, and was owner of Charnocks estate on Barbados. He appears anomalous in holding a post on the Island: although possibly a sinecure it also gave opportunities for personal enrichment.

Spring Hill House

Spring Hill House was rebuilt by William George Shedden in 1863. His grandfather Robert Shedden had been an American Loyalist who fled to Britain in the American War of Independence, and became a very successful London West India merchant and slave-owner. William George Shedden himself was partner in a new firm, Hawthorn and Shedden, also slave-owners and mortgagees. His father George Shedden had also lived at Spring Hill, and left £140,000 in 1855.

Arreton St. George's Church
In Arreton Church, two plaques commemorate Robert Bell and his wife. Robert Bell had been in a partnership that owned an estate called Belle Plaine in Demerara (now Guyana) that received almost £15,000 in compensation for 274 ensalved people. Demerara had been a source of cotton in the 1790s under Dutch rule, and under the British became an important sugar-frontier between the 1810s and 1830s, generating high returns on its capital-intensive plantations. An uprising by enslaved people in 1823 was brutally suppressed. Arreton Church was restored in 1863 by Mrs Halson, the wife of Robert Bell's nephew and heir.

Buckland Grange
Thomas Yard, a Barbados slave-owner had returned or come to England in the slavery era, and was living at Buckland Grange by the 1830s, dying there in 1844. He had inherited three estates and over two hundred enslaved people from his uncle in 1803. Under his own will, Thomas Yard left £4000 each to his six younger children secured on his Cottage estate in Barbados, and left the estate itself to his eldest son Alleyne Cox Yard, who was still at Buckland Grange at the time of the 1851 census.

Appley House
At the time of the 1841 census, Appley House (now St Cecilia's Abbey) was the home of James Hyde, a mahogany merchant in Honduras who died at Appley House in 1858. British Honduras (now Belize), on the mainland of Central America, was not a sugar-colony but used slave-labour to exploit the tropical hardwood forests as raw materials to feed the boom in British piano-making. James Hyde was a major figure in this trade both before and after Emancipation.

The Lighthouse at Niton
Robert Holford, who built the lighthouse at Niton, is an enigma to us. He appears in two claims for slave compensation in Nevis as an assignee of a bankrupt West India merchant firm called Manning & Anderdon (William Manning was the father of the great leader of the Catholic revival in Britain Cardinal Manning). Holford might have been a creditor of Manning & Anderdon, or was possibly a trustee. He was reputed to have left a very large personal fortune, possibly a millionaire, in which case he was one of richest 15 or so people dying in the first half of the nineteenth century.

Other connections with the Isle of Wight in the slave-ownership records.
Entering 'Isle of Wight' in the Notes Search (as opposed to the quick Address search) on the LBS website yields a larger total of 94 individuals whose various connections with the Island can be further explored.

Some of these individuals were on (or on their way to) the Island for reasons that remain relevant today - holidaying or in retirement for example - and some for reasons that possibly do not obtain today - financial failure and disgrace. In 1793, for example, the following death-notice appeared in the *Gentleman's Magazine*:

'1793, June 26. At the White Hart inn Bagshot, Surrey, Mrs. Barnet, of Holles-street, Cavendish-square, lately arrived from the West Indies, where she had large property. She was travelling, with her family of seven children, to Southampton, on her way to the Isle of Wight, where she intended to pass the summer. Her eldest daughter and the gentleman to whom she was on the point of being married, attended her most affectionately during her short illness of three days.'

'Mrs Barnet' was Elizabeth Everett, the relict (or widow) of the Hon. William Barnett, of Arcadia in Jamaica. After her husband's death, she had come to England: Jamaica was no country for old women. Arcadia was an estate in Trelawney in the west of Jamaica with over 300 enslaved people in the early 1800s: it and they passed to another William Barnett, probably Elizabeth Everett Barnett's step-son.

A second category of slave-owners arriving on the Island came in effect as retirees, and died there after relatively short sojourns. Nathaniel Cave, a native of Barbados, who had purchased an estate and enslaved people there in 1829 and a second estate with the Apprentices and their unexpired term of labour in 1837, had lived in Clifton near Bristol but by the census of 1861 he was living at Newchurch, Ventnor with his wife Isabella and his daughter by his first marriage Lucy, both also born in Barbados. Nathaniel Cave died in 1861 at the rectory of his son-in-law in Shropshire: his son was also an Anglican clergyman.

James Trant, a Montserrat slave-owner of Irish descent who had married Mary Barrett, a distant relation of the poet Elizabeth Barrett Browning, let his house in Hans Place in London and moved to Upper Ryde, where he made his will, proved in 1804. Theodore Foulks, a Jamaica slave-owner, rented Pidford House in 1809, and died there either late in 1810 or early in 1811. His grand-daughter, the Victorian writer Theodora Elizabeth Lynch, has an entry in the *Oxford Dictionary of National Biography.* She returned to England after the death of her husband in Jamaica in 1845, and wrote about Jamaica in novels and stories. John Sterling was a major literary figure, now largely forgotten, who wrote verse dramas (*Stafford*) and narratives (*The Election*): Thomas Carlyle wrote a biography of him in 1851. Unlike many absentees who inherited slave-property, he went to the West Indies to visit his estate and enslaved people in St Vincent in 1831-32. He was an ameliorationist, that is he believed that slavery could be reformed and the lives of the enslaved people improved within the confines of slavery, and that abolition would eventually happen organically. According to his entry in the *Oxford Dictionary of National Biography*, he began rebuilding a house at Hillside on the Island before his death in 1844.

It is obviously not true today, but in the 19th century the Isle of Wight hosted distressed gentlefolk, as did Boulogne, which had the additional advantage of putting indebted individuals out of reach of their creditors. Frederick Elin, for example, formerly of The Observatory, Ryde but late of Hazelmount in Binstead died on the 4th December 1881. He had

been made bankrupt in 1872, just after leaving a business partnership with his brother John, who continued to prosper and left £150,000 at his death in 1900. The two men were the sons and one-time partners of the London merchant and slave-owner John Bloxam Elin, who had left £160,000 in 1873.

Again, it is naturally no longer true, but in the 18th and 19th centuries members of the leisured classes from the mainland drew on the Isle of Wight to find wives.

Two daughters of John Leigh of Northcourt married slave-owners. Johanna Leigh married twice, the second time to the delightfully-named Francis Love Beckford, a member of the family of the great Jamaica slave-owner and London politician William Beckford. Catherine Leigh married Chaloner Arcdeckne. Both Francis Love Beckford and Chaloner Arcedeknce were large-scale Jamaica slave-owners.

In a further contrast to the present day, the Island was politically corrupt before 1832, with three constituencies – Yarmouth, Newport and Newtown - that meet the description of 'rotten boroughs' (seats with small electorates susceptible to bribery from outsiders seeking election to the Commons: outside these three constituencies, the voting population of the Island voted in the Hampshire county election). Slave-owners bought into these rotten boroughs, as did East India Company nabobs, to create what was regarded as 'virtual representation' for the sugar colonies in the metropolitan parliament. The careers of such MPs were often transient. Their fortunes fluctuated, and their patrons resold the boroughs to newer and richer men. Under these arrangements, the slave-owner John Blackburn sat for the Newport Isle of Wight constituency between 1802 and 1806, while George Watson Taylor sat for Newport 1816-1818 using the money inherited by his wife from her uncle Simon Taylor of Jamaica. Dudley Long North sat for Newtown between 1807 and 1808, when he was parked there while his real seat was sorted out, and again in 1820-21. The Yarmouth, Isle of Wight constituency had three slave-owners sitting as MPs in the late 18th and early 19th centuries: Edward Morant between 1780 and 1787; Henry Swann between 1803 and 1804; and Thomas William Plummer between 1806 and 1807. Edward Morant recorded his interaction with the patron of his seat at Yarmouth the day after his election: 'Received of Mr. Long [his banker] £3,000 which was immediately paid Mr. Clarke Jervoise for an engagement of honour. No one present at the receipt.' Henry Swann had married the heiress to the Oxford plantation in Jamaica. Plummer opposed the abolition of slave-trade during his brief tenure in Parliament. His family firm were West India merchants, in which the *History of Parliament* website shows him to have been a partner.

Black presences on the Isle of Wight

This article has focused on the slave-owners. But slavery also brought a Black presence onto the island. In the will of Maria Burns formerly Inglis proved on the 18th April 1800[3] she made reference to Thomas Siras 'my old black servant now living in the Isle of Wight' to whom she left '£100 to be paid within 6 months of my decease.' Maria Burns was the wife of a doctor in Southampton; she had previously been married to John Dickons Inglis, who left her the Charlton estate in St Thomas-in-the-Vale in Jamaica, together with the enslaved people attached to it. She was apparently the financially stronger partner in her second marriage, leaving her husband an annuity of £100 p.a. secured on her estates and enslaved people, which and whom she left to a female relative, probably the sister, of her first husband.

Efforts to trace Thomas Siras further were unsuccessful until we recognised that Siras was almost certainly a phonetic variation of something else. That realisation took us quickly enough to the baptism 22/10/1797 of a Thomas Cyrus, born 08/10/1797 to Thomas Cyrus and Ann, at St Mary's, Cowes; to the 01/07/1804 burial of a Thomas Cyrus at Hamble le Rice Hampshire; to the 07/09/1822 marriage of Thomas Cyrus 'a black' to Martha Lee in Manchester; and to the 1851 census entry for Ann Brennan pauper aged 86 born Hamble and daughter Elizabeth Cyrus dressmaker born Cowes 49 living at Hamble le Rice. These fragments suggest an African man, probably brought from Jamaica either enslaved or free but becoming a 'servant' in the UK, in a relationship with Ann or Anne Brennan and having at least two children with her, Elizabeth and a second Cyrus (the man marrying in Manchester in 1822), and dying in 1804.

The rest of the story of Thomas Cyrus is missing, at least to us. It was one form of African presence on the Island. But there were other forms. In the slave-colonies (where it is not possible I believe to think in terms of 'consent'), the sexual exploitation by white male slave-owners of black enslaved women or of free women of colour gave rise to children of mixed heritage, often termed by their fathers as 'natural' or 'reputed' children. The life-chances of such children were significantly shaped by their father's patronage or otherwise in his lifetime, or provision under his will at death. We have found two such examples on the Island, both males and both - interestingly – Anglican clergymen. Jasper Farmer Baillie was the natural son of David Baillie, an attorney of Jamaica and Anna Lewis 'a free brown woman': in 1861 he was lodging at Elm House, Newchurch Ryde 1861. Rev. Ebenezer Robertson, the Rector of Motistone with Shorwell on the Isle of Wight from 1840 until 1854, was the son of a Jamaican slave-owner of the same name and Margaret Dunbar, a free woman of colour there. The Rev. Ebenezer Robertson, a graduate of Trinity Cambridge, resigned his post on the Island in 1854 'being desponding in his mind that he should fall into poverty' and committed suicide in the same year by leaping off Shakespeare's Cliff at Dover.

I want to close on what currently is a mystery or puzzle for LBS. We know that Thomas Williams of Ryde had inherited - with William Walter Williams 'late of West Cowes now of Newport' - an estate owned by their brother in Jamaica. The question for us is whether Thomas Williams of Ryde is the same man as Admiral Thomas Williams (who died in 1841) who was of New Church Upper Ryde, and whose first wife, a cousin of Jane Austen was killed on the island in 1798 in a carriage collision.

The collision gave rise to the following lament for the standards of conduct on the roads of the Island:

> 'Surely this alarming instance of the fatal effects arising from the bad management of the cart and dray horses in the Isle of Wight, which are hardly ever broken in, and generally under the conduct of the most careless and unfeeling drivers, will excite the Gentlemen of the Island to seek out a remedy for so flagrant, so dangerous, and so destructive a neglect on the part of the owners of such horses; and we hope that the relations of this excellent Lady, thus prematurely destroyed, will inquire minutely, and punish most severely, the negligence that has brought upon them so lamented a deprivation. In the narrow roads of the Isle of Wight, a severe police, as to all those who have the care of horses, is in fact but common justice to the public at large.'[4]

Perhaps some things remain constant on the Island.

Acknowledgments
This article is based on a lecture given to the Isle of Wight Historical Association at Newport on the 11th October 2017. I would like to thank Terence Blunden and the Committee of the Isle of Wight Historical Association for their invitation, the audience in Newport for their comments and additional information (including the fact that the local Island family from whom Queen Victoria had purchased the original Osborne House was descended from a slave-trader, Robert Blachford), and Paul Bingham for arranging to publish this version of the lecture in the *Proceedings*.

References

1 The Trans Atlantic Slave Trade Database at www.slavevoyages.com, in which this reference can be found, is an invaluable searchable resource.

2 Nicholas Draper, *The Price of Emancipation: Slave-ownership. Compensation and British Society at the End of Slavery* (Cambridge University Press, 2010).

3 PROB 11/1340/175.

4 The Times, 13 August, 1798.

Author: Dr. Nicholas Draper University College London

'LOT'S WIFE' AND THE CHANGING SHAPE OF 'THE NEEDLES'

Caroline Dudley

Abstract

During the eighteenth century, until it toppled over, a prominent stack that formed part of the Needles Rocks was popularly named Lot's Wife, after the biblical character who had been turned into a pillar of salt. This paper advances evidence to show that the rock fell in 1772, and not in 1764 as often claimed. The actual shape of this rock is examined, drawing on images made before it fell. It is argued that this rock is unlikely to have given the Needles Rocks their name. Arch and pillar formation and rock falls are part of a continual process of erosion that perpetually changes the appearance of the Needles. Two arches that have collapsed since the early part of the eighteenth century are documented.

Geology of the Needles Rocks

The geology of this location may be summarised in a number of bullet points:

- The Needles Rocks and the chalk cliffs along the southern side of Alum Bay are composed of hard indurated chalk with parallel bands of flints marking the bedding planes, classified as part of the Portsdown Chalk Formation. They are the western termination of an outcrop of chalk running through the centre of the Isle of Wight from Culver Cliff in the east. This outcrop once extended as a ridge across to the Isle of Purbeck in Dorset but was worn away by erosion.
- This chalk is a type of limestone that was formed from the skeletal remains of planktonic algae deposited on the seabed during the Late Cretaceous, between 100 and 66 million years ago (Ma), when the climate was warmer and sea levels very high.
- Collision of continental plates during the Alpine Orogeny, about 20 Ma, caused folding and uplift of the chalk in southern England (Hopson & Farrant 2015, 101). These movements resulted in the chalk beds of the Needles Rocks and cliffs along the southern side of Alum Bay becoming tilted into a near-vertical position, and caused compression and hardening of the rock that has made the chalk here more resistant to erosion. The high angle of dip in the chalk beds of the Needles Rocks – 75 degrees to the north – has caused each stack to erode into an unusual wedge shape. In addition, they have become elongated in the direction of outcrop strike, which is east–west.
- During repeated Quaternary glacial periods from about 2.6 Ma, the water locked up in ice sheets and glaciers at high latitudes caused substantial falls in global sea-level. In the last (Devensian) ice age, when sea-level was 120m lower than it is today, minor tributaries of the English Channel River system cut northwards into and through the chalk ridge between Purbeck and the Isle of Wight (Hamblin *et al* 1992, 79; Gaffney *et al* 2009, 73). As that ice age ended, about 10,000 years ago, ice melt caused sea-level to rise, flooding both the estuary of the Solent River and the valleys through the chalk ridge in the west.
- Coastal erosion on the exposed headlands either side of the breached gaps in the chalk ridge caused caves, arches and then stacks to form. These sea stacks were the ancestors of Old Harry Rocks off the Isle of Purbeck and the Needles Rocks off the Isle of Wight. As each generation of stacks was worn away and collapsed, the size of the gaps between Purbeck and the Isle of Wight increased. They have now merged into a single 'gap' 14 miles wide and there are currently three Needles stacks each around 30m (100 ft) high (Bright 2017).

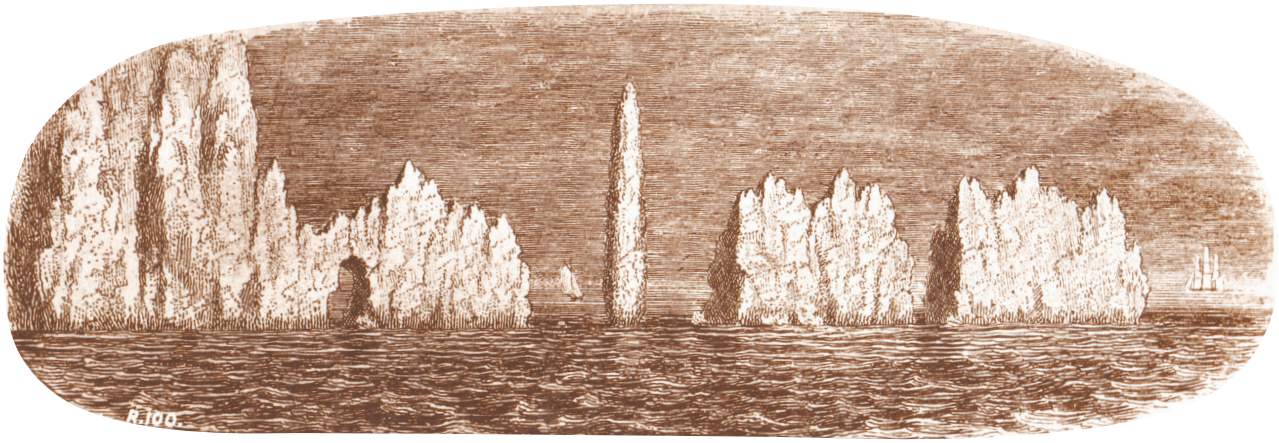


Figure 1: Brannon engraving made in 1828 of the Needles Rocks as he imagined their appearance before Lot's Wife fell (Brannon 1831). The arch connecting the inner stack to the headland is likely to have collapsed between 1735 and 1759 (see artwork later in this paper), before Lot's Wife fell. Brannon placed the tall narrow rock in the middle of the gap between the second stack and the headland. In fact it should appear closer to the second stack and just to the north of the line of the two outer stacks. We know this because the base of the rock is visible today at low tide (see figure 16).

When did Lot's Wife fall?
By the end of the seventeenth century, one of the Needles chalk stacks had eroded into a tall narrow form. It was popularly referred to as 'Lot's Wife', after the biblical character who was turned into a pillar of salt, 'the Pinacle' (*sic*) and 'the Needle'. Since the mid-1790s, many writers have recorded the year that this rock fell as 1764. It was a surprise to the author to discover, using the online British Newspaper Archive, that it actually fell on 22nd November 1772. There is no mention in newspapers for 1764 of a rock falling at the Needles. Seven newspapers in the database for 1772 reported the incident. Six used the same source with an identical description, the rock having been 'by a continued washing of the sea, thrown down'. However, the local *Hampshire Chronicle* reported that the rock was blown down 'by a sudden gust of wind'.

Hampshire Chronicle **Monday 30th November 1772**
We hear from West Cowes, that yesterday se'n-night, in the morning, by a sudden gust of wind, one of those celebrated Needle Rocks, called the Pinacle Rock, at the West end of the Isle of Wight, was blown down.

Salisbury and Winchester Journal **Monday 30th November 1772 (same wording in** ***The Caledonian Mercury, The Ipswich Journal*** **and** ***Oxford Journal*** **of 5th December 1772 and in the** ***Reading Mercury*** **of 7th December 1772)**
On Sunday se'nnight the rock known by the name of the Needle or Lot's Wife, upwards of 120 feet above High-water Mark, which stood at the west end of the Isle of Wight, was by a continued washing of the sea, thrown down. This rock will be a great loss to mariners, as it was a direction for them to steer by.

The Scots Magazine **November 1772**
The same account as above, but includes the date 'On the 22nd of November, the rock known ...'

How did the incorrect date originate?
Besides there being no mention in the newspapers for 1764 currently available in the British Newspaper Archive database, there is no record of the collapse of any rocks at the Needles in Dodsley's *Annual Register* for the year 1764 (Burke 1765), whereas the 1772 edition does record a rock called Lot's Wife falling at the Needles on 22nd November that year (English 1773). So, when did the incorrect year of 1764 for the collapse of Lot's Wife first arise?

1774 – Francis Grose
The earliest known book to mention the collapse of the tall narrow rock at the Needles is by Francis Grose (1731–1791), an eminent English antiquary born in London. His first and best-known publication was the *Antiquities of England and Wales,* which was initially produced in four volumes, between 1772 and 1776. The second volume includes Hampshire and the Isle of Wight (Grose 1774). Accompanying the text is an engraving first published in 1773 by Richard Bernard Godfrey showing the Needles Rocks from Hurst Castle (see figures 2 a & b). The engraving was based on a drawing made in 1761 (Grose 1774).

