

# William Lyons of Tenby (1776–1849) and his conchology collection in the Tenby Museum & Art Gallery with recognition of type material

*William Lyons de Tenby (1776–1849) et sa collection conchyliologique au Tenby Museum & Art Gallery avec reconnaissance du matériel type*

P. GRAHAM OLIVER<sup>(1)</sup>, KATHY TALBOT<sup>(2)</sup>, BARBARA FREDRIKSSON<sup>(3)</sup>, VICTORIA TOMLINSON<sup>(4)</sup>, MARK LEWIS<sup>(5)</sup> & DOUGLAS FRASER<sup>(6)</sup>

<sup>(1)</sup>Honorary Research Fellow, National Museum of Wales, Cardiff, CF10 3NP - graham.oliver@museumwales.ac.uk

<sup>(2)</sup>Trustee, Tenby Museum and Art Gallery, Castle Hill, Tenby, SA70 7BP - info@tenbymuseum.org.uk

<sup>(3)</sup>Volunteer curator, Tenby Museum and Art Gallery, Castle Hill, Tenby, SA70 7BP - info@tenbymuseum.org.uk

<sup>(4)</sup>Volunteer curator, Tenby Museum and Art Gallery, Castle Hill, Tenby, SA70 7BP - info@tenbymuseum.org.uk

<sup>(5)</sup>Curator, Tenby Museum and Art Gallery, Castle Hill, Tenby, SA70 7BP - info@tenbymuseum.org.uk

<sup>(6)</sup>Tenby Historical Society

Citation : Oliver P.G., Talbot K., Fredriksson B., Tomlinson V., Lewis M. & Fraser D., 2020. William Lyons of Tenby (1776–1849) and his conchology collection in the Tenby Museum & Art Gallery with recognition of type material *Colligo*, 3(1). <https://perma.cc/XX>

## KEY-WORDS

historical collection

Molluscs

Tenby

type specimens

Capt. T. Brown

J.S. Miller

W. Turton

J. Alder

Col. G. Montagu

**Summary:** The William Lyons (1776-1849) conchological collection in the Tenby Museum and Art Gallery is one of the few from the early 19<sup>th</sup> century to survive intact and is the oldest natural history collection in Wales. Lyons was recognised in three eponyms, the molluscan genus *Lyonsia* and the molluscan species *Trochus lyonsii*, and the barnacle *Conia lyonsii*. His collection was extensively cited in the works of Forbes and Hanley, J.G. Jeffreys and Captain T. Brown. Lyons corresponded and received shells from his contemporaries who include Colonel G. Montagu; W. Turton; J.S. Miller; Lieutenant General R. Bingham; Reverend W. Bingley; T. Walcott; Miss Puxley; Miss Pocock and T. Rackett; brief biographies of each are given. Examples of the labels and handwriting of the collectors are illustrated. Type and possible type material is recognized for the following species: *Acanthochitona discrepans* Brown, 1827; *Turritella* (now *Aclis*) *minor* Brown, 1827; *Pyramis crystallina* Brown, 1827 (now *Hyala vitrea*); *Helix goodalli* Miller, 1822 (now *Opeas hannense*); *Helix* (now *Zenobiella*) *subrufescens* J.S. Miller, 1822; *Physa alba* Turton, 1825 (now *Physa hypnorum*); *Helix scaburgensis* Alder, 1830 (now *Spermodea lamellata*) and *Voluta catenata* Montagu, 1803 (now *Gibberula catenata* (Montagu, 1803)). A manuscript in the hand of William Lyons entitled "A list of shells found on the sea shore at Tenby and Pembrokeshire" is presented and analysed. A brief family history of William Lyons is included.

**MOTS-CLÉS**

collection historique  
 Mollusques  
 Tenby  
 spécimens types  
 Cne T. Brown  
 J.S. Miller  
 W. Turton  
 J. Alder  
 Coll. G. Montagu

**Résumé** : La collection conchyliologique de William Lyons (1776-1849) au Tenby Museum and Art Gallery est l'une des rares du début du XIX<sup>e</sup> siècle à avoir survécu intacte et est la plus ancienne collection d'histoire naturelle du pays de Galles. Lyons est reconnu dans trois éponymes, les mollusques *Lyonsia*, *Trochus lyonsii* et le balane *Conia lyonsii*. Sa collection a été largement citée dans les ouvrages de Forbes et Hanley, J.G. Jeffreys et Capt. Brown. Lyons correspondait et recevait des coquilles de ses contemporains dont le colonel G. Montagu, W. Turton, J.S. Miller, le Lieutenant-Général R. Bingham, le Révérend W. Bingley, T. Walcott, M<sup>lle</sup> Puxley, M<sup>lle</sup> Pocock et T. Rackett ; de brèves biographies de chacun sont fournies. Les différentes étiquettes et écritures des collectionneurs sont illustrées. Les types et le matériel possiblement typique sont reconnus pour les espèces suivantes : *Acanthochitona discrepans* Brown, 1827 ; *Turritella* (act. *Aclis*) *minor* Brown, 1827; *Pyramis crystallina* Brown, 1827 (act. *Hyala vitrea*) ; *Helix goodalli* Miller, 1822 (act. *Opeas hannense*) ; *Helix* (act. *Zenobiella*) *subrufescens* Miller, 1822 ; *Physa alba* Turton, 1825 (act. *Physa hypnorum*) ; *Helix scarburgensis* Alder, 1830 (act. *Spermodea lamellata*) et *Voluta catenata* Montagu, 1803 (act. *Gibberula catenata* (Montagu, 1803)). Un manuscrit de William Lyons intitulé "Une liste des coquilles trouvées au bord de la mer à Tenby et Pembrokeshire" est présentée et analysée. Une brève histoire familiale de William Lyons est incluse.

## Introduction

During the first decades of the 19<sup>th</sup> century William Lyons (1776-1849) amassed a collection of British shells, mainly from around his home town of Tenby in south-west Wales. Although he did not contribute to the scientific literature, his collection was well known to his contemporaries with whom he corresponded and exchanged shells (Dean, 1936; Kennard, 1944). A portion, containing most of the land and freshwater shells, was reviewed by Kennard (1944) in which he recognized a number of secondary collectors such as Bingham, Bingley, Bean, Goodall and Miller and two lots of paratypes. Kennard's statement (1944: 75), "It is of the greatest importance to ascertain what the pioneers meant by the names they used" still holds true today and as was exemplified in the recent review of the Montagu collection (1803-1816) in the Exeter Museum by Oliver, Morgenroth & Salvador (2018). Since the review by Kennard the Lyons collection has received little attention and the marine portion has never been revised. A preliminary review indicated that the collection was no longer accessible physically nor were the associated data available in a useable format. A project was then put in place to research the collection, bring the data up to modern standards and to place the collection in modern storage. This paper summarises

the contents of the collection, reports on specimens of taxonomic significance, on the secondary collectors and presents a brief biography of William Lyons. Also included in this paper is an assessment of a manuscript found in the Tenby Museum labelled "Shells of Tenby" not dated but in the handwriting of William Lyons. This item will be referred to as "Lyons mss" throughout this paper.

## Acquisition history

The collection was made, according to dates on the labels, between 1808 and 1831. William Lyons died in 1849 and the collection remained in the family home, at 5 Market Street, until 1878. In March 1869 in a "Proposal for a public museum" <sup>1</sup> Frederick Dyster (1800?-1893) describes "...the conchological collection of Miss Lyons as forming, if it could be transferred to this museum, a valuable nucleus for a really scientific collection..." In 1878 the Tenby Museum (**Fig. 1**) was created and was given a lease for a property on Castle Hill, overlooking St Catherine's Island. In a letter, dated 1st April 1878 <sup>2</sup>, Dr Dyster reported that it was being offered to the museum by Miss Lyons presumed to be Miss Jane Sarah Lyons (1805-1879) the eldest daughter or perhaps Sarah Alicia Lyons (1806-1885); and this was duly accepted. In 1885 conchological books belonging to Wil-

1. Proposal for a public museum in the Tenby Observer 18 March 1869.

2. Minutes of the Trustees meeting of 1st April, 1878, Tenby Museum Archive.

liam Lyons but carrying the signature of C.A. Lyons (Catherine Ann Lyons (1798-1873) were donated to the Tenby Museum by a Miss Janet Lyons<sup>3</sup> (presumed to be a grand-daughter and child of Cdr William Lyons (1797-1878), the eldest son). It is interesting to note that a condition of the bequest was that “*the original nomenclature be preserved*” something that was sadly not adhered to in the following years. There is no record of the size of the collection at that time and no register of its contents was made and no formal acquisition documentation was kept. Rather quickly it was decided to rearrange the shells and minutes of the Museum indicate that central to this was the Reverend C.M. Phelps. The Minutes indicate that the re-arrangement had begun by 1882 but in 1890 it was reported that Phelps still had museum specimens in his possession and these were returned in 1891<sup>4</sup>. Phelps died in 1907<sup>5</sup> and we have no record of him completing the re-arrangement. He made his own collection which was acquired by Y.H. Mills of Haverfordwest and subsequently donated by him to the National Museum of Wales (NMW) in 1916. One lot in that collection contained a typical pale blue Lyons mount suggesting that Phelps had confused his collection with some of Lyons. Another local conchologist, a Mr Bartlet Span, and one-time trustee of the Tenby Museum, was also enlisted<sup>6</sup> to help with the re-

arrangement. The Bartlet Span collection of some 5000 specimens was also donated to the NMW in 1915. Then in 1925 staff of the Zoology Department of the National Museum of Wales, including the conchologist J. Davy Dean, were requested to advise on the arrangement and display of the shells<sup>7</sup>. Exactly what was done is unclear but correspondence with the NMW continued through to 1976. Alarming F.G. North, then Keeper of Geology in the NMW, in 1939 suggested “*it would certainly be better to turn out some of the shells (displayed in Tenby museum) in order to accommodate fossils*”<sup>8</sup>; what actually was done is not known. Throughout this period only J. Davy Dean and A.S. Kennard emphasised the historical importance of the Lyons collection. Despite all the correspondence about re-arrangement, no-one suggested cataloguing the collection or applying basic curatorial management practices to it. In 1980 the collection was removed from display and a team of volunteers was tasked with data basing the specimens, using the collection management system Modes. The lack of conchological experience during this process did nothing to highlight the historic nature of the collection, and nor was the physical conservation improved. **Figures 2–4** show the natural history gallery as it was in 1939 and the Lyons shells can be seen arranged on wooden slats in the cases.

3. Minutes of the Trustees meeting of 4th October, 1885, Tenby Museum Archive.

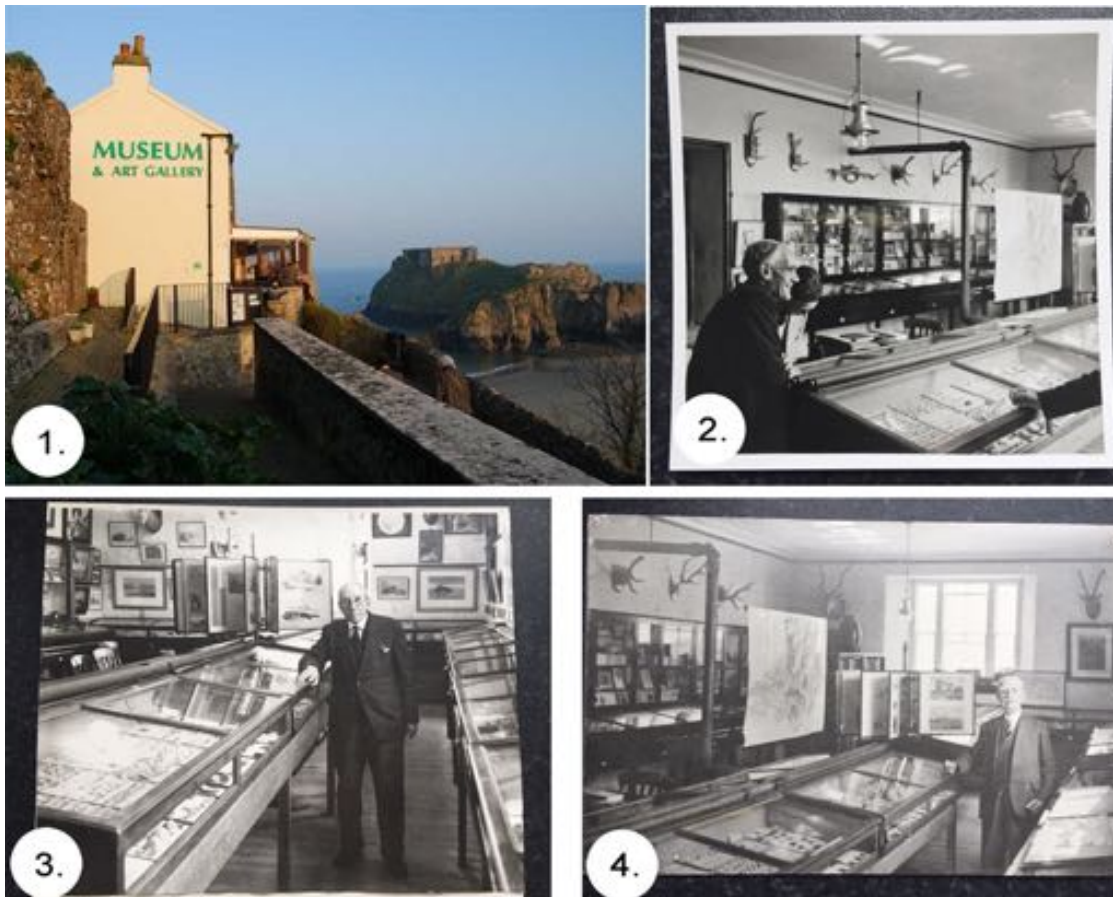
4. Minutes of the Trustees meeting of 27th April, 1882; 25th July, 1883; 6th May 1885; 27 November 1890; 25th April 1891, Tenby Museum Archive.

5. Death of Rev C.M. Phelps, The Pembroke County Guardian and Cardigan Reporter for 1st November 1907. Available on-line at the National Library of Wales- <https://newspapers.library.wales/view/4251134/4251139/45/Phelps>.

6. Minutes of the Trustees meeting of 7th October, 1890, Tenby Museum Archive.

7. Minutes of the Trustees meeting of 8th May, 1925, Tenby Museum Archive.

8. Letter from F.G. North to J.E. Arnett dated 8th March 1939 in Tenby Museum Archive.



Figs 1–4.

Fig. 1, Tenby Museum as it is today overlooking St Catherine's Island.

Figs 2–4, The natural history gallery in 1939, the Lyons shells can be seen attached to wooden slats in the display cases; 1, with Mr Phelps (treasurer); 2, with Joseph Arnett, honorary curator, retired 1939; 3, with Arthur Leach, honorary curator (1940-1955).



### Summary of the collection

Today the collection consists of 340 lots of dry molluscan shells representing 216 species. The number of lots of the main categories are given in Table 1 along with the number of species represented. The Lyons list (Lyons mss) of Tenby shells gives 245 species but the disassociation of data has been such that only about one third of the lots now carries locality data. For the majority of specimens it can only be assumed that they came from Tenby. Seventy-four lots did not come from Tenby and among these 21 came from Bear Haven, Bantry Bay in Ireland, 21 from the south coast of England, 12 from Scarborough and 15 from Somerset.

The marine shells in particular have been ex-

tensively used for exhibition and many have no direct attribution to Lyons in that they carry no original labels or mounts. Their provenance is only indicated by the addition of “Lyons coll.,” either in hand writing or as typed labels, by subsequent curators. The land and freshwater Mollusca examined by Kennard (1944) appear never to have been put on display or rearranged by Phelps. They retain the bulk of their original mounts and labels and include shells gifted to Lyons from other collectors and locations other than Tenby. It is likely that the origins of these shells outside of Tenby excluded them from the attention of Phelps and others who were focussed on displaying only shells from Tenby. The marine shells have been subjected to greater disturbance and a smaller proportion remain with their original mounts.

The original Lyons mounts among the marine shells consist of small rectangular blocks covered on their upper surfaces by coloured paper of various shades (Fig. 5). At one time these blocks were attached to wooden slats for display and these slats contained the identifications (Fig. 5). The reverse is plain and carries the locality data in Lyons' hand but no identifications (Fig. 6), these have been added at a later date by subsequent researchers or curators. Remnants of adhesive remain on the reverse sides and often obscure the data. Larger shells

	number of lots	number of species
Marine bivalves	83	64
Marine gastropods	171	85
Land & freshwater bivalves	10	5
Land and freshwater gastropods	58	54
Polyplacophora	8	6
Scaphopoda	2	1
Cephalopoda	1	1
Mixed	7	

Table 1. Higher taxon summary of the current Lyons Collection in Tenby Museum.



Fig. 5. A reconstructed slat with Lyons block mounts in place.



Fig. 6. Reverse of Lyons blocks showing locality and dates in Lyons hand writing, Identifications and museum numbers added later.



Fig. 7. Wooden display slats with Lyons shells fixed directly.

were completely removed from their original mounts and fixed directly onto wooden slats (Fig. 7). Their provenance may be a printed label or hand-written stating “Lyons Collection” on the front of the slat or this information may be written on the reverse.

Much of the material examined by Kennard (1944) was gifted to Lyons by his contemporaries and some retain the label styles of these collectors or have been remounted by Lyons himself.

These appear not to have been on display and these will be considered separately under each secondary collector.

## Eponyms

**Lyonsia** W. Turton, 1822 (Bivalvia, Pandoroidea) (Fig. 8). Type species *Mya striata* Montagu, 1816.

Turton (1822: 34) wrote “We have dedicated it to our worthy correspondent, Mr Lyons of Tenby, who first presented it to the notice of the British naturalist.”

The type species was described by Montagu (1816: 188) who also acknowledged Lyons by

writing. “This new and interesting species, it appears, was discovered by Mr Lyons in Tenby-bay on the south coast of Wales, from whence specimens were sent to Mr Norris who obligingly favoured me with that form from which the above description is taken; and I have been reassured by the Rev Mr Bingley that several more have been taken recently by the same gentleman after a storm, which were all alive.” For Norris see Appendix 3 and the Rev Mr Bingley is dealt with below.



Fig. 8. *Lyonsia* shells in Lyons Coll. Tenby.  
TENBM 1983.4740 (32 mm).

**Lyonsiella** G.O. Sars, 1872.

This name is not directly linked to William Lyons but is simply a diminutive of *Lyonsia*.

**Trochus lyonsii** Fleming, 1828 (Fig. 9)

The name *Trochus lyonsii* has a varied attribution but nowhere was it formally described always being referred to as a white variety of *Trochus zizyphinum* first noticed by Leach. The name first appears in Leach's manuscript of his *Molluscorum Britanniae Synopsis* of 1816. Gray (1847) argued that Leach's names should be validated with the date 1818 but this was never accepted and Sherborn (1932) gave the date as 1847, which is the date of Gray's paper. MolluscaBase attributes the name to Leach in Gray, 1852 but this name does not appear in that publication. The name appears in McAndrew & Forbes (1847) and is referred to as *Calliostoma zizyphinum* var. *lyonsii* in Forbes & Hanley, 1850 [1853]. However Fleming (1828: 323) mentions Leach's white variety of *Trochus zizyphinum* as *T. lyonsii* Leach and we argue that this predates all other publications and therefore Fleming takes priority.



Fig. 9. *Calliostoma zizyphinum* var. *lyonsii* in Lyons Coll. Tenby. TENBM 1983.4536 (17 mm).

**Conia lyonsii** G. B.Sowerby I, 1823 (Fig. 10)

Lyons included barnacles, worm tubes and larger foraminifera in his list but only mollusc shells are present in his extant collection. This species is cited in Lyons mss and was collected

from the hull of a ship in Tenby and presumably sent to W.E. Leach for identification. It is now regarded as a junior synonym of the Ca-

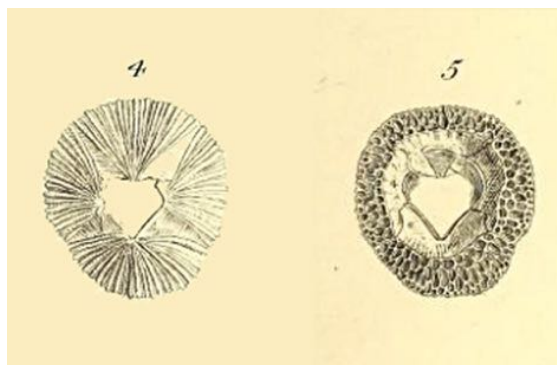


Fig. 10. *Conia lyonsii* reproduced from original figure of G.B. Sowerby I, 1823.

ribbean *Newmanella radiata* (Bruguière, 1789).

The previous two eponyms were originally given by W.E. Leach (Harrison & Smith, 2008) who during the period of 1815-1822 was the Keeper of Zoology in the Natural History Museum, London. Leach left his position following a nervous breakdown in 1822 and we have no direct archival evidence of correspondence between the two men. Neither publication mention William Lyons directly but Leach mss (in library of NMW) does cite material first collected by Lyons.