Figures 2 a & b (detail): This image of Hurst Castle with the Needles in the distance appears in Grose (1774) and was engraved by Richard Bernard Godfrey from a drawing made in 1761. According to Grose, the Needles 'are seen at a distance in this view, where the pinnacle or pointed rock here mentioned is particularly distinguishable'. However, Godfrey appears to have made it more distinguishable than it really was, since it is recorded as having been 36.6m (120 ft) high and so was only about 6m (20 ft) taller than the stack close behind it. The middle stack is today about 30m (100ft) high.

Grose described the Needles as: 'certain chalk rocks, one of which is tall and slender, with a sharp point like a pinnacle or needle. These are styled the Needles, or Needle Rocks; they are seen at a distance in this view, where the pinnacle or pointed rock here mentioned is particularly distinguishable: this about two years ago was thrown down by the impetuosity of the waves which washed its sides, and had before greatly undermined it.' He correctly implies a date of 1772.

1778 – John Sturch

In 1778, the Rev. John Sturch (1718–1794) of Newport published *A View of the Isle of Wight, in Four Letters to a Friend* (Sturch 1778). In his preface, Sturch did not profess an extensive knowledge of geography and natural history, but wrote: 'I shall have one advantage over those who have borrowed *all* their information from books, that what falls under my own observation, will, at least, have the merit of being *true.*' He lived on the Isle of Wight from at least the 1740s, dying there in 1794 and should have been well placed to write accurately about the rock's collapse. On the Needles he wrote: 'Several of them are at considerable distances from the land, as well as from each other; and as they rise to the height of many feet above the water, they appear at a distance like the remains of some broken towers, which had been shattered and thrown down by an earthquake. They are nevertheless of nature's own curious but unpolished workmanship, and have doubtless stood for immemorable ages without any material changes. Nothing however is an absolute proof against the injuries of time. It is but a few years since that one even of those solid pyramids yielded to the fury of a storm and fell, to the no small surprise of those who were within hearing of the mighty crash.' Here Sturch said that the rock fell during a storm. *The Gentleman's Magazine* (Urban 1773), in its meteorological report of the weather in London, recorded the wind as 'SW strong' on both 22nd and 23rd November, with 22nd being 'an exceeding bright fine day' and 23rd 'a very heavy wet day'. Owing to the direction of the wind, from the southwest, the weather during this period is likely to have been the same along the south coast of England.

1781 – Worsley

In 1781, Sir Richard Worsley (1751–1801)[1] of Appuldurcombe House published the monumental *History of the Isle of Wight*. Under the heading 'The Needles', he recorded that: 'The Western termination of this parish, and of the island, is an acute point of high land, from which has been disjoined, by the washing of the sea, those lofty white rocks, called the Needles, formerly three in number, but about seven years ago, the tallest of them, called Lot's Wife, which rose a hundred and twenty feet above low-water mark, and in shape resembled a needle, being undermined by the constant efforts of the waves, overset, and totally disappeared.' 'About seven years' prior to this equates to Lot's Wife falling sometime in the early 1770s and certainly not as long since as 1764. Sir Richard wrote to various parishes requesting information on their environs for the book, and as he did this within a decade of the rock falling, the account is likely to be accurate.

1794 – Wyndham, 1795 – Albin, 1796 – Tomkins

The 1764 date first appears in Wyndham (1794) and was repeated by Albin (1795) and Tomkins (1796). The descriptions of the rock's demise are so similar that either the same source was used by all three authors or Albin and Tomkins copied their information from Wyndham. Henry Penruddocke Wyndham (1736–1819) was a British Whig Member of Parliament, topographer and author. The preface to his book *A Picture of the Isle of Wight: delineated upon the spot, in the year 1793*, explained that he had 'passed a few summers in the Isle of Wight' and thought he 'could not employ some leisure hours more agreeably to myself, or more usefully to the public, than in transmitting to paper the observations which I occasionally made, in my repeated excursions to the different parts of the island.' In an account of a journey by sea around the Island in July 1793, he wrote: 'We may now suppose ourselves clear of the farthermost Needle Rock, three of which have still defied, with security, the blasts and tempests of the equinoctial storms, and rear their wedge-formed fronts, and craggy tops at some distance from each other. The fourth, emphatically called *the Needle*, was a tall, tapering mass of stone, of a small proportionate diameter, and rose to upwards of one hundred feet: the foundations of this being, at length, worn away by the agitation of the waves, the whole pillar yielded to their fury, about the year 1764, and fell with such a tremendous crash, that the sensations of it were actually felt at Southampton. This rock is now totally buried in the waters, and not a wreck of it left above.'

The printer John Albin (fl. 1792–1831)[2] moved to the Isle of Wight in the 1780s and first published his *New, Correct, and Much-improved History of the Isle of Wight* in 1795. On page 662, he wrote of the Needles: 'it is within recollection of a great part of the inhabitants of the island, and those on the opposite shore, as well of mariners, being little more than twenty years ago, that one of these wonderful pyramids was undermined and thrown down by a furious storm. That which fell is said to have been 120 feet in height above low water mark.' 'Little more than twenty years' prior to 1795 ties in with the 1772 date for the rock's collapse; however, on pages 665–666, he gives the date of 'about 1764' for its demise! He also stated there that it fell with a prodigious crash: 'the Needles… Their sharp and craggy points have pointed out the propriety of the name; but this title was still more applicable to a fourth, which was undermined and fell down with a prodigious crash about the year 1764, and is now totally lost, being upwards of one hundred feet high, when it was standing.'

Wyndham and Albin were tentative in their dating and wrote that the rock fell 'about the year 1764'. However, the engraver Charles Tomkins (1757–1823) stated the year as fact. Like Wyndham, Tomkins had undertaken his tour of the Island in 1793, but his two-volume work *A Tour to the Isle of Wight, illustrated with eighty views, drawn and engraved in*

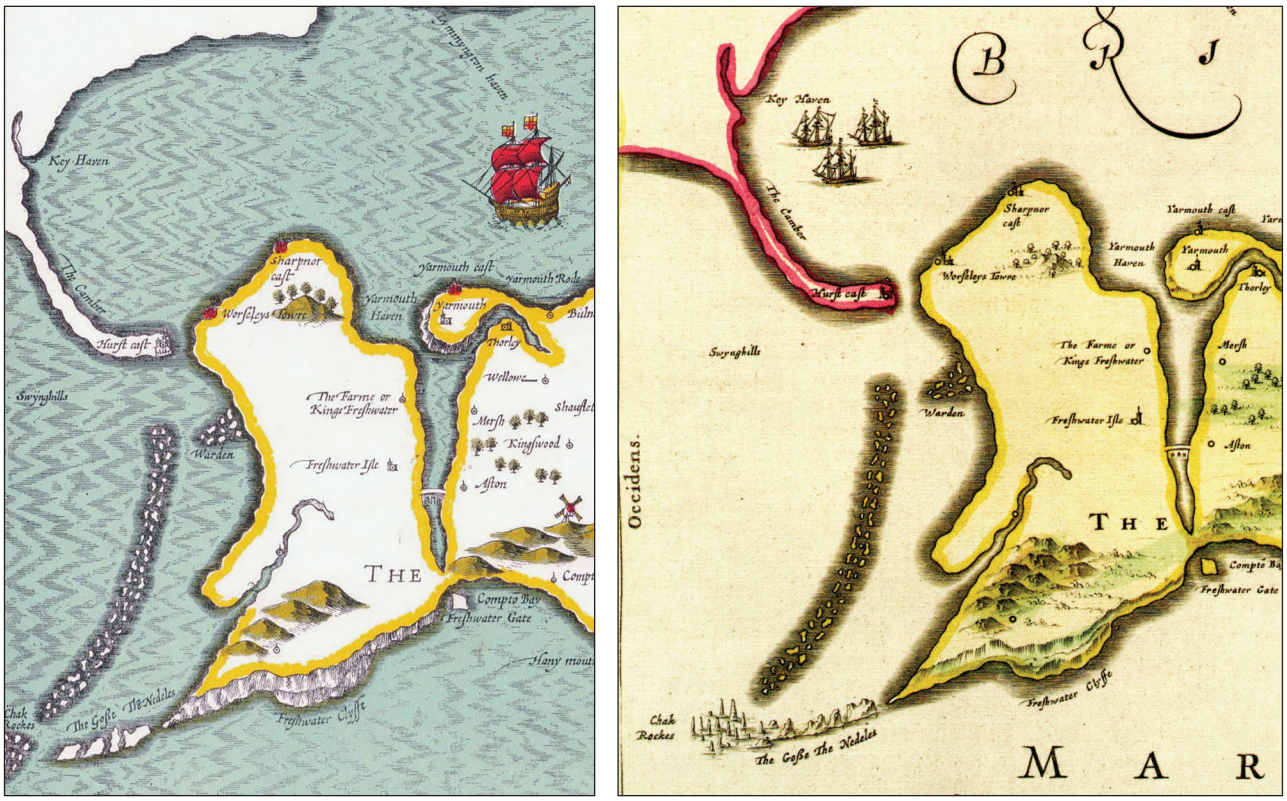
aqua tint wasn't published until 1796, two years after Wyndham's because of the time taken to produce 80 engravings as well as a lengthier text. At the start he explained: 'Having long been actuated by a desire to view the picturesque beauties of the *Isle of Wight*... I determined to embrace so favourable a season as the summer of 1793, to examine that beautiful and romantic island.' From this we can deduce that he was unacquainted with the Island and this was his first visit. Sailing around Headon Point and into Alum Bay, he wrote: 'At the extremity of the adjoining high lands, are seen the insulated rocks called the Needles. Three of them, of considerable size, are still remaining, but that which originally procured them their name, was a tapering pillar of above a hundred feet high, thrown down by the fury of the waves, in the year 1764. Its fall was attended with so tremendous a shock, that it is said to have been felt at Southampton. The base of this rock we could not possibly discover, though the sea is particularly transparent at this part, and we employed a considerable time in looking for it.' Both Wyndham and Tomkins elaborated on the magnitude of the shock waves produced when the rock fell, saying that they were felt as far away as Southampton. From the earlier works by the Isle of Wight inhabitants Sturch and Worsley, it would seem that both the 1764 date and the extent of shock waves of the crash were a fabrication. It is strange that Tomkins and his party were not able to find the base of the rock since this is visible at low tide today, but perhaps they were unaware of its exact location.

1831 – Brannon

In the nineteenth century, prolific Isle of Wight author and engraver George Brannon (1784–1860) perpetuated the 1764 date first started by Wyndham (1794), Albin (1795) and Tomkins (1796). He published an engraving in 1828 (see fig. 1) of the rock showing how he thought it had once looked. George was born in Ireland but probably moved to the Island around 1809 and first published his *Vectis Scenery* in 1821. He wrote of the Needles Rocks: 'Their forms bear no resemblance whatever to their *name*, which was derived from a spiral rock about 120 feet high, that fell in the year 1764 with so tremendous a crash, as to have been heard at the distance of several miles; indeed it is said by some, that the shock was felt as far even as Southampton.' This information has been regarded as impeccable by many and became ingrained in popular Island history. Both the date and appearance of the rock in Brannon's many works are misleading.

What did Lot's Wife really look like? A survey of contemporary images and descriptions

Early seventeenth-century maps – Speed and Blaeu



Figures 3 a & b: Speed's 1610 map (left) and Blaeu's 1645–48 map (right) showing the Needles Rocks and Channel and various hazards to larger vessels: Warden Ledge, the Shingles, Goose Rock and the reef of chalk rocks west of the Needles.

The sections of two seventeenth-century maps, by Speed and Blaeu, both show a diagrammatic representation of the western tip of the Isle of Wight. John Speed (1551–1629), whose map was first printed in 1610, was a well-known English cartographer and historian. Joan Blaeu (1596–1673) was a Dutch cartographer and atlas maker. It seems that Blaeu based his map on that of Speed as there are many similarities. The maps show the various hazards to mariners:

Warden Ledge; the Shingles, the roughly 3-mile-long shifting bank of pebbles just beneath the waves on which many ships have been wrecked; the Goose Rock; and a reef of chalk rocks west of the Needles. Speed showed those 'Chak Rockes' off the Needles as flat, so presumably submerged, but Blaeu drew them with sharp points. Doomer, in a drawing made just ten years after Blaeu's map was published (see fig. 4), apparently omitted any sign of these rocks suggesting they were all submerged. A reef of chalk rocks southwest of the Shingles, and 'the Bridge', a dangerous bar shoal or chalk ledge extending to around 1.2 miles west of Needles Point, were described by Chandler *et al.* (1847): 'The *Shingles* extend nearly W.S.W. and E.N.E., about 2½ miles in length… [The S.W. extremity] is connected with the Needle Point by the narrow bar-shoal, or Bridge… and on which there are only 3 fathoms, at the distance of ⅓ of a mile from the Needle Rocks… Without the S.W. extremity of the Shingles lies a reef of *Chalk Rocks*, with 2 and 2⅓ fathoms over them.'

Both Speed and Blaeu show the Needles Rocks to be four in number, but it would appear from other sources that the innermost section of rock was still joined to the headland at this time (see artwork below). The two outermost stacks of the Needles are longer than they are tall but the third innermost one, Lot's Wife, is taller than it is long and is shown with an irregular outline by Speed. Maps were obviously not strictly representational at this time, however.

1646 – Lambert Doomer

The seventeenth century was the Dutch Golden Age, when that Republic was the most prosperous nation in Europe and dominated European trade, science and art. Landscape and marine art became major genres in painting for the first time, whereas in Britain the importance of these forms of art was not realised until the eighteenth century. Consequently the earliest landscapes and seascapes made in Britain were by visiting Dutch artists.

A drawing by Lambert Doomer (1624–1700)[3] is the earliest known picture of the Needles and Lot's Wife (Isle of Wight Industrial Archaeology Society 2003). This pillar-like rock is taller than the two outer stacks and does appear to be lying slightly north of the gap between its nearest neighbour and the headland (note that the stack which today is nearest to the headland had not then become detached). The rock appears to have a fairly flat western face, a pointed top and a large bulge roughly halfway up its landward side, which stops it looking needle-like in shape. The drawing is contained in *Atlas Blaeu-Van der Hem* (published c. 1662), a showpiece of Dutch cartographic and topographical art, which is currently in the Austrian National Library in Vienna.

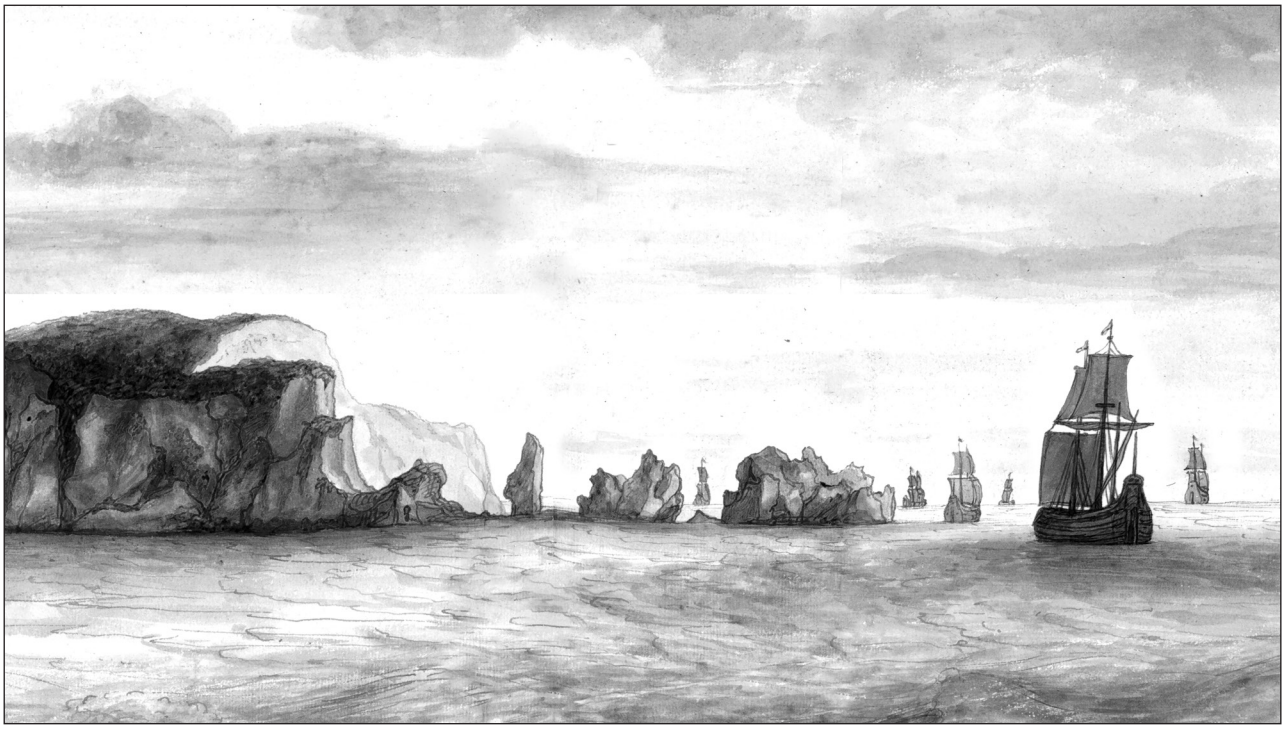


Figure 4: Pen and wash drawing of the Needles made in 1646 by the Dutch artist Lambert Doomer. © ANL/ Vienna, 389030-F.K., Bd. 19:46, f. 58-59, (46).

c. 1690 – Thomas Phillips

'A Prospect of Hurst Castle', which shows the Needles Rocks in the distance on the other side of the Solent, was painted by the artist, cartographer and military engineer Thomas Phillips (c.1635–1693) in around 1690. He spent much time along the south coast of England during his career, which included his initial appointment as master gunner of HMS *Portsmouth* in 1661. His inspection of the naval bases and strategic harbours began in the 1680s, and his work on Portsmouth's fortifications from July 1690. Therefore, Phillips would have seen the Needles Rocks many times and been familiar with their shape. For his surveys he drew up meticulous plans and clearly had an eye for detail. He was commissioned to survey many different parts of the country producing plans and views, and his work was considered

skilful and reliable. Payne (1987), a former Curator in the department of Manuscripts at the British Library, wrote in praise of Phillips that his 'deft hand and cultured eye enabled him to turn in some of the most handsome pictorial reports of his day' undertaken 'in such an accomplished manner as to confirm that military draughtsmen too had learned from Hollar and artists from the Low Countries.'

In Phillips's painting, the Needles are not the main subject and it is uncertain how much care he would have taken in trying to reproduce a landmark in the background. The dimensions of 'A Prospect of Hurst Castle' are 70.5 x 48.8 cm, making the height of Lot's Wife roughly 1 cm in the painting. However, its position is consistent with the location of the base today, as it is both north of the line of the other stacks and closer to the adjacent stack than it is to the headland. Compared with Doomer's work of c. 44 years earlier, the rock looks more tapered.

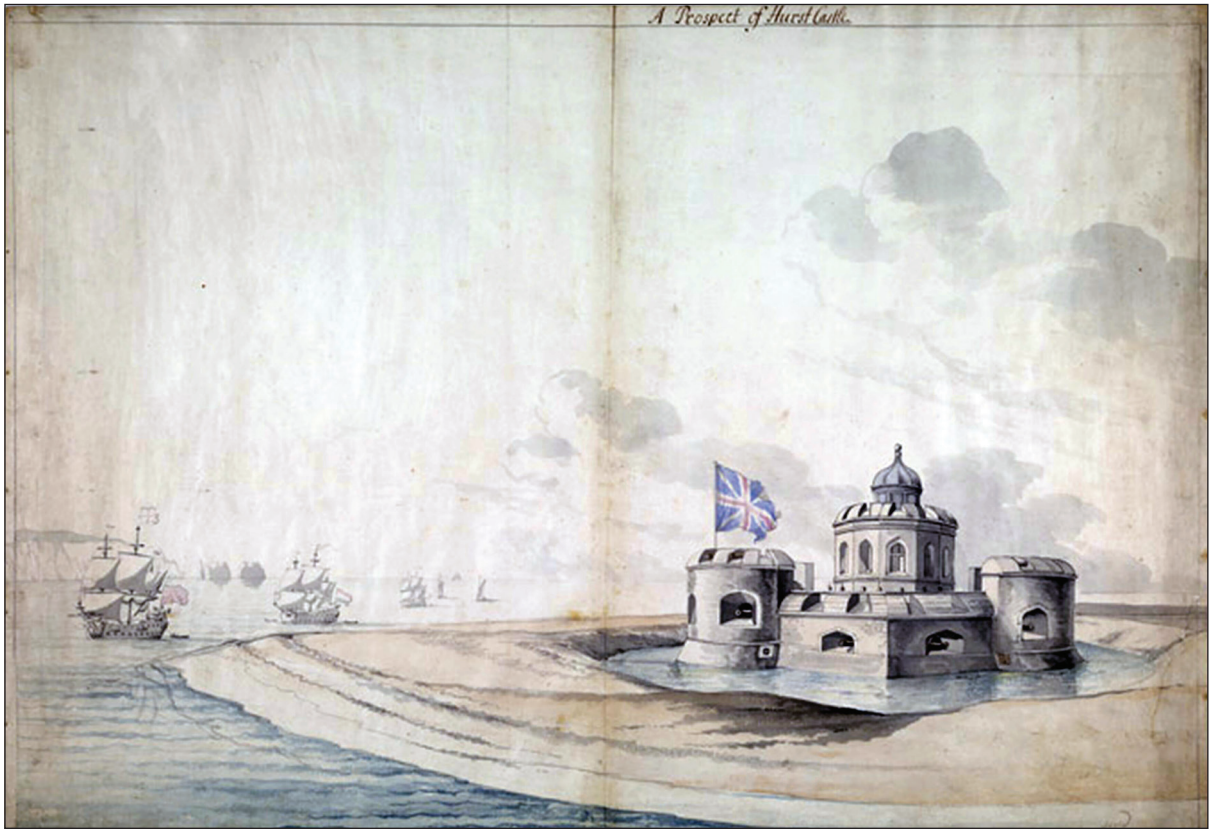


Figure 5: 'A Prospect of Hurst Castle' by Thomas Phillips, c. 1690. The Needles Rocks can just be seen in the distance between the two ships on the left. Watercolour over pencil, 70.5 x 48.8 cm. Part of King George III's Topographical Collection. © British Library Board (Ktop XIV 63-1-a).