**The marine molluscs not examined by Kennard (1944)**

An indication of the value of the Lyons collection to his contemporaries can be gleaned from the citations in some standard works of the era, primarily Forbes & Hanley (1848-1853) (Table 2) and Jeffreys (1862-1869) (Table 3). Lyons is cited 32 times in Forbes and Hanley and 18 times in Jeffreys. Both authors describe visiting the Lyons collection; (Forbes & Hanley, vol. 1: 214) and (John Gwyn Jeffreys, vol. 4: 104). Lyons is also cited in Turton, 1822 and in Brown, 1827.

Table 2. List of citations of Lyons in Forbes & Hanley (1848-1853). 1ere partie.

Volume	Page	Citation	Name in citation	Current name	Museum number
Vol. 1	p. 167	"Tenby (Lyons)"	<i>Mya truncata</i>	<i>Mya truncata</i>	83/4736
Vol. 1	p. 214	"having examined Mr Lyons's own specimens"	<i>Lyonsia norvegica</i>	<i>Lyonsia norvegica</i>	83/4740
Vol. 1	p. 234	"by Mr Lyons at Tenby"	<i>Thracia distorta</i>	<i>Thracia distorta</i>	83/4735
Vol. 1	p. 273	"Tenby (Lyons), near Milford Haven (Lyons)"	<i>Psammobia vespertina</i>	<i>Gari depressa</i>	83/4719



Volume	Page	Citation	Name in citation	Current name	Museum number
Vol. 1	p. 276	"Tenby (Lyons)"	<i>Psammobia fervensis</i>	<i>Gari fervensis</i>	83/4720
Vol. 1	p. 286	"sandy beach about two miles from Tenby (Lyons)"	<i>Tellina fragilis</i>	<i>Gastrana fragilis</i>	83/4702
Vol. 1	p. 289	"Tenby (Lyons)"	<i>Tellina crassa</i>	<i>Arcopagia crassa</i>	83/4706
Vol. 1	p. 294	"Tenby (Lyons)"	<i>Tellina donacina</i>	<i>Moerella donacina</i>	83/4708
Vol. 1	p. 299	"Tenby (Lyons + SH)"	<i>Tellina incarnata</i>	<i>Bosemprella incarnata</i>	83/4709
Vol. 1	p. 376	"Fishguard and Caldy Island in Pembrokeshire (Lyons)"	<i>Lutraria oblonga</i>	<i>Lutraria oblonga</i>	missing
Vol. 1	p. 382	"Caldy Island near Tenby (Lyons)"	<i>Tapes perforans</i>	<i>Venerupis corrugata</i>	83/4602
Vol. 1	p. 391	"Tenby (Lyons)"	<i>Tapes virginea</i>	<i>Polittapes rhomboides</i>	83/4705
Vol. 1	p. 394	"Tenby (Lyons)"	<i>Tapes aurea</i>	<i>Polittapes aureus</i>	83/4706
Vol. 2	p. 32	"Tenby (Lyons)"	<i>Cardium pygmaeum</i>	<i>Parvicardium exiguum</i>	missing
Vol. 2	p. 68	"Tenby (Lyons)"	<i>Diplodonta rotundata</i>	<i>Diplodonta rotundata</i>	missing
Vol. 2	p. 76	"Tenby (Lyons + SH)"	<i>Montacuta bidentata</i>	<i>Kurtiella bidentata</i>	missing
Vol. 2	p. 80	"to the west of Manorbeer, in Pembrokeshire (Lyons)"	<i>Montacuta substriata</i>	<i>Montacuta substriata</i>	missing
Vol. 2	p. 83	"Tenby (Lyons)"	<i>Turtonia minuta</i>	<i>Turtonia minuta</i>	missing
Vol. 2	p. 93	"Mr Lyons (of Tenby) acquired his specimens from the coral-sand of Bantry Bay"	<i>Kellia nitida</i>	<i>Hemilepton nitidum</i>	missing
Vol. 2	p. 241	"Tenby and Milford Haven (Lyons)"	<i>Arca lactea</i>	<i>Striarca lactea</i>	missing
Vol. 2	p. 258	"Milford Haven (Lyons)"	<i>Pinna pectinata</i>	<i>Atrina pectinata</i>	missing
Vol. 2	p. 397	"Found at Tenby, by Mr Lyons, according to Brown"	<i>Chiton discrepans</i>	<i>Acanthochitona discrepans</i>	83/4588
Vol. 2	p. 534	"Tenby (Lyons)"	<i>Trochus helycinus</i>	<i>Margaritus helycinus</i>	missing
Vol. 3	p. 75	"Tenby (Lyons)"	<i>Rissoa striatula</i>	<i>Alvania carinata</i>	83/4559
Vol. 3	p. 122	"Tenby (Lyons)"	<i>Rissoa rubra</i>	<i>Barleeia unifasciata</i>	missing
Vol. 3	p. 129	"Tenby (Lyons)"	<i>Rissoa fulgida</i>	<i>Eatonina fulgida</i>	missing
Vol. 3	p. 140	"Laugharne (Lyons)"	<i>Rissoa ventrosa</i>	<i>Ecrobia ventrosa</i>	missing
Vol. 3	p. 220	"we are indebted to the late Mr Lyons of Tenby for the gift of some examples of this remarkable species"	<i>Aclis supranitida</i>	<i>Aclis minor</i>	83/4325-6
Vol. 3	p. 357	"Tenby (Lyons)"	<i>Lamellaria perspicua</i>	<i>Lamellaria perspicua</i>	83/4454
Vol. 3	p. 561	"Milford Haven (Lyons)"	<i>Pleurobranchus plumula</i>	<i>Berthella plumula</i>	missing
Vol. 4	p. 271	"as found at Tenby by Mr Lyons"	<i>Turritella minor</i>	<i>Aclis minor</i>	83/4324
Vol. 4	p. 469	"Tenby (Lyons)"	<i>Astarte triangularis</i>	<i>Goodallia triangularis</i>	missing

**Table 2.** List of citations of Lyons in Forbes & Hanley (1848-1853). 2eme partie.

ZOOLOGIE

Volume	Page	citation	name in citation	current name	museum number
Vol. 2	p. 195	"found by Lyons and Hanley at Tenby"	<i>Lepton squamosum</i>	<i>Lepton squamosum</i>	missing
Vol. 2	p. 255	"by Lyons at Tenby"	<i>Diplodonta rotundata</i>	<i>Diplodonta rotundata</i>	missing
Vol. 2	p. 333	"Mr Lyons told me that he had found it at Milford Haven"	<i>Venus chione</i>	<i>Callista chione</i>	83/4614
Vol. 2	p. 350	"Tenby (Lyons)"	<i>Tapes aureus</i>	<i>Politiitapes aureus</i>	83/4706
Vol. 2	p. 368	"near Tenby (Lyons)"	<i>Gastrana fragilis</i>	<i>Gastrana fragilis</i>	83/4702
Vol. 2	p. 431	"it is said that the late Mr Lyons found it in Pembrokeshire"	<i>Lutraria oblonga</i>	<i>Lutraria oblonga</i>	missing
Vol. 3	p. 28	"named after the late Mr W. Lyons, an active British conchologist"	<i>Lyonsia norvegica</i>	<i>Lyonsia norvegica</i>	83/4740
Vol. 4	p. 6	"Tenby (Lyons)"	<i>Rissoa striatula</i>	<i>Alvania carinata</i>	83/4559
Vol. 4	p. 44	"Mr Lyons noticed it at Tenby"	<i>Rissoa fulgida</i>	<i>Eatonina fulgida</i>	missing
Vol. 4	p.57	"Tenby (Lyons)"	<i>Barleeia rubra</i>	<i>Barleeia unifasciata</i>	missing
Vol. 4	p. 95	"Tenby (Lyons)"	<i>Scalaria trevelayana</i>	<i>Epitonium trevelayana</i>	missing
Vol. 4	p. 104	"Tenby (Lyons and J.G.J)" "This shell the type of which I examined in the collection of the late Mr Lyons, Tenby"	<i>Aclis supranitida</i>	<i>Aclis minor</i>	83/4325-6
Vol. 4	p. 161	"Tenby (Lyons)"	<i>Odostomia scalaris</i>	<i>Brachystomia scalaris</i>	83/4304
Vol. 4	p. 163	"Tenby (Lyons)"	<i>Odostomia rufa</i>	<i>Pyrgiscus crenata</i>	83/4350-1
Vol. 4	p. 232	"Dover (Lyons fide Montagu)"	<i>Aedorbus subcarinatus</i>	<i>Aedorbus subcarinatus</i>	missing
Vol. 4	p. 317	"Tenby (Lyons)"	<i>Trophon muricatus</i>	<i>Trophonopsis muricatus</i>	83/4444
Vol. 4	p. 320	"Tenby (Lyons)"	<i>Trophon truncatus</i>	<i>Boreotrophon truncatus</i>	83/4445
Vol. 4	p. 448	"Tenby (Lyons)"	<i>Philine scabra</i>	<i>Philine scabra</i>	missing

Table 3. List of citations of Lyons in Jeffreys (1862-1869).

The collection was visited by two persons who gave identifications by writing these on the reverse of the wooden blocks (Fig. 11). These identifications are often partly obscured by glue and were thus made before the collection was attached to the wooden slats as seen in the display cases and in Figure 5. The identifications written in a primitive style in pencil (top

row) are by a person unknown to us but the handwriting on the bottom row is that of J.T. Marshall (1842-1922). Marshall (1893-1912) compiled a series of papers entitled "Additions to British Conchology" and one suspects that he was using the Lyons collection to verify records. We have no direct evidence from Tenby Museum archives of his visit.



Fig. 11. Lyons blocks. Top row annotated with identifications in pencil in an unknown hand. Lower row annotated with identifications in the hand of J.T. Marshall.



**Capt. T. Brown**

Thomas Brown (1785-1862) was a Scottish naturalist and conchologist. He is best remembered for his *Illustrations of British Conchology* (1827 and reprinted and expanded in 1844) in which he introduced many new genera and species, very few of which gained acceptance. He became curator of the Manchester Museum in 1840 but very little of his shell collection has been recognised (Jackson, 1944; McGhie, 2008).

Brown is not mentioned in the labels of the Lyons collection but Brown does refer to shells in Lyons collection and having examined some, from which he described new species. For one species a lectotype has been chosen (Kaas, 1985) but for others, type material has not been located although the species are represented in the collection. In Brown (1827, 1844) he refers to Lyons as George Lyons of Tenby, but this must be an error as there was no George Lyons living in Tenby at that time and none with a collection of shells from Tenby.

*Chiton discrepans* Brown, 1827  
now *Acanthochitona discrepans* (Brown, 1827)  
(Fig. 12)

**Lectotype designation:** Kaas (1985: 598–602).

**Type material:** 7 shells as *Chiton discrepans* formerly attached to a wooden slat but no original labelling. TENBM 1983.4588, det. Anon. Lectotype and 6 paralectotypes as illustrated by Kaas (1985). Kaas's figure numbers are linked to catalogue numbers as follows: fig. 62 (lectotype) is #4588/1; fig. 61 is #4588/2; fig. 60 is #4588/3; fig. 59 is #4588/4; fig. 65 is #4588/5; fig. 66 is #4588/6; fig. 67 is #4588/7. The undersides of these shells have remnants of the typical duck-egg blue card used by Lyons.

**Type locality:** Tenby, Pembrokeshire, Wales, U.K.

**Type references:** As *Chiton discrepans* Brown, 1827, pl. 35, fig. 20. As *Chiton discrepans* Brown, 1827, In Brown T. 1844: 65, pl. 21, fig. 20.



Fig. 12. Type series of *Chiton discrepans* Brown 1827, TENBM: 1983.4588/1–7, with the figure numbers from Kaas, 1985, no 62 is Lectotype, 21.0 mm. Insert: a copy of the original illustration in Brown, 1827.

**1827 Description**

Several specimens of this new shell, as a British species, were sent to me by George Lyons, Esq. of Tenby Wales as the *C. fascicularis*, which shell, it would appear, is not known on that coast.

**1844 Description**

Shell much elongated, narrow, acutely carinated; valves shield-shaped, and acutely pointed beneath; along the centre of the valves is a lance-shaped elevation, which is striated longitudinally; valves covered with strong, round, elevated regularly set papillae, except at the edges, which are plain; at the junction of each valve is a tuft of strong, straight, stiff bristles; whole margin beset with rather distant, very minute, grey hairs; valves generally of an orange-yellow; margin deep umber-brown. This species differs from the preceding in being much more carinated, in the valves being a third narrower, in the fasciculi of bristles being shorter and more stunted, in the papillae being round instead of oval, and the whole shells being narrower in proportion to its length. Several specimens of this shell, new to the British Conchologist, were sent to me from George Lyons, Esq. of Tenby, Wales,

where it is common and where it was mistaken for the *C. fascicularis*.

*Turritella minor* Brown, 1827 now  
*Aclis minor* (Brown, 1827) (Fig. 13)

**Type material:** Syntypes: 4 shells as *Aclis supranitida* S.V. Wood, 1842 Found in sand from the South Sands, 1808. TENB 1983.4325, det. J.T. Marshall.

**Type locality:** South Sands, Tenby, Pembrokeshire, Wales, UK approx. 51.66°N 4.71°W

**Type references:** As *Turritella minor* Brown, 1827: pl. 51, figs 57, 58. As *Turritella minor* Brown In Brown T. 1844: 9, pl. 8, figs 57, 58.

**1827 Description**

*Turritella minor* – A new species. Found at Tenby by George Lyons Esq – In his cabinet

**1844 Description**

Shell acute; with fifteen well defined, rounded, somewhat short volutions, tapering to a sharp point, covered with very fine, regular, spiral striae; aperture subrotund; outer lip thin. Length three-eighths of an inch, breadth not an inch. Found on the coast of Tenby, Wales, by George Lyons, Esq., Tenby and in his cabinet.



Fig. 13. *Aclis minor* (Brown, 1827). (a) Original figures nos 57 and 58 from Brown, 1827. (b) Reverse of Lyons block with type locality, *Aclis supranitida* det. by J.T. Marshall. (c) Syntype series of *Turritella minor* Brown, 1827, TENBM 1983.4326/1-4.

No formal description was given in 1827, only illustrations. A brief description was given in 1844 but was not regarded as sufficient by Forbes and Hanley (1853: 271) to distinguish it. They correctly point out the error in Brown's dimensions. *Aclis minor* is included in Forbes and Hanley (1850) but under *Aclis supranitida* SV Wood where they acknowledge a gift of this species from Lyons. If these shells exist they may be regarded as part of the syntype series.

*Pyramis crystallinus* Brown, 1827 now  
*Hyala vitrea* (Montagu, 1803) (Fig. 14)

**Type material:** Possible syntypes, 8 shells attached to a brick-red wooden block. "Found on the South Sands, June 1809" in Lyons hand. TENBM 1983.4329/1-5. As *Rissoa vitrea* det. Anon. 4 separated off as 1983.4329/1-4, 4 damaged shells attached to wood block as 1983.4329/5.

**Type locality:** South Sands, Tenby, Pembrokeshire, Wales, UK approx. 51.66°N 4.71°W

**Type references:** As *Pyramis crystallinus* Brown, T. (1827: pl. 50, fig. 76). As *Pyramis crystallinus* In Brown T. 1844: 13, pl. 9 fig. 76.

This taxon is absent from modern databases but was considered to be a junior synonym of *Rissoa vitrea* (now *Hyala vitrea*) by both

Forbes and Hanley (1853) and Jeffreys (1867). No specimens labelled as *Pyramis crystallinus* or *crystallinus* are present but shells of *Hyala vitrea* are, under TENBM 1983.4329.

**1827 Description**

A new species. Found by George Lyons Esq. - In his cabinet.

**1844 Description**

Shell blueish white, with 5 glossy, very smooth, somewhat ventricose volutions; ending in a rather obtuse apex; body more than one and a half the length of the spire, and a little cylindrical; aperture nearly orbicular; outer lip thin, smooth; pillar lip very slightly reflected on the columella. Length an eighth of an inch; breadth not half its length. Found at Tenby, by George Lyons, Esq., and in his Cabinet.

*Myatella montagui* Brown, 1844

Brown (1844) introduced the generic names *Magdala* and *Myatella* and the new species *Myatella montagui* but all are compounded around Montagu's *Mya striata* and *Lyonsia* of Turton. *Myatella montagui* is credited to shells discovered in Tenby by Lyons but it is clear that these are the same shells described by Montagu as *Mya striata*. All the names here have been placed into the synonymy of *Lyonsia norvegica* in MolluscaBase (2020).



Fig. 14. *Pyramis crystallina* Brown 1827 now *Hyala vitrea*, (a) 4 potential syntypes TENBM 1983.4329/1-4. (b, c) 8 potential syntypes as originally attached to wood block with locality data on reverse, TENBM 1983.4329/5 (d) original illustration from Brown, 1827.



**Col. G. Montagu**

We already know that Lyons was acquainted with Col. George Montagu through the description of *Mya (Lyonsia) striata*. From annotations on the Lyons blocks (Fig. 15) we also know that Lyons received shells from Montagu and that Montagu identified shells for Lyons. The Lyons collection contains other shells that may have come from Montagu and may have some taxonomic significance. It is however unfortunate that the disassociation of data from the shells within the Lyons collection has left this a matter of conjecture.

*Voluta catenata* Montagu, 1803 now  
*Gibberula catenata* (Montagu, 1803) (Fig. 16)

**Type material:** Possible syntypes: 3 shells

as *Gibberula miliaris*. TENB 1983.4515, det. Anon.

**Type locality:** Cornwall (as given in Montagu, 1803)

**Type references:** As *Voluta catenata* Montagu, 1803: 236, pl. 6, figs 2. Montagu described this species believing that his shells came from Cornwall (Oliver *et al.*, 2017: 377). This is a Caribbean species and is one of the numerous erroneous additions made by Montagu to the British fauna (Oliver & Morgenroth, 2018). Three shells agreeing entirely with those described by Montagu are present in the Lyons collection and one cannot but surmise that these came from Montagu. As no type material was found in Exeter or London (Oliver *et al.*, 2017) we suggest that the shells in the Lyons collection are possible syntypes and are treated here as such.

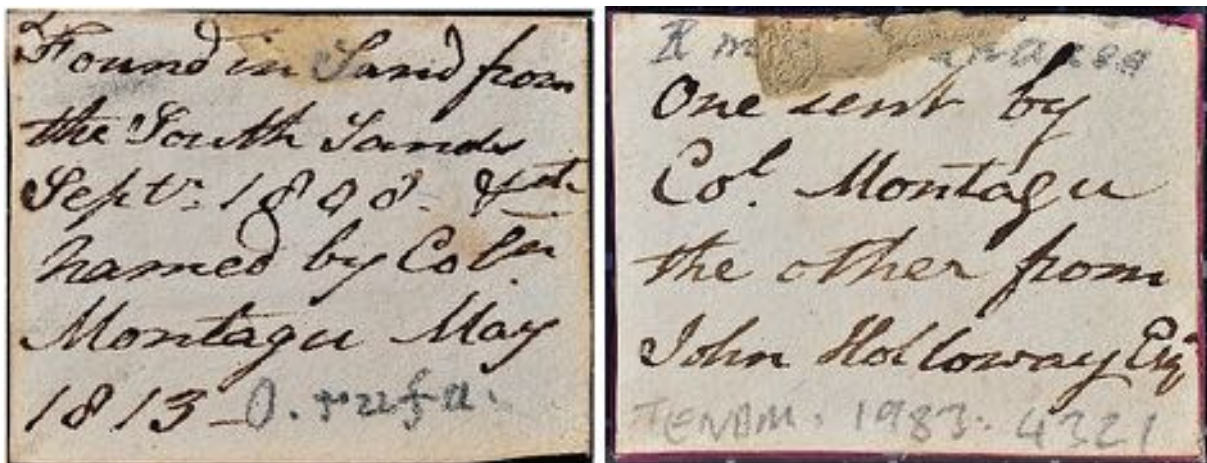


Fig. 15. Reverse of Lyons mounts indicating provenance of Col. George Montagu. TENBM 1983.4321 and TENBM 1983.4351.

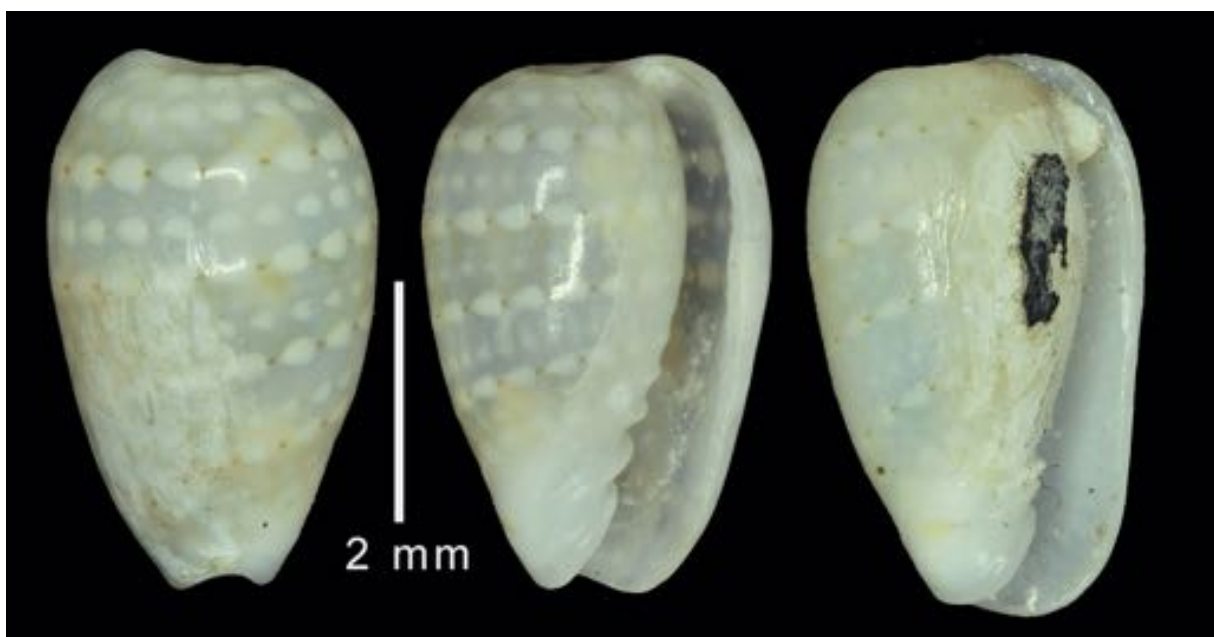


Fig. 16. *Gibberula catenata* (Montagu) from the Lyons collection. TENBM.1983.4515.

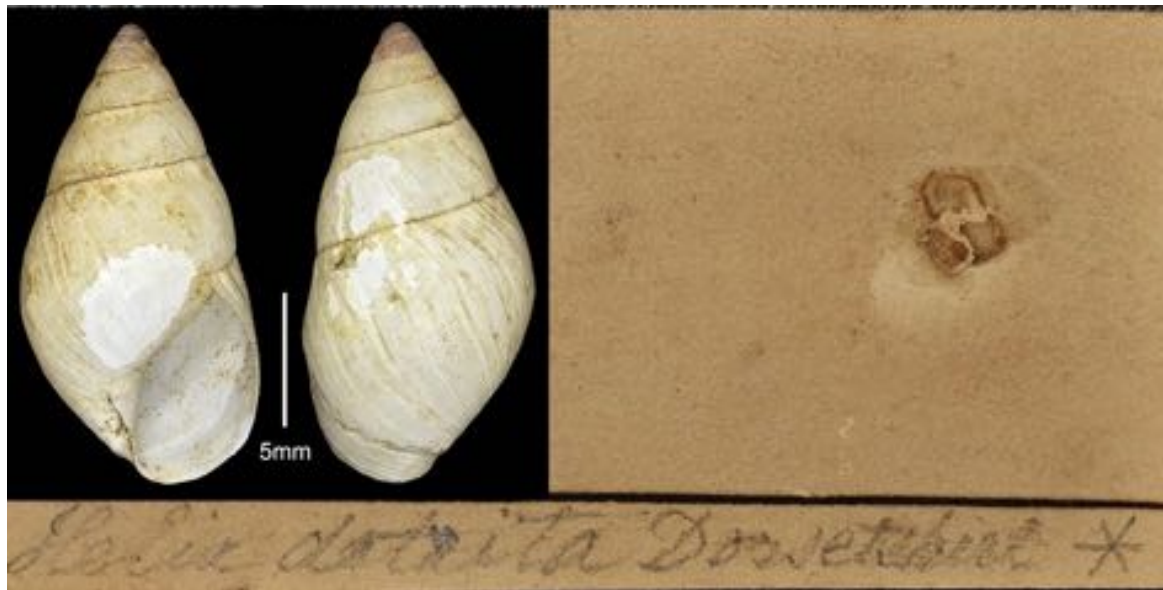


Fig. 17. *Helix detrita* Montagu from Dorsetshire in the Lyons collection. TENBM. 2001.192.2.

*Helix detrita* Montagu, 1803 now *Drymaeus elongatus* (Röding, 1798) TENBM 2001.192.02 (Fig. 17).

This is another neotropical shell described by Montagu as British (Oliver *et al.*, 2017) and was given to Montagu by Mr Bryer who found it at Weymouth and Dorchester. The two shells in the Lyons collection match exactly and are labelled as coming from Dorsetshire, it seems plausible that Lyons's shells are part of the same lot seen by Montagu but from whom Lyons got them is not known. Dorsetshire localities in Montagu (1803; 1808) are frequently linked to a Mr Bryer and to a lesser extent a Miss Pocock who is more fully acknowledged by Donovan (1802: pl. 125).

#### Miss Elizabeth Pocock

Donovan (1802) says of Miss Pocock when describing *Maetra glauca* “the conchologist is

indebted to Miss Pocock for the discovery of it on our shore. The attention with which this lady has honoured the science has not been rewarded by this new species only: we have been favoured with several others, besides many rare kinds that have been found by her on different parts of the sea-coast.”

A Miss Elizabeth Pocock is mentioned in J. Sowerby (1812: 14; 1818: 22) as donating shells from Marazion in Cornwall and therefore probably the same person. Turk (1979) suggested that this Miss Pocock may have been part of the family of Nicholas Pocock (artist, b. 1741) and brother of Nicholas Pocock (marine captain out of Cornwall from 1804-1811), but this is supposition. Unfortunately, we have been unable to find any confirmatory biographical data for this lady but record here that she also sent shells to Lyons (Fig. 18), lots #2017.08, #1983.4741 and #2001.129.04.



Fig. 18. *Turbo truncatus* Montagu collected by Miss Pocock from the “repectamenta of the River Itchin at Southampton”.



### Bear Haven and the Puxleys

There are 21 lots present bearing the locality “Bear Haven” a location in Bantry Bay, SW Ireland. There is a single label linking their provenance to a Miss Puxley (Fig. 19). However, Lieut.-General Bingham is also implicated as Leach in Gray (1852) notes that a J.L. Puxley sent a shell to Gen. Bingham that Leach subsequently described as *Buccinum puxleianum* (now *Buccinum humphreysianum* Bennett, 1824). Brown (1827, 1844) describes his *Brochus arcuatus* as “Found in sand, at Bear Haven --- by General Bingham, in his cabinet”.

As Lyons received shells from Bingham, both Bingham and Puxley are possible sources. A Mrs Puxley is cited five times by Forbes & Hanley (1853) and four times by Jeffreys (1862-68). The JL Puxley mentioned by Leach in Gray (1852) can be traced to a John Lavellin Puxley formerly of Cork and listed as a landowner in the parish of Bear Haven. He and his family subsequently appear in the 1841 census of Laugharne (Pembrokeshire) and again in 1851 now in Tenby. In this last census they have a visitor, one Jane Lyons (1805-1879) eldest daughter of William Lyons. This is the daughter who donated some of the conchological books belonging to William Lyons to Tenby Museum in 1885.

Bantry Bay is a frequent locality in shell collections probably because of the diverse species to be found in the coral (maerl) sands. The locality appears in the biological literature first in 1809 (Lyne, 1983) when Lewis Weston Dillwyn, William Elford Leach and Joseph Woods make a collecting trip and visit the famous Irish Botanist Ellen Hutchins at her home in Ballylickey, Bantry Bay. (Harrison & Smith, 2008). Although most well known as a botanist Ellen Hutchins also collected shells and Leach named *Persiphona hutchinsiana* [now *Alvania*

*cimex* (L. 1758)] for her after a shell she sent to him (Harrison and Smith, 2008; 99). William Turton and his daughter acknowledge the hospitality of the 1st Earl and Countess of Bantry (Viscount Beerhaven) at their “noble house” Bantry House and note some shells collected there (Turton, 1819: 260).

### The non-marine molluscs examined by Kennard (1944)

#### J.S. Miller

J.S. Miller (?-1830) was Curator of the museum in Bristol during the early part of the 19th century. He was primarily interested in palaeontology, particularly crinoids. He wrote a single paper (Miller, 1822) on the land and freshwater molluscs of the Bristol district. In this paper he describes *Turbo everetti*, *Helix allaria*, *Helix subrufescens* and *Helix goodalli*. The presence of trade cards in the Lyons collection suggests that Miller was a serious collector and probably had a formal arrangement for exchanging shells. A biography of Miller can be found in the *Philosophical Magazine* (Anonymous, 1831).

Kennard (1944) attributed 8 lots to JS Miller the most important taxonomically being two lots attributable to new species described by Miller. Their significance was noted by Kennard (1944) who suggested they may represent paratypes but the loss of the Miller collection in Bristol due to bombing of the museum during the Second World War raises their status to syntype.

*Helix goodalli* J.S. Miller, 1822, now *Opeas hannense* (Rang, 1831).

**Type locality:** The pineries at Bristol (Fig. 20a).

**Type material:** Possible syntypes, 4 shells, Found in the pineries at Bristol. Leg. J.S. Miller. As *Cochlicella clavulus*. TENBM 2001.129.12

**Type locality:** Pineries (pineapple cultivation beds) Bristol, England.

**Type reference:** Miller, J.S. 1822: 381 not figured.

These shells are from the type locality as given by Miller (1822) and with the absence of type material in the Bristol Museum can be regarded as possible syntypes. The pineries mentioned were beds for raising pineapples and were kept at a raised temperature ideally suited for this hot-house alien. There are currently only 12 recorded occurrences of this species in the UK (NBN Gateway, 2019) but is fairly common as a hothouse alien (pers.



Fig. 19. *Spirula peronii* from Miss Puxley collected at Bear Haven, Bantry Bay, TENBM 2017.06.





Fig. 20. (a) syntype of *Helix goodalli* J.S. Miller, 1822 with label in the Lyons collection, TENBM.2001.129.12.  
(b) second lot of *Helix goodalli* as *Helix cochlicella*, TENBM.2001.129.42.

comm. Ben Rowson).

A second lot that Kennard (1944) also attributed to J.S. Miller is present but carries no locality data and is not considered as type material. 4 shells, No locality. As *Helix cochlicella*. Leg. J.S. Miller. TENBM.2001.129.42 (Fig. 20b).

#### Original description

A subperforated, turreted, pellucid, pale corneous, or almost white shell, having six to seven volutions, and an ovate aperture.

*Helix subrufescens* J.S. Miller, 1822,  
now *Zenobiella subrufescens* (J.S. Miller, 1822)  
(Fig. 21).

**Type material:** Possible syntypes, 2 fragmentary shells, No locality, As *Helix subrufescens*. Leg. J.S. Miller. TENBM.2001.129.44

**Type locality:** Environs of Bristol

**Type reference:** In. Miller, J.S. 1822: 379 not figured.

#### Original description

A subumbilicated, very slightly carinated, irregularly striated, slightly raised, diaphanous shells, with five volutions, and a somewhat round lunated aperture.

Kennard (1944) believed that these shells came from J.S. Miller and were therefore paratypes and that he knew of no specimens of this species in the Alder collection in Newcastle.



Fig. 21. Syntypes of *Helix subrufescens* J.S. Miller, 1822. TENBM.2001.129.44.

Given that the Miller collection in Bristol has been lost we feel justified in suggesting that these shells can be considered as possible syntypes even though there is no locality data with them.

#### J.S. Miller Trade Cards

The trade cards (Fig. 22) give Miller's private address suggesting that his conchology was not part of his museum duties and that perhaps he ran a shell dealership from his home.

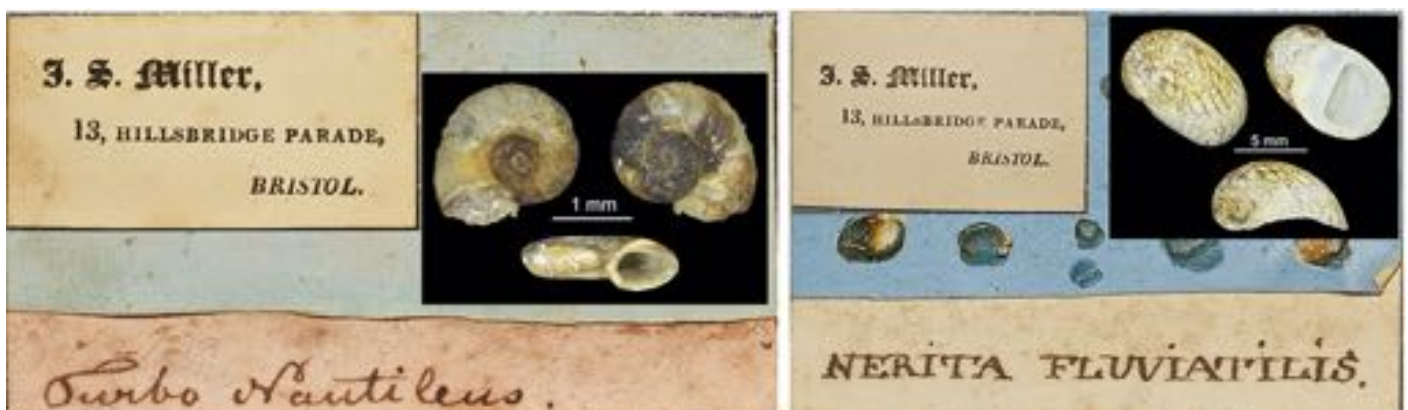


Fig 22. Trade cards of J.S. Miller in the Lyons Collection. Right, TENBM: 2001:129:40, *Theodoxus fluviatilis*;  
Left, TENBM: 2001:129:39, *Gyraulus crista*. Reverse of card in left corner, shells cleaned and detached from card.

### W. Bean

William Bean II (1787-1866) of Scarborough is well known for the extensive collections that he amassed and his generous nature through the exchange of specimens (McMillan & Greenwood, 1972). Kennard (1944) recognised 10 lots in the Lyons collection all attached to the distinctive mounts of Bean's collection. Of these one may have some taxonomic significance.

#### *Helix scarburgensis* Alder, 1830 now *Spermodea lamellata* (Jeffreys, 1830) (Fig. 23)

**Type material:** Possible syntypes. 3 shells and 1 fragment. No Locality. Leg. W. Bean. TENBM. 2001.129.37.

**Type locality:** Scarborough, Yorkshire, England.

**Type references:** Alder, J. 1830: 36. As *Acanthinula lamellata* Jeffreys, 1830: 333.

*Helix scarburgensis* is a manuscript name by William Bean of Scarborough. Bean distributed such specimens to other collectors including J.S. Miller of Bristol and J. Alder of Newcastle. The shells in the Lyons collection were attached to a typical Bean mount carrying his very distinctive writing style. Alder (1830) on the basis of Bean's material published his *Helix scarburgensis* but almost simultaneously Jeffreys described his *Acanthinula lamellata* (Jeffreys, 1830) on Bean material given to him by J.S. Miller. Authentic material from Bean can be regarded as potential type material and it is noted here that Jeffreys's types of *S. lamellata* are not itemised in the Jeffreys collection in the United States National Museum (USNM) and no material of Alder's *H. scarburgensis* has been found in Newcastle. The shells in the Lyons collection have the

same provenance of both Alder's and Jeffreys' taxa and could act as potential type material. It is also known that Lyons's shells were sent to Bean. Oliver (2015) reported on shells of the alien bivalve *Mytilopsis leucophaeata* labelled "Lyons, Tenby" on a Bean label in the Doncaster Museum collection.

### W. Turton

William Turton (1762- 1835) was as a physician and worked in Swansea for 15 years, moving to Dublin, Teignmouth, Torquay and finally settling in Bideford in 1831. He was a contemporary of Col. G. Montagu, Forbes and Jeffreys and wrote a number of seminal works, notably his *Conchylia Insularum Britannicarum* (published in 1822). Turton's collection came into the possession of Jeffreys and is now incorporated with the latter in the USNM. The genus *Turtonia* was dedicated to Dr Turton by Alder, 1848.

#### *Physa alba* Turton, 1826 now *Physa fontinalis* Linnaeus, 1758.

**Type material:** Possible syntypes as Fragments. Formerly attached to a beige card marked in pencil with "111. Physa alba". TENBM 2001.129.05. (Fig. 24).

**Type locality:** Towyn, North Wales, UK.  
**Type reference:** Turton W. 1826: 363, pl. 13, fig. 3.

#### Type description

*Testa sinistrorsa, ovata, ventricosa, albo-cornea, pellucida; anfractibus quatuor, tumidis, exsertis: apertura ovata.*

Shell sinistral, oval, ventricose, white horn-colour, transparent: volutions four, tumid and produced. Length four tenths of an inch; breadth about three tenths.



Fig. 23. Possible syntype of *Helix scarburgensis* Alder and *Acanthinula lamellata* Jeffreys. TENBM.2001.129.37. Card mount ex W. Bean, his hand writing.

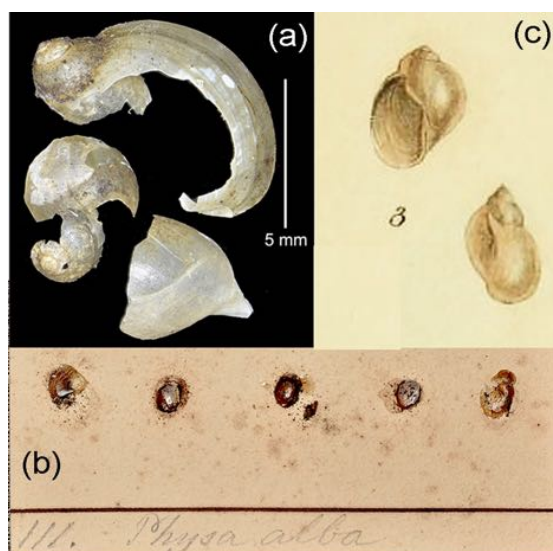


Fig. 24. Possible syntypes of *Physa alba* Turton, 1826. (a) remaining fragments in Lyons Coll. TENBM 2001.129.05. (b) Lyons's mounting card. (c) reproduction of original figure from Turton, 1826 (enlarged).



We know from the literature that William Turton corresponded with Lyons but there seems to have been very little exchanging of specimens. Kennard (1944) considered one lot to have come from Turton because of the reference to “111” on Lyons' card which is a direct reference to Turton's Manual of 1831. If so Kennard considered these to be paratypes of *Physa alba* Turton and considered that they match the original figures. On the Smithsonian catalogue we could find no reference to this species in its original name or current name of *Physa fontinalis* with the type locality of Towyn, Wales. If Kennard is correct then these shells could act as syntypes but they are now in fragments and scarcely recognisable.

### General Bingham

Lieut.General Richard Bingham (1741- 1824?). Officer in the Dorset Militia. Resided Melcombe Horsey in the parish of Melcombe Bingham near Dorchester, Dorsetshire, England.

He carries the eponyms of *Sphenia binghami* Turton, 1819, *Pyramis binghami* Brown, 1827, *Binghami paradoxus* Brown, 1827 and *Sabanea binghamiana* Leach, 1852.

He was described variously as “our diligent fellow-labourer among the rocks of Torbay” (Turton, 1819); “an assiduous collector of British shells” (Jeffreys, 1864); “indebted to the exertions of his friend General Richard

Bingham” (Brown, 1827). In contrast “General Bingham was notorious for being imposed on as to indigenoussness” (Jeffreys' letter in Forbes & Hanley, 1853). This would imply that his locality data were not to be trusted and this might stem from the thirty-nine new species described by Brown (1827) from shells collected by Bingham, primarily from Dunbar and Belton Sands in East Lothian, Scotland. These localities are exactly those so often given by the mistrusted Captain Laskey (1811) in his “Account of North British Testacea” (Oliver *et al.*, 2017; Oliver & Morgenroth, 2018). Regardless of Bingham's reputation he did gift shells to Lyons, some of the marine shells directly indicating their provenance but others probably indirectly (Fig. 25). Those lots carrying localities of Dunbar and or Belton Sands (Fig. 25) probably all came from Bingham.

Kennard (1944) also attributes a series of 15 terrestrial molluscs collected in north Somerset to General Bingham. These consist of a pale blue card to which the shells were attached; the identifications are on a paper attachment and the locality is on the reverse of the card. One lot (Fig. 26) carries the label “*Helix striatula* Bingham”, a manuscript name suggesting that these lots came from Bingham. Kennard (1944) was not totally convinced of this provenance and we could not find any connection between the Bingham family and a property in the vicinity of Langford or Churchill Batch.



Fig. 25. Reverse of Lyons mounts indicating the provenance of General Bingham and the Scottish localities of Dunbar and Belton Sands. TENBM. 1983. 4310, TENBM. 1983.4343, TENBM. 1983.4356.



Fig. 26. One of 15 lots of land snail attributed to General Bingham. This labelled with the manuscript name *Helix striatula* Bingham. TENMB. 2001.129.25.





Fig. 27. Two lots attributed to the Rev. J. Goodall. *Turbo tridens*, Amersham are topotypes of *Azeca goodalli* Férussac. TENBM.2001.129.48. *Turbo 6-dentatus*, Eton is *Vertigo pygmaea* (Draparnaud). TENBM.2002.92.

### J. Goodall

Dr Rev Joseph Goodall (1760-1840) was Provost of Eton and an ardent shell collector purchasing at auctions such as that of the Tankerville collection; his shells are mostly now in the Natural History Museum London (Dance, 1986). A number of eponyms were given including *Helix* (now *Azeca*) *goodalli* Férussac, 1821. Kennard (1944) recognised 3 lots that he attributed to Goodall (Fig. 27). Of these one is of interest as it consists of a topotype of *Azeca goodalli*. The single shell was attached to a pale blue-green hexagonal card with an attached paper label reading “*Turbo tridens*, Amersham”. The syntypes of this species are in the Muséum National d’histoire Naturelle, Paris.