Figure 6: Detail of 'A Prospect of Hurst Castle' by Thomas Phillips, c. 1690, showing Lot's Wife and the two outer stacks beyond the Needles headland. The image has been altered digitally to improve contrast. © British Library Board (Ktop XIV 63-1-a).

1735 – Philip von Reck

The coloured sketch shown in fig. 7 was produced by 25-year-old Baron Philip Georg Frederich von Reck (1710–1798)[4], a German commissary accompanying German and English colonists to Georgia, America. Various delays meant that they reached Cowes harbour in mid November 1735, later than planned and then had to spend over five weeks sheltering there owing to severe storms and adverse winds. They finally reached the Needles on 21st December (10th December in the Julian calendar) and sailed on into the English Channel.

The painting shows von Reck's ship, the *London Merchant*, in the foreground and one of its two companion ships, the *Symond*, rounding the Needles. Among the travellers was Rev. John Wesley, the father of Methodism. On the day of departure Wesley wrote: 'We sailed from Cowes, and in the afternoon passed the Needles. Here the ragged rocks, with the waves dashing and foaming at the foot of them, and the white side of the island rising to such a height, perpendicular from the beach, gave a strong idea of "Him that spanneth the heavens, and holdeth the waters in the hollow of his hand!"[5]'

Figure 7: 'The Needles and Shols by the Isle of Wight in the English Channel 1735'. Painting from von Reck's sketchbook. Lot's Wife looks much more slender than in earlier images. NKS 565 kvart, © The Royal Danish Library.

Exactly how much time von Reck had to study the Needles is not known. Several written accounts of the journey survive and Francis Moore, keeper of the stores on the *Symond*, explained how his ship and the *Hawk* continued on passed the Needles while 'The *London Merchant* lay by a little for three of the passengers who happened to be gone to Portsmouth when the wind came fair; but it was all to no purpose, for they not coming up in time, were left behind' (Moore 1744). Therefore, von Reck would have been able to sketch the Needles while they waited there for the absent men, whose wives and children were on board. The painting shows that the stack that is today nearest the headland had not then become detached. It also shows the striking proportions of Lot's Wife so that we can believe how it might have been used as a mariner's marker in assisting safe passage out of the Needles Channel.

Four lines in the poem 'VECTA. A Description of the Isle of Wight' (Anon. 1740), attributed to Tobias Smollett (1721–1771), a successful Scottish author and poet, and surgeon's mate on HMS *Chichester* (Shelton 2015), provide written evidence of the rock being used as a navigational marker less than five years after von Reck made his painting. Here, the poet and his party have just rowed past Hurst Castle on their way to the Needles:

In prospect chief the Pinacle we keep,
A lengthen'd gloom projecting o'er the deep;
Tho' small its breadth, aloft in air it tow'rs,
While round its rooted base the billow roars;

1759 – Isaac Taylor

Isaac Taylor (c. 1720–1788) was a land surveyor, map maker and engraver from Herefordshire. He was interested in antiquities and topography, as is clearly shown by the content of his maps. He specialised in estate maps but also produced five county maps including that for Hampshire and the Isle of Wight (Norgate & Norgate 2006a). This was engraved by Richard Benning (fl. 1743–1781). At the western extremity of the Isle of Wight, Taylor's map shows the Goose Rock beyond the Needles Rocks, two outer stacks and a taller, narrower third stack. The map is illustrated with various scenes and one of these is entitled 'The Needles'. In this, Lot's Wife has been drawn to look very much like a pillar, with a more consistent width over its height than on the map, where the lower two-thirds appear distinctly broader than the upper third. In addition, the drawing shows the innermost stack to have become largely separated from the headland, being joined only by a bar of rock at its base. Philip von Reck did not show the innermost stack as distinct from the headland in his 1735 painting so it seems likely that the stack was created sometime between then and 1759. The shape and position of the three larger stacks accords well with their appearance today, so although Lot's Wife should be set back behind the line of the other stacks in the drawing, should we consider the shape of this rock to be reasonably accurate as well?

Figure 8a: Section of Isaac Taylor's '1 inch to 1 mile' map engraved by Richard Benning and published in August 1759 showing Goose Rock, Lot's Wife and the other Needles stacks. Figure 8b: is an illustration that appears on the map. The innermost stack is shown here as separate from the headland. From Old Hampshire Mapped (Norgate & Norgate 2006b).

The original illustration of 'The Needles' shown on Taylor's map is in the collection of Carisbrooke Castle Museum (CCM). This differs from the version on the map in having the inner stack connected to the headland by an arch. The drawing is entitled 'Ancient View of the Needles' and careful examination shows that the top of the arch was a later addition as the horizontal lines representing the sea behind show through its surface. So presumably the drawing had been altered to show how the Needles had looked sometime prior to 1759.

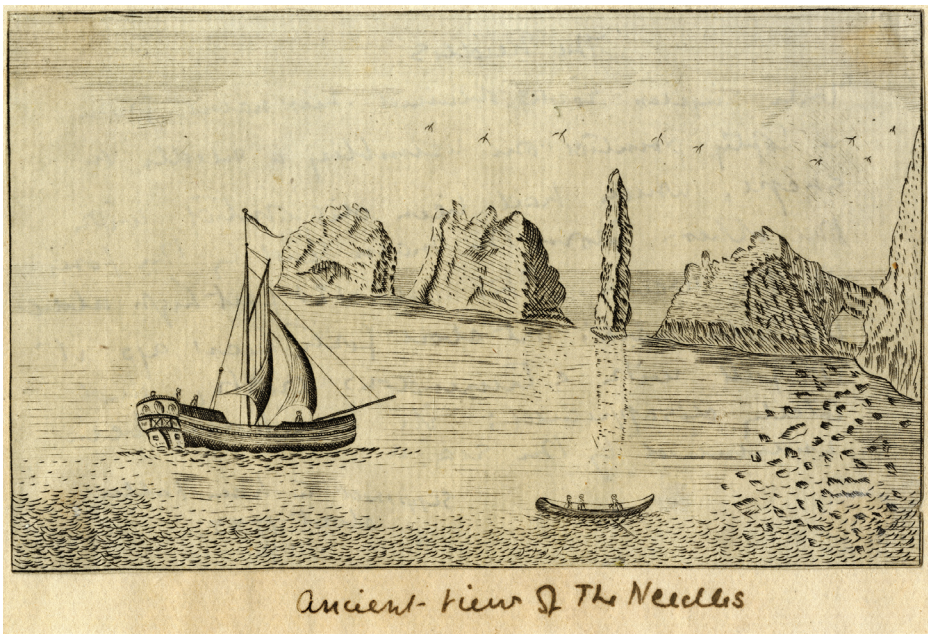


Figure 9: Undated and unsigned pen and ink drawing of the Needles Rocks in the CCM collection. Compared with the drawing on the 1759 Taylor map (fig. 8b), the innermost stack is connected to the headland by an arch as well as at its base. The horizontal lines representing the sea can be seen through the surface of the arch, showing that it was drawn on later. As the title of the drawing is 'Ancient View of the Needles', it has presumably been adapted to show how the rocks looked at an earlier time. © Carisbrooke Castle Museum.

1766 – Henry Jones

In 1766, the Irish poet and dramatist Henry Jones (1723–1770) released a poem with the title '*Vectis. The Isle of Wight: a poem in three cantos*' (Jones 1766). Part of the poem concerning the Needles is reproduced below. The poem was propagated by several different publishers in 1766 and 1782. One of the publishers (Mallett 1782) illustrated their edition of the poem with the drawing of the Needles in the Carisbrooke Castle Museum collection where the inner stack is still connected to the headland by an arch (fig. 9). A 1766 edition, published by W. Flexney of Holborn, London, was accompanied by a seemingly more hypothetical image of the Needles Rocks (fig. 10).

Excerpt from Canto II *Vectis. The Isle of Wight: a poem in three cantos* by Henry Jones first published in 1766.

The Needles now with dawning gleams appear
Like the grey glimpses when the morn is near,
That whiter grows as Boreas mends the breeze,
Their bluish mantle fading by degrees;
Is vanish'd now, the rocks are now express'd,
And beauty stands before us all undress'd,
With tempting Majesty serene yet coy,
That damps at once, at once provokes our joy,
Conceding gradual with a placid mien,
Where grandeur mixt with gentleness is seen;
Where both agree with wide extended arms
To clasp the gazer to their mingled charms;
The verdent velvet robe is cast above,
As needless in the naked task of love,
See! see! how fancy on that bed is caught
With all that Iris in her webb hath wrought;
Where all the tints that in her loom delight
On yonder bank, salute the raptur'd sight;
The rainbow's radiance and commingled ray
In shining strata of refulgent clay,
Seem emulous of that which reigns on high,
Here Earth contends with beauties of the Sky;
Th' inchanting slope with sweet attraction draws,
The eager heart, and yet it's ardour awes,
As conscious of some wondrous scene behind
That with prodigious grandeur damp the mind;
By some prophetic energy imprest
That from this specimen concludes the rest;
And lo! the outguards*, fix'd that boldly brave
The storm indignant and the advancing wave;
In hostile wise with sharpen'd spears they stand
Amid the floods, at nature's great command;
In postures changing as we draw more near,
Like watchful warriors, old implanted there,
That face us various as we winding go,
And challenge still, and still arrest the foe:
But see Lot's wife§, for fame has call'd her so,
With stately stature and with robes that flow
Majestic, lofty, like some sea born Queen,
Adjust her tresses in the mirror green,
Her tresses there assume the noblest forms,
The rocks her toilet, and her comb the storms;
Her fashions are put on by nature's hand,
Her curls in characters unchanged stand,
How different from the beauties of the land!
Now swallow'd up with greatness, fear and joy,
Let taste and wonder all the soul employ,
The soul can scarce this prodigy comprize,
Through all the inlets of both ears and eyes.
Lo! nature's hand hath here enormous wrought
Beyond the grasp of sense, the reach of thought;
Here awe struck reason must in silence pause,
Lay down her scepter and suspend her laws,
Unable on her gradual steps to climb
The dreadful summit of this vast sublime:
How all impressions of the mind are chang'd!
The heart distended and the head derang'd,
When instant struck by this tremendous space,
So fill'd with terror and so deck'd with grace;
Where such extreams the astonish'd senses greet,
Where paradise at once and chaos meet:
The height above the wave fatigues the eye,
That seems contiguous to the coping sky,
For the strain'd nerve can scarcely reach so high,
Above the proudest pitch of Roman style,
Of Pompey's theatre, or Trajan's pile;
This awful edifice commands the waves,
By nature built, the boisterous billow braves;
The God of ocean here his palace keeps,
And sends his mandates o'er the distant deeps,
The voice in eddies through the cliff is tost,
And all the sense in half the space is lost;
In half the space is mingled with the air,
By echo's force annihilated there.

* Detach'd rocks that have those appearances.
§ A rock so called.

About this rather enthusiastic piece of verse, a contemporary in *The Critical Review* (Anon. 1766) wrote: 'It would be doing Mr Jones an injury not to acknowledge that he is very poetical, perhaps too much so, through the whole of his performance.' However, it contains the longest written description yet found of Lot's Wife, when the rock was still standing, and gives us an idea of how magnificent the rock must have appeared from a boat. It is also the first known published occurrence of the name 'Lot's Wife' applied to this rock. That Lot's Wife resembled a woman in shape is supported by Bullar (1806), who wrote: 'A respected friend, who saw this rock about forty years ago, observed, that it then struck him as having a considerable resemblance to the colossal statue of a female; beneath whose drapery, the wave-worn pedestal portended a speedy fall.'

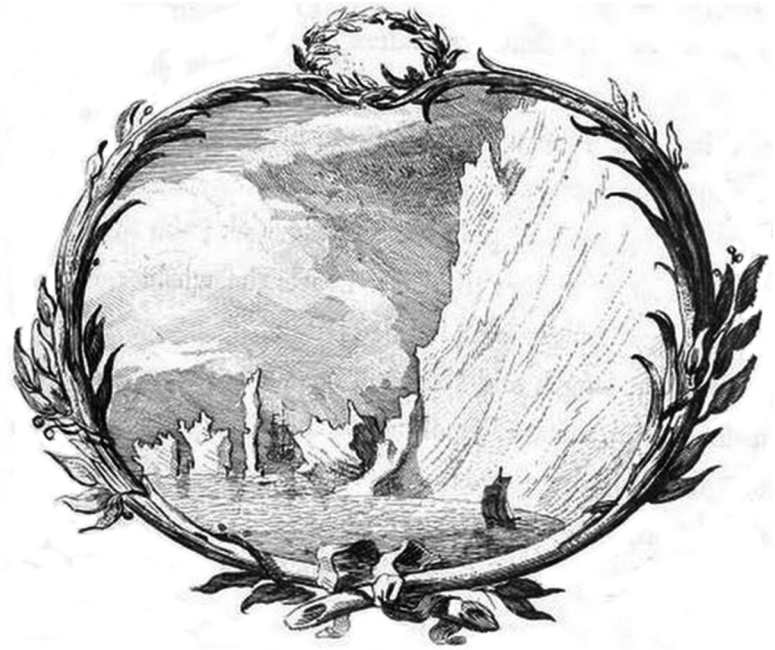


Figure 10: Illustration of the Needles heading Canto II of Vectis in the edition published by W. Flexney of Holborn, London, in 1766. In this, the jagged tops to the two outer stacks are extremely exaggerated and Lot's Wife looks far too tall and narrow compared with the other stacks and rather top heavy and unstable. Therefore, its accuracy must be questionable.

July 1772 – Joseph Banks

Further evidence that Lot's Wife was still standing in July 1772 is provided by the famous naturalist and explorer Sir Joseph Banks (1743–1820) in his diary from the first British scientific expedition to Iceland (Banks 1772). They set sail in the brig *Sir Lawrence* from Gravesend on 12th July 1772, and were to travel along the south and west coasts of Britain en route to Iceland. Anchored at Yarmouth during the early evening of 20th July, they waited for favourable winds, which came overnight. Banks's diary entry for 21st July 1772 reads:

> 'At 3 o'clock this morn we were calld up to see the needles by which we passd & admird the small perpendicular rock resembling indeed a needle from which they probably had their name. That very stone would certainly be an excellent situation for observations to be made to prove whether or not the theory of the seas decrease is founded upon facts. At present our pilot told me that at low water there was not more than three feet [of] water between it & the larger rock which lays near it. If so & this paper should be read a thousand years hence they will probably be united if our present philosophers build upon good grounds.'

In Banks's description of Lot's Wife as the *small* perpendicular rock, he is presumably referring to its girth rather than to its height. It does not sound from the contemporary reports that it had diminished greatly in height before it fell.

1773 and 1781 – Richard Bernard Godfrey

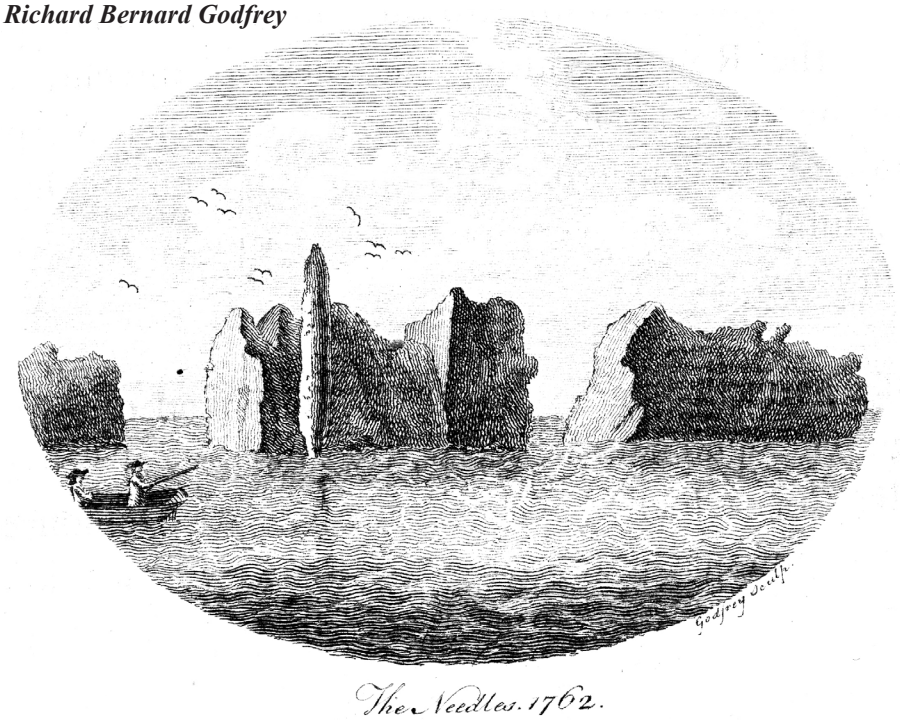


Figure 11: Plate 10 in Worsley's History of the Isle of Wight, showing the Needles in 1762. The engraving is by Richard Bernard Godfrey, but the original artist is unknown.

As noted earlier, Richard Bernard Godfrey (1738–1795) engraved an image first published in 1773 that included the Needles (see figure 2b); the drawing from which this engraving was produced is said to have been made in 1761 (Grose 1774). Godfrey also produced a more detailed engraving, reproduced as plate 10 in Worsley (1781). This image includes a date of 1762. Boynton (1967, cited in Abbott 2006) wrote that it is not known whether the plates in Worsley (1781) were commissioned for the text, as many are not dated. However, because of its date of 1762, he thinks that plate 10 may have been commissioned by an earlier Worsley, since material for the text was collected over three generations. Therefore, the original drawing was presumably made in 1762, by an unknown artist, and later engraved by Godfrey for the book.

Accuracy in the depiction of the rocks must be questionable as the middle stack seems a rather unfamiliar shape with the western third appearing almost as a separate rock pushed up against the inner two-thirds. The gap between the middle and innermost rocks also seems too narrow. Godfrey was described as 'a well-respected eighteenth-century engraver of antiquities' (Peters & Peters www.artoftheprint.com), but if this engraving was based on an earlier drawing, he cannot be blamed for its inaccuracy.

The engraving by Hixon entitled 'View of the Needle Rocks in the Year 1760' (see fig. 12) in the Rev. Richard Warner's book *History of the Isle of Wight* (Warner 1795) must surely be a copy of the Godfrey engraving in Worsley (1781). The dimensions of the rocks are so very similar, including the rather oddly shaped middle stack. These two images must be looked on as one idea rather than supporting each other in accuracy. Warner's 1793 two-volume work on southwestern Hampshire (Warner 1793) refers to Worsley's history several times, and he must have closely consulted that book.