### J. Walcott

John Walcott (1754-1831) was a naturalist who wrote on diverse subjects and was an early disciple of Linnaeus. He lived in various houses in and around Bath although he rather eccentrically rented country properties moving around frequently (Torrens, 2004). The Walcotts and Lyonses had their family roots in south-west Ireland and were to be connected by marriage when in 1783 John married William Lyons' sister, Dorothy Mary (1759-1832). Marriage between the two families continued when Mary Ellen the (sixth child of William Lyons) married Edmund Scopoli Walcott (third son of John Walcott) in Tenby in 1817. A further example of Walcott's eccentricity was the naming of his sons after famous naturalists Edmund Scopoli (b. 1785), John Lyons Ray (b. 1788) and William Henry Linnaeus (b. 1790). Only a single lot in the shell collection reflects the above link however Walcott was not a shell collector but was known for his fossils (Torrens, 1976). The shell is that of *Unio tumi-*

*us* Retzius, 1788 taken from the River Severn, in 1810 (Fig. 28).

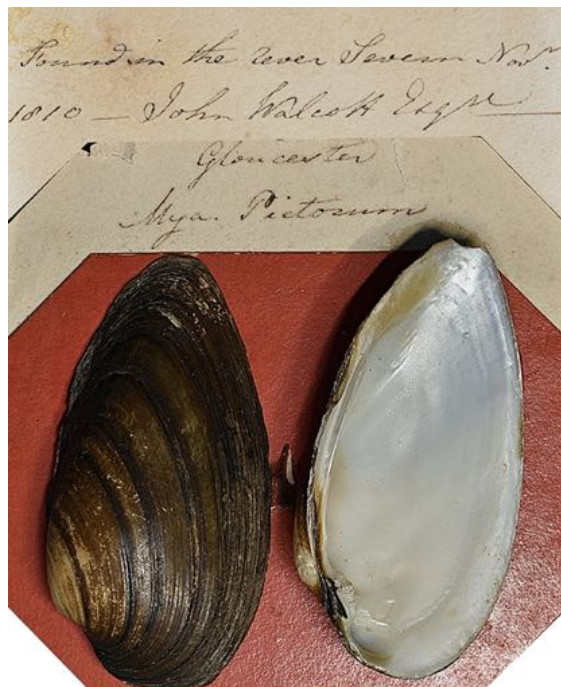


Fig. 28. *Unio tumidus* Retzius collected by John Walcott from the R. Severn. TENBM. 2001.129.15.

### Rev. W. Bingley

William Bingley (1774-1821) was an English cleric, naturalist and writer (Courtney, 1886). He was a fellow of the Linnean Society and wrote on both botanical and zoological subjects. He is not recognised as a shell collector.

A single lot is attributable to Bingley as indicated on Lyons's label (Fig. 29). The two shells were identified as *Helix octanfracta* Montagu, 1803 and at that time was considered rare. The exact locality of 'a pond between Litchet and Lower Litchet' is to be found in Maton & Rackett (1807, p.212) who wrote “This is either a rare or very local species” – We have procured it from a gravel pit between Litchet and Lower Litchet, Dorset. *Helix octanfracta* is now a syno-



Fig. 29. *Helix octanfracta* (*Omphiscola glabra*) collected by the Rev. Bingley from a pond near Litchet, Dorsetshire.



Fig. 30. Two lots attributed to Thomas Rackett by Kennard (1944). Shells and top mount as *Turbo nigricans* TENBM 2001.129.52. Bottom mount as *Turbo laminatus* white variety, TENBM 2001.129.55.

nym of the *Omphiscola glabra* (O.F. Müller, 1774) a widespread but very local species that is not well represented in large museum collections (pers. comm. Ben Rowson).

#### Rev. T. Rackett

Thomas Rackett (1755-1840) was an English cleric, antiquary and naturalist (Watkins and Davies, 2004). Working with William George Maton (1774-1835) he wrote a history of early conchologists (Maton & Rackett, 1804) and a catalogue of British shells (Maton & Rackett, 1807).

Kennard (1944) tentatively attributes 6 lots to Rackett but he gave no reasons for this assump-

tion, he may have recognised the label style (Fig. 30) although there is no known depository for the Rackett collection.

#### Unidentified glass mounts

Among the Lyons collection are four glass mounts that were not reported upon by Kennard (1944). The shells are sandwiched between two glass plates and visible on both sides through a window cut in the inserted card mount. The script on the labels is not that of Lyons but despite being intricate and very distinctive we have been unable to verify their provenance. Both writing styles are however similar to those seen of the trade cards of J.S.



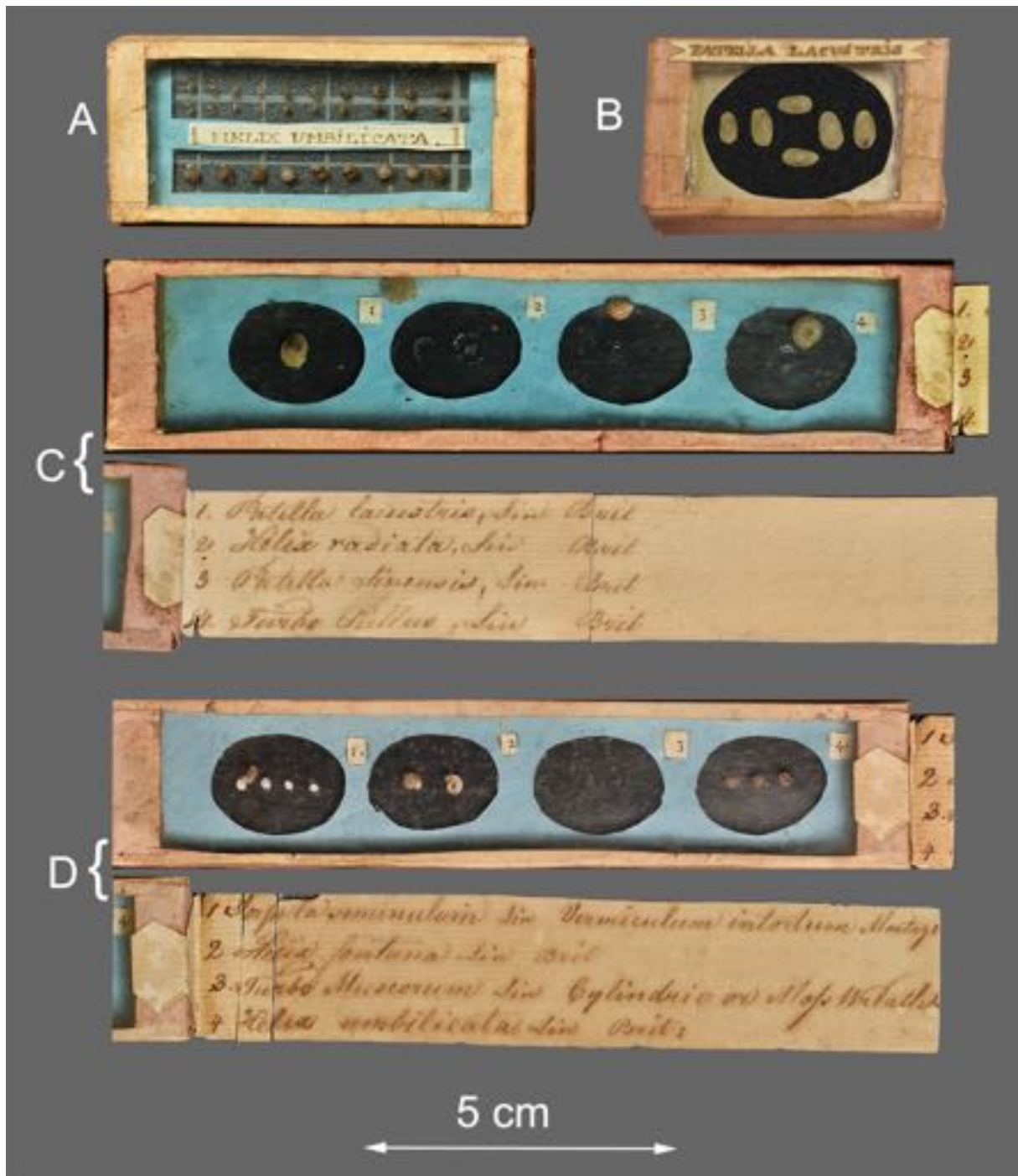


Fig. 31. Four glass mounts of uncertain provenance. A, TENBM 2001.129.13; B, TENBM 2001.129.10; C, TENBM 2017.02; D, TENBM 2017.01.

Miller (see Fig. 31). In *Turbo* for example the right tail of the T is extended and reflected over most of the word. The block printing in capitals are alike.

### Brief family history

Prepared by Douglas Fraser for Tenby Historical Society reprinted from [http://www.tenbyhistoricalsociety.org.uk/downloads/William\\_Lyons.pdf](http://www.tenbyhistoricalsociety.org.uk/downloads/William_Lyons.pdf).

Figure 32a, b, family history charts prepared from data in Ancestry.com.

### William Lyons of Tenby (1766-1849)

#### Origins

William Lyons was the descendent of an Irish family although the very early origins suggest they can be traced back to the Lords of Glamis of Glamis Castle in Scotland. At some point in the seventeenth century the family acquired estates in Ireland with the family seat at Lyons River, Kings County. His great grandfather, Major Henry Lyons served in the West Indies where he married Sarah Winthrop whose father was to become Governor of Antigua. In addition to the Antigua estates that he thus



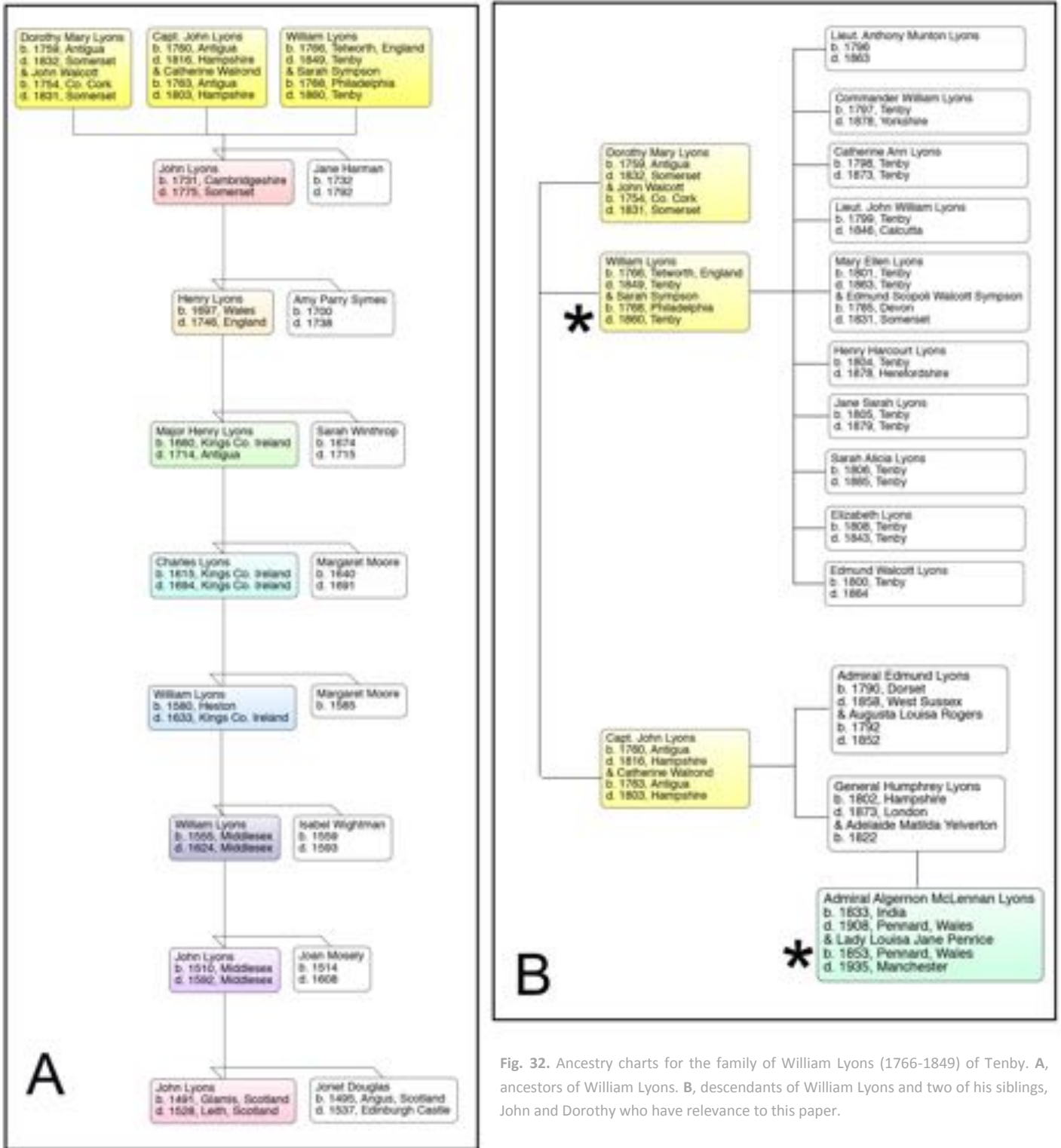


Fig. 32. Ancestry charts for the family of William Lyons (1766-1849) of Tenby. A, ancestors of William Lyons. B, descendants of William Lyons and two of his siblings, John and Dorothy who have relevance to this paper.

inherited, Major Lyons made considerable land purchases, building up a substantial property, which he left in the charge of his fourth son, Samuel when he returned to Ireland. Henry's son, William's father, John of Sturtlow House, Huntingdon and Antigua married Jane, the daughter of Colonel Samuel Harman of Harman's Antigua, in 1753. His estates were left primarily to his eldest son, John who was a member of the Council of Antigua in 1782.

Thus, the Lyons family acquired substantial

sugar producing estates in Antigua, but it was also a large family and it is quite difficult to establish just how prosperous any individual member was. William himself was one of ten. His eldest brother, John, had eighteen children by two marriages; some joined the armed forces and some travelled extensively, one became very prominent (Edmund was an admiral and subsequently first Baron Lyons of Christchurch). We know from his will that William's marriage settlement provided him with £2000 from the Antigua estates but his cir-

cumstances otherwise suggest that he was of independent means but not particularly wealthy. William's estate was left in its entirety for the benefit of his wife and unmarried daughters, his sons appear to have had to make their own way in life. The family also led a very retiring life; there is virtually nothing about them in the newspaper archives, just the occasional announcement of a marriage or a birth.

### Life in Tenby

William's family lived in a town house in Market Street (now Tudor Square) Tenby where he and his wife Sarah (née Sympson) lived until her death in 1860. There is no record of them having owned the land, so we may assume that they rented. William himself was born in Tetworth, Huntingdonshire in 1766 and lived in Tenby from at least 1796 when their first child, Anthony, was born until the birth of his youngest in 1811. William and Sarah and their unmarried daughters: Jane, Sarah and Elizabeth, are recorded in the 1841 census for Tenby and William is known to have died there in 1849. The family is mentioned in the "gentry" section of Piggotts 1830 directory of Tenby but in 1844 the only reference is to a Miss Lyons - which may mean that William and Sarah were living somewhere else at the time (in 1837 they were in Bath but still describing themselves as being of Tenby). Sarah with Catherine and young Sarah are shown at no 5 Market Street in the 1851 census.

It is difficult to establish how well travelled William Lyons was, especially in the first 30 years of his life (given the occupations of his predecessors and descendants, it might be expected that he joined the armed forces but no record has been found). In addition to the Antigua connection, his family could be found in all parts of the world including India and the United States as well as the West Indies. His wife, Sarah (Sympson) had been born in Philadelphia in 1768. However, as noted above, virtually every historic reference to William's whereabouts is to Tenby. But why did he settle in Tenby in the first place? One intriguing possibility is because it was the home of Catherine and William Routh. William Routh was a Bristol printer who, in 1790, commissioned the Regency architect John Nash to design a house in Tenby. His wife, Catherine Davies, was the grand-daughter of Thomas Howell who had made his fortune in Antigua before buying Prinknash Park in Gloucestershire in 1776.

Was there a connection, by blood, marriage or merely friendship between the Howell and the Lyons families?

### Children

**William and Sarah** had thirteen children: Anthony, William, Catherine, John, Edmund, Mary, Charles, Henry, Jane, Sarah, Elizabeth, Frances and James. It has proved quite difficult to trace the family, in part because unless the full name is used, names such as "John Lyons" are quite common, but mainly because the sons appear to have travelled extensively, either on business or in the armed forces. For that reason the following account relies heavily upon family internet sources which it has not always been possible to verify.

Two of the sons, **Charles** (1803-1803) and **James Hamilton William Lyons** (1811-1812) died in infancy. This may also have been the fate of **Frances Harriet** (1809-?) since she soon disappears from the records. Four of the girls lived and died unmarried in Tenby; **Catherine Ann** (1798-1873), **Jane Sarah** (1805- 1879), **Sarah Alicia** (1807-1885) and **Elizabeth William** (1808-1843). Was their failure to secure a husband because father could not afford a sufficient settlement?

The eldest son, **Anthony Munton Lyons**, born in 1796 joined the Royal Marines in 1812 but was put on half- pay in 1814. He does not appear to have returned to service but was still a 2nd lieutenant on half-pay in the 1842 Army Lists. He remained in Tenby and in the 1830 Piggott's Directory Anthony is described as "the master of the ceremonies"; Tenby had an assembly rooms by the harbour. Clearly, he had little income since in early versions of his will, William arranged to leave £500 to Anthony, but he revoked this in 1844 because his son had secured a position in Demerara, presumably a civilian appointment. Anthony had married Mary Ann Williams from Tenby in 1823. They had **Elinor** (1824), **Mary Elizabeth Williams** (1825), **Sarah Emma** (1826), **Caroline Jane Williams** (1828), **Antonia Emily Williams** (1830) and **William Williams** (1832). He died in Guiana in 1863. Of the children, we have not been able to trace young William, who does not appear to have returned to the UK although it is possible that one or more of the girls returned but is recorded under another name after marrying overseas.

**William**, born in 1797, is said (family internet

sources) to have been a Royal Navy Captain. It has been impossible to verify this and since the plain name William Lyons is not uncommon it is difficult to follow him through the records with any certainty. However, he is likely to have been the William Lyons who became a lieutenant in the Navy in 1825 but who did not receive subsequent promotion. Instead he was sent to run the coastguard station at Glenarm in County Antrim where he received the RNLI silver medal for gallantry in 1840. If this is the correct William Lyons, it helps to explain why he has not been traced in the UK census records, nor in marriage registrations, since most of the Irish records for the period have been lost. The title of captain may well have been acquired at a later stage in his career since a William Lyons served in the merchant marine from 1853 to 1857. He died in 1878 in Goole.

**John William** (1799-1846) does not appear under that name in any of the UK census and registration records which may suggest that he served overseas with the armed forces. The family internet sources suggest that he was a lieutenant and there is a possible entry in the Royal Marines lists showing a seniority of 1830. There is no record of **Edmund Walcott William** (1800) except his death in Headington, Oxfordshire, in 1864. Similarly, the census shows no record of **Henry Harcourt Lyons** (1804-1875) but it does include his wife, Anna Margaretta Griffies Williams, whom he married in 1833 in Marlborough, and his daughter Agnes Grace Sutton Lyons (1834-1911). It is interesting and may be significant that Anna is shown in the census as a “Landed Proprietor”; did she have her own income rather than depending upon that of her husband? The intriguing absence of the Lyons sons from the census suggests that they were frequently away from home, either with the armed services or acting as merchants in connection with the family business.

**Mary Ellen William** (1801-1870), married Edmund Scopoli Walcott of Limerick, probably her first cousin, in 1817. Not long after he added the name Sympson and the records are variously in the names of Walcott and Walcott-Sympson. Their children were: **John Minchin** (1818), **Edmund Lyons** (1819), **Mary Dorothy** (1821), **William Lyons Enraght** (1822), **Henry Sympson** (1826). They were all christened in Clifton or Bristol and William was christened at the age of four in 1826, which often happened when families went

overseas for a spell. By 1861, Mary is a widow living in Bristol with her unmarried daughter, Mary. Most of the rest of the family, where it can be found, consists of people living modestly on private incomes. Henry lived for a while in The Norton, Tenby but by the time of the 1871 census he and his family lived in Laugharne. Edmund went to Australia in about 1850 and had eight children, one of which, Henry, himself had eighteen.

**Williams brother John** (1759-1832) also had many children and gave rise to a famous line of military figures in the Royal Navy and Army, including Admiral **Edmund Lyons** (1790-1858) and his nephew Admiral **Algernon McLennan Lyons** (1833-1908). We mention the latter because his wife **Lady Louisa Lyons** also made a shell collection that was donated to the National Museums Liverpool.

### Conclusions

William Lyons and his family do not appear to have made a great mark. They lived quietly in Tenby, wealthy enough - for the most part - not to have to work but not sufficiently wealthy to live well. Possibly not sufficiently wealthy for the girls to make good marriages, with the exception of Mary who married a cousin when only sixteen. The males mostly joined the Armed Forces but do not appear to have made a great success of that, or they may have become involved with the family's West Indian trade. William Lyon's descendants all appear to have left Tenby by the end of the nineteenth century.