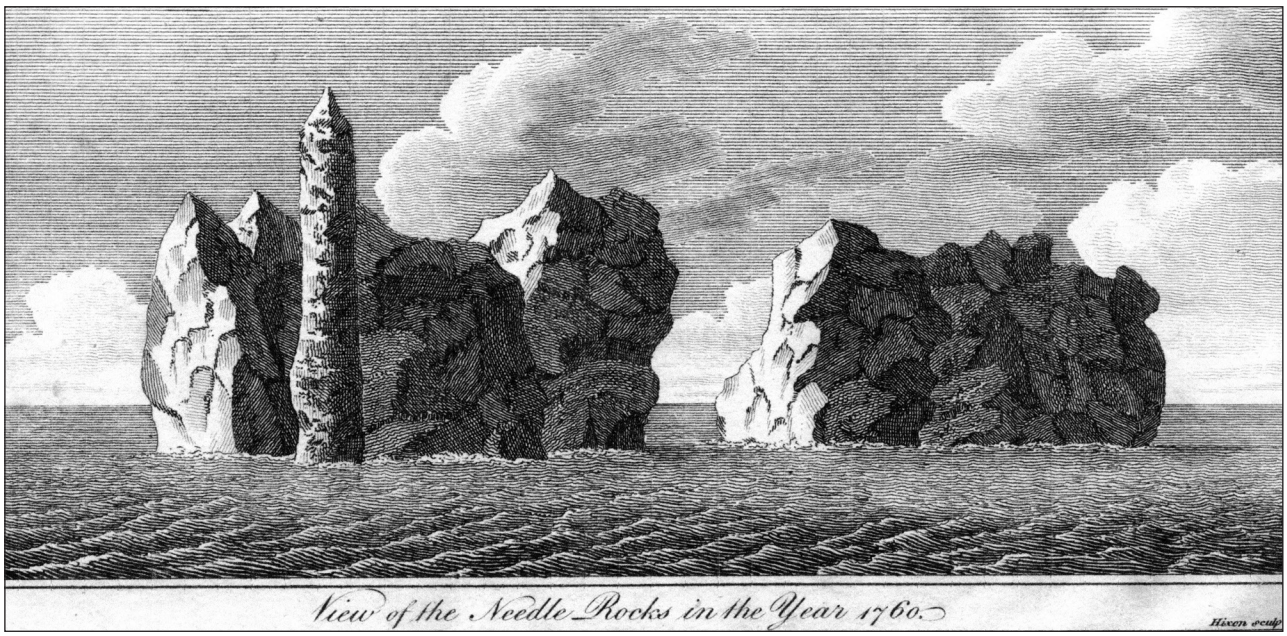


Figure 12: 'View of the Needle Rocks in the Year 1760' engraved by Hixon (in Warner 1795). 'The annexed plate gives a view of this singular rock, vulgarly called Lot's Wife, from its fanciful resemblance to the pillar of salt, into which her improper curiosity occasioned her to be converted' (Warner 1795).

Were the Needles Rocks named after the tall narrow rock?

Many authors after the mid 1790s state that the tall, needle-like rock gave the Needles Rocks their name: 'a chain of rocks, named the *Needles*, from a lofty pointed one' (Warner 1795), and 'three of them, of considerable size, are still remaining, but that which originally procured them their name, was a tapering pillar of above a hundred feet high' (Tomkins 1796). Brannon (1831) continued this explanation: 'Their forms bear no resemblance whatever to their *name*, which was derived from a spiral rock about 120 feet high'. Joseph Banks, on his voyage to Iceland in July 1772, wrote that they admired: 'the small perpendicular rock resembling indeed a needle from which they probably had their name'; so perhaps this assumption was often made after the rock had become needle-like in appearance.

Yet there is much evidence going back to at least the fifteenth century showing that the stacks were collectively called the Needles, and were so called prior to the late 1600s when Lot's Wife might first have appeared needle-like in shape. On 5th December 1409, an Italian carrack destined for Southampton was recorded as having been driven onto the sands near 'les Nedeles', where it broke up (Hockey 1982). The first printed map of the Isle of Wight, made by Baptista Boazio in 1591, depicts the three stacks as roughly equal in height and breadth and labels them as 'y^{e} Nedles' (Turley 1976). Then just over a decade before Lambert Doomer drew the Needles, Father Andrew White, travelling to Maryland in November 1633, recorded that his ship: 'passed by the dangerous needles, being certaine sharpe rockes at the end of the Iland' (White 1634).

Lot's Wife may have become slender and pointed over time, but there are many rocks worldwide that have the name 'Needle Rock' but which are shaped more like a tall narrow pyramid. Examples include the 40 m (131 ft) high Needle Rock at Fishguard Bay, Pembrokeshire; the Needle Rock at Plémont, Jersey; and L'Aiguille (or the Needle), which rises

70 m (230 ft) above the sea at Étretat, Normandy, France. Brannon (1831) wrote that the Needle Rocks 'in profile appear like so many irregular and accuminated pyramids'; therefore, each stack could be termed a 'Needle'.

Another explanation offered for the name 'The Needles' is that the rocks had sharp and craggy points. Examples are 'the Needles, so called because they are so sharpe' (William Camden 1610); 'the Needles… A range of rocks so called from their sharpness' (Anon. 1740); 'that remarkable group of rocks so well known by the name of the Needles... are perhaps so called in reference to their sharp and craggy points' (Sturch 1778); and 'These rocks derive their name from the resemblance which they bear by their sharp and craggy points' (Albin 1795).

Seabirds at the Needles

Many of those writing about the Isle of Wight in the latter half of the eighteenth century and into the early nineteenth century described the incredible abundance of seabirds that bred on the towering chalk cliffs between the Needles and Freshwater Bay. Worsley (1781) wrote: 'These cliffs are frequented by immense numbers of marine birds—*Puffins, Razor-bills, Willocks, Gulls, Cormorants, Cornish-choughs, Daws, Starlings,* and *Wild Pigeons*; some of which come at stated times to lay their eggs and breed, while others remain there all the year.' Sturch (1778) recorded that the nesting birds first appeared 'generally about the middle of May, and they produce a new generation fit to emigrate by the middle of August following'. The marine birds were said to 'sit in thick rows on the several shelves or strata of the cliffs' (Cooke 1808); and the softer strata were 'perforated like honeycombs by the Puffins' (Rusticus 1849). The seabird eggs were collected, hardboiled and eaten by the local inhabitants but the birds themselves were considered unpalatable and instead of being consumed were sold to fishermen to bait their crab and lobster pots, while their feathers were sold to upholsterers. Descent to the nests was accomplished using a rope fastened to an iron crowbar driven into the ground at the top of the cliff. A piece of wood was attached to the other end of the rope to act as a seat, while a basket tied around the waist was used as a receptacle for eggs or birds, the latter being beaten down with sticks as they flew in or out of their nests. The birds also provided 'sport' and numerous shooting parties were made to the Island in the summer months. Webster (in Englefield 1816) wrote that in fine weather at Scratchell's Bay 'it is easy to land in the middle part; and it is often visited on account of the vast quantities of wild fowl that frequent this place.'

The remains of Lot's Wife today and 'threading the Needles'

Knight (1841) wrote of 'the pillar of Lot's Wife': 'its base, consisting mostly of flint, is still visible, and in stormy weather it forms a dangerous reef.' The roughly oval-shaped base of this rock can still be seen today at low tide, approximately northwest of the centre of the gap between the two innermost stacks (see fig. 16). It is therefore closest to the central stack and was not directly in the middle of the gap between the two innermost stacks as depicted by, for example, Taylor in 1759 and Brannon in 1828. Perhaps such illustrators thought it looked more aesthetically pleasing in line with the other stacks.

Bruce (2001), in his book *Wight Hazards*, describes various options for 'threading the Needles' in smaller craft during calm conditions with no swell: 'The passage between the middle and inner Needle is wider and more generally used. All the most prominent submerged rocks obstructing the channel are on the north side, and the best line lies about one-third of the width of the gap from the middle Needle, leaving one rock to the west and the other two to the east. The westernmost rock is the highest… It was at the western side of this gap that the 40 m high pencil of rock called… Lot's Wife, stood.'

Continuing erosion at the Needles

Because of their prominent position, the Needles stacks and headland have been eroded by winds and waves over time. Erosion by the sea creates shallow caves in the chalk, which become arches as the caves are worn away from each side. When the arches become too weak, they collapse leaving pillars or stacks. Eventually these too will fall. Fig. 9 shows the arch that connected the innermost stack to the headland in the early eighteenth century and which had collapsed by 1759. Another arch had formed by the 1780s according to an engraving 'View of the Needles & white cliffs from Alum Bay' by Thomas Vivariès in Worsley (1781). Wyndham (1794) described this later arch: 'At the end of the main land of the point, and at the foot of the cliff, the dashing of the waters has formed a large arch, which, we were informed, was passable at low tides.' The geologist Thomas Webster (in Englefield 1816), on his visit to the Needles in October 1811, also noted that behind the easternmost Needle was 'an arch in the chalk, there being a space between it and the adjoining Needle sufficient to admit a boat.' The following images, in chronological order, show this arch. It is said to have collapsed sometime between 1815 and 1820 (Hill 1871). The pillar that remained gradually diminished in height and a Brannon engraving dated June 1840 shows that it had by then virtually disappeared.

Erosion also causes cliffs to become unstable and rock falls and cliff-retreat subsequently occur. The rock falls at the northern part of Scratchell's Bay, together with erosion of a cave on the north side, are causing the promontory to narrow and a new stack will eventually form from the cliff behind the current innermost stack.

Figure 13: 'The Needles', pen and watercolour by Samuel Howitt in 1791. This painting clearly shows the arch at the base of the headland. Reproduced by kind permission of 'The Isle of Wight Heritage Service'. © Isle of Wight Council Heritage Service IWCMS.2002.98.

Figure 14: 'Allum Bay and the Needles'. Drawn and engraved by Charles Tomkins. Published as Act Directs by C. &. G. Kearsley, Fleet Street 1794. This image appears in Tomkins (1796) and shows the arch at the base of the headland as well as some of the multitude of seabirds that nested on the stacks and cliffs.

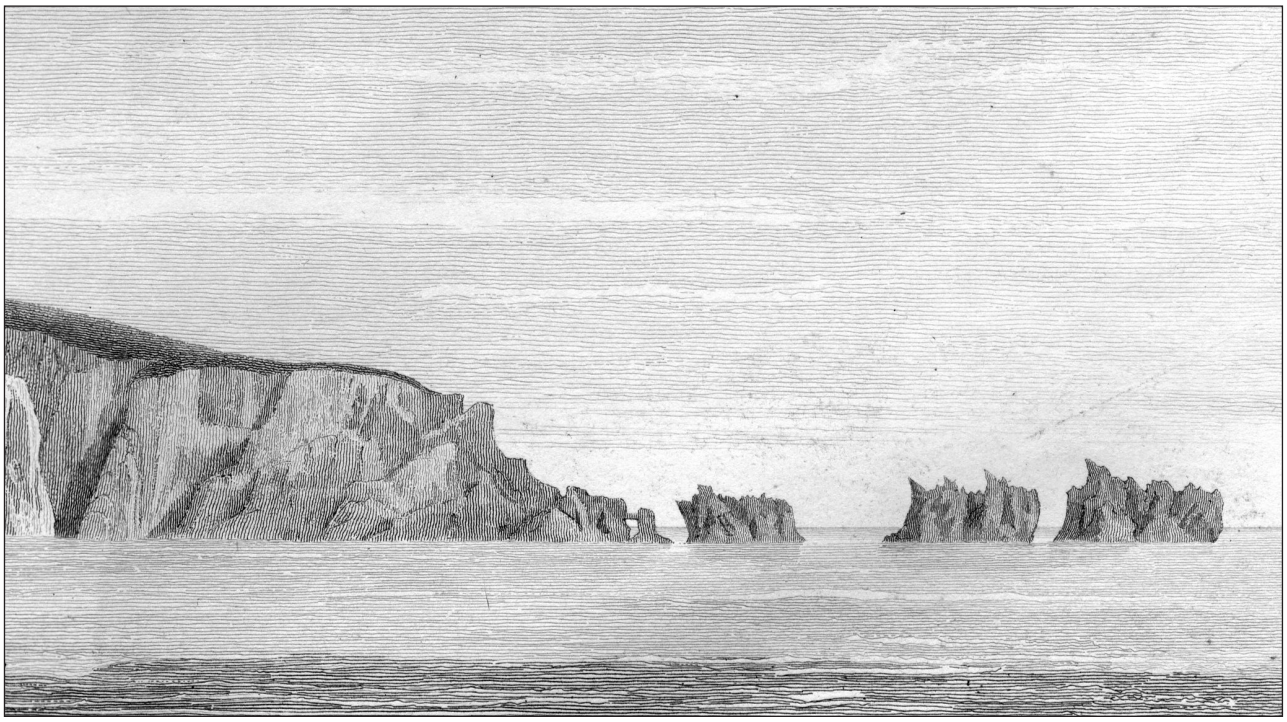


Figure 15: George Cooke engraving first published in 1815 (in Englefield 1816). The top of the arch has eroded away to a very narrow bar. This is said to have collapsed sometime between 1815 and 1820 (Hill 1871) leaving a pillar of chalk, which had itself eroded away by June 1840.

Figure 16: Rock fall at the northern end of Scratchell's Bay, March 2019. Future stacks will be formed as Scratchell's Bay erodes and moves eastwards. The dark base of Lot's Wife can be seen north of the gap between the two innermost stacks.

Conclusions

Lot's Wife fell on 22nd November 1772. The erroneous date of 1764 was initiated by Wyndham, Albin and Tomkins in the 1790s and perpetuated in popular guides produced by Brannon and others so that the date became ingrained in the Island's history. There can be no doubt that Lot's Wife was an awe-inspiring rock and was tall and narrow before it fell. The base can still be seen at low tide. The name 'the Needles' is not thought to derive from Lot's Wife, as the whole chain of rocks was so called from at least the fifteenth century, long before the rock became needle-like in appearance. Cave, arch, pillar and stack formation will continue at the Needles as the action of the sea and wind constantly erode the chalk promontory and periodic rock falls occur.

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Notes

1. Research for *The History of the Isle of Wight* was initially begun by Richard's grandfather, Sir James Worsley (1672–1756) of Pylewell Park, Hampshire, in the early 1700s. James's son, Sir Thomas Worsley (1728–1768), made considerable additions to the work, but his early death meant that the task of completing it devolved upon his son Richard, who took four years to do so prior to publication in 1781.

2. Albin was recorded as a printer and druggist living in Pyle Street, Newport, in 1792, but he was also a map maker, cartographer and author (Isle of Wight Gardens Trust). In his later work *A Companion to the Isle of Wight,* 8th edition (1831), he wrote that he had been resident on the Isle of Wight for almost 50 years. Therefore, he would not have been living there at the time that Lot's Wife fell, but would have been able to ask those who remembered the rock and its demise for information. However, he also appears to have referred to Wyndham's account of the rock's collapse.

3. Lambert Doomer was born in Amsterdam into a family that was comfortably well off. He initially trained as a furniture maker, like his father, but then decided to become an artist. Lambert's father supplied picture frames for Rembrandt van Rijn but it is not certain whether Rembrandt was Lambert's teacher. To complete his education, Doomer travelled to France with another art student, Willem Schellinks, in 1646 and they then visited England, including the Isle of Wight, before returning to Holland later that year. Doomer was known as a prolific and talented artist. He is best known as an accurate landscape draughtsman, particularly for his views of the Rhine and other topographical scenes he made during his various travels, when he would sketch in pen and ink, later making up his sketches into finished paintings in his studio (Isle of Wight Industrial Archaeology Society 2003). Although his sketch of the Needles was made early in his career, there appears to be no reason to believe that it deviates greatly from reality.

4. Baron von Reck was well educated and kept a travel diary. He is considered to have been artistically gifted and made 50 or so watercolour and pencil sketches of the plants, animals and native Indians he saw in Georgia. When he died, in the late 1790s, his drawings were given to the King of Denmark, in whose library they remained unknown for two centuries. They were discovered by a Danish researcher in 1976 and were made available to the public the following year. The sketches have now been formed into a book (Hvidt 1980).

5. Isaiah 40:12

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AN ARCHAEOLOGICAL ASSESSMENT OF THE IMPACT OF STATUTORY PIPE-LAYING ACTIVITY WITHIN THE MEDIEVAL CISTERCIAN ABBEY OF QUARR, ISLE OF WIGHT, 2014

David Tomalin

The earlier archaeological background

Early archaeological investigations were carried out at Quarr in 1891, when local architect and antiquary Percy Stone cut a broad scatter of exploratory trenches across the site of the Cistercian abbey. His objective was to establish an overall ground plan of the monastic buildings destroyed during the Reformation. In this he achieved considerable success, but as an architect rather than an archaeologist, he left no record of stratigraphy and few specific archaeological details.

A few commissioned photographs illustrate the nature and extent of the 1891 excavations (figure 1). A small collection of pottery and tile fragments, since found in two wall vents of the abbey barn, may be a relic of these early activities. Where cited here for comparative purposes, items in this 'barn collection' receive the nominal designation 'context 513'.

The most detailed account of this Victorian investigation was set out in Percy Stone's *Architectural Antiquities of the Isle of Wight*. This was a substantial two-volume work, published privately in 1891. A résumé and plan also appeared in his contribution to the *Victoria County History of Hampshire and the Isle of Wight,* 1911 (v.5, 152–4).

Figure 1: Exploratory trenches cut by Percy Stone during his investigation of the claustral area of Quarr Abbey in 1891. In the background is the infirmary chapel. Its west gable had already fallen.

No further archaeological investigations were carried out at Quarr until 1992 when an inter-tidal survey examined the shoreline some 90m north of the monastic precinct. A tile kiln had been exposed in a low eroding cliff on the floor of the valley; this had been a source of medieval peg-tiles (Riall, N., in archive). The archaeomagnetic date of this structure was late thirteenth or early fourteenth century (AD 1274–1314; Tomalin *et al*. 2012, 287 & 291).

In 1997, geophysical surveys at Quarr were carried out by the University of Southampton, Department of Archaeology (Sly & Clark 2002). These confirmed much of the ground plan that Percy Stone had extrapolated from his investigative trenches and bar probings. Unfortunately, due to the nature and position of Quarr Road, the survey was unable to gain helpful evidence in the specific area where the trench for the water pipe was subsequently cut. This passed through the site of the abbey church (figure 2).

Both Stone's plan and the geophysical evidence confirmed that the remains of the abbey church are now concealed directly beneath Quarr Road. Until 2014, this 'road' was an un-metalled bridleway leading from Fishbourne Creek to Binstead village (IWC 1997, definitive route 3).

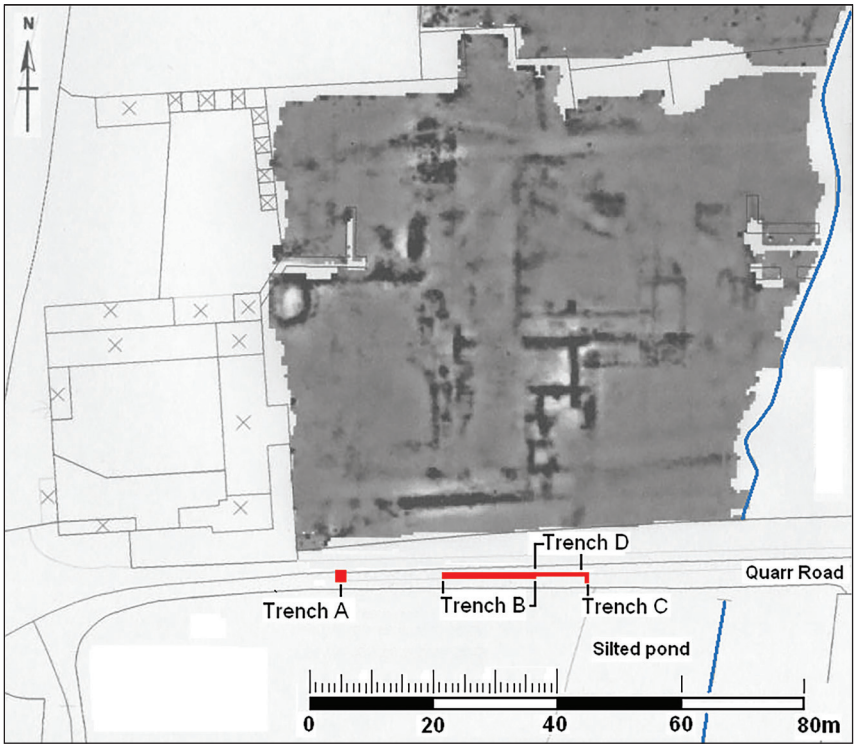

Figure 2; Resistivity image of Quarr Abbey showing geophysical coverage adjacent to the 2011 pipe-line route and the 2014 assessment trenches. (Geophysical image by Sly & Clark 2002, University of Southampton.)

The circumstances of ground disturbance in 2011

In 2011, a new 90mm polycarbonate water main was installed along Quarr Road. This was inserted by contractors Clancy-Docwra on behalf of Southern Water. Beneath the road, along the east–west axis of the medieval abbey church, pipe-laying began with a process of 'moling'. Where the contractors encountered hard resistance to their boring apparatus they resorted to bucket trenching. This threw up medieval building stone.

While the pipe trench was open, the disturbed medieval levels were observed by local residents Mark Proctor and George Cassell. The damage was also viewed by Father Gregory of the Community of Quarr. The Community contacted the Archaeological and Historic Environment Service of the Isle of Wight Council. Some photographs are thought to have been taken at this time but have not been traced. No formal archaeological examination or record seems to have been made of the open trench.

After the pipe trench was backfilled in 2011, the Community of Quarr, as the site owners, consistently expressed concern that damage to the archaeology of the medieval church had not been assessed or recorded. To remedy this situation, the Community obtained permission of English Heritage (Heritage England) to have the pipe trench re-opened and the damage assessed.