The memorial of this quiet man is to be found in his remarkable shell collection donated to Tenby Museum in 1878 by his daughters.

### A second Lyons collection

It was reported in the *Transactions of the Cambridge Philosophical Society* (Donations to the Museum, 1827) that on the 14th April 1823 a collection of British shells had been donated to their museum by W. Lyons. In 1865 most of the collection of the Cambridge Philosophical Society was incorporated into the Cambridge University Museum of Zoology but the shells were retained by the Rev. L. Jenyns (1800-1893) and had been taken with him when he moved to Bath in 1849 (Preece & Sparks, 2012). Kennard (1944) reported that one lot that he saw in the Tenby Museum was labelled “Swaffam Prior Cambs” and therefore had likely come from the



Rev. L. Jenyns thus confirming the likely link. Unfortunately, the Tenby lot in question was not located in our revision, for more information on Jenyns see Preece & Sparks (2012). The shell collection of Jenyns in the Bath Royal Literary and Scientific Institution is currently inaccessible.

### Lyons's “List of Shells found on the Sea Shore at Tenby and Pembrokeshire”

Present in the Tenby Museum archive is a handwritten list of the shells found at Tenby and Pembrokeshire (Fig. 34). On the cover,

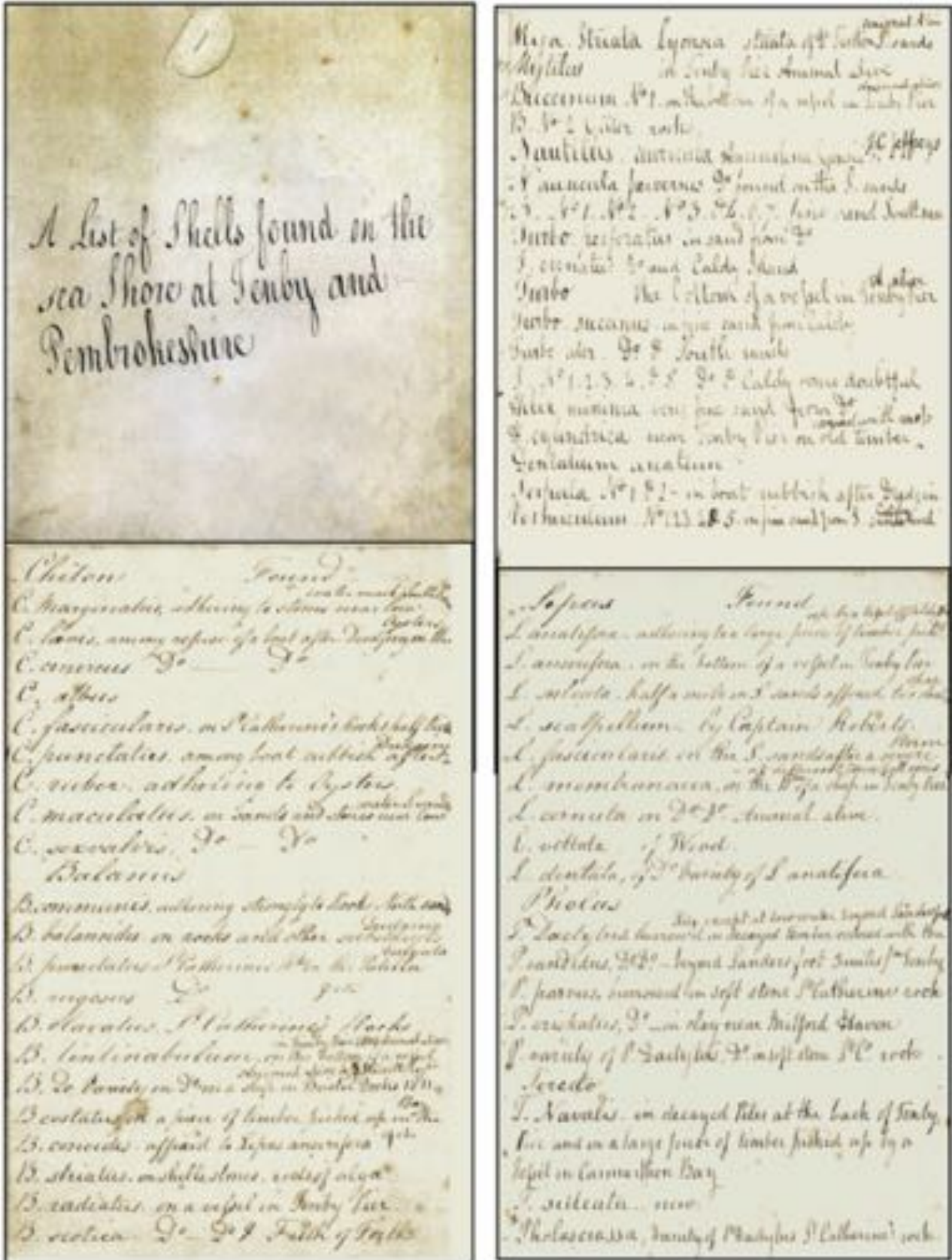


Fig. 34. Cover and three sample pages of Lyons list of the shells of Tenby.

written in biro (so relatively recently) is “by Capt. Roberts c. 1849”. There is no evidence for this provenance so perhaps a single reference to Roberts in the list prompted this conclusion. Other evidence suggests it is by Lyons himself. Firstly it is in the same handwriting that is found on the reverse of the Lyons mounts, most distinctive is his frequent use of the abbreviation “&ctr” (see Fig. 33).



Fig. 33. Distinctive use of the abbreviation for &ctr in the Lyons list (left) and on the Lyons mounts (right).

Secondly in Bourne's 1843 “*History of Tenby*” she gives a list of Tenby shells which is structured in a similar way and she credits on pages 76-77 “*The following list of shells may be relied on as correct, being a copy of one compiled by a gentleman of great research in conchology, and who has in his splendid and valuable collection*

*all the specimens mentioned*”. Then on p. 79 she mentions Lyons by name and notes *Mya striata* which is *Lyonsia*.

The list consists of 22 pages giving the names of species and where each was found. The list includes 245 species of mollusc and in addition barnacle, polychaeta and foraminifera ‘shells’. It is a valuable document allowing the comparison of the fauna of a defined region over a span of some 200 years. Environmental change is recognisable in the frequent quoting of shells from the trash of oyster dredging, as such oyster beds are long gone. It is also apparent that Lyons frequently examined the hulls of ships beached on shore in Tenby harbour (Fig. 35) and this may account for the number of alien molluscs and barnacles recorded. At that time Tenby was a busy harbour that traded with numerous countries including the Americas and the ships were beached to take on and offload cargo thus allowing Lyons to collect from the hulls at low tide (Fig. 36).



Fig. 35. Lithograph of Tenby harbour circa 1832 by G. P. Reinagle. From the collection of the National Library of Wales.

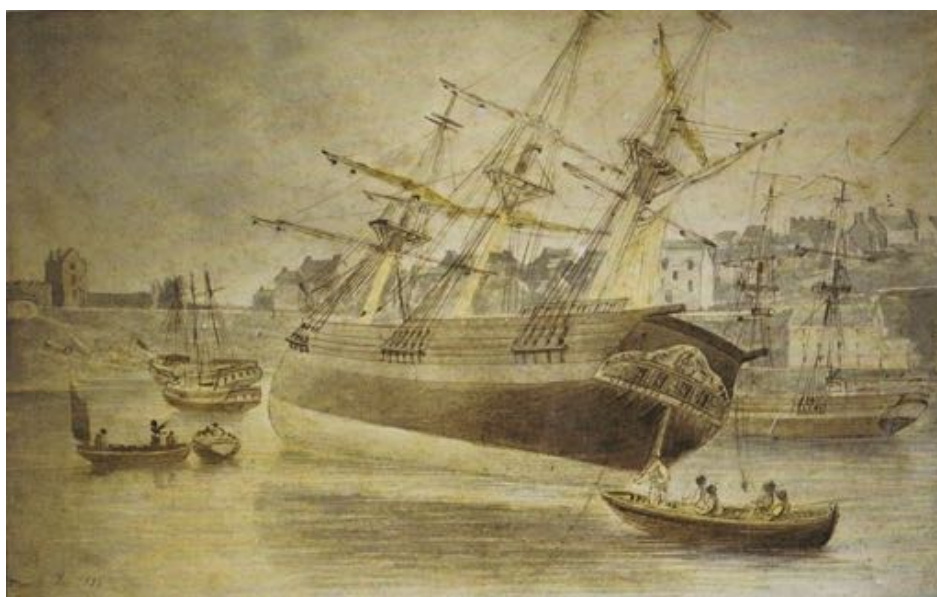


Fig. 36. Lithograph by Charles Norris (1835) showing the American registered “Victoria” of Boston beached in Tenby harbour.





Fig. 37. Aerial view of Tenby showing Lyons's favourite collecting sites. The current location of the Tenby Museum is also indicated.

The last page is titled “New shells found at Tenby by W.L.” and here we find *Lyonsia* and *Conia lyonsii* (see above). We also note a *Balanus tenbiensis* and an *Auriculum lyonsii* of Jeffreys, along with a number of Turbo species that are all apparently unpublished manuscript names but unfortunately there are no specimens bearing any of these labels in the collection.

Most of the shells were collected from the

### Chiton

- C. marginatus* Pennant, 1777  
*Lepidochitona cinerea* (Linnaeus, 1767)  
adhering to stones near low water mark, South Sands
- C. laevis* Pennant, 1777  
*Callochiton septemvalvis* (Montagu, 1803)  
among refuse of a boat dredging oysters
- C. cinereus* Linnaeus, 1767  
*Lepidochitona cinerea* (Linnaeus, 1767)  
D° D°
- C. albus* Linnaeus, 1767  
*Ischnochiton albus* (Linnaeus, 1767)
- C. fascicularis* Linnaeus, 1767  
*Acanthochitona fascicularis* (Linnaeus, 1767)  
on St Catherine's Rocks half tide
- C. punctatus* Turton, 1819  
*Lepidochitona cinerea* (Linnaeus, 1767) ???  
among boat rubbish after dredging
- C. ruber* Linnaeus, 1767  
*Boreochiton ruber* (Linnaeus, 1767)  
adhering to oysters
- C. maculatus* Gmelin, 1791  
Not a British species  
on sands and stones near low water, S. Sands

beaches and rocks around Tenby although also from neighbouring beaches at Laugharne, Saundersfoot and MilfordHaven. Lyons's favourite locations are marked on Fig. 37 and are South Sands, North Sands, St Catherine's Rock, the Harbour, Caldey Island and Giltar rocks. The various aspects of these sites give a large variety of shore types from sheltered to exposed, clean sand to muddy sand and with the aid of local fishing boats dredging was possible in the sublittoral.

### *C. sexvalvis*

manuscript name  
D° D°

### Balanus

- B. communis* Pulteney 1799  
*Perforatus perforatus* (Bruguière, 1789)  
adhering strongly to rocks, North Sands
- B. balanoides* Linnaeus, 1767  
*Semibalanus balanoides* (Linnaeus, 1767)  
on rocks and other dredging substances
- B. punctatus* Montagu, 1803  
*Chthamalus stellatus* (Poli, 1791)  
St Catherines Rocks on the Patella vulgata
- B. rugosus* Pulteney, 1799  
*Balanus crenatus* Bruguière, 1789  
D° &ctr
- B. clavatus* Montagu, 1803  
*Semibalanus balanoides* (Linnaeus, 1767)  
St Catherine's Rocks
- B. tintabulum*  
*Megabalanus tintinnabulum* (Linnaeus, 1758)  
on the bottom of a vessel in Tenby Pier 1819 Animal alive
- B. D° variety*

Note: The text in the calligraphy font is that from Lyons's list, i.e. the first name given and the locality data. We have added the authorities to the names given by Lyons and then we have offered the current accepted name (from Mollusca-Base) for each entry although we cannot confirm that all of Lyons's determination were accurate. We have not altered any of the spellings used by Lyons some of which are archaic, eg "muscle" rather than "mussel".



on D° on a ship in Bristol Docks 1811. Animal alive by J. Walcott esq.

**B. costatus** Montagu, 1803

*Balanus balanus* (Linnaeus, 1758)

on a piece of timber picked up in the bay

**B. conoides** Montagu, 1803

*Perforatus perforatus* (Bruguère, 1789)

affixed to *Lepas anatifera* &ctr

**B. striatus** Bruguère, 1789

? *Semibalanus balanoides* (Linnaeus, 1767)

on shells, stones, roots of algae

**B. radiatus** Bruguère, 1789

*Newmaniella radiata* (Brug. 1789)

on a vessel in Tenby Pier

**B. scotica** Wood, 1815

*Balanus balanus* (Linnaeus, 1758)

D° D° & Frith of Forth

## Lepas

**L. anatifera** Linnaeus, 1758

*Lepas anatifera* Linnaeus, 1758

adhering to a large piece of timber picked up by a vessel off Caldy

**L. anserifera** Linnaeus, 1767

*Lepas anserifera* Linnaeus, 1767

on the bottom of a vessel in Tenby Pier

**L. sulcata** Montagu, 1803

*Lepas (Anatifa) pectinata* Spengler, 1793

half a mile on S. Sands affixed to a deal spar

**L. scalpellum** Linnaeus, 1767

*Scalpellum scalpellum* (Linnaeus, 1767)

by Captain Roberts

**L. fascicularis** Ellis

*Dosima fascicularis* (Ellis & Solander, 1786)

on the S. Sands after a severe storm. at different times of all sizes

**L. membranacea** Montagu, 1808

*Conchoderma virgatum* Spengler, 1789

on the B<sup>m</sup> of a ship in Tenby Pier

**L. cornuta** Montagu, 1815

*Conchoderma auritum* (Linnaeus, 1767)

on D° D°. animal alive

**L. vittata** of Wood? Wood, 1815

*Conchoderma virgatum* Spengler, 1789

**L. dentata** of Do variety of *L. anatifera*

*Lepas anatifera* Linnaeus, 1758

## Pholas

**P. dactylus**

*Pholas dactylus* Linnaeus, 1758

burrow'd in decayed timber covered with the tide except at low water beyond Saundersfoot

**P. candidus**

*Barnea candida* (Linnaeus, 1758)

D° D°--beyond Saundersfoot 5 miles fm Tenby

**P. parvus**

*Barnea parva* (Pennant, 1777)

burrowed in soft stone St Catherines rock

**P. crispatus**

*Zirfaea crispata* (Linnaeus, 1758)

in clay near Milford Haven

**P. variety of P. dactylus**

D° in soft stone St. C° rock

**Pholas crassa** variety of *P. dactylus*

St Catherine's Rock

## Teredo

**T. navalis** Linnaeus, 1758

*Teredo navalis* Linnaeus, 1758

in decayed piles at the back of Tenby Pier in a large piece of timber picked up by a vessel in Carmarthen Bay

**T. sulcata** nov.

manuscript name

## Mya

**M. pholadia** Montagu, 1803

*Rocellaria dubia* (Pennant, 1777)

burrowed in the lower valve of large old oyster shells

- **arenaria** Linnaeus, 1758

*Mya arenaria* Linnaeus, 1758

half a foot below the surface of sand & gravel at the island of Caldy

- **truncata** Linnaeus, 1758

*Mya truncata* Linnaeus, 1758

lodged under gravel near low water mark

- **margaritifera** Linnaeus, 1758

*Margaritifera margaritifera* (Linnaeus, 1758)

rapid rivers Pembrokeshire

- **pictorum** Linnaeus, 1758

*Unio pictorum* (Linnaeus, 1758)

D° D°

- **inaequivalvis** Montagu, 1803

*Corbula gibba* (Olivi, 1792)

on South Sands & Saundersfoot Sands

- **suborbicularis** Montagu, 1803

*Kellia suborbicularis* (Montagu, 1803)

embedded in Limestone

- **pubescens** Pulteney, 1799

*Thracia pubescens* (Pulteney, 1799)

on South Sands & Saundersfoot Sands

- **praetenuis** Pulteney, 1799

*Cochlodesma praetenuis* (Pulteney, 1799)

D° D°

- **distorta** Montagu, 1803

*Thracia distorta* (Montagu, 1803)

among boat refuse after dredging

- **bidentata** Montagu, 1803

*Kurtiella bidentata* (Montagu, 1803)

- burrowed in the valves of old oyster shells, S. Sands*
- *ferruginosa* Montagu, 1803  
*Tellimya ferruginosa* (Montagu, 1808)  
*on the South Sands*
  - *prismatica* Montagu, 1808  
*Abra prismatica* (Montagu, 1808)  
*on the shore near Manorbeer*
  - *substriata* Montagu, 1803  
*Montacuta substriata* (Montagu, 1808)  
*on the spines of an Echinus dredged in the Bay*
  - *purpurea* Montagu, 1808  
*Turtonia minuta* (Fabricius, 1780)  
*beyond Manorbeer*

### Mactra

- M. solida* Linnaeus, 1758  
*Spisula solida* (Linnaeus, 1758)  
*Muscle bank under Gilter Rocks*
- *subtruncata* da Costa, 1778  
*Spisula subtruncata* (da Costa, 1778)  
*sandy beach Saundersfoot*
- *stultorum* Linnaeus, 1758  
*Mactra stultorum* (Linnaeus, 1758)  
*D° D° & South Sands*
- *dealbata* Pulteney in Montagu, 1803  
*Standella pellucida* (Gmelin, 1791)  
This is an exotic species, not clear what Lyons had  
*D° D° D°*
- *compressa* Pulteney, 1799  
*Scrobicularia plana* (da Costa, 1778)  
*at the mouth of the river near Tenby*
- *boysii* Montagu, 1803  
*Abra alba* (W. Wood, 1802)  
*beach near Saundersfoot*
- *triangularis* Montagu, 1803  
*Goodallia triangularis* (Montagu, 1803)  
*sand from Caldy*
- *lutraria* Linnaeus, 1758  
*Lutraria lutraria* (Linnaeus, 1758)  
*at D° and South Sands*
- *hians* Pulteney, 1799  
*Lutraria oblonga* (Gmelin, 1791)  
*D° D° & Fishguard*
- *truncata* Montagu, 1808  
*Spisula solida* (Linnaeus, 1758)  
*Muscle Bank*
- *minutissima* Montagu, 1808  
*Goodallia triangularis* (Montagu, 1803)  
*in sand from Caldy*
- *cinerea*, large variety of *M. stultorum* Montagu, 1803  
*Mactra stultorum* (Linnaeus, 1758)

### Donax

- D. trunculus* Linnaeus, 1758  
*Donax trunculus* Linnaeus, 1758

- plentiful between Tenby & Llaugharne*
- *rubra* Montagu, 1808  
Uncertain but from Turton it is probably *Ervilia castanea* Montagu, 1803  
*in fine sand from Caldy Island*
- *irus* Linnaeus, 1758  
*Irus irus* (Linnaeus, 1758)  
*thrown upon the S. Sands after a storm*

### Venus

- V. — fasciata*  
*Clausinella fasciata* (E.M. da Costa, 1778)  
*on the South Sands*
- *paphia* Montagu, 1803  
*Clausinella fasciata* (E.M. da Costa, 1778)  
*in oyster boats Milford Haven*
- *verrucosa*  
*Venus verrucosa* Linnaeus, 1758  
*D° D° and on the South Sands*
- *striatula*  
*Chamelea striatula* (E.M. da Costa, 1778)  
*on the sands Saundersfoot*
- *islandica*  
*Arctica islandica* (Linnaeus, 1767)  
*D° D° and Gilter*
- *exoleta*  
*Dosinia exoleta* (Linnaeus, 1758)  
*D° D° South Sands*
- *undata*  
*Mysia undata* (Pennant, 1777)  
*North Sands and D°*
- *sinuosa*  
*Mysia undata* (Pennant, 1777)  
*D°, very rare*
- *ovata*  
*Timoclea ovata* (Pennant, 1777)  
*on all parts of the sands*
- *decussata*  
*Ruditapes decussatus* (Linnaeus, 1758)  
*Caldy Island*
- *pullastra* Montagu, 1803  
*Venerupis corrugata* (Gmelin, 1791)  
*D° South Sands*
- *perforans* Montagu, 1803  
*Venerupis corrugata* (Gmelin, 1791)  
*St Catherines*
- *virginea* Linnaeus, 1758 nom. dub.  
*Politapes rhomboides* (Pennant, 1777)  
*on the South Sands & in the trawl much larger size*
- *aurea*  
*Politapes aureus* (Gmelin, 1791)  
*D° D° and from off Lands End*
- *sulcata*  
*Astarte sulcata* (E.M. da Costa, 1778)  
*Oyster boats Milford Haven*

- *danmonia* Montagu, 1808  
*Astarte sulcata* (E.M. da Costa, 1778)  
*on the South Sands*
  - *scotica* Maton & Racket, 1807  
*Astarte sulcata* (da Costa, 1778)  
*D°\_ and from the Trawler*
  - *lactea* Donovan, 1803  
*Venus casina* Linnaeus, 1758  
*D°\_ D°\_*
  - *cassina*  
*Venus casina* Linnaeus, 1758  
*Milford Haven*
  - *reflexa* Montagu, 1808  
*Venus casina* Linnaeus, 1758  
*D°\_ D°\_*
  - *triangularis*  
*Gouldia minima* (Montagu, 1803)  
*Oyster boats Milford Haven*
- Solen**
- S. siliqua*  
*Ensis siliqua* (Linnaeus, 1758)  
*buried to the depth of a foot, S. Sands*
  - *ensis*  
*Ensis ensis* (Linnaeus, 1758)  
*D°\_ D°\_ near low water mark*
  - *vagina*  
*Solen marginatus* Pulteney, 1799  
*D°\_ the sands Saundersfoot*
  - *pellucidus*  
*Phaxas pellucidus* (Pennant, 1777)  
*Saundersfoot D°\_ two miles from Tenby*
  - *legumen*  
*Pharus legumen* (Linnaeus, 1758)  
*D°\_ D°\_ and South Sands*
  - *antiquatus* Pulteney, 1799  
*Azorinus chamosolen* (da Costa, 1778)  
*rare Milford Haven*
  - *minutus* Linnaeus, 1767  
*Hiatella arctica* (Linnaeus, 1767)  
*Oyster boats &c\_*
  - *vespertinus* Gmelin, 1791  
*Gari depressa* (Pennant, 1777)  
*on the coast near Milford Haven*
  - *floridus* *Psammobia floridus* of Turton 1822  
*Gari tellinella* (Lamarck, 1818)  
*S. Sands*
  - *pinna*  
*Pandora pinna* (Montagu, 1803)  
*Dredged off Caldy*
  - *squamosus*  
*Lepton squamosum* (Montagu, 1803)  
*among refuse of Oyster boats*

## Tellina

*T. fervensis*

- Gari fervensis* (Gmelin, 1791)  
*on all parts of the coast of Pembrokeshire*
- *D°\_ variety, bright yellow*  
*Gari fervensis* (Gmelin, 1791)  
*S. Sands after a storm of wind*
- *squalida*  
*Tellina incarnata* Linnaeus, 1758  
*on the sands Saundersfoot*
- *donacina*  
*Maerella donacina* (Linnaeus, 1758)  
*dredged in the bay and on South Sands*
- *tenuis*  
*Macomangulus tenuis* (E.M. da Costa, 1778)  
*on all parts of the sands*
- *fabula*  
*Fabulina fabula* (Gmelin, 1791)  
*plentiful on Saundersfoot sandy shore*
- *solidula* Pulteney, 1799  
*Limecola balthica* (Linnaeus, 1758)  
*common in the bays along the coast*
- *crassa*  
*Arcopagia crassa* (Pennant, 1777)  
*in the trawl off Worms Head*
- *D°\_ variety, half grown shell*  
*Arcopagia crassa* (Pennant, 1777)  
*Milford*
- T. radiula* Montagu, 1803  
*Lucinoma borealis* (Linnaeus, 1767)  
*sea shore Caldy Island*
- *rotundata*  
*Diplodonta rotundata* (Montagu, 1803)  
*D°\_ D°\_ D°\_*
- *maculata, a variety of of T. tenuis Adams*  
*Arcopella balaustina* (Linnaeus, 1758)
- *fragilis*  
*Gastrana fragilis* (Linnaeus, 1758)  
*sandy beach about two miles from Tenby*

## Cardium

- C. edule*  
*Cerastoderma edule* (Linnaeus, 1758)  
*on all coasts where the shore is sandy*
- *D°\_ variety*  
*Cerastoderma edule* (Linnaeus, 1758)  
*near Gilter Rocks*
- *echinatum*  
*Acanthocardia echinata* (Linnaeus, 1758)  
*by dredging*
- *ciliare*  
*Cardium ciliare* Linnaeus, 1758. nomen dubium  
*D°\_ & South Sands after a gale*
- *laevigatum*  
*Laevicardium crassum* (Gmelin, 1791)  
*dredging in Tenby Bay*
- *exiguum*  
*Parvicardium exiguum* (Gmelin, 1791)



- D°\_ & on the shore*
- *rubrum*  
*Lasaea rubra* (Montagu, 1803)  
*on St Catherines rocks half tide*
  - *fasciatum* Montagu, 1803  
*Parvicardium pinnulatum* (Conrad, 1831)  
*on the coast and at Laugharne of a large size*
  - *corneum*  
*Sphaerium corneum* (Linnaeus, 1758)  
*in a small river near Tenby*
  - *amnicum*  
*Pisidium amnicum* (O.F. Müller, 1774)  
*D°\_ D°\_*
  - *lacustre*  
*Musculium lacustre* (O.F. Müller, 1774)  
*D°\_ D°\_ and ponds*

### Arca

- *A. pilosa* Linnaeus, 1767  
*Glycymeris glycymeris* (Linnaeus, 1758)  
*oyster boats Milford Haven*
- *lactea*  
*Striarca lactea* (Linnaeus, 1758)  
*on the South Sands*
- *noae*  
probably *Arca tetragona* Poli, 1795. *noae* is  
Mediterranean  
*dredged off Mumstone in the bay*
- *barbata* var. of *A. perforans* Turton, 1819  
*Striarca lactea* (Linnaeus, 1758)  
*D°\_ near Milford*
- *minuta*  
*Nuculana minuta* (O.F. Müller, 1776)  
*dredged off Caldy*
- *nucleus*  
*Nucula nucleus* (Linnaeus, 1758)  
*at Saundersfoot sands & cr*

### Pecten

- *P. maximus*  
*Pecten maximus* (Linnaeus, 1758)  
*dredged from oyster beds in the bay*
- *jacobaeus*  
*Pecten jacobaeus* (Linnaeus, 1758) not British  
*on the South Sands*
- *opercularis*  
*Aequipecten opercularis* (Linnaeus, 1758)  
*dredged from Caldy beds*
- *varius*  
*Mimachlamys varia* (Linnaeus, 1758)  
*Do\_ Do\_ common*
- *lineatus* E.M. da Costa, 1778  
*Aequipecten opercularis* (Linnaeus, 1758)  
*on the South Sands & dredging*
- *distortus* E.M. da Costa, 1778  
*Talochlamys pusio* (Linnaeus, 1758)

- *Do\_ in deep water affixed to stones & ctr*
- *obsoletus* Pennant, 1777  
*Palliolium tigrinum* (O.F. Müller, 1776)  
*under Gilter Rocks*
- *pusio*  
*Talochlamys pusio* (Linnaeus, 1758)  
*dredged near Stackpole Head*

### Ostrea

- *O. edulis*  
*Ostrea edulis* Linnaeus, 1758  
*in vast beds many parts of the coast*
- *striata* E.M. da Costa, 1778  
*Ostrea edulis* Linnaeus, 1758  
*on rocks low water mark*
- *parasitica* Turton, 1819  
*Ostrea edulis* Linnaeus, 1758  
*adhering to a piece of timber picked up by a boat  
in the Bay*
- *crista galli*  
*Lopha cristagalli* (Linnaeus, 1758) (Indian Ocean)  
more likely was *Dendostrea frons* (Linnaeus, 1758)  
(Caribbean)  
*on the bottom of a vessel in Tenby Pier*

### Anomia

- *A. ephippium* Linnaeus, 1758  
*Anomia ephippium* Linnaeus, 1758  
*by the dredge fixed to oysters, rocks & c*
- *squamula* Linnaeus, 1758  
*Heteranomia squamula* (Linnaeus, 1758)  
*D°\_ Lobsters, crabs & other bodies*
- *aculeata* Linnaeus, 1758  
*Heteranomia squamula* (Linnaeus, 1758)  
*adhering roots of algae & ctr*
- *undulata* Gmelin 1791  
*Pododesmus patelliformis* (Linnaeus, 1761)  
*affixed to shells stones & crabs*
- *cymbiformis* Maton & Rackett, 1807  
*Heteranomia squamula* (Linnaeus, 1758)  
*Do\_ & on the stalks of Fucus digitatus*
- *electrica* Linnaeus, 1758  
*Anomia ephippium* Linnaeus, 1758  
*affixed to Pecten maximus*

### Mytilus

- *M. edulis*  
*Mytilus edulis* Linnaeus, 1758  
*in beds near Gilter*
- *incurvatus* Pennant, 1777  
*Modiolus barbatus* (Linnaeus, 1758)  
*rocks beyond East Wear Sands*
- *pellucidus* Pennant, 1777  
*Mytilus edulis* Linnaeus, 1758  
*St Catherines*
- *barbatus*

- Modiolus barbatus* (Linnaeus, 1758)  
*deep water dredging*
- *modiola*  
*Modiolus modiolus* (Linnaeus, 1758)  
*D°\_ D°\_*
- *umbilicatus* Pennant, 1777  
*Modiolus modiolus* (Linnaeus, 1758)  
*deep dredging*
- *praecisus* Montagu, 1803  
*Sphenia binghami*, Turton, 1822  
*refuse of oyster boats*
- *discors*  
*Musculus discors* (Linnaeus, 1767)  
*among leaves of Fuci*
- *discrepans* Montagu, 1803  
*Musculus discors* (Linnaeus, 1767)  
*in the Trawl<sup>m</sup> & dredging*
- *cygneus*  
*Anodonta cygnea* (Linnaeus, 1758)  
*in the extensive ponds Stackpool Court*
- *avonensis* Montagu, 1803  
 ? *Unio pictorum* (Linnaeus, 1758)  
*in Gumferston Brook*
- *stagnalis*  
 ? *Anodonta cygnea* (Linnaeus, 1758)  
*Stackpole Pond*
- Nautilus**  
 Foraminifera
- N. beccarii*  
*Ammonia beccarii* (Linnaeus, 1758)  
*on the roots of algae and on the shells of oysters*
- *beccarii perversus*  
*D°\_ D°\_ & in fine sand*
- *crispus*  
*Elphidium crispum* (Linnaeus, 1758)  
*on oysters & with the preceding species*
- *D°\_ baricty*  
*sand from the South Sands*
- *laevigatulus*  
*Nautilus laevigatulus* Walker & Jacob, 1798  
*on oysters and D°*
- *calcar*  
*Lenticulina calcar* (Linnaeus, 1758)  
*dredged roots of algae*
- *depressulus*  
*Haynesina depressula* (Walker & Jacob, 1798)  
*D°\_ D°\_ and fine sand*
- *umbilicatulus*  
*Nautilus umbilicatulus* Walker & Jacob, 1798  
*on shells, corallines &c*
- *crassulus*  
*Nonion crassulum* (Walker & Jacob, 1798)  
*D°\_ D°\_ and drifted sand*
- *nitidus*  
*in fine sand*

- *inflatus*  
*Trochammina inflata* (Montagu, 1808)  
*D°\_ from the South Sands*
- *carinatus*  
*Nautilus carinatus* Walker & Jacob, 1798  
*D° and the South Sands*
- *subarcuatulus*  
*Astacolus subarcuatulus* (Walker & Jacob, 1798)  
*in fine sand*
- *radicula*  
*Nodosaria radicula* (Linnaeus, 1758)  
*on shells and other substances*
- *linearis*  
*Vaginulina linearis* (Montagu, 1808)  
*in sand from the coast beyond Pembroke*
- *rectus*  
*Nautilus rectus* Montagu, 1803  
*D°\_ D°\_ & at Tenby, small*
- *spirula*  
*North and South Sands*

## Cypraea

- C. pediculus*  
 probably *Trivia monacha* (E.M. da Costa, 1778).  
*pediculus* is Caribbean.  
*found in abundance on the South Sands*
- *arctica*  
*Trivia arctica* (Pulteney, 1799)
- *bullata* Montagu, 1803  
*Trivia arctica* (Pulteney, 1799)

## Bulla

- B. lignaria*  
*Scaphander lignarius* (Linnaeus, 1758)  
*dredged Milford Haven & Tenby small*
- *aperta*  
*Philine aperta* (Linnaeus, 1767)  
*East Wear near low tide & South Sands*
- *halioidea* Montagu, 1803  
*Lamellaria perspicua* (Linnaeus, 1758)  
*Dredged and D°\_ D°\_*
- *plumula*  
*Berthella plumula* (Montagu, 1803)  
*Milford Haven*
- *catena*  
*Philine catena* (Montagu, 1803)  
*in fine sand from Caldy Island*
- *D° variety*  
*with the preceding species*
- *emarginata* J. Adams, 1800  
*Philine aperta* (Linnaeus, 1767)  
*in fine sand nr St Catherines*
- *denticulata*  
*Philine denticulata* (J. Adams, 1800)  
*Tenby shore*

- *hydatis*  
*Haminoea hydatis* (Linnaeus, 1758)  
*Gilfer and Milford Haven*
  - *akera*  
*Akera bullata* O.F. Müller, 1776  
*D°\_ South Sands*
  - *cylindracea*  
*Cylichna cylindracea* (Pennant, 1777)  
*D°\_ and on the extensive sands from Tenby to Laugharne*
  - *truncata* J. Adams, 1800  
*Retusa truncatula* (Bruguère, 1792)  
*D°\_ D°\_ and Gilfer*
  - *obtusa*  
*Retusa obtusa* (Montagu, 1803)  
*South Sands*
  - *diaphana* Montagu, 1803  
*Trivia arctica* (Pulteney, 1799)  
*near Gilfer*
  - *fontinalis*  
*Physa fontinalis* (Linnaeus, 1758)  
*ditches and ponds Gumferston*
  - *hypnorum*  
*Aplexa hypnorum* (Linnaeus, 1758)  
*in a pond and brook near Penally*
  - *flexilis* Montagu, 1808  
*Velutina plicatilis* (O.F. Müller, 1776)  
*South sands*
  - *fluviatilis* Turton, 1807  
*Physa fontinalis* (Linnaeus, 1758)  
*rivulet near Gumferston*
  - *alba* Turton, 1825  
*Physa fontinalis* (Linnaeus, 1758)  
*D°\_ pools of water and ditches*
  - *aplysia*  
*Aplysia punctata* (Cuvier, 1803)  
*Rock pools of sea water Manorbeer*
  - *minuta*  
*Diaphana minuta* T. Brown, 1827  
*in fine sand*
  - *hyalina* Turton, 1834  
*Diaphana minuta* T. Brown, 1827  
*D°\_ and Caldy Island*
  - *catena*  
*Philine catena* (Montagu, 1803)  
*fine sand from D°\_*
  - *membranacea*  
*Pleurobranchus membranaceus* (Montagu, 1816)  
*Dredging*
- Voluta**
- V. *tornatilis*  
*Acteon tornatilis* (Linnaeus, 1758)  
*Saundersfoot sands, Sth Sands*
  - *denticulata*  
*Myosotella denticulata* (Montagu, 1803)  
*inlets of the sea on alga*
  - *ringens* Turton, 1819  
*Myosotella denticulata* (Montagu, 1803)  
*on Gumferston sea marsh*
  - *alba* Turton, 1819  
*Auriculinnella bidentata* (Montagu, 1808)  
*in sand from Caldy Island*
  - *bidentata*  
*Auriculinnella bidentata* (Montagu, 1808)  
*D°\_ and South Sands*
- Buccinum**
- B. *undatum*  
*Buccinum undatum* Linnaeus, 1758  
*taken in dredging & on rock*
  - *carinatum* variety of B. *undatum*  
*Buccinum undatum* Linnaeus, 1758
  - *lapillus*  
*Nucella lapillus* (Linnaeus, 1758)  
*on St Catherines Rocks &c*
  - *reticulatum*  
*Tritia reticulata* (Linnaeus, 1758)  
*Gilfer & Broad Haven*
  - *macula* Montagu, 1803  
*Tritia incrassata* (Strøm, 1768)  
*D°\_ and South Sands*
  - *minimum* Montagu, 1803  
*Chauvetia brunnea* (Donovan, 1804)  
*in sand from Caldy Island*
  - *terrestre* Montagu, 1803  
*Cecilioides acicula* (Müller, 1774)  
*''' of grass & moss nr Penally*
  - *obtusulum* Kanmacher, 1798  
*Cecilioides acicula* (Müller, 1774)  
*Gilfer Rocks, fry of B. undatum*
  - *breve* J Adams, 1797  
*Nucella lapillus* (Linnaeus, 1758)  
*in sand from Caldy Island*
  - *minutum* Pennant, 1777  
*Tritia incrassata* (Strøm, 1768)  
*in fine sand from Manorbeer*
  - *laeve* J Adams, 1797  
*Nucella lapillus* (Linnaeus, 1758)  
*D°\_ and sand from Caldy Island*
  - *variety of B. undatum with the volutions reversed*  
*Buccinum undatum* Linnaeus, 1758  
*Gilfer Rocks*
- Strombus**
- S. *pespelecani*  
*Aporrhais pespelecani* (Linnaeus, 1758)  
*South Sands & Milford Haven*
- Murex**
- M. *despectus* Linnaeus,  
A northern species so expect this is *Neptunea antiqua* Linnaeus, 1758



- on the coast between Fishguard and Tenby*
- *corneus* E.M. da Costa non Linnaeus  
*Colus gracilis* (E.M. da Costa, 1778)  
**D°\_ and South Sands**
  - *erinaceus* Linnaeus, 1758  
*Ocenebra erinaceus* (Linnaeus, 1758)  
**Gilfer & oyster boats**
  - *purpureus* Montagu, 1803  
*Raphitoma purpurea* (Montagu, 1803)  
**Dredging**
  - *linearis* Montagu, 1803  
*Raphitoma linearis* (Montagu, 1803)  
**D°\_ and South Sands**
  - *muricatus* Montagu, 1803  
*Trophonopsis muricata* (Montagu, 1803)  
**among refuse of oyster boats**
  - *turricula* Montagu, 1803  
*Propebela turricula* (Montagu, 1803)  
**D°\_ and South Sands**
  - *rufus* Montagu, 1803  
*Propebela rufa* (Montagu, 1803)  
**D°\_ D°\_**
  - *sinuosus* Montagu, 1803  
*Drillia sinuosa* (Montagu, 1803)  
This is not British so uncertain about what Lyons had.  
**D°\_ and Gilfer**
  - *costatus* Pennant, 1777  
*Mangelia costata* (Pennant, 1777)  
**Dredging**
  - *attenuatus* Montagu, 1803  
*Mangelia attenuata* (Montagu, 1803)  
**D°\_ and South Sands**
  - *gracilis* Montagu, 1803  
*Comarmondia gracilis* (Montagu, 1803)  
**oyster boats**
  - *nebula* Montagu, 1803  
*Bela nebula* (Montagu, 1803)  
**D°\_ and Gilfer**  
**D°\_ variety**  
**D°\_ D°\_**
  - *septangularis* Montagu, 1803  
*Haedropleura septangularis* (Montagu, 1803)  
**D°\_ and South Sands**
  - *tubercularis* Montagu, 1803  
*Cerithiopsis tubercularis* (Montagu, 1803)  
**Dredging**
  - *adversus* Montagu, 1803  
*Marshallora adversa* (Montagu, 1803)  
**oyster boats**
  - *reticulatus* E.M. da Costa, 1778  
*Bittium reticulatum* (da Costa, 1778)  
**common on sandy shores**
  - *minutissimus* Adams, 1797  
Not in MolluscaBase or Jeffreys  
**in sand from Caldy Island**
  - *bamffius* Donovan, 1804  
*Boreotrophon clathratus* (Linnaeus, 1767)  
**South Sands & dredging**
  - *gyrineus* Montagu, 1808  
This is not a British shell so what Lyons had is doubtful  
**fine sand from Caldy**
- ### Trochus
- T. zizyphinus** Linnaeus, 1758  
*Calliostoma zizyphinum* (Linnaeus, 1758)  
**Gilfer Rocks**
  - *tenuis* Montagu, 1803  
*Calliostoma granulatum* (Born, 1778)  
**Milford Haven and sea coast**
  - *tumidus* Montagu, 1803  
*Gibbula tumida* (Montagu, 1803)  
**affixed to stones and dredged**
  - *crassus* Pulteney, 1799  
*Phorcus lineatus* (da Costa, 1778)  
**adhering to rocks Caldy Island**
  - *magus* Linnaeus, 1758  
*Gibbula magus* (Linnaeus, 1758)  
**by dredging & at Milford**
  - *cinerarius* Linnaeus, 1758  
*Steromphala cineraria* (Linnaeus, 1758)  
**adhering to loose stones. dredge**
  - *umbilicatus* E.M. da Costa, 1778  
*Steromphala umbilicalis* (E.M. da Costa, 1778)  
**St Catherines Rocks**
  - *conulus* Linnaeus, 1758  
*Calliostoma conulus* (Linnaeus, 1758)  
This is a Mediterranean shell and doubtfully found at Tenby  
**dredged in the Bay**
- ### Turbo
- T. terebra** Linnaeus, 1758  
Not British so expect it is *Turritella communis* Risso, 1826  
**adhering to alga thrown upon the shore**
  - *cinctus* E.M. da Costa, 1778 **variety of T. terebra**  
As above  
**Milford Haven,**
  - *clathrus*  
*Epitonium clathrus* (Linnaeus, 1758)  
**on the shore Tenby & Laugharne**
  - *clathratulus*  
*Epitonium clathratulum* (Kanmacher, 1798)  
**D°\_ & Gilfer**
  - *elegantissimus* Montagu, 1803  
*Turbonilla lactea* (Linnaeus, 1758)  
**in sand from the South Sands**
  - *unicus* Montagu, 1803  
*Graphis albida* (Kanmacher, 1798)  
**D°\_ & fine sand from Caldy Island**
  - *littoreus* Linnaeus, 1758