In 2014, the re-opening was carried out between 22 April and 2 May by members of the Isle of Natural History & Archaeological Society. The work was coincident with a road closure order enacted by the Isle of Wight Council while re-laying the bridleway surface to serve as a dedicated cycleway. This field assessment of the pipe trench was arranged by the Community of Quarr with the assistance of Tim Sly of the University of Southampton, Department of Archaeology. Implementation was professionally supervised by the writer. Access and public safety precautions were managed by the highways section of the Isle of Wight Council. Machine services were provided by Clancy-Dowcra. Helpfully, the operators of the mechanical digger were those who had conducted the pipe-laying operation in 2011.

Field methodology

Two inspection trenches (figure 2, *A* & *B*) were machine-cut through the backfill of the pipe trench. Each of these cuts pursued the depth of the earlier backfill, at potential damage points where the impact of pipe-laying was suspected to have been most acute. The total area re-examined along the axis of the pipe-line was 22m². The maximum width of the cut was 1m, a size just slightly less that the original pipe trench. Widening to 2m was made in the short western trench *A*.

Examination was completed by careful trowelling, mostly to a depth of 1m. At this point an earlier water pipe was uncovered (pipe 1). Below 1m, the floor of the trench was mostly waterlogged but at the eastern end of trench *B*, where the pipe had been laid through permeable alluvium, excavation was pursued to a greater depth of 2m (figure 5). Using a 1m toothless bucket, the backfill of the 2011 pipe trench was mechanically removed under close archaeological supervision.

The scope of this field assessment was confined to the limits of the backfilled water-pipe trench, while exposing a clean face along the south side of the cut. It was soon found that the backfill descended to a depth that exceeded the 0.8m level of the new 90mm water main (pipe 2). When the north face of the trench was cleaned by trowelling, a view of the original stratigraphy was gained. The base of the trench exposed *in-situ* foundation rubble inside the calculated position of the west front of the abbey church. Cut *B* exposed disturbed medieval rubble towards the east end of the church.

When recording the section face of the trench *B*, twelve distinct contexts were identified. Each was described according to composition, texture, colour and archaeological content. Where previously disturbed archaeological material was retrieved from the backfill of the trench, this was assigned to 'context 13' prefixed by a numbered zone within the length of the trench (contexts 113, 213, 313 & 413). During and after re-excavation, stone building materials were examined by Dr Mike Cotterill who was particularly familiar with outcrops and sources of building stone on the Isle of Wight.

The south face of evaluation cut *B* was recorded in section (figure 5). This was drawn by line-level and the height later fixed to an OS benchmark of 9.13m OD on an outbuilding in the nearby farmyard. The stratified contexts were recorded by standard visual and textural examination and Munsell colour descriptions.

Disturbed medieval building materials and minor small finds (tile, pottery and glass) were assessed with reference to allied material from other relevant sites on the Isle of Wight and elsewhere. This included material from the Wootton-Quarr inter-tidal survey (Tomalin *et al*. 2012). Before infilling, the excavated back-fill was checked with a metal detector but no items of archaeological significance was found.

The pipe trench investigation

Trench A

Trench *A* exposed buried foundations some 4m east of the point where the pipe would have crossed the calculated position of the west front of the abbey church. This postulated frontage aligned with the south-eastern corner and east face of Quarr Abbey Cottage. At a depth of 0.55m, the base of Trench *A* revealed a bedding of irregular slabs of silty limestone. On this surface rested the 2011 water pipe (figure 3). Although the slabs were no more than rough tabular blocks devoid of dressed facings, they presented a relatively even surface. No signs of wear could be found that might signify the former passage of feet. At least two blocks had been upturned in 2011 by digger action. One of these still remained close to its socket (figure 3). The effects of heavy rain and waterlogging prevented investigation of any underlying blocks.

Figure 3: Quarr pipe 2 in trench A, showing laid limestone footings in situ and a dislodged slab previously upturned by a mechanical digger.

Figure 4: Foundation rubble (context 150) exposed at the eastern end of trench B. Pipe 2, laid in 2011, enters the rubble at bottom left. The long waterlogged strip marks the destruction line of earlier pipe 1, an iron water main reburied in backfilled rubble, soil and silt (context 130).

Trench B

Trench *B* opened up the line of the 2011 water pipe along the east-west axis of the church (figures 2 & 4). This cut along the axis of the nave, the crossing and the chancel. Beyond 17m, the width of the trench was reduced from 1m to 0.5m in an eastern extension that brought the total length to 22m. The purpose of this trench was to establish the course and depth of the 2011 water main and to observe any deeper damage caused by the installation of the earlier pipe (1).The face of the north baulk was cleaned by hand. For clarity, it has since been illustrated in reverse section. Removal of the previous backfill (context 130) sought the course of the iron pipe (pipe 1) where it passed through a brown alluvial loam at the eastern end of trench *B* (context 145).

At the western end of this trench, a substantial body of weakly compacted random rubble was exposed in the southern baulk (figures 4 & 5, context 150). Where water main 2 entered this mass, the Southern Water contractors who had laid the new pipe took the view that this deposit had been moled. The positions of both pipes can be seen in figure 4).

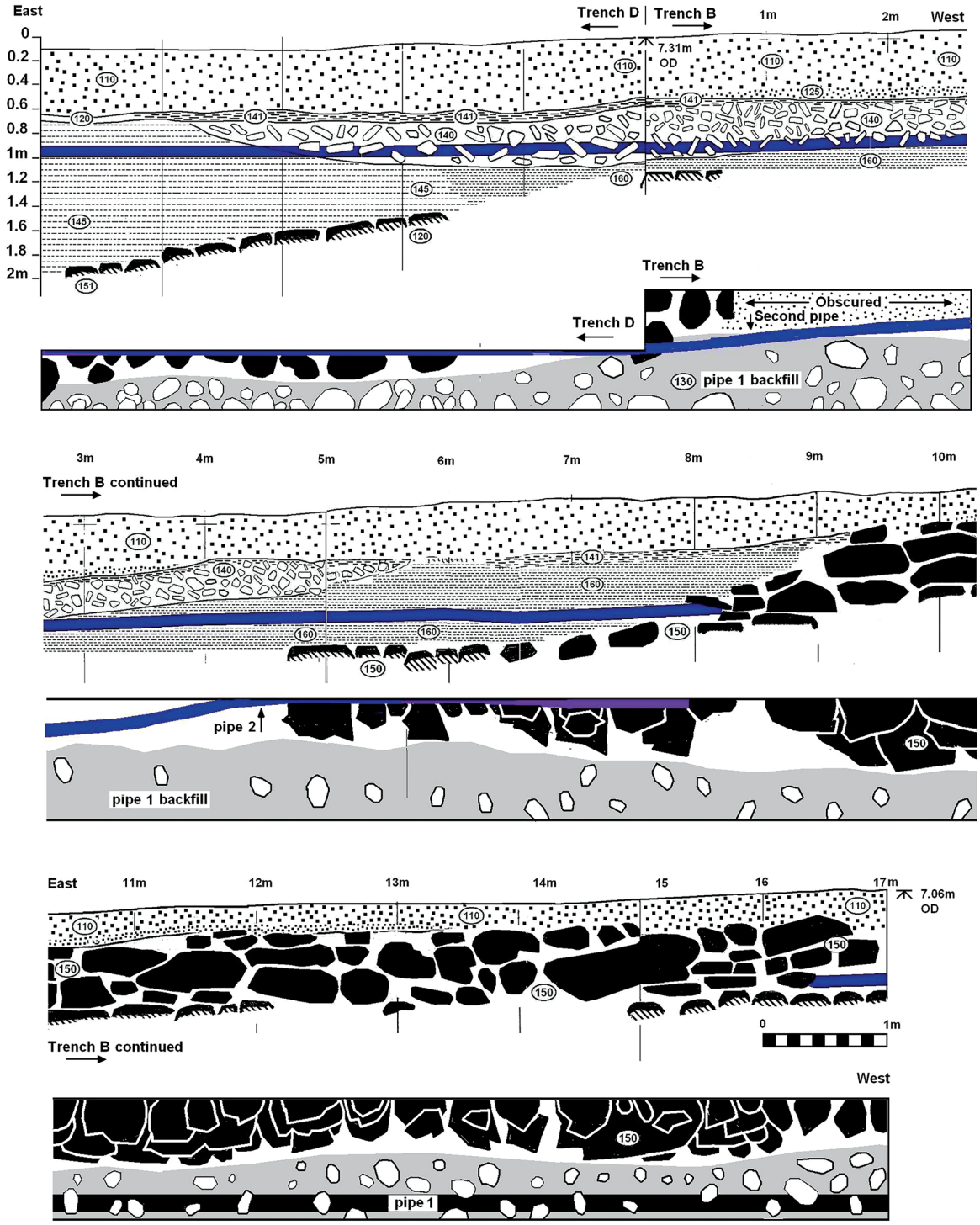

Figure 5: East-west axial section and plan through the site of the abbey church at Quarr showing the course of the 2011 water-pipe and the stratigraphy beneath Quarr Road. (Drawn from the southern baulk of trench B).

Archaeological results

This archaeological investigation provided a clear view of the impact of past pipe-laying within the monastic church. It also revealed the nature of previously undisturbed stratigraphy. The latter was visible only in the north face of the second evaluation cut. In the north face of trench *A*, only random backfill was exposed. This descended to the defunct iron water main, making the entire baulk unsuitable for section drawing.

Evidence of church structure

The most robust evidence of church structure was revealed on the floor of trench *A*. Here, tabular blocks of strongly lithified silty limestone had been laid, without bonding, in a level spread (figure 3). Judged by its position, this might be perceived to be a primary footing for the south arcade of the nave. This attribution may gain some support from Stone's 1891 extrapolated plan. Unfortunately, due to the presence of the road, the geophysical survey of 2002 was unable to offer either positive or negative evidence of wall footings on this part of the site (Sly & Clark 2002, figure 5).

Being strictly confined to the line of the pipe, trench *A* failed to locate any truly firm footing for a nave/aisle arcade or wall. The southern boundary of this trench fell short of any such trace. In the absence of a truly well bedded or well-bonded footing along the length of the pipe trench, suspicion arises that none of this rubble bedding was sufficiently robust to have supported any major structural walls or piers of this large medieval church.

An alternative interpretation would assign all of the exposed rubble to a screed, laid to support the church floor. In this case the width and position of the abbey church will remain imprecise until wall and arcade positions can be precisely fixed. This might be pursued by seeking footings of the south aisle that may still survive south of the road (figure 2).

Stratigraphic and chronological evidence

Twelve significant stratified contexts were recognised within the re-opened pipe trench. When viewed in a Harris matrix, these could be assigned to three phases (figure 6). Only the heavy rubble of contexts 150, 151 and 152 can be considered to be of Dissolution or pre-Dissolution date. These contexts all identify ill-defined rubble bedding, perhaps disturbed, within the medieval abbey church (figures 5 & 6).

In terms of structural integrity, only the firmly bedded footing stones in context 152 (trench *A*) could be confidently accepted as truly *in-situ*. In contexts 150 and 151 the stones were more loosely assembled and there remains the possibility that some post-Dissolution disturbance or subsidence may have taken place.

Early post-Dissolution events were signified by contexts 145 and 160. Both were deposits of silt loam overlying heavy rubble contexts 150 and 151. Dismantling of the church must have taken place before these loams were deposited. Substantial in-wash along the flood plain of the Newnham Stream is a possible explanation for contexts 145 and 160. No datable material was obtained from either of these two horizons.

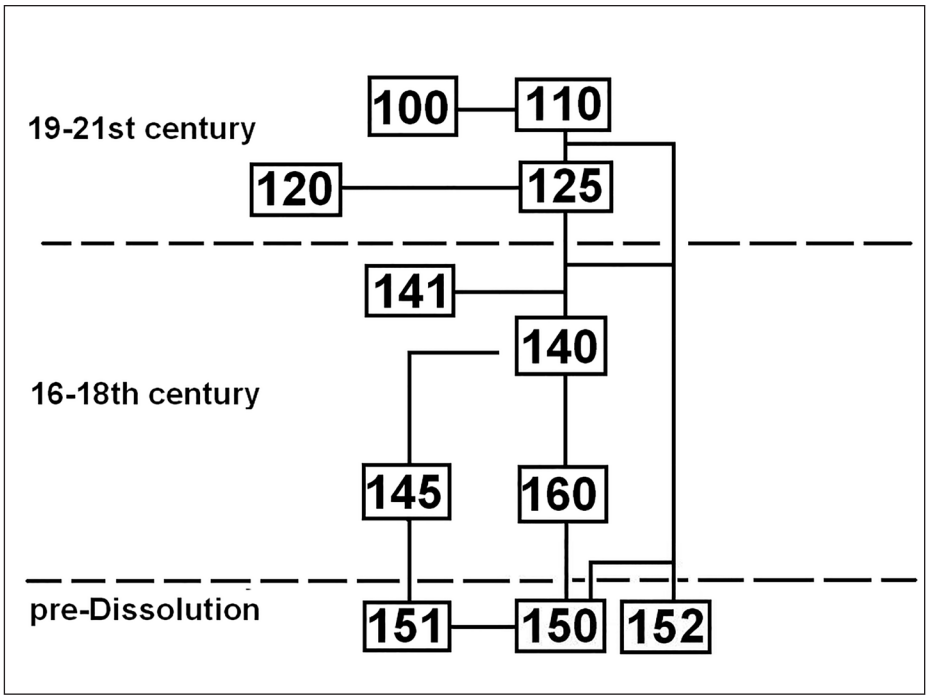

Figure 6: Harris matrix showing the stratigraphic relationship of the principal archaeological contexts in the Quarr Road pipe trench.

A further stage in the post-Dissolution history of the site was marked by contexts 140 and 141. The principal deposit was a loose spread of lighter rubble. This contained modest fragments of raw limestone mixed with tile, slate, pottery and bottle glass (context 140). A thin capping of intensified fragments of roof slate covered most of this deposit (141). Judged by the presence of a little post-medieval Verwood pottery, it seems that this material was probably deposited during the seventeenth or eighteenth century. The base of a heavy wine bottle in context 140 displays a distinctive form that suggests a date after 1736 and perhaps before 1820 when bottle styles changed.

A final phase of structural change was marked by contexts 110, 120 and 125. These relate to the re-alignment and re-laying of Quarr Road in 1857. At the western end of the pipe-trench, the compacted gravel composition of this road (context 110) impinged directly on medieval foundation rubble within the footprint of the church. Near the west front of the church, this contact became even more direct in trench *A*.

No artefacts were recovered to confirm the date of these late contexts. However, it appears that a stone-lined culvert beneath the road was either built or modified with arched brickwork when this highway was constructed in 1857. At this time, a certain amount of additional embanking may have been required to carry the new highway over the Newnham Stream. This may have been a modification to an earlier retaining bank serving a large silted pond immediately up-stream. The scale and design of this substantial stone-lined culvert could indicate an earlier spillway exiting from a mill (figure 9).

Some early cartographic evidence

The presence of a building in this vicinity is shown on a map published by Andrews and Dury in 1769 (figure 7, building A). A coloured map of the Fleming estate, produced by Whitcher in 1817, records the several buildings within the abbey's walled precinct but neither a building nor pond is then shown adjoining the Newnham Stream. A decade later, in 1826, Thomas Greenwood shows much the same while recording what appears to be little more than a nominal scatter of buildings (figure 8). Where the 1769 map places a building firmly on the Newnham Stream, this could be a watermill fed by the fully silted pond that can still be traced immediately south of this embanked section of Quarr Road. Unfortunately, the sketchy detail of the map also befits the 'infirmary chapel' which is known to have straddled the Newnham Stream.

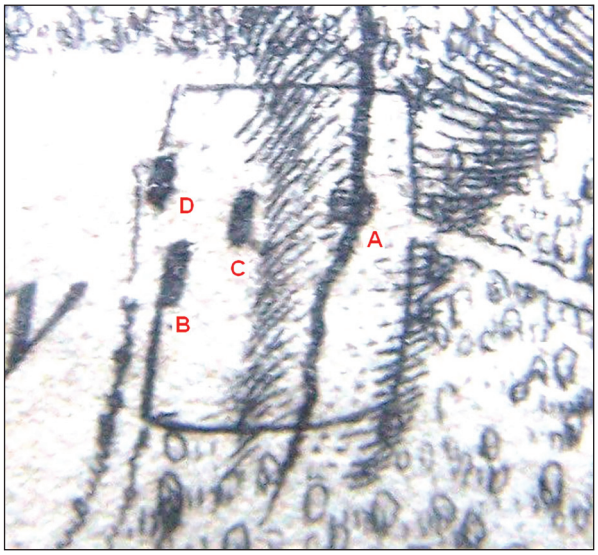

Figure 7: Quarr's medieval precinct with upstanding internal buildings mapped by Andrews and Dury in 1769. The infirmary chapel (A), or perhaps a later mill, straddles the Newnham Stream. The former course of Quarr Road approaches from the right. Buildings A-D are annotated here to assist discussion in this text.

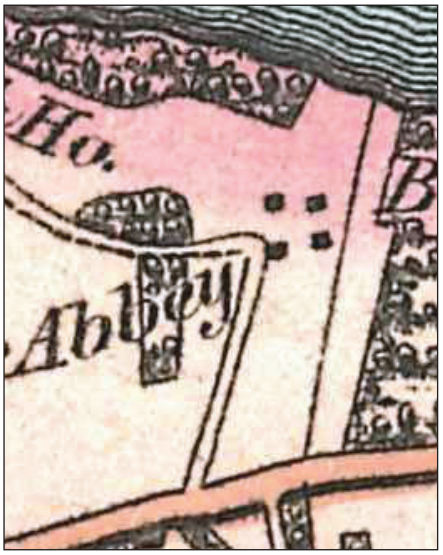

Figure 8: An enlargement of Thomas Greenwood's map of 1826, showing four standing buildings on the site of Quarr abbey.

Figure 9: The stone-lined culvert beneath Quarr Road, looking south (Photo: Roger Simpson).

Medieval and post-medieval pottery

Verwood pottery was recovered from re-excavated backfill in trench *B* (items 203-209). These were minor fragments of shallow dishes with olive and amber glazes, all too small to provide any clear date. Item 207 had a flat out-turned rim, perhaps attributable to a chamber pot and appropriately coated with a thorough internal glaze (Draper & Copland-Griffiths 2002, 157-50).

Verwood sherd 206 offered potential relative dating for destruction rubble identified as context 140. This sherd was a tantalisingly incomplete portion of a vessel with some minor spillage of light olive green glaze on the tip of its broad rim. An indication of more generous glaze could also be seen on a small remnant of its internal surface. With a projected diameter of some 42cm and a gently in-bent rim, it bears some resemblance to a form of dish used in Southampton in the mid-16th century (Platt *et al* 1975, 2, 107-8, figure 165, cat no 696). However, the two fabrics are not compatible. Such a date would match the destruction of the abbey church during or shortly after the 1530s, but its manufacture could have been later.

Medieval roofing materials

Some highly fragmented roofing materials were recovered from unstratified contexts 113, 213 and 413. For comparative purposes, samples of medieval roofing slates were also gathered from Quarr beach. These had been eroded from the enclosure which surrounded the medieval tile kiln recorded during the Wootton-Quarr coastal survey (Tomalin *et al*. 2012, 287). Some fragments preserved in Quarr's 'barn collection' (nominal context 513) show that peg tiles, imported slates and at least two lithological types of stone roofing slabs had been used at the abbey. None of these particular examples could be attributed to specific building phases.

The medieval crested roof-ridge tiles

Five fragments of crested ceramic roof-tile were recovered from the pipe trench. All showed similar bold knife-cut serrations on the crest. At the internal apex of the tile, a regular line of blind stabs showed that each had been punctured to assist consistent firing (figure 10).

The glaze on all fragments was a similar semi-translucent olive green, flecked and streaked with brown traces of ferrous and copper impurities. The glaze was probably applied thinly over much or all of the external surfaces. The lack of basal portions prevents confirmation.

Viewed in a fractured surface, the ridge tiles show some 3% fine angular white flint and rare well-rounded sand grains held in a pink and grey matrix. The grey is confined to the core of the ridge. If sand and flint particles were added as particular fillers, then this tempering is not dissimilar from the square floor tiles found within the abbey; which bear a similar olive glaze and were vented by potters' stabs.

A fragment from pipe trench context 140 demonstrates that these roof tiles were broken and scattered in post-Dissolution times, but fails to establish the date of manufacture or use. In Southampton, broadly similar crested tiles have been recorded in thirteenth century and later contexts but none show quite the same glaze or offer an exact parallel (Dunning 1975, 191–7). Those recorded in Christchurch also differ (Jarvis 1983, 71, fig. 30).