- Littorina littorea* (Linnaeus, 1758)  
on *Gilfer Rocks & cr*
- *tenebrosus* Montagu, 1803  
*Littorina saxatilis* (Olivi, 1792)  
*D°\_ and Stackpole quay*
  - *rudis* Maton, 1797  
*Littorina saxatilis* (Olivi, 1792)  
on *rocks on the pier & Milford Haven*
  - *striatulus* E.M. da Costa, 1778  
*Alvania carinata* (da Costa, 1778)  
*sand from South Sands*
  - *vinctus* Montagu, 1803  
*Lacuna vincta* (Montagu, 1803)  
on *algae St Catherines Rock*
  - *canalis* Montagu, 1803  
*Lacuna vincta* (Montagu, 1803)  
*D°\_ & Gilfer*
- Turbo**
- T. crassior*  
*Lacuna crassior* (Montagu, 1803)  
*dredged and on the shore*
- *parvus*  
*Rissoa parva* (E.M. da Costa, 1778)  
*adhering algae St. Catherines Rock*
  - *costatus* J. Adams, 1797  
*Manzonina crassa* (Kanmacher, 1798)  
*D°\_ & in fine sand from Caldy Island*
  - *striatus* J. Adams, 1797  
*Onoba semicostata* (Montagu, 1803)  
*D°\_ D°\_ & South Sands*
  - *cimex*  
*Alvania cimex* (Linnaeus, 1758)  
*sand from South Sands*
  - *ventrosus*  
*Ecrobia ventrosa* (Montagu, 1803)  
on *the shores of Tenby and Laugharne*
  - *ulvae*  
*Peringia ulvae* (Pennant, 1777)  
*D°\_ & Milford Haven*
  - *pullus*  
*Tricolia pullus* (Linnaeus, 1758)  
*sand from Caldy Island and on algae*
  - *punctura*  
*Alvania punctura* (Montagu, 1803)  
*in fine sand from D°\_*
  - *ruber* J. Adams, 1797  
*Barleeia unifasciata* (Montagu, 1803)  
*South Sand & Manorbeer*
  - *vitreus*  
*Hyala vitrea* (Montagu, 1803)  
*D°\_ and Caldy Island*
  - *spiralis*  
*Spiralinella spiralis* (Montagu, 1803)  
*D°\_ & Lydstep sands*
  - *interstinctus*
- Parthenina interstincta* (J. Adams, 1797)  
*D°\_ & Caldy*
- *unidentatus*  
*Odostomia unidentata* (Montagu, 1803)  
on *oyster & other shells*
  - *plicatus*  
*Odostomia plicata* (Montagu, 1803)  
*D°\_ dredged & roots of algae*
  - *pallidus*  
*Turbo pallidus* Montagu, 1803 nom dub.  
on *oysters & cr*
  - *semicostatus*  
*Onoba semicostata* (Montagu, 1803)  
*D°\_ and Caldy Island sand*
  - *cingillius* Montagu, 1803  
*Cingula trifasciata* (J. Adams, 1800)  
*South Sands & from D°\_*
  - *quadrifasciatus* Montagu, 1803  
*Lacuna vincta* (Montagu, 1803)  
*D°\_ and St Catherines Rocks*
  - *interruptus* J. Adams, 1800  
*Rissoa parva* (da Costa, 1778)  
*dredged & South Sands*
  - *retiformis* Montagu, 1803  
*Alvania punctura* (Montagu, 1803)  
*fine sand from D°\_*
  - *fuscus*  
*Turbo fuscus* nomen dubium  
*in D°\_ from Tenby Pier washed ashore*
  - *sandvicensis* Turton in Montagu, 1803,  
*Turbo sandvicensis* Montagu, 1803 nom dub.  
*in sand from Caldy*
  - *albulus*  
*Pusillina inconspicua* (Alder, 1844)  
*D°\_ & from South Sands*
- Turbo**
- Turbo scriptus* J. Adams, 1797  
*Crisilla semistriata* (Montagu, 1808)  
*in fine sand from Caldy Island*
- T. subrufus*  
*Turbo subrufus* J. Adams, 1797 nom. dub.  
*D°\_ and South Sands*
- *fugosus* Montagu, 1803  
*Littorina saxatilis* (Olivi, 1792)  
*Rocks Manorbeer*
  - *fulgidus*  
*Eatonina fulgida* (J. Adams, 1797)  
*in fine sand from Caldy*
  - *semistriatus*  
*Crisilla semistriata* (Montagu, 1808)  
*D°\_ and South Sands*
  - *indistinctus*  
*Parthenina indistincta* (Montagu, 1808)  
*in sand from Caldy*
  - *insculptus* Montagu, 1803

- Ondina divisa* (J. Adams, 1797)  
in fine sand from D°\_
- *Rocks Leadstep*
- *ascaris*  
*Aclis ascaris* (Turton, 1819)  
in fine sand from South Sands
- *ambiguus* Linnaeus  
*Epitonium turtonis* (Turton, 1819) probably this species see Dillwyn, 1817, p. 855  
found at Tenby above thirty years ago and named by Col. Montagu Dr Turton's Dictionary, Turtonis  
*Land & Freshwater*
- Turbo muscorum*  
*Pupilla muscorum* (Linnaeus, 1758)  
under the upper stones of the loose built walls north side of the town
- *pupa marginata* T. chrysalis  
*Pupilla muscorum* (Linnaeus, 1758)  
Do\_ and near the river
- *sexdentatus*  
*Vertigo antivertigo* (Draparnaud, 1801)  
among the rejectimenta of the D°\_
- *carychium*  
uncertain identity  
under old timber nr Gumferston
- *elegans* J. Adams, 1797  
uncertain identity  
roots of ferns to the S. west of Tenby
- *fasciatus* Pennant, 1777  
*Cochlicella acuta* (O.F. Müller, 1774)  
*Burrows near Penally*
- *perversus*  
*Balea perversa* (Linnaeus, 1758)  
adhering to the trunks of trees
- *nigricans* Maton & Racket, 1807  
*Clausilia (Clausilia) rugosa* (Draparnaud, 1801)  
ivy grown walls
- *vertigo* Montagu, 1803  
*Vertigo angustior* Jeffreys, 1830  
under stones and moss
- Helix**
- H. stagnalis*  
*Lymnaea stagnalis* (Linnaeus, 1758)  
*Stackpole Court*
- *fragilis* Montagu, 1803  
*Lymnaea stagnalis* (Linnaeus, 1758)  
D°\_ in the extensive ponds
- *palustris*  
*Stagnicola palustris* (O.F. Müller, 1774)  
near Gumferston
- *fossarius* Montagu, 1803  
*Galba truncatula* (O.F. Müller, 1774)  
D°\_ in moist muddy ditches nr Penally
- *peregra*  
*Radix labiata* (Rossmässler, 1835)  
stagnant pools D°\_ D°\_
- *putris*  
*Succinea putris* (Linnaeus, 1758)  
in muddy places
- *auricularia*  
*Radix auricularia* (Linnaeus, 1758)  
*Kilgaren & Gumferston Rivers*
- *lutea* Montagu, 1803  
*Radix balthica* (Linnaeus, 1758)  
in the South Sands
- *limosa*  
*Radix balthica* (Linnaeus, 1758)  
in the brook near Gumferston
- *laevigata* Linnaeus, 1758  
*Velutina velutina* (O.F. Müller, 1776)  
on the shore & dredging
- *tentaculata*  
*Bithynia tentaculata* (Linnaeus, 1758)  
in the rivulet near Penally
- *lubrica*  
*Cochlicopa lubrica* (O.F. Müller, 1774)  
under stones, trunks of trees & ctr
- *polita*  
*Melanella alba* (E.M. da Costa, 1778)  
dredged and South Sands
- *labiosa*  
*Rissoa membranacea* (J. Adams, 1800)  
D°\_ and adhering to algae Gilter Rocks
- *petraea*  
*Melarhaphe neritoides* (Linnaeus, 1758)  
on rocks a little beneath high water mark
- *aspersa*  
*Cornu aspersum* (O.F. Müller, 1774)  
hedges and in old walls
- *nemoralis*  
*Cepaea nemoralis* (Linnaeus, 1758)  
*Burrows near Penally*
- *hortensis*  
*Cepaea hortensis* (O.F. Müller, 1774)  
gardens and hedges
- *virgata*  
*Ceriuella virgata* (E.M. da Costa, 1778)  
barren stony situations near the coast
- *cingenda*  
*Theba pisana* (O.F. Müller, 1774)  
Tenby marsh near cliffs
- *rufescens*  
*Arianta arbustorum* (Linnaeus, 1758)  
moist woods and shady places
- *hispidula*  
*Trochulus hispidus* (Linnaeus, 1758)  
in moss and under stones
- *lucida*



- Oxychilus cellarius* (O.F. Müller, 1774)  
swampy places ctr
- Helix**
- H. trochiformis**  
*Euconulus trochiformis* (Montagu, 1803)  
D°\_ under old timber near Gumferston
- *lacuna* Montagu, 1803  
*Lacuna parva* (E.M. da Costa, 1778)  
attached to algae Sr Catherine's rocks
- *caperata*  
*Candidula intersecta* (Poiret, 1801)  
dry banks near the coast
- *radiata* E.M. da Costa, 1778  
*Discus rotundatus* (O.F. Müller, 1774)  
D°\_ and on old walls near Penally
- *umbilicata*  
*Pyramidula umbilicata* (Montagu, 1803)  
on loose built walls near Penally
- *ericetorum* O.F. Müller, 1774  
*Helicella itala* (Linnaeus, 1758)  
sandy heaths
- *subcarinata*  
*Tornus subcarinatus* (Montagu, 1803)  
in fine sand from Caldy & ctr
- *depressa*  
*Skeneopsis planorbis* (Fabricius, 1780)  
D°\_ and from the South Sands
- *paludosa* E.M. da Costa, 1778  
*Vallonia pulchella* (O.F. Müller, 1774)  
wet swampy situations near Gumferston
- *crenella*  
*Vallonia costata* (O.F. Müller, 1774)  
D°\_ and near the Rivulet
- *cornea*  
*Planorbarius corneus* (Linnaeus, 1758)  
Milford Haven River
- *complanata*  
*Hippeutis complanatus* (Linnaeus, 1758)  
D°\_ and near Gumferston
- *carinata*  
*Planorbis carinatus* O.F. Müller, 1774  
D°\_ D°\_ near Penally
- *vortex*  
*Anisus vortex* (Linnaeus, 1758)  
D°\_ and Ditches Burrows
- *spirorbis*  
*Anisus spirorbis* (Linnaeus, 1758)  
ponds Stackpole
- *contorta*  
*Bathyomphalus contortus* (Linnaeus, 1758)  
D°\_ and Ditches
- *alba*  
*Gyraulus albus* (O.F. Müller, 1774)  
in a pond nr the Pembroke road
- *nautilea*
- Planorbis cristatus* Draparnaud, 1805  
D°\_ & near Gumferston
- *subulata*  
*Eulima glabra* (E.M. da Costa, 1778)  
in fine sand from Freshwater West
- *auricula*  
uncertain  
Gilter Rocks
- *lanthina fragilis*  
*Janthina janthina* (Linnaeus, 1758)  
"" after a gale
- Nerita**
- *N. litoralis*  
*Littorina obtusata* (Linnaeus, 1758)  
adhering to algae St. Catherines Rocks
- *pallidula*  
*Lacuna pallidula* (E.M. da Costa, 1778)  
D°\_ D°\_ & at Gilter
- *glaucina* Linnaeus ex auct  
probably *Euspira nitida* (Donovan, 1804)  
South and Laugharne sands
- *fluviatilis*  
*Theodoxus fluviatilis* (Linnaeus, 1758)  
Gumferston Rivulet adhering to stones
- *alba*  
probably juvenile *Euspira nitida* (Donovan, 1804)  
on the coast and Caldy
- *canrena* Linnaeus ex auct  
probably *Euspira nitida* (Donovan, 1804)  
D°\_ D°\_ in stomach of starfish
- *rufa*  
*Euspira montagui* (Forbes, 1838)  
on fuci at low water during spring tides
- *mammilla*  
probably *Euspira nitida* (Donovan, 1804)  
South Sands & Caldy
- Patella**
- *P. vulgata*  
*Patella vulgata* Linnaeus, 1758  
affixed to rocks North shore
- *pellucida*  
*Patella pellucida* Linnaeus, 1758  
adhering to the leaves of algae
- *fluviatilis*  
*Ancylus fluviatilis* O.F. Müller, 1774  
Rivulet near Gumferston
- *lacustris*  
*Acroloxus lacustris* (Linnaeus, 1758)  
Brook near Tenby & Stackpole ponds
- *ungarica*  
*Capulus ungaricus* (Linnaeus, 1758)  
dredged on oysters
- *fissura*  
*Emarginula fissura* (Linnaeus, 1758)

- *D°* \_ *between Tenby & Caldy*
- *apertura* Montagu, 1803  
*Diodora graeca* (Linnaeus, 1758)  
*in sand from south sands & Caldy*
- *graeca*  
*Diodora graeca* (Linnaeus, 1758)  
*oyster boats adhering to old shells*
- *caerulea* Montagu, 1803  
*Patella pellucida* Linnaeus, 1758  
*on the roots of algae St Catherines rocks*
- *D°* \_ *variety*  
*D°* \_ *D°* \_ & *Leadstep Rks*
- *granularis*  
? name does not apply to British shell  
*Rocks on the North Sands*
- *lutea*  
??  
*D°* \_ *in pools of water*

### Dentalium

- *D. entalis*  
*Antalis entalis* (Linnaeus, 1758)  
*Muscle Bank Gilter & S. Sands*
- *striatum* Montagu, 1803  
*Antalis dentalis* (L. 1758) doubtful not British  
*D°* \_ *D°* \_ *and dredged off Caldy*
- *imperfuratum*  
*Caecum imperfuratum* (Kanmacher, 1798)  
*on the shore fresh water Ba....*
- *glabrum*  
*Caecum glabrum* (Montagu, 1803)  
*in sand from Caldy Island*
- *laeve* Turton, 1819  
*Antalis vulgaris* (E.M. da Costa, 1778)  
*near Gilter rock*
- *labiatum* Turton, 1822  
*Antalis vulgaris* (E.M. da Costa, 1778)  
*D°* \_ *and South Sands*

### Serpula

Foraminifera / Polychaeta

- *S. spirorbis*  
*Laeospira borealis* (Daudin, 1800)  
*on stones, old shells & algae*
- *spirillum*  
*Serpula spirillum* Linnaeus, 1758  
*on some species of algae*
- *granulata*  
*Bushiella (Jugaria) granulata* (Linnaeus, 1767)  
*on the underside loose stones near Saundersfoot*
- *carinata*  
*Spirorbis carinatus* Daudin, 1800  
*on old valves of Arca pilosa & ct*
- *corrugata*  
*Spirorbis corrugatus* (Montagu, 1803)  
*on the slate rocks near Saundersfoot*

- *heterostrophia*  
*Janua heterostropha* (Montagu, 1803)  
*on oysters and other old shells & algae*
- *sinistrosa*  
*Serpula spirillum* Linnaeus, 1758  
*on lobsters and other animals*
- *minuta* Montagu, 1803  
*Janua heterostropha* (Montagu, 1803)  
*on Corallina & ct dredged*
- *lucida*  
*Serpula spirillum* Linnaeus, 1758  
*on Sertularia thrown upon the coast*
- *reversa*  
*Serpula reversa* Montagu, 1803  
*on shells crabs & stones*
- *vermicularis*  
*Serpula vermicularis* Linnaeus, 1767  
*attached its whole length*
- *triquetra*  
*Serpula triquetra* Linnaeus, 1758  
*adhering to stones, old shells & ctr*
- *complexa* Turton, 1819  
*Filograna implexa* Berkeley, 1835  
*dredged up off Caldy Island*
- *contortuplicata*  
*Serpula contortuplicata* Linnaeus, 1758  
*from the bottom of a brig*
- *lobata*  
*Serpula lobata* Montagu, 1803  
*on shells & in fine sand*
- *concamerata*  
*Eponides concameratus* (Montagu, 1808)  
*D°* \_ *D°* \_ & *attached to zoophytes*

### Vermiculum

Foraminifera / Polychaeta

- *V. incurvatum* Kanmacher, 1798  
*Spirorbis incurvatus* Turton, 1802  
*in fine sand South Sands*
- *pervium* Montagu, 1803  
*Spirorbis incurvatus* Turton, 1802  
*D°* \_ *D°* \_ & *from Caldy Island*
- *perforatum*  
*Serpula perforata* Walker & Jacob, 1798  
*in fine sand*
- *intortum*  
*Vermiculum intortum* Montagu, 1803  
*plentiful on the sandy shores*
- *subrotundum*  
*Miliolinella subrotunda* (Montagu, 1803)  
*D°* \_ & *from Caldy*
- *oblongum*  
*Triloculina oblonga* (Montagu, 1803)  
*in fine sand from the South Shore*
- *lacteam* Kanmacher, 1798  
*Vermiculum lacteam* Turton, 1802

- in very fine D° –*
- *striatum* Kanmacher, 1798  
*Serpula lagena* Turton, 1802  
*in fine sand not common*
  - *globosum*  
*Oolina globosa* (Montagu, 1803)  
*D° – very rare*
  - *laeve*  
*Reussoolina laevis* (Montagu, 1803)  
*in fine sand very rare*
  - *marginatum*  
*Fissurina marginata* (Montagu, 1803)  
*from south sands*
  - *retortum*  
*Serpula retorta* Walker & Jacob, 1798  
*D° – very rare*

### New shells found at Tenby by WL

- Chiton sixvalvis*  
Cannot find this name, was probably an aberrant specimen  
*under loose stones S. Sands*
- *Balanus. the conia Lyonsii of Dr Leach*  
This is *Conia Lyonsii* Leach ms in J. Sowerby, 1823.  
*Newmanella radiata* (Brug. 1789) Not British it is Caribbean  
*bottom of a vessel, animal alive*
  - B. sulcatus** Brug. 1789  
*Balanus balanus* Linnaeus, 1767  
*on the bottom of a vessel alive*
  - N° 1  
*D° – D° – Animal alive*
  - N° 2  
*D° – D° – D° –*
  - *Tenbiensis*  
a manuscript name  
*on shells slate & ctr*
  - insculptus*  
Cannot find this name  
*adhering to a piece of timber picked up in the Bay*
  - *Teredo sulcata*  
Cannot find this name  
*from a piece of wood drifted in the harbour*
  - *Mya striata Lyonsia striata of Dr Turton*  
*Lyonsia norwegica* (Gmelin, 1791)  
*S. sands, Animal alive*
  - *Mytilus*  
*in Tenby Pier Animal alive*
  - *Buccinum* N° 1  
*on the bottom of a vessel in Tenby Pier, Animal alive*
  - *B. N° 2*  
*Gilter Rocks*
  - *Nautilus auricula Auriculum Lyonsii of JG Jeffreys*  
This is a Foraminifera

- now *Cancris auricula* (Fichtel & Moll, 1798) cannot find *Lyonsii*
- *N. N° 1. N° 2. N° 3 & 4. 6. 7*  
*D° – fine sand South Sands*
  - *Turbo perforatus*  
Cannot find this name  
*in sand from D° –*
  - *T. crenatus*  
Cannot find this name  
*D° – and Caldy Island*
  - *Turbo succinus*  
Cannot find this name  
*in fine sand from Caldy*
  - *Turbo ater*  
Cannot find this name  
*D° – & South Sands*
  - *T. N° 1. 2. 3. 4. & 5*  
*D° – & Caldy some doubtful*
  - *Helix minima*  
Cannot find this name  
*very fine sand from D° –*
  - *H. cylindrica*  
Cannot find this name  
*near Tenby Pier on old timber covered with moss*
  - *Dentalium arcuatum*  
Cannot find this name
  - *Serpula N° 1 & N° 2.*  
*in boat rubbish after dredging*
  - *Vermiculum N° 1. 2. 3. 4. & 5*  
*in fine sand from S. sands and*

### Discussion

#### Lost histories and demise of significant natural history collections in local museums

Through the curation and involved research we have shown that the Lyons collection in Tenby is significant for a number of reasons.

> Primarily it contains type specimens of value to international taxonomic research and as such must be conserved and made available to the research community.

> Secondly the collection and archive give a historic perspective on the malacofauna some 200 years ago. As such the collection reflects changes in biodiversity through environmental changes.

> Thirdly there is a history of science element involved through the social networking of the collectors.

> Finally there is a perspective on Tenby as a sense of place both past and present.

This project has however revealed significant



degradation of the collection through progressive use as an exhibition resource. Repeated efforts were made to “upgrade” the collection and make it suitable for display and this was embarked upon very soon after its acquisition. This process partly disassociated the original data from the collection. Through changes in museological philosophies the roles of such collections have changed and after its removal from display all historic and scientific contexts were effectively lost. Such was this change in philosophy that it was not possible to gain state or local government funding to carry out the required curation and conservation. The collection had in essence lost all value to the current museological hegemony.

With some support from the Ruffer Foundation we have revealed the four significant features of the collection but having done so what future does this collection have?

“Too good for Tenby Museum!”