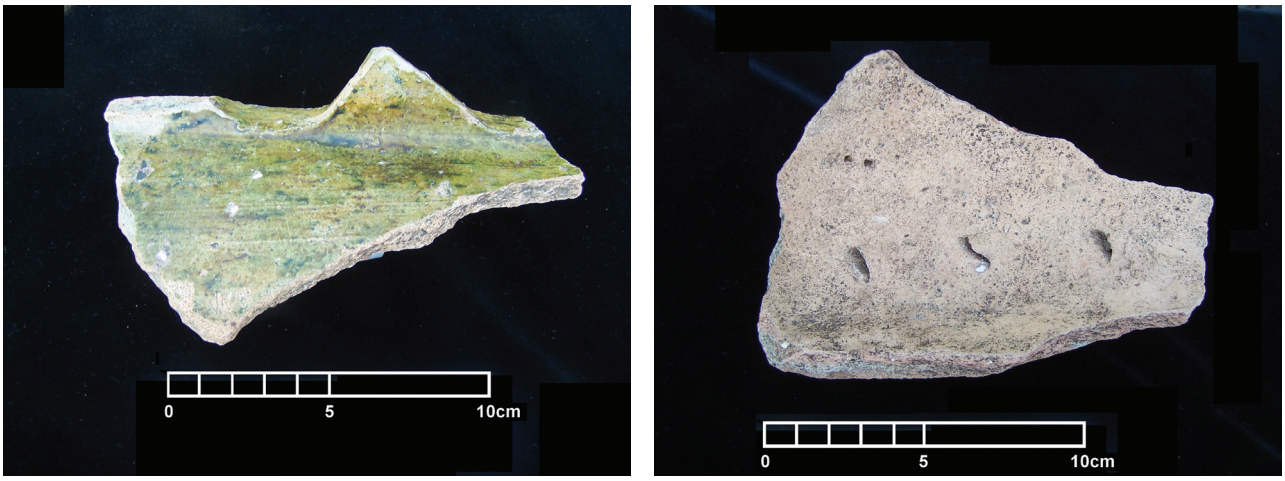

Figure 10: Glazed crested roof-ridge tile with its underside marked by venting stabs

In contexts 140 and 141, minor fragments of peg tile were recovered. The greater quantity of fragments found in backfill context 213/313 might reasonably be assumed to derive from this same horizon. Examination of all of this material suggests that none of the fragments include a product from Quarr's medieval tile kiln near the shore. Thickness of peg tiles in the pipe trench seldom exceeds 14mm, and most examples lie within the range of 10-13mm. Unlike material from the kiln, these tiles are notably hard-fired and display a deep red colour that is certainly darker than the kiln products. It seems likely that these tiles are post-medieval products, an attribution that would agree with the associated pottery in contexts 140 and 141 and the suggestion that a post-medieval building formerly stood close to this spot.

West Country slate

Roof slate, loosely attributed to one or more West Country sources, was recovered from contexts 140 and 141. The fragmentary state of all of this material offered little opportunity for reconstruction, although a few examples recovered from the old backfill in trench *B* (context 213) were more informative.

Item 174 is a nearly complete greenish grey slate with an estimated length of some 19cm (figure 11). With a width of 12cm this is relatively modest, its size and shape seemingly equating with some of the wooden shingles that appear in Norman and later artistic representations. A part of a single bored and punched nail hole survives near the head of this slate. A nick in the left-hand edge indicates the position of the nail that once secured its neighbour. Some white mortar adhering to the underside shows that these slates were additionally secured by cementation.

A further example from context 213 is a lenticular slate 26cm long and 15cm wide (figure 12). The colour of this slate is bluish grey, a tone that is less common amongst Quarr's roofing components. Seemingly, this slate belongs to quite another roof.

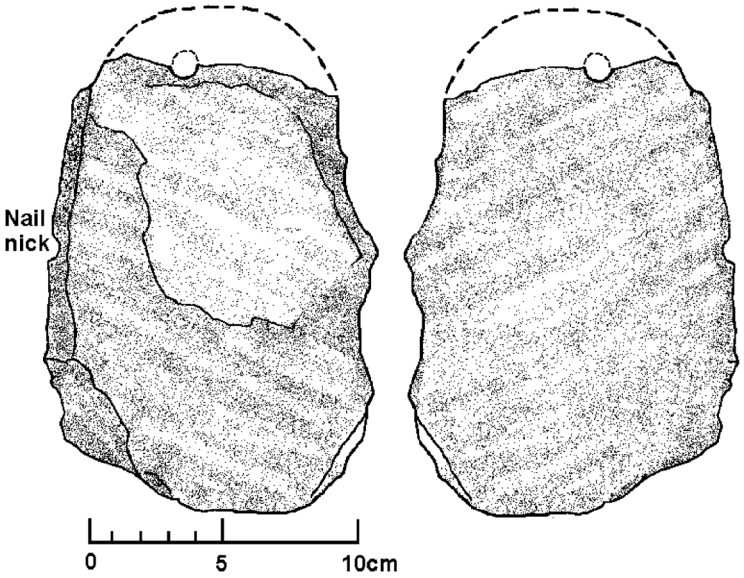

Figure 11: Roofing slate of shingle proportions from context 213.

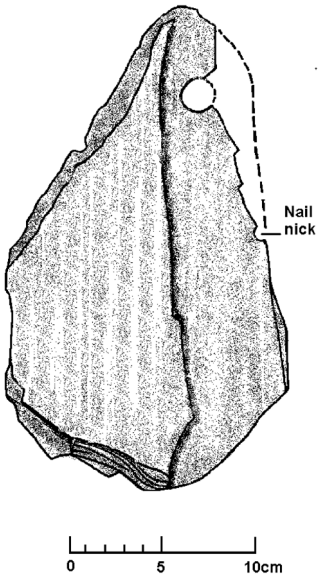

Figure 12: Roofing slate, apparently of lenticular form, from context 213.

In the face of the low valley-bottom cliff at Quarr Beach, complete roof slates were formerly noted at the western edge of a ditched enclosure surrounding the medieval tile kiln. Profuse quantities of these slates were tumbling from the cliff face in 1993. Re-examination of the cliff in 2014 found the entire *in situ* deposit lost to coastal erosion, but many fragments still remained scattered in the inter-tidal mud (figure 13).

A few of these beach items were thick heavy pieces, ill suited to roofing unless further cleaved. These might be compared with some larger pieces, of boulder size, seen in this zone in the 1990s. All, perhaps, indicate shipments of raw material for cleaving and shaping by a specialist team assembled at the kiln site.

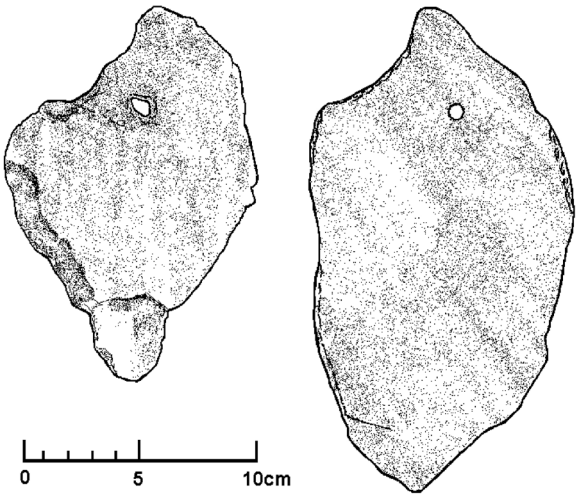

Figure 13: West Country roof slates recovered from Quarr Beach and attributed to a delivery formerly heaped within the enclosure surrounding the 13th/14th- century tile kiln.

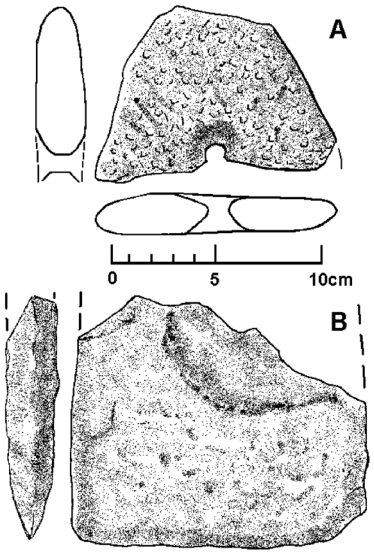

Figure 14: Damaged stone roof slabs from Quarr 513.
A- Quarr stone. B- Purbeck Limestone.

Indications that the abbey was accustomed to supplying slate elsewhere appears in its charters where the abbot agreed to send these materials to building works at Luccombe, Newport and Rowborough (Hockey 1991, docs. 203, 237 & 327-8). In 1523 the abbot was also providing slates and tiles for a grange in the New Forest village of Rowner (*ibid* doc. 483).

Stone roof slabs

Some tabular fragments of limestone from backfill context 213 might be considered possible evidence of shattered roof slabs but all were too small to permit positive identification.

Item 164, in the 'barn collection' (513), gathered elsewhere on the abbey site, offers evidence of imported stone roofing from one of the quarries on the Purbeck coast of Dorset (fig. 14, B). Although broken, and devoid of its nail hole, this modest slab may have resembled the shape of a wooden shingle. Small slabs of this size and irregular thickness might offer a poor seal against wind and rain. Like item 163 in the barn collection (figure 15), this slab shows white mortar cementation on its underside.

Ceramic floor tiles

A corner fragment of a highly worn floor tile (item 181) came from context 213, in trench *B*. It is 24mm thick and 102 x 106mm in size (close to 1 inch by 4 inches square). Its sides are typically undercut and the top face excessively worn leaving only the faintest veneer of an olive green glaze. Glaze spilt on the sides of the tile is more obvious. There is no indented 'frog' on the underside.

The fabric of this tile shows some 15% of sharp angular white and black flint inclusions held in a pink clay matrix heavily impregnated with light olive quartz sand grains with a roundness of 0.7 on Powers' scale. The presence of some fine random particles of chalk seem to indicate a local source in the Solent/ South Wessex region. The same fabric occurs in a corner fragment of a second tile from trench *B* (item 180). This may belong to one of the common favoured floor tile-sizes noted by Wight as 4½, 5 or 6 inches square (Wight 1975, 4). A small finger-dimpled 'frog' near the underside corner seems suited to a four-frog arrangement of such a size. This fragment is entirely devoid of glaze.

These two fragments from backfill in trench *B* (items 180 & 181) may helpfully be compared with three complete floor-tiles in the Quarr 'barn collection' (items 177-179). The latter are virtually identical, fashioned close to a common size of 97 x 97mm (4 inches square). The edges of these tiles are similarly undercut, and the underside of each is trowel-scored with a deep embedding frog (figure 16).

The surface of each of these tiles once bore either an olive green or semi-transparent yellow vitreous glaze. In each case, most of the glaze has been removed by equilateral wear, but telltale dribbles remain on the chamfered edges. On the top surfaces sufficient thin remnants of glaze show that all had been washed with a single colour and that no decorative devices had been displayed. On tiles 177 and 178 in the barn collection, the olive green glaze with its flecks of dark brown impurities shows notable similarity with the vitreous coating of the crested roof tiles from this site (figures 10 & 16). Tile 179 displays a slightly lighter glaze with a yellow hue but it seems evident from the other tiles that the colour of a single spread of glaze could vary according to the density of its impurities and the thickness of its application.

A possible guide to the date of these tiles comes from a demolished 14th-century chapel in St John's Street, Winchester where examples of similar size and appearance have been noted during pre-development excavations (K. Trott pers. comm.).

During the excavations of 1891, a tiled pavement was uncovered in the chapter house at Quarr. The excavator tells us little more than this was an '*arrangement of homely material*' (Stone 1891, I, 42), but his plate 31 illustrates a portion of the tile arrangement. Here, the floor had been laid with light and dark green tiles surrounded by a border of red triangular half-tiles.

Building stone

Three types of building stone were identified in the field assessment. Each could be traced to an accessible source in Palaeogene beds in close proximity to the abbey. A principal component was random rubble fragments or boulders obtained from the Binstead facies of the Bembridge Limestone Formation (Insole & Daley 1985; Tomalin 1987, 87). This stone could be readily recognised by the common inclusion of the gastropod *Galba*. This variety of limestone accounted for about 60% of the stone in context 150 and about 80% of the stone in context 151. Context 150 produced many large unshaped blocks. These were of sizes that could be have been manhandled by a team of two or three workmen. Only one block had been dressed into ashlar form and finished with a smooth vertical face.

The second type building stone comprised flat-bedded tabular strongly lithified blocks of pale cream-coloured siltstone that can readily turn to grey when weathered. Visually, this is a non-laminated sediment that probably owes its resilience to calcite cementation. This is the 'Quarr siltstone', and silty limestone facies recently noted by Island geologist Bill Webb. This siltstone can be seen inter-bedded with a shell brash visually identical to Quarr Stone in very large detached blocks that have been exposed on the neighbouring Solent

Figure 15: Damaged tabular limestone roof slab163 from 513 showing traces of adhering white mortar bedding on its underside.

Figure 16: A glazed 4″ floor tiles from an unstratified context. Knife stabs and a central blade-scored frog can be seen on the underside.

foreshore, east of the Binstead stream. This is the Seagrove Bay member of Headon Hill Formation (Hopson & Farrant 2015, 92). Substantial blocks of this siltstone, up to about 12cm thick, had been used in bedded foundations and footings of the abbey church, as seen in trench *A*. Thinner and smaller slabs, usually some 4 to 8cm thick were randomly distributed in the rubble of context 150. Here, they may have been used as floor footings and packing. This material accounted for about 30% of the stone in this context.

The third building stone was won from local outcrops of Headon Hill Formation. This was 'Quarr Stone', locally known as 'Feather Bed limestone'. It can be readily distinguished by its profuse content of fragmented mollusc shells. The dissolving of many of these shells to form innumerable slot-like cavities commonly gives this stone a light feathery appearance (Tomalin 1987, 87). This material accounted for some 10% of the stone in context 150.

Geology fieldwork suggests that the Bembridge limestone and the siltstone could have been readily obtained from convenient beach outcrops between the mouths of the Wootton Haven and Binstead Stream. This would involve a cartage distance of no more than 1.2km. All of this material could possibly have been obtained within as little as 0.3km.

Some Quarr Stone may have come from Binstead beach, but considerable supplies were obtainable from quarry pits in the vicinity of Binstead church (Hopson & Farrant 2015, 132). Quarr Stone was a favoured architectural stone in Late Saxon and Norman times but its availability was restricted to a localised stratum that could only be effectively pursued through small shafts that might enable radial tunnelling. The source of this stone seems to have been largely exhausted by the middle of the fourteenth century (Jope 1964, 117).

In the pipe trench, very few examples of Quarr Stone were recovered. All were small eroded pieces, perhaps discards from a nearby quarry source or minor cobbles from Binstead beach. In front of Quarr Abbey Cottage, a scatter of Quarr Stone fragments was seen in the eroded un-metalled surface of Quarr Road. These could be the last strewn remnants left from the Tudor dismantling of the west front of the church. The exposure has now been covered by a new road surface.

The presence of bricks

Twenty-nine fragments of brick were recovered from backfill context 213. A few minor featureless fragments were also noted in context 140 but these were too small to provide any indication of size or shape. In the up-cast from trench *B* were larger portions of brick, possibly once embodied in context 140. Some of these brick fragments may have been randomly included in repairs to Quarr Road (context 110).

Just two pieces of brick fragments might be of Tudor or Late medieval date (items 119 & 129). These displayed a respective thickness of 53mm and 37mm, similar to the thickness of 2" commonly favoured in the manufacture of Tudor and other early bricks. No indication of length or breadth could be found.

Glass

Only one significant item of glass was found, a bottle base in context 140. This fragment represents a thick-walled cylindrical bottle with a diameter of 90mm when measured at its slightly broadened base (figure 17). The base is indented in a deep 'kick-up', with an internal reach of 50mm. A change of shape from a mallet profile to slender cylindrical form occurred in post-medieval wine bottles around 1725 (a complete example comes from a well in Oyster Street, Portsmouth: Fox & Barton 1986, 227, fig. 142.1). The dark glass and the thick wall of the pipe trench bottle is compatible with manufacture during the period 1735-1820. This fragment offers a significant *terminus post quem* for context 140 and the spread of rubble and roofing slate it contained.

Faunal remains

Minor faunal remains were recovered from context 140, a horizon of building destruction dated no earlier than the second quarter of the eighteenth century. From this level came a short and thick *bos* horn core and about a dozen ventral valves of relatively small oysters.

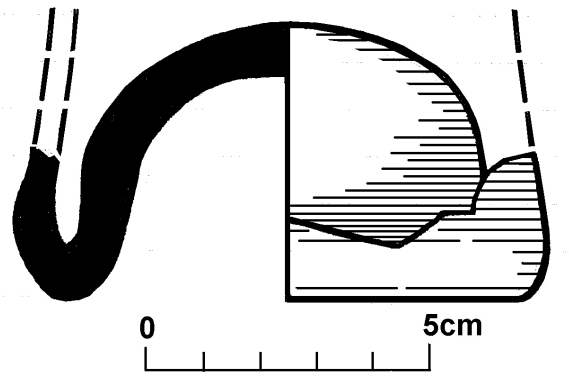

Figure 17: Eighteenth-century bottle base from context 140.

The recovered archaeological information in context

The archaeological information gained from this simple investigation exemplifies what would otherwise be lost. The precise ground plan of the abbey church has been drawn into question since the actual width of the nave, as calculated in 1891, now seems less certain.

Where the large rubble spread has been observed in context 150, the thoroughness of John Mill in dismantling the church may now be better understood. Virtually all dressed stonework had been effectively removed and a quest for rubble even persisted below floor level. With more accessible stone still surviving in upstanding parts of the claustral buildings, one wonders whether this eradication was targeted at the heart of the abbey church by Protestant zeal rather than practical need.

The evidence offered by contexts 145 and 160 suggest that the demolition may have been accompanied by a local alluvial event when the lower part of the site was inundated with silt flushed in by the Newnham Stream. Neglect, abandonment or destruction of the upstream fishponds, leats and sluices is a possible explanation. The year 1564 brought particularly damaging floods to southern Britain (Stratton 1978, 42).

The presence of building materials in contexts 140 and 141 beneath Quarr Road is problematic. These two contexts appear to be virtually contemporary with each other, the increased incidence of slate fragments in context 141 being the only discernible differentiation. This slate could represent an earlier road topping, perhaps derived from the dismantling of an adjacent mill on the edge of the former pond on the south side of Quarr Road.

Just two artefacts offer a spot date for this deposit of rubble and slate. Verwood sherd 206 has been compared with a form of dish used in Southampton in the mid-sixteenth century, but the analogy is far from firm. Of greater significance is the presence of the thick dark glass wine bottle that is unlikely to have entered this deposit before 1735. This suggests that the rubble of context 140 was either spread during the eighteenth century, or that a building of that date was demolished somewhere in this vicinity around this time.

Assessing the damage of pipe-laying in 2011

At the outset of this assessment, concern was expressed that the laying of the water pipe in 2011 had created unwarranted disturbance of the below-ground archaeology within the medieval abbey church. This potential damage concerned the east wall of the chancel, the interior of the nave and principal structural remains at or near the base of the west front.

The exploratory assessment in 2014 ascertained that discernible damage by pipe-laying was clearly evident at the west end of the church, but this had been essentially caused by the insertion of an earlier iron water pipe, believed to date from around 1947. Where the new polycarbonate pipe had been inserted, it was connected to the earlier system at an access point sited just outside the west front of the church. From this point the two pipes were then routed eastwards in tandem along the axis of the church and beyond the chancel.

Where the new pipe had been inserted by boring or 'moling', its course largely followed the backfilled trench of its predecessor. Where this moled course was slightly sinuous, the pipe deviated into deposits 140, 150 and 160. Fortunately, in all of these non-structural contexts, damage was found to be minimal. Where trenching by mechanical bucket had been carried out, this had mostly coincided with the track of the earlier pipe. Because of this good fortune, no significant damage was now evident. Nevertheless, in 2011 a large body of previously disturbed medieval stonework had been up-cast from the earlier pipe trench and removed from the site. This could not be retrieved.

Conclusion on threat and damage to the scheduled ancient monument at Quarr

As at all nationally scheduled ancient monuments, it is reasonable to expect to see the vulnerability of a medieval abbey such as Quarr to be fully accommodated when plans to install or modify underground services for water, gas, electricity and telecommunication are afoot. Where the undertakers of these works have been entrusted to operate outside the protective heritage umbrella provided by the Local Planning Authority, events at Quarr Abbey suggest that this privilege of self-regulation may have reached a point of paradox – *quis custodiet ipsos custodes*? When levels of heritage awareness and best practice slip, the genius of destruction is ever swift and sure.

It is salutary to observe that below-ground damage to this particular scheduled ancient monument was only revealed through the insistence of the Benedictine monks of the Community of Quarr. Now that we have seen how basic safeguards may founder during works by Statutory Undertakers and their contractors, it is perturbing to consider just how much more sub-surface damage of this kind may be occurring on other scheduled ancient monuments where local vigilance and awareness may be significantly weaker.

If the performance of a utilities contractor is to be simply measured by a weighing of price and time, it is evident that pursuit of these narrow objectives will persistently pose direct threat to the below-ground and unseen dimension of the national heritage. The evidence from Quarr shows that there is clearly a need for more discerning performance indicators that should counterbalance this inherently destructive process. These indicators need to promote and reward appropriate precautions when 'opening-up' notifications are issued by statutory undertakers to the local Highway Authority. This will require a simple, yet specific, adjustment to the statutory role currently performed within Local Government, where documentation on highway engineering, sub-surface pipe routes and historic and environmental records are all maintained, yet currently viewed in isolation.

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Summary of contexts

100. Topsoil bonded by mature grass and rootlets.
110. Road gravel attributed to construction in 1857.
113. Old unstratified backfill in trench *A*.
120. Old ground surface perceived in trench *B* extension.
125. Fine gravel base to Victorian gravel road.
130. Limestone rubble and earthen backfill covering pipe 1(installed *c*.1947).
131. Iron water pipe 1, *c*.1947.
140. Loose Bembridge Limestone rubble in a friable matrix of loose mortar particles, with occasional fragments of ceramic roof tiles, roof slates, thick-walled wine bottle and post-medieval Verwood sherds.
141. Intensified scatter of fine broken roof-slate fragments at capping context 140.
145. Greyish brown loam containing some 10% eroded alluvial flint.
150. Substantial body silty limestone rubble perceived to be foundation bedding for the south nave wall or the floor of the medieval abbey church.
160. Light brown loam containing some 10% flint inclusions. Perceived to be an alluvial wash into which the medieval foundation rubble of the church may have been cut or sunk. Its interface with context 145 could not be firmly established.

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ROUND HOLES IN OYSTERS, QUEEN VICTORIA'S BATHING BEACH, OSBORNE HOUSE, ISLE OF WIGHT

Dr. Stephen K. Donovan

Abstract

Small round holes in shells, the ichnogenus Oichnus *Bromley, are commonly the spoor of predatory gastropods. Multiple oyster valves,* Ostrea edulis *Linnaeus, contain sparse* Oichnus simplex *Bromley, commonly the free (right) valve. Borings are of consistent diameter, are commonly limited to one boring per valve and may be penetrative (complete) or non-penetrative (incomplete). These borings show no preferred site; rather, they are as likely to penetrate the substrate marginally (thin valve) as centrally (thick valve). One borehole preserves a small bivalve, either a borer or nestler. It is suggested that these are bivalve borings into a pavement of dead oyster valves on a firm substrate. The small diameter of borings indicates that they represent an early, post-larval infestation. If the oyster valves were removed soon after by a storm, they would appear to have been bored pre-mortem by carnivorous snails, rather than post-mortem by bivalves constructing domiciles.*

Small round holes produced by boring organisms are a common feature of dead shells both on the seashore (see, for example, Hoogduin *et al*. 2017) and in the fossil record (Pickerill & Donovan 1998). The ichnologist classifies these structures within the ichnogenus *Oichnus* Bromley, 1981. Most commonly, but not invariably (Bromley 2004, 466-467), these are the spoor of predatory, boring molluscs, most frequently snails. Big round holes are a feature of fragments of sedimentary beds washed ashore by storms (such as Donovan 2011, figure 2C; 2014, figure 3) and can be determined as part of a large clavate (club-shaped) boring. These are commonly the product of certain groups of boring bivalve molluscs, such as pholadids, and assigned to the ichnogenus *Gastrochaenolites* Leymerie, 1842. But there are round holes, perhaps a little bigger than typical *Oichnus*, but smaller than common *Gastrochaenolites*, that are found in many of the oyster valves washed ashore on Queen Victoria's bathing beach at Osborne House, East Cowes, Isle of Wight. I have been puzzling over these borings – what made them and why?

The descriptive terminology of modern traces and trace fossils is expounded in Häntzschel (1975) and the principles of their classification used herein follow Pickerill (1994). All specimens are deposited in the Naturalis Biodiversity Center (RGM prefix), Leiden, the Netherlands.

Locality

Queen Victoria's private bathing beach [NGR SZ 525 953] (Donovan 2014, figure 1, 2B), is open to all visitors to Osborne House, East Cowes. It is a rich site for disarticulated oyster valves, other shells and pebbles of Paleogene limestones (Institute of Geological Sciences 1976; Insole *et al*. 1998, pp. 18-22). Lloyd & Pevsner (2006, figure on p. 211) provided an estate map; the beach is in the area of locality 7 ('Landing House') therein. The ichnofauna (Donovan, 2014) includes common *Caulostrepsis taeniola* Clarke, 1908, *Caulostrepsis* isp., *Entobia* isp. and *Oichnus simplex* Bromley 1981, with rare *Trypanites*? isp. and a seagull beak mark.

Materials and methods

Collections of bored oysters discussed herein were made in the summers of 2014 and 2016. Specimens were selected in the field in conditions of good light, both with and without the aid of a hand lens. They were then prepared by lightly washing in tap-water to remove excess sand and then gently dried on newspaper in a sunny window. Specimens were examined by eye, hand lens and binocular microscope. All photographs were taken with a Canon G11 digital camera.

Description

Thirty disarticulated oyster valves of the common European oyster, *Ostrea edulis* Linnaeus, 1758, were collected and numbered RGM.1332386-1332403 and RGM.1332427-1332438 (figures 1 & 2). Free valves (right, flat) are commoner than attached valves (left, convex). Borings are circular, either cylindrical or gently conical, vary in diameter from 1.5 to 2.5 mm and penetrate even the thickest areas of oyster valves. Twenty three valves are perforated by one small round hole only; others bear two or more holes. Most holes are penetrative; only six valves preserve incomplete borings, including one specimen (RGM.1332432) that also bears a penetrative (complete) boring (Fig. 2F). Incomplete borings all start on the outside of the valves. One valve (RGM.1332396; figure 1F) includes a penetrative boring (in association with *Entobia* isp.) in which a small bivalve is preserved (figure 1F). At least one boring (RGM.1332397) is conical and bored from the inside of the valve.

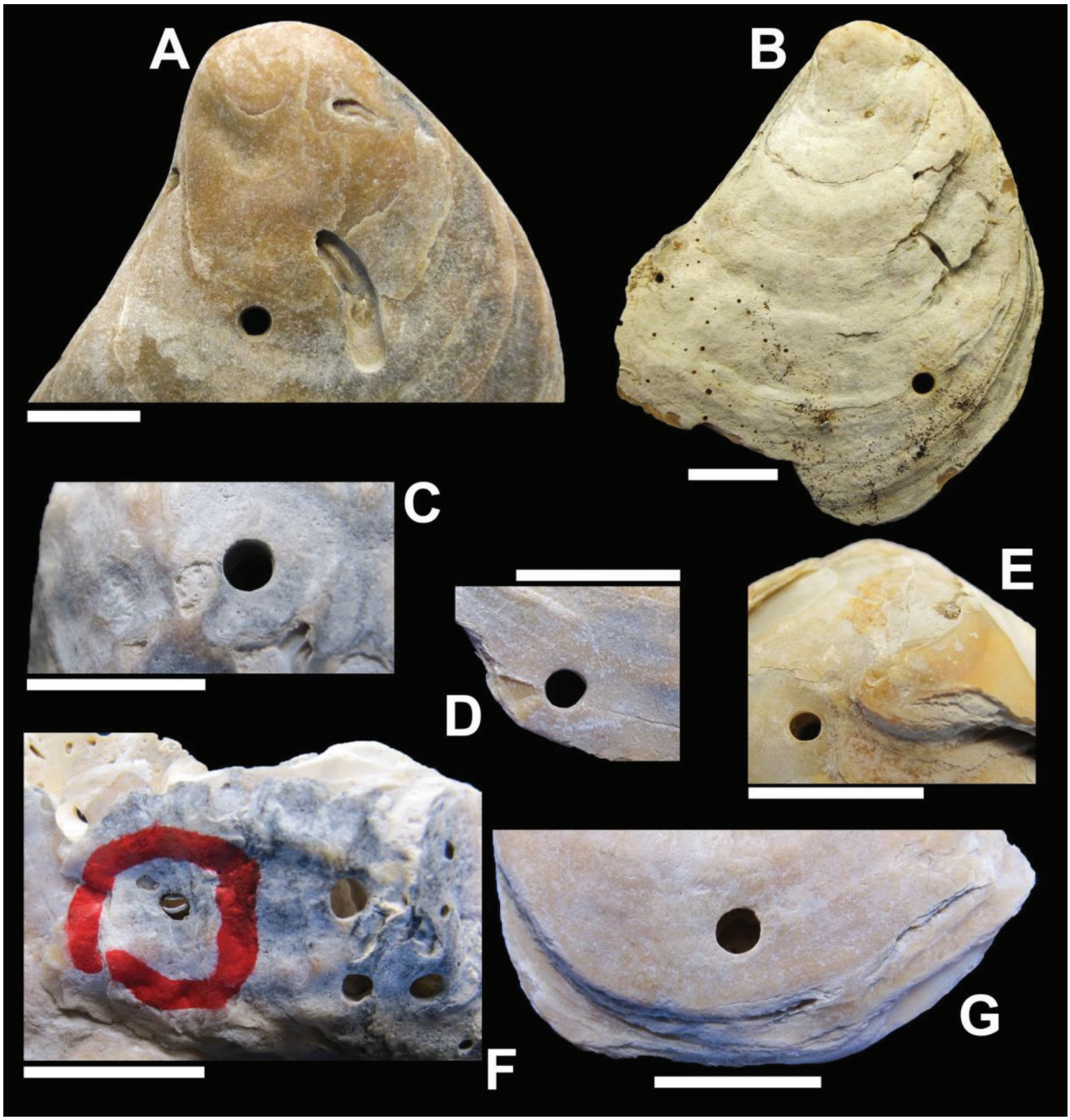

Figure 1: Oichnus simplex Bromley in Ostrea edulis Linnaeus from Queen Victoria's bathing beach, Osborne House, East Cowes, Isle of Wight. (A) RGM.1332386, slightly conical boring through moderately thick free valve; Caulostrepsis taeniola Clarke to right. (B) RGM.1332400, cylindrical boring through thin valve; Entobia isp. to lower left. (C) RGM.1332389, cylindrical boring through moderately thick part and close to centre of valve. (D) RGM.1332387, cylindrical boring close to commissure. (E) RGM.1332388[3], slightly conical boring through thick part of valve near umbo. (F) RGM.1332396, a cylindrical O. simplex with an in situ bivalve borer(?) or nestler(?) and in a valve otherwise riddled by Entobia isp. (G) RGM.1332392, an incomplete boring in a thick part of a valve, near the adductor muscle scar and close to the commissure. Specimens uncoated. All scale bars represent 10 mm.

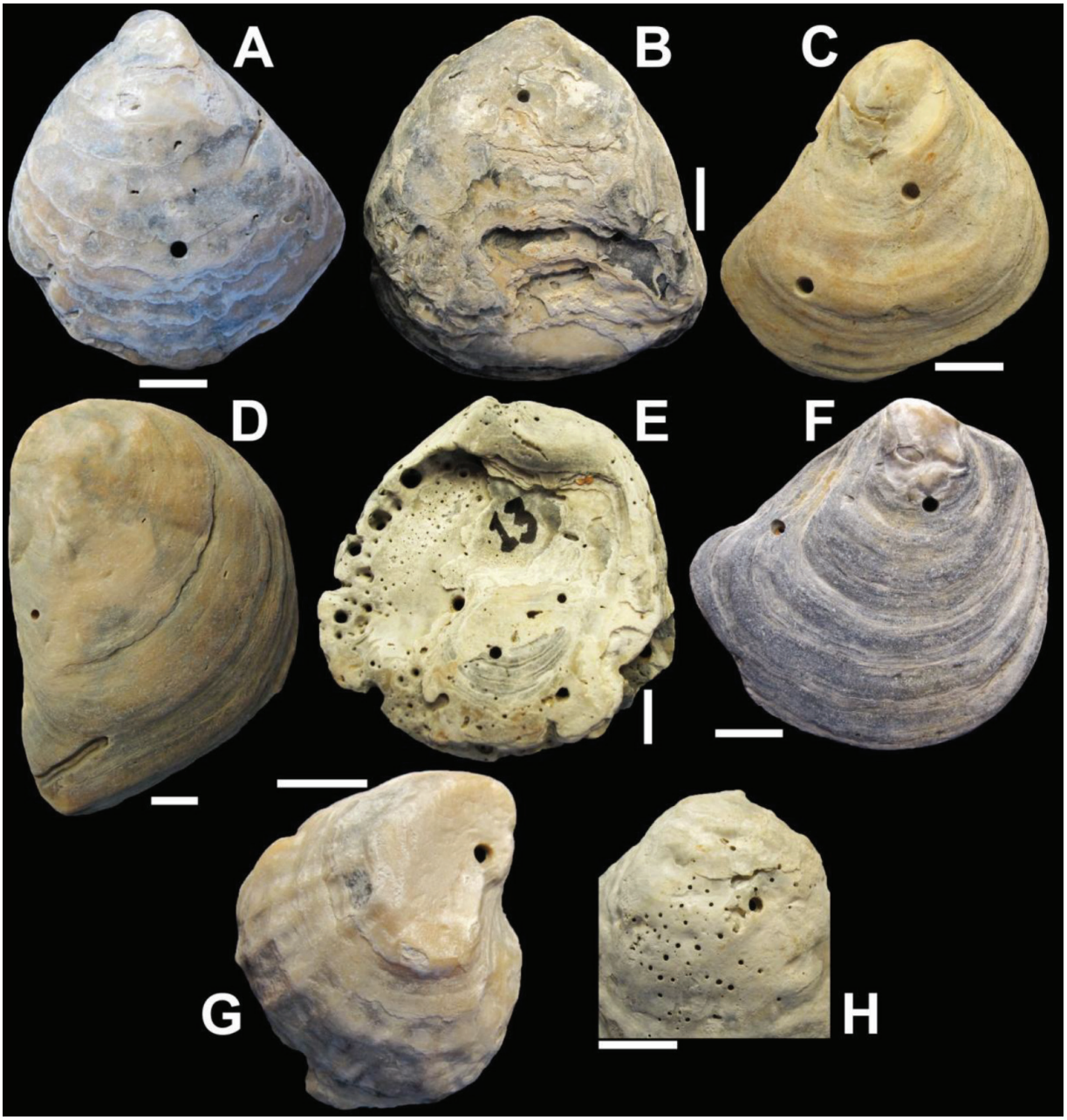

Figure 2: Oichnus simplex Bromley in Ostrea edulis Linnaeus from Queen Victoria's bathing beach, Osborne House, East Cowes, Isle of Wight. (A) RGM.1332391, cylindrical boring through the thickest part of the shell, close to the adductor muscle scar. (B) RGM.1332395, incomplete boring near umbo and in thick part of the valve. (C) RGM.1332427, two incomplete borings; that in the upper right is almost complete. (D) RGM.1332394, incomplete boring; Caulostrepsis taeniola towards bottom left. (E) RGM.1332398, most, perhaps all of the large boreholes in this valve are Entobia isp., but some may be O. simplex. (F) RGM.1332432, complete (right) and incomplete borings in the same valve; both are in areas where the valve is thick. (G) RGM.1332437, slightly conical boring through the attachment scar of an attached valve. (H) RGM.1332402, complete, slightly conical boring in close association with a dense infestation of Entobia isp. Specimens uncoated. All scale bars represent 10 mm.

Discussion

> "The flat or native oyster lives offshore from about low water to between 15 and 45 fathoms (27.4 – 82.3 metres) on firm, comparatively immobile bottoms of mud, rocks, muddy sand, muddy gravel with shells, hard silt, old peat bottoms or on man-made spat collectors" (Tebble 1976, p. 53).

The classification of these borings presents no problem, but their origin is worthy of discussion. To reiterate, small round holes in shelly substrates belong to the ichnogenus *Oichnus* Bromley 1981, and such cylindrical to slightly conical holes as those discussed herein belongs to the type species, *Oichnus simplex* Bromley 1981. Such is straightforward, but what were the borers and what was their purpose? That is, were they predatory (*Oichnus*) or did each form part of a larger and

more extensive domicile (*Gastrochaenolites*)?

Conical borings can be shown commonly to have originated from the external surface, but not invariably; RGM.1332397 was bored from the inside surface outwards. A boring in RGM.1332437 is similarly enigmatic, the broad attachment surface of the valve has been bored (figure 2G). That six of the valves bear multiple, conspecific borings, but these are mainly incomplete; that is, they provide no evidence for or against predation. Only RGM.1332432 has two borings, one of which is complete (figure 2F).

The distribution of borings in these oysters are not consistently in any one area of the valve, unlike some assessments of gastropod-generate borings (see, for example, Pickerill & Donovan 1998, pl. 3). Borings are not concentrated in one part of the valve, as might be expected from an efficient predator. Rather, borings are found in both thick and thin parts of the valves. The common, but not invariable association of one valve, one complete boring may be a red herring. That is, it is anticipated that a predator only needs to drill a single boring through which it would feed; however, must solitary boreholes always be predatory? I suspect not. Although this would be a typical association of predatory behaviour, and in the absence of evidence for site selection, perhaps they are not due to predatory snails. Rather, they may be domiciles (dominichnia) of small, post-larval boring bivalves. RGM.1332396 (figure 1F) provides tantalising evidence of a bivalve association with one of these pits, but whether the bivalve is a borer or a post-boring invader, that is a nestler, is impossible to determine without breaking the specimen.

I speculate that these boring that I have included in *O. simplex* actually represent post-mortem, non-predatory borings. If these disarticulated valves lay on the seafloor as a dense accumulation, an oyster pavement (figure 3A), on a firm, muddy substrate, it is likely that they would have been bored by bivalves. That is, boring bivalves would have treated the valves of dead oyster as part of a lithified seafloor (see quotation from Tebble 1976, above; figure 3B herein). Early borings would likely have been narrow, becoming large with time, but the valves on Queen Victoria's bathing beach were derived from offshore. They may have been transported to their present position in a storm; the boring bivalves may have already been established in the underlying substrate (figure 3C). Thus, although these holes are provisionally assignable to *O. simplex*, if they were more complete, including the part of the boring in the substrate, it is speculated that they could more correctly be referred to the club-shaped borings, ichnogenus *Gastrochaenolites* Leymerie, 1842. Because most of these oyster valves are thin, they are unlikely to have been infested by bivalves boring into, rather than through them

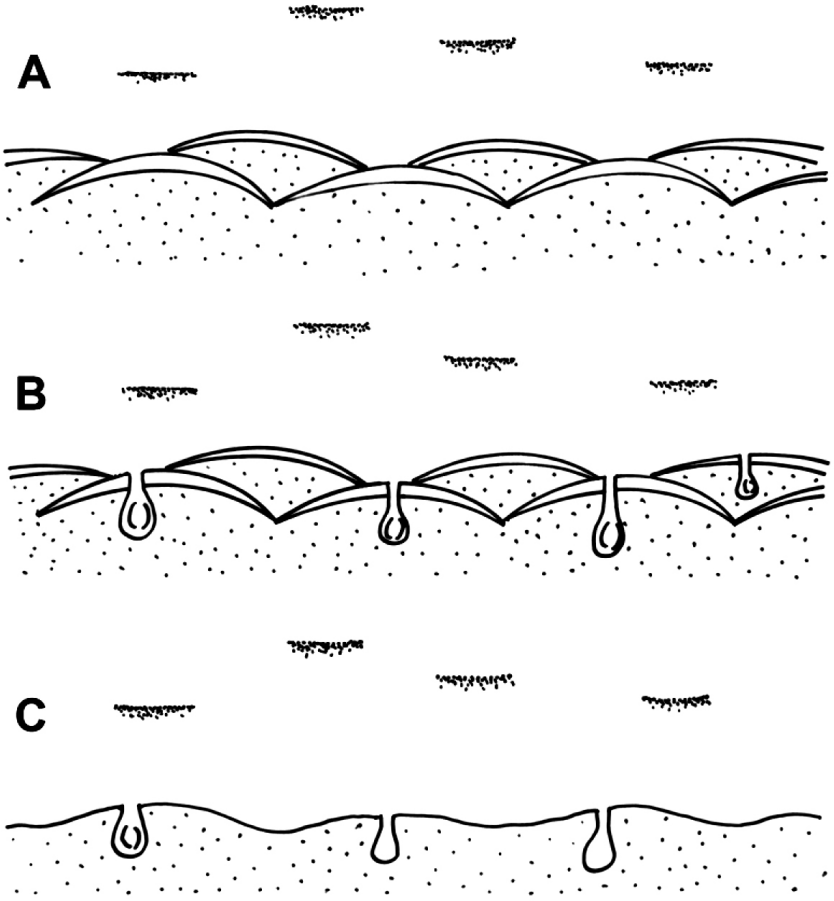

Figure 3. Schematic diagram of possible genesis of boring in disarticulated valves of Ostrea edulis Linnaeus. (A) Oyster pavement of numerous dead and disarticulated valves on firm substrate. The valves are dominantly concave-down, which is the most hydrodynamically-stable orientation (Brenchley & Newall 1970). (B) A spatfall of larvae of pholadid (boring) bivalves invades the substrate. Pholadids bore into the valves and, where complete, into the substrate. (C) A storm removes the oyster valves and carries them onshore. Some pholadids and their borings are lost; others survive.

(*contra* Pickerill & Donovan 1997; Farinti & Zavala 2002; Mauna *et al*. 2005; Donovan *et al*. 2014).

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METEOROLOGICAL REPORT FOR SHANKLIN, ISLE OF WIGHT FOR THE YEAR 2018

Clive Cooper

Abstract

Shanklin Weather Station was established approximately 68 years ago, although weather diaries are only available from February 1983. The station is owned by the Isle of Wight Council and is maintained by the Met Office. The station is situated at The Mead, a park area near Shanklin 'Old Village' towards the outskirts of the town and is 50 feet above sea level. The station is a simple one consisting of a 5" standard rain gauge and a Stevenson's Screen equipped with three thermometers. Readings and observations are taken once daily at 09.00GMT. The Campbell Stokes sunshine recorder is located on the roof of Shanklin Theatre, at a height of 180 feet above sea level.

Temperatures

The yearly mean temperature was 11.72°C and was 0.78°C above the long-term average. 2018 was 3th warmest year in the 36 year series. Eight of the twelve months had positive anomalies. The months with the positive anomalies were July with 2.8°C, December with 2.1°C, May with 1.9°C, June with 1.5°C, January and November both with 1.4°C April with 1.0°C and August with 0.6°C. There were four months with a negative anomaly; February with 1.5°C, March with 1.2°C, October with 0.4°C and September with 0.1°C of its long-term average. The winter period December 2017 - February 2018 was the 15th coldest that I have recorded since the winter of 1983-1984, when the weather diaries started. The spring of 2018 was the equal 14th warmest with 2012 in the series. Summer 2018 was the warmest that I have recorded. Autumn 2018 was the equal 11th warmest with 2015. December 2018 was the second mildest in the past 36 years.

The highest temperature of the year, 28.9°C, occurred on the 3rd August. There was a total of 65 days (the long-term average being 30) when the temperature reached or exceeded 21.1°C *(70°F)*: - 2 in April, 10 in May, 12 in June, 26 in July and 10 in August and 5 in September The lowest maximum daytime temperature, - (minus) 0.6°C, was recorded on the 28th February. The highest overnight temperature was 19.2°C and was recorded on the 2nd July. The lowest overnight minimum temperature was - (minus) 4.0°C, on 1st March. There were a total of 16 air frosts, defined as a temperature below 0.0°C; 8 in February, 7 in March, and 1 in November. The latest frost was recorded on 21st March. The first frost of the following autumn/winter was on the 27th November.

Rainfall

The rainfall for the year 2018 totalled 936.3mm representing 103% of the long-term average. There were 158 days with measurable rainfall. The six months with above average rainfall were March with 119.4mm, December with 182.4mm, August with 84.6, April with 74.1mm, and November with 121.7mm and January with 113.8mm. This represented 197%, 171%, 144%, 134%, 110%, 107%, positive anomalies, respectively. The six months with below average rainfall were June with 2.6mm, October with 52.6mm, July with 32.3mm, September 47.4mm, February with 58.4mm and May with 45.0mm This represents 5%, 46%, 64%, 68%, 84% and 87% of their respective negative monthly anomalies.

2018 was the 12th wettest year that I have recorded. The winter (Dec 2017-Feb 2018), producing 307.1mm of rain, was the 11th wettest in the 36 year series. Spring, with 238.5mm, was the third wettest in the 36 year series. The summer produced 121.5mm of rain and was the 15th driest in the series. Autumn, with 221.7mm, was drier than normal and was the 8th driest in the series. The month that stands out was June, with only 2.6mm, was the driest month of the year. During the summer of 2018 there was a period of 39 days with no rain recorded, the 18th June till 26th July, this was longer than the previous driest period recorded which was the 7th June till the 7th July in 1984, 31 days.

An amount of rainfall reaching or exceeding 25.4mm*(1 inch)* in a 24hr period ending at 09.00GMT, occurred on two days; the 26th August 39.7mm and on the 15th December when 38.7mm of rain was recorded,

Sunshine

Problems arose in March 2017 when telecommunication masts were installed adjacent to the sunshine recorder. This caused a shadow to fall across the recorder, and was also too close for safe observations to be carried out. After consultation with the Meteorological Office, it was decided to suspend sunshine recordings due to Health and Safety constraints. An alternative site is currently being sought, with the hope that the sunshine recorder can be re-sited.

MISCELLANEOUS PHENOMENA

Thunder

Thunder was heard on 5 days in 2018; 1 in April, 2 in May, 1 in July and 1in November.

Hail

Hail was recorded on no days in 2018.

Sleet /Snow

Sleet/Snow was observed at Shanklin in 2018 on 16th January, as sleet. Snow fell on the 27th and 28th February and 1st March. Sleet fell on the 2nd March, with further falls of snow on the 17th 18th and 19th March.

Gales
Gales occurred on 16 days during the year; 6 in January, 2 in September, 4 in November, and 4 in December.

Monthly weather summary – 2018

Month	Average Temp.	Mean Max.	Mean Min.	Rainfall	Sun Hours
Jan	7.3	9.6	4.9	113.8	n/a
Feb	4.1	6.8	1.3	58.4	n/a
Mar	5.9	8.6	3.3	119.4	n/a
Apr	9.9	12.8	7.1	74.1	n/a
May	13.9	18.5	9.2	45.0	n/a
Jun	16.2	20.3	12.1	2.6	n/a
Jul	19.7	23.9	15.4	32.3	n/a
Aug	17.5	21.1	14.0	86.6	n/a
Sep	15.0	18.7	11.3	47.4	n/a
Oct	12.1	15.6	8.5	52.6	n/a
Nov	10.3	12.2	8.3	121.7	n/a
Dec	8.9	10.7	7.1	182.4	n/a
Yearly Figure:	11.72	14.90	8.54	936.3	n/a

Clouds Freshwater Causeway

Fog Freshwater Bay

Pictures by Mike Cotterill

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CORRESPONDENCE: SOME COMMENTS ON THE SHALFLEET TYMPANUM

Rob Pearson & Chris Hicks

We recently read John Margham's article on Romanesque Wight (Margham 2018) and, although there was much of interest, we would like to take issue with what he had to say about the Shalfleet tympanum.

Anglo Romanesque imagery is frequently crude and, consequently, difficult to interpret. A modern observer must therefore understand the basic principles of early medieval symbolism if they are to make an educated guess as to the original meaning of any given image. This is particularly so of the Shalfleet Tympanum.

Mr. Margham describes the relief well and then goes on to discuss its meaning, with reference to a number of other authorities. In particular, he suggests that the carving may hint at an original dedication to Saint Mark, or that it may be a reference to the Trinity, with the central figure representing Christ. He offers no argument in support of these theories and, as neither have any basis in medieval symbolism or theology, we believe they are highly unlikely.

The carvings have none of the attributes traditionally associated with Christ or St Mark. Medieval figures of saints and apostles are usually, if not always, depicted wearing a nimbus. We know of no Romanesque image of Christ that does not wear a halo. Similarly, St Mark is typically represented by a winged lion with a halo, usually holding a book. Therefore, there is absolutely no reason to conclude that the Shalfleet tympanum depicts, or even alludes to, either of these individuals. By extension, this carving is even less likely to represent the Trinity. (Interestingly, this and the other carvings sited in Mr Margham's article, do not appear to have been defaced by iconoclasts. This might indicate that our ancestors did not consider them to be idolatrous.)

Despite the above, it is not unreasonable to suggest that the carving may represent Daniel in the lions' den, as Old Testament figures from this period are frequently depicted without a nimbus.

However, as Mr Margham states in his conclusion, "architectural sculpture cannot be studied in isolation." It is with this in mind that we would like to discuss the other comparable images illustrated in this article, and offer another possible interpretation:

Although superficially similar to the other examples, we believe the tympanum at Charney Bassett is something of a 'red herring'. Unlike the other designs, the carving is basically symmetrical, and the griffins appear to attack the central figure (which has no halo and therefore is highly unlikely to represent Christ.) This is typical of much Romanesque iconography in which a human figure is assailed by, or entangled in, the forces of nature. These images are generally considered to represent mankind's struggle against evil.

The other three carvings have much more in common. All show a pair of lions, with one facing the centre of the composition and one turned away. This is particularly interesting in the carving from Milborne Port, where the sculptor has evidently been at pains to balance the composition, despite the asymmetry. A harmonious design would have been much more easily achieved if the figures were facing each other. Therefore, it is difficult to believe that the design is simply decorative.

The lions on the lintel at Down St Mary adopt a surprisingly similar posture to those at Milborne Port. The central figure is manifestly turning away from the lion on the left. This, and the position of the lions, implies a specific narrative interpretation.

In the light of this, the carving at Shalfleet, as with the other examples referred to, may well have an allegorical meaning. According to medieval and biblical symbolism, the lion could represent good or evil. We would, therefore, suggest that these carvings could depict negative and positive attributes, with the central figure perhaps making a choice between them. Indeed, at Down St Mary, the man is clearly reaching to the lion on the right.

The human figure is not an essential element in an allegory of this sort, which is why we believe that Mr Margham correctly suggests that the carving from Milborne Port probably illustrates the same theme as the other two.

In summary: interpretation of early medieval iconography is frequently problematic. It is not always possible to say what an image meant, but it is unhelpful to suggest what it clearly did not mean. If one is to undertake a valid meditation on the original significance of any given image, it is wisest to take all the available evidence into account before forming an opinion. Propounding a theory which is based on a selective use of the evidence, is disingenuous and risks using 21st century reasoning to interpret 12th century philosophy.

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REPLY TO ROB PEARSON & CHRIS HICKS

Rita Wood (York)

It was interesting to see the comments about the Shalfleet tympanum. The letter from Rob Pearson and Chris Hicks was forwarded to me because the part of John Margham's interpretation which caused their objections had been based on ideas I have proposed and published. My theory, briefly, is that the three characters - the two lions and the man - represent the Trinity, seen at the point when Christ (the man) has ascended into Heaven after the Resurrection, and is welcomed by the Father and the Holy Spirit (the animals).

It is true that, for example, Christ often has a cruciform halo, but that is not his only attribute, and even in a literal depiction it might not be present. Comparisons with other tympana having a similar design, of a man standing between symmetrical animals, are fruitful. These tympana exist at Charney Bassett (Oxon), at Down St Mary (Devon) and (partially) at Caverswall (Staffs). These tympana are likely to be related - for example by a lost pattern book - but their variations add to the basic meaning, as when the central figure holds up greenery, or wears a crown, or when griffins are used instead of lions.

The idea is set out in full in my book *Paradise: the world of Romanesque Sculpture*, in chapter 6; there I also deal with, and dismiss, the Daniel in the lions' den theory. My book as a whole reverses a lot of the tearing, clawing and punitive ideas about the sculpture of this period, and the notion that it is 'crude'. All that is replaced with a more rational theory that the Church at this time was trying to bring people to love God, and to live so as to go to Paradise. If after all they misbehaved, I am sure a few claws could come out.

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CORRESPONDENCE: COMMENT ON ''BIOEROSION OF DINOSAUR BONE IN THE WESSEX FORMATION (WEALDEN GROUP, EARLY CRETACEOUS) OF THE ISLE OF WIGHT, ENGLAND"

Professor Stephen K. Donovan

The Wealden (Early Cretaceous) deposits of the Isle of Wight are internationally renowned for their fauna of ancient terrestrial saurians, particularly the dinosaurs (Martill & Naish 2001). The body fossils – bones and teeth – are understandably the main focus of research into the dinosaurs (e.g., Hutt 2016), but a second important aspect is their trace fossil record (= ichnology), such as tracks and trackways, and coprolites (Delair 1985; Martill & Naish 2001, pp. 310-323). In this context the recent contribution by Lockwood *et al*. (2017) on invertebrate borings into and burrows adjacent to dinosaur bones is particularly welcome (see also Martill & Naish 2001, pp. 52-53, text-figs 4.1, 4.3). This admirably demonstrates the importance of examining the post-mortem interactions of bones with the invertebrates of the terrestrial ecosystem. This provides new evidence of organisms (presumably insects) that have otherwise left no equivalent record to the Island's dinosaurs, even though they all shared the same environment. As Lockwood *et al*. (2017, p. 69) freely admitted, "Linking trace fossils to a trace maker without a confirmatory body fossil will always be a matter of conjecture …", but their analysis is both informed and informative. My congratulations go to the authors.

I do have a further comment, not meant to be critical, but rather to inform the future researches of the authors and to make their published results more widely applicable. I am a critic of papers which provide interesting data on trace fossils, but which shun the use of the ichnological nomenclature. Although they are sedimentary structures, trace fossils are named within so-called ichnogenera and ichnospecies. These are in no way equivalent to Linnaean binomials, although they appear to be similar; trace fossils are not organisms and should not be treated as such. The existence of this system of nomenclature can be confusing and its origins in the 19th Century were at a time when many trace fossils were misidentified as fossil algae (Osgood 1975).

As an example of how ichnotaxonomic nomenclature informs science; by applying names to objects we convey an idea of what it is and this name will subsequently enter the literature. For example, many authors have examined the palaeoecological significance of 'small round holes' in shells, which may be predatory, parasitic or domiciles, but if they fail to assign them to the ichnogenus *Oichnus* Bromley, 1981, they are unlikely to be recognized by the relevant abstracting literature (Donovan & Pickerill 2004; Donovan 2017). They will have failed to have engaged with many interested ichnologists.

I therefore encourage Lockwood *et al*. to embrace the ichnotaxonomy of borings in bones in their future publications. This might be regarded as a 'hot topic' in ichnology; recent important contributions include Pirrone *et al*. (2014) and Höpner & Bertling (2017). I welcome Lockwood *et al*. (2017) as a fascinating contribution to the ichnology of bones. In the future, I encourage the authors to apply ichnological binomens to all their trace fossils and, in so doing, reach a wider audience via the abstracting literature.

I do acknowledge that Lockwood *et al*. (2017, p. 67) mentioned by name the burrow *Beaconites* sp. (more correctly isp., for ichnospecies; Bromley 1996, p. 162) in passing, but it did not receive the same detailed analysis as did the speculation of potential producing organisms (but see Keighley & Pickerill 1994). Description is part of the centre of Earth Science; speculation, although part of science, is more on the fringes of such studies. Description and related ichnotaxonomy are the handmaidens of all trace fossil research.

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REPLY TO PROFESSOR DONOVAN

Jeremy Lockwood, Christina Shears-Ozeki & Mick Green

We thank Professor Stephen Donovan for his kind comments and helpful suggestions. We share his view that the study of ichnology is an essential complement to the study of body fossils, and that important data can be gleaned if field recordings are thorough and matrix is properly examined and described before removal. We also accept that where appropriate, ichnites should be given the binomial of their ichnogenus and ichnospecies to enhance searches as well as helping to correlate ecosystems. However, we feel that in some circumstances using binomials should be approached with caution and in some cases perhaps even temporarily shunned.

In our paper we reported the first record (as far as we are aware) of invertebrate bioerosion of dinosaur bone in the UK and the second record in Europe (the first by Csiki in 2006). The study of invertebrate bioerosion of dinosaur bone is then a reasonably new field, with most reports occurring in the last fifteen years (although a few cases were fully documented earlier, e.g. Rogers (1992)). However, recently the volume of literature has started to expand, and it may well be that with improved recognition the increase will be exponential. One obvious benefit of a wider sample base will be that it will allow a greater understanding of variation, which in turn will allow more logical and practical groupings to be made. In the field in question it became apparent that there was no universally agreed terms to describe the ichnites. A useful attempt to overcome this was made by Pirrone *et al.* (2014) who suggested and defined a series of ichnotaxobases. However, the literature at this stage still contained very few relevant ichnotaxa (essentially *Cubiculum* and *Osteocallis*) and although some aspects of some of our traces showed similarities to *Cubiculum isp*. there were no bioglyphs or definite defining morphologies. On balance, we felt it safer to avoid creating a new taxon or loosely attributing to an existing one until this field of research had progressed further.

A similar situation occurred with large tridactyl ornithopod tracks. The variation in the shape of these tracks often forms a continuum (albeit with peaks), rather than obviously discrete morphotypes. This is to be expected when there are so many different factors that can come into play other than foot morphology, such as substrate type, kinetics and climate. From about 1990 to 2010 the number of ichnogenera and ichnospecies grew rapidly with over 40 types of large ornithopod tracks being described worldwide. Many of these new ichnotaxa were based on slight morphological differences and many of the publications only presented brief diagnoses. The result was rather chaotic. In a review paper (Lockley *et al.* 2014) we were able to reduce the number of ichnogenera down to three. Soon after Martinez-Diaz *et al.* (2015) published another review coming to much the same conclusions and again cutting the number to three. A large proportion of the natural casts of footprints at Hanover Point, Isle of Wight, bear a broad similarity to the ichogenus

Carririchnium (Lockwood *et al*. 2014) This is useful information in that it helps us to compare the ichnofauna with other sites across the world. However, many differ from *Carririchnium* but we think the urge to name them for the present time should be resisted. There seem to be no simple solutions to this argument which is essentially one of 'splitting' or 'lumping' when the boundaries are indistinct. Perhaps these are areas that deserve more debate within the ichnological community.

So, we agree absolutely with the two handmaidens of description and related ichnotaxonomy although perhaps in some circumstances, description needs to lead the way, rather than the two of them walking hand in hand. We hope this goes someway to explaining some of our thought processes in dealing with these problems and are grateful to Professor Donovan for raising such an interesting point.

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Rogers, R. R. 1992 'Non-marine borings in dinosaur bones from the Upper Cretaceous Two Medicine Formation, Northwestern Montana', *Journal of Vertebrate Paleontology* 12(4): 528-531.

NOTICES OF ARTICLES AND NEW BOOKS REGARDING THE ISLE OF WIGHT

The following publications appeared in 2018:

A new species of *Anteophthalmosuchus* (Crocodylomorpha, Goniopholididae) from the Lower Cretaceous of the Isle of Wight, United Kingdom, and a review of the genus

Cretaceous Research, 84, 340-383. Jorgo Ristevski *et al*.

'Down to the Coast- Fine Mansions & Fair Villas Architectural Overview'

Robin McInnes https://www.downtothecoast.co.uk/downloads/dttc-fine-mansions-fair-villas-east-wight.pdf

'Down to the Coast', supported by the Heritage Lottery Fund (HLF) through its Landscape Partnership Programme, is being delivered in the East Wight by the Isle of Wight Area of Outstanding Natural Beauty Partnership (AONB Partnership). This particular project activity is entitled 'Fine Mansions and Fair Villas of the East Wight Countryside and Coast'. Its purpose is to raise interest and awareness of the rich architectural heritage of the East Wight built environment from the sixteenth century to the present day. By creating a visual record of the architectural styles of residences in the towns, villages and countryside it has highlighted how the built environment contributes to the wider landscape of the East Wight and its Area of Outstanding Natural Beauty (AONB).

The report illustrates the rich heritage of domestic architecture in the East Wight, in particular the period from 1600. It demonstrates, effectively, how local building materials have been used aesthetically to construct mansions and villas, often in harmony with their countryside and coastal locations.

Early diagenesis of the lower Vectis Formation, Wealden Group Lower Cretaceous, Barremian, Sandown, Isle of Wight

Proceedings of the Geologists' Association, 129(6) 782-789. Jennifer M. Huggett *et al*.

Geotourism and Geoconservation on the Isle of Wight, UK: Balancing Science with Commerce

Geoconservation Research 1, 44-52. Martin I. Simpson

'Paradise Lost? Lost Buildings of the East Wight'

Robin McInnes https://www.downtothecoast.co.uk/uploads/paradise-lost-expl-heritage-loss-in-ew-final-report.pdf

This project is the third in a series that has examined how historical imagery can inform us of the changing landscape of the East Wight AONB. It is also a study of the architecture of the East Wight and how architectural styles over the centuries have fitted within the natural landscape. 'Paradise Lost? – The lost buildings of the East Wight' explores the reasons for heritage loss across the East Wight, particularly over the last 100 years. Its purpose has been to research and understand the reasons for the loss of heritage, particularly historic houses, and to raise awareness amongst a wide range of stakeholders, with the objective of avoiding any past mistakes and future losses.

Primrose Island: Keats and the Isle of Wight

The Keats-Shelley Review 32, 28-46. Jane Darcy

This article argues that Keats's visits to the Isle of Wight in 1817 and 1819 were key to his imaginative development. Eighteenth-century and Romantic-period travel literature reveal the island's importance as a picturesque destination rivalling the English Lakes. The medical endorsement of sea-bathing added to its popularity, while the sea itself had recently become an object of aesthetic appreciation. Keats's strong attachment to the sea is evident in 'On the Sea' and *Endymion*, which he began on the island. Keats's letters chart his changing relationship to the solitude and beauty the Isle of Wight offered him.

Vertebrate remains from the Insect Limestone (latest Eocene), Isle of Wight, UK

Earth and Environmental Science Transactions of the Royal Society of Edinburgh Jerry J. Hooker *et al*.

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