This would have been a common perspective from national museums some decades ago and recently there have been moves to focus natural history collections in so called hub museums. This had been a solution for small museums with collections but no relevant curatorial expertise, but this process only transfers the problem from one site to another. Such moves rarely if ever result in curatorial research or increases in accessibility. The lost histories remain lost primarily because there is insufficient expertise to expose the significance and interpret it for all potential audiences.

With current pressures on all museum curatorial departments (Mendoza, 2017) moving collections will not result in benefits with the only exception being if the said collection is in immediate danger of physical destruction.

There is much more potential in keeping collections in their contextual surroundings, as their stories have greater meaning to the local population and visitors alike (LGA & CLOA, 2017).

For a collection like that of Lyons physical security must be assured and appropriate resources must be forthcoming from our heritage sector. The scientifically important material can be accessible without its transfer to a national of hub museum. This is achieved by making such specimens available through the internet as by the “Mollusca Types Great British Museums” project (Ablett *et al.*, 2020). The biodiversity data and changes in the fauna can be used to create community projects. In the case

of Lyons and Tenby there is a current initiative to use the Lyons collection as a 200-year-old data set on which the current shell fauna can be compared. This project involves local schools and community groups.

The Lyons collection can also be used as a focus for Tenby as a sense of place in natural history, with many famous naturalists drawn to Tenby. By the end of the eighteenth-century Tenby as a maritime trading centre was in decline and much of its property decaying. William Paxton recognised the potential opportunity to develop the town as a spa resort and it was to a town in a state of change that William Lyons arrived. However, as well as a place beneficial to health, by the nineteenth century Tenby was visited by several natural historians and became a focus for marine biology. Margaret Davies (1981) traces the history of Victorian naturalists in Tenby among whom can be included Edward Donovan (1768–1837), James Scott Bowerbank (1797–1877), Thomas Henry Huxley (1825–1895) and Philip Henry Gosse (1810–1888) who wrote “*Tenby, A Seaside Holiday*” (Gosse, 1856). Donovan (1805: 389) wrote that “*no situation whatever can be more admirably adapted than the neighbourhood of Tenby for the study of the productions of the sea coast*” Whether this reputation attracted William Lyons to settle in Tenby we do not know but his shell collection came to the attention of Huxley who in 1850 remarked on the “*celebrated collection of the late Mr Lyons of Tenby*” (Huxley, 1900).

This project does however, highlight that subject expertise is required to correctly curate the collection and identify the lost stories. Such subject expertise cannot be permanently available in all museums holding conchological collections but such expertise should be available from larger museums on a peripatetic basis. This does require at least the national museums to maintain such expertise (Mendoza, 2017) a situation which is no longer secure.

Without the basic curation of collections their significance and potential stories will never be revealed and an irreplaceable legacy will eventually be lost.

## Appendix 1

### Kennard 1944

Table. Summary of the lots examined by Kennard (1944) linking Kennards citations to mu-

## ZOOLOGIE

seum registration numbers and current nomenclature. \*There are no locality data with this lot and therefore it does not agree with

Kennards citation, the label may have been lost.

Museum number	Kennard name	Page	Lyons label	Current name	Provenance
2001.129.1	<i>Succinea pfeifferi</i> Rossm	1944, 2: 75	<i>Helix oblonga</i>	<i>Oxyloma elegans</i> (Risso)	Lyons
2001.129.2	<i>Ena detrita</i> Müll	1944, 2: 75	<i>Helix detrita</i>	<i>Drymaeus elongatus</i> (Röding)	unknown
2001.129.3	<i>Subulina octona</i>	1944, 2: 75-76	<i>Helix octona</i>	<i>Subulina octona</i> (Bruguière)	unknown
2001.129.4	<i>Subulina octona</i>	1944, 2: 75-76	<i>Achatina octona</i>	<i>Subulina octona</i> (Bruguière)	Miss Pocock
2001.129.5	<i>Physa fontinalis</i>	1944, 2: 76	<i>Physa alba</i>	<i>Physa fontinalis</i> (Linnaeus)	? W. Turton
2001.129.6	<i>Chondras similis</i>	1944, 2: 76	<i>Pupa cinerea</i> var. <i>parvula</i>	<i>Solatopupa similis</i> (Bruguière)	unknown
2001.129.7	<i>Ena montana</i>	1944, 2: 76	<i>Bulimus montanus</i>	<i>Ena montana</i> (Draparnaud)	unknown
missing	<i>Ancylastrum fluviatile</i>	1944, 2: 76			
2001.129.8	<i>Aplexa hypnorum</i>	1944, 2: 76	<i>Bulla hypnorum</i>	<i>Aplexa hypnorum</i> (Linnaeus)	Lyons
*2001.129.10	<i>Ancylus lacustris</i>	1944, 2: 76	<i>Patella lacustris</i>	<i>Acroloxus lacustris</i> (Linnaeus)	
missing	<i>Ancylastrum fluviatile</i>	1944, 2: 76			
2001.129.12	<i>Opeas pumilum</i>	1944, 2: 76	<i>Cochlicella clavulus</i>		J.S. Miller
2001.129.13	<i>Punctum pygmaeus</i>	1944, 2: 76	<i>Helix umbilicata</i>	<i>Pyramidula umbilicata</i> (Montagu)	
2001.129.14	<i>Lymnaea glabra</i>	1944, 2: 76	<i>Helix octanfracta</i>	<i>Omphiscola glaber</i> (O.F. Müller)	W. Bingley
2001.129.15	<i>Lymnium tumidum</i>	1944, 2: 77	<i>Mya pictorum</i>	<i>Unio tumidus</i> Retzius	J. Walcott
2001.129.16	<i>Azeca goodalli</i>	1944, 2: 77	<i>Turbo tridens</i>	<i>Azeca goodalli</i> (Férussac.)	Gen. R.Bingham
2001.129.17	<i>Zua lubrica</i>	1944, 2: 77	<i>Helix lubrica</i>	<i>Cochlicopa lubrica</i> (O.F. Müller)	Gen. R.Bingham
2001.129.18	<i>Pupilla muscorum</i>	1944, 2: 77	<i>Turbo chrysalis</i>	<i>Pupilla muscorum</i> (Linnaeus)	Gen. R.Bingham

2001.129.19	<i>Lauria cylindracea</i>	1944, 2: 77	<i>Turbo muscorum</i>	<i>Lauria cylindracea</i> (E.M. da Costa)	Gen. R.Bingham
2001.129.20	<i>Ena montana</i>	1944, 2: 77	<i>Helix lackhamensis</i>	<i>Ena montana</i> (Draparnaud)	Gen. R.Bingham
2001.129.21	<i>Balea perversa</i>	1944, 2: 77	<i>Turbo perversus</i>	<i>Balea perversa</i> (Linnaeus)	Gen. R.Bingham
2001.129.22	<i>Marpessa laminata</i>	1944, 2: 77		<i>Cochlodina laminata</i> (Montagu)	Gen. R.Bingham
2001.129.23	<i>Vitrea crystallina</i>	1944, 2: 77	<i>Helix crystallina</i>	<i>Vitrea crystallina</i> (O.F. Müller)	Gen. R.Bingham
2001.129.24A	<i>Oxychilus cellarius</i>	1944, 2: 77	<i>Helix lucida/nitida</i>	<i>Oxychilus cellarius</i> (O.F. Müller)	Gen. R.Bingham
2001.129.24B	<i>Retinella nitidula</i>	1944, 2: 77	<i>Helix lucida/nitida</i>	<i>Aegopinella nitidula</i> (Draparnaud)	Gen. R.Bingham
2001.129.25	<i>Retinella radiatula</i>	1944, 2: 77	<i>Helix striatula</i>	<i>Nesovitrea hammonis</i> (Strøm)	Gen. R.Bingham
2002.95	<i>Candidula caperata</i>	1944, 2: 77	<i>Helix caperata</i>	<i>Candidula intersecta</i> (Poiret)	Gen. R.Bingham
2002.94	<i>Vortex lapicida</i>	1944, 2: 77	<i>Helix lapicida</i>	<i>Helicigona lapicida</i> (Linnaeus)	Gen. R.Bingham
2001.129.28	<i>Pomatias elegans</i>	1944, 2: 77	<i>Turbo elegans</i>	<i>Pomatias elegans</i> (Linnaeus)	Gen. R.Bingham
2001.129.29	<i>Acme lineata</i>	1944, 2: 77	<i>Turbo fuscus</i>	<i>Acicula lineata</i> (Draparnaud)	W. Bean
2001.129.30	<i>Acanthinula aculeata</i>	1944, 2: 77	<i>Helix spinulosa</i>	<i>Acanthinula aculeata</i> (O.F. Müller)	W. Bean
2001.129.31	<i>Retinella pura</i>	1944, 2: 77	<i>Helix nitidula</i>	<i>Aegopinella pura</i> (Alder)	W. Bean
2001.129.32	<i>Lymnaea glabra</i>	1944, 2: 77	<i>Helix octanfracta</i>	<i>Omphiscola glaber</i> (O.F. Müller)	W. Bean
2001.129.33	<i>Vitrea crystallina</i>	1944, 2: 77	<i>Helix crystallina</i>	<i>Vitrea crystallina</i> (O.F. Müller)	W. Bean
2001.129.34	<i>Vallonia costata</i>	1944, 2: 77	<i>Helix crenella</i>	<i>Vallonia costata</i> (O.F. Müller)	W. Bean
2001.129.35	<i>Punctum pygmaeum</i>	1944, 2: 77	<i>Helix pygmaea</i>	<i>Punctum pygmaeum</i> (Draparnaud)	W. Bean
2001.129.36	<i>Vertigo pusilla</i>	1944, 2: 77	<i>Helix vertigo</i>	<i>Vertigo pusilla</i> O.F. Müller	W. Bean



## ZOOLOGIE

2001.129.37	<i>Acanthinula lamellata</i>	1944, 2: 77	<i>Helix scarburgensis</i>	<i>Spermodea lamellata</i> (Jeffreys)	W. Bean
2001.129.39	<i>Planorbis crista</i>	1944, 2: 78	<i>Turbo nautilus</i>	<i>Gyraulus crista</i> (Linnaeus)	J.S. Miller
2001.129.40	<i>Theodoxus fluviatilis</i>	1944, 2: 78	<i>Nerita fluviatilis</i>	<i>Theodoxus fluviatilis</i> (Linnaeus)	J.S. Miller
2001.129.41	<i>Sphaerium rivicola</i>	1944, 2: 78	<i>Cardium corneum</i>	<i>Sphaerium rivicola</i> (Lamarck)	J.S. Miller
2001.129.42	<i>Opeas pumilum</i>	31944, 2: 78	<i>Helix cochlicella</i>	<i>Opeas hannense</i> (Rang)	J.S. Miller
2001.129.43	<i>Acanthinula lamellata</i>	1944, 2: 78	<i>Helix holosericea</i>	<i>Spermodea lamellata</i> (Jeffreys)	J.S. Miller
2001.129.44	<i>Helix subrufescens</i>	1944, 2: 78	<i>Helix subrufescens</i>	<i>Zenobiella subrufescens</i> (J.S. Miller)	J.S. Miller
2001.129.45 mount only	<i>Vertigo anglica</i>	1944, 2: 78			J.S. Miller
2002.94	<i>Theodoxus fluviatilis</i>	1944, 2: 78	<i>Nerita fluviatilis</i>	<i>Theodoxus fluviatilis</i> (Linnaeus)	Rev. Goodall
2002.92	<i>Vertigo pygmaea</i>	1944, 2: 78	<i>Turbo 6-dentatus</i>	<i>Vertigo pygmaea</i> (Draparnaud)	Rev. Goodall
2001.129.48	<i>Azeca goodalli</i>	1944, 2: 78	<i>Turbo tridens</i>	<i>Azeca goodalli</i> (Férussac)	Rev. Goodall
missing	<i>Vitrea crystallina</i>	1944, 2: 79			L. Jenyns
2001.129.50	<i>Planorbis planorbis</i>	1944, 2: 79	<i>Helix planorbis</i>	<i>Planorbis planorbis</i> (Linnaeus)	T. Rackett?
2001.129.51	<i>Planorbis albus</i>	1944, 2: 79	<i>Helix alba</i>	<i>Gyraulus albus</i> (O.F. Müller)	T. Rackett?
2001.129.52	<i>Clausilia rugosa</i>	1944, 2: 79	<i>Turbo nigricans</i>	<i>Clausilia rugosa</i> (Draparnaud)	T. Rackett?
2001.129.53	<i>Laciniaria biplicata</i>	1944, 2: 79	<i>Turbo biplicata</i>	<i>Alinda biplicata</i> (Montagu)	T. Rackett?
2001.129.54	<i>Marpessa laminata</i>	1944, 2: 79	<i>Turbo laminatus</i>	<i>Cochlodina laminata</i> (Montagu)	T. Rackett?
2001.129.55	<i>white var</i>	1944, 2: 79	<i>Turbo laminatus</i>	<i>Cochlodina laminata</i> (Montagu)	T. Rackett?



Fig. 38. Reproduction of the lithograph "Conchology of Tenby" by Charles Norris, 1813. Original size. From the archives of the Tenby Museum.

## Appendix 2

### Norris's *Conchology of Tenby*

The Mr Norris, who sent specimens of *Lyonsia striata* to Montagu, was Charles Norris of Tenby (1779-1885) (Norris, 1966). Norris was a prolific topographical etcher (Tipton, 1997) who in 1813 had made a print entitled "Conchology of Tenby" (Fig. 38) and we like to believe that he drew on the Lyons collection for his specimens.

### Acknowledgements

P.G. Oliver wishes to express his gratitude to all of the staff, volunteers and trustees of the Tenby Museum for their hospitality and enthusiasm during his visits. I must also acknowledge the support of the John Ellerman Foundation through their 2019 grant to the National Museum of Wales to database Molluscan type specimens in UK and Ireland.

We must acknowledge the Art Fund for a Jonathan Ruffer curatorial grant which has aided the training of volunteers and staff of Tenby Museum and the general curation of the Lyons Collection.

We also wish to thank those who discussed the

type status of some of the shells, Ben Rowson and Harriet Wood of Amgueddfa Cymru-National Museum of Wales and Jon Ablett and Andreia Salvador of the Natural History Museum, London.

Matt Williams of the Bath Royal Literary and Scientific Institution and Richard Preece of the Zoological Museum University of Cambridge in trying to locate the second Lyons collection. To Peter Dance (author of *A History of Shell Collecting*) for help in attempting to track down some of the secondary collectors.

We also thank June Chatfield and Jon Ablett for their helpful reviews of this paper.

### References

ABLETT J., BROWN C., GALLICHAJ J., GORDON D., HOLMES A. M., HUNTER T., MACHIN R., MORGENROTH H., OLIVER P. G., PETTS R., PYE S., REILLY M., ROWSON B., SALVADOR A., SUTCLIFFE R., TURNER J. A., WOOD H. 2019. *Mollusca Types in Great Britain*. Amgueddfa Cymru-National Museum Wales / Natural History Museum. Available online at <https://gbmolluscatypes.ac.uk> [Accessed: 2 March 2020].

ALDER J., 1830. A catalogue of the land and

- freshwater testaceous Mollusca found in the vicinity of Newcastle upon Tyne with remarks. *Transactions of the Natural History Society of Northumberland, Durham and Newcastle upon Tyne*, 1: 26–41.
- ALDER J., 1848. Catalogue of the Mollusca of Northumberland and Durham. *Transactions of the Tyneside Naturalist's Field Club*, 1: 97–209.
- ANONYMOUS, 1831. Memoir of the late J. S. Miller, A.L.S. Curator of the Museum of the Bristol Philosophical Institution. *The Philosophical Magazine and Annals of Philosophy*, Ser. 2, 9: 4–7.
- BOURNE M. A., 1843. *A guide to Tenby and its neighbourhood, historical and descriptive comprising notices of their chief objects of interest and attraction*. Spurrell, Carmarthen, 94 pp.
- BROWN T., 1827. *Illustrations of the conchology of Great Britain and Ireland. Drawn from nature*. W.H. Lizars and D. Lizars, Edinburgh and S. Highley, London, 144 pp., 52 pls.
- BROWN T., 1844. *Illustrations of the Recent Conchology of Great Britain and Ireland, with the description and localities of all the species, marine, land, and fresh water*. Ed. 2. London: Smith, Elder & Co. Drawn and Coloured from Nature. Second Edition, Greatly Enlarged.
- COURTNEY W. P., 1886. William Bingley. *Dictionary of National Biography*, 1885-1900 (1886).
- DANCE S. P., 1986. *A history of shell collecting*. Brill- Backhuys, Leiden, 265 pp.
- DAVIES M., 1981. Victorian Naturalists in Tenby. *The Pembrokeshire Historian*, 7: 1623.
- DEAN J. D., 1936. Conchological cabinets of the last century. *Journal of Conchology*, 20: 225–252.
- DONOVAN E., 1802. *The natural history of British shells: including figures and descriptions of all the species hitherto discovered in Great Britain, systematically arranged in the Linnean manner, with scientific and general observations on each*. 5 volumes, London, printed for the Author, and for F. and C. Rivington, Vol. 4: pls 109-126.
- DONOVAN, E., 1805. *Descriptive Excursions through South Wales and Monmouthshire, in the Year 1804, and the Four Preceding Summers*. Volume 2. London, Printed for the author, 396 pp.
- FLEMING J., 1828. *A history of British animals, exhibiting the descriptive characters and systematical arrangement of the genera and species of quadrupeds, birds, reptiles, fishes, Mollusca, and Radiata of the United Kingdom; including the indigenous, extirpated, and extinct kinds, together with periodical and occasional visitors*. Edinburgh, Bell & Bradfute / London, James Duncan. i-xxii, 1–565 pp. + corrigenda.
- FORBES E. & HANLEY S. C. 1848–1853. *A history of British Mollusca and their shells*. London, van Voorst. Vol. 1: i-lxxx [1853], 1-486 [1848], pl. A-W, AA-ZZ, AAA-ZZZ [dates uncertain]; Vol. 2: 1-480 [1 dec. 1849], 481-557 [1850]; Vol. 3: 1-320 [1850], 321-616 [1851]; Vol. 4: 1-300 [1852], pl. 1-114F [dates uncertain].
- GOSSE P. H., 1856. *Tenby: a seaside holiday*. J. van Voorst, London, 258 pp.
- GRAY J. E., 1847. On the classification of the British Mollusca by W.E. Leach. *Annals and Magazine of Natural History*, ser. 1, 20: 267–273.
- GRAY J. E., 1852. *Molluscorum Britanniae, Synopsis of the Mollusca of Great Britain*. John van Vorst, London, xvi. 376 pp.
- HARRISON K. & SMITH E., 2008. Rifle-green by Nature. A Regency Naturalist and his Family, William Elford Leach. *Ray Society Monographs*, 171: 621 pp.
- HUXLEY, L. 1900. *The Life and Letters of Thomas Henry Huxley*. 2 vols, London, Macmillan.
- JACKSON J. W., 1944. Captain Thomas Brown. *Memoirs of the Manchester. Literary & Philosophical Society*, 86: 1–28.
- JEFFREYS J. G., 1830. A synopsis of the testaceous pneumonobranchous Mollusca of Great Britain. *Transactions of the Linnean Society of London*, 16: 323–392.
- JEFFREYS J. G., 1862–1869. *British Conchology*. London, van Voorst : Vol. 1: [CXIV + 341 [1862]. Vol. 2: pp. 479 [1864]. Vol. 3: pp. 394 [1865]. Vol. 4: pp. 487 [1867]. Vol. 5: pp. 259 [1869]]
- KAAS P., 1985. The genus *Acanthochitona* Gray, 1821 (Mollusca, Polyplacophora) in the north-eastern Atlantic Ocean and in the Mediterranean Sea, with designation of neotypes of *A. fascicularis* (L. 1767) and of *A. crinita* (Pennant, 1777). *Bulletin du Muséum National d'Histoire Naturelle (section A Zoologie)*, (4) 7 (3): 579–603.
- KENNARD A. S., 1944. The Lyons collection in the Tenby Museum. *Journal of Conchology*, 22: 74–79.
- LASKEY J., 1811. Account of North British Testacea. *Memoirs of the Wernerian Natural History Society*, 1: 370–414.
- LGA & CLOA, 2017. *People, culture, place. The role of culture in placemaking*. Local Government Association and Chief Cultural and Leisure Officers Association. London, 29 pp.



- LYNE G. L., 1983. Lewis Dillwyn's visit to Kerry, 1809. *Journal of the Kerry Archaeological and Historical Society*, 15-16: 83–111.
- MARSHALL J. T., 1893. Additions to 'British Conchology' [Part I]. *Journal of Conchology*, 7: 241–265.
- MARSHALL J. T., 1911-1912. Additions to British Conchology. Part VII. *Journal of Conchology*, 13: 179–190 [April 1911]; 192–209 [July 1911]; 223–231 [October 1911]; 294–306 [April 1912], 324–338 [July 1912].
- MATON W.G. & RACKETT T., 1804. An historical account of testaceological writers. *Transactions of the Linnean Society of London*, 7: 119–244.
- MATON W.G. & RACKETT T., 1807. A descriptive catalogue of the British Testacea. *Transactions of the Linnean Society of London*, 8: 17–250.
- MCANDREW R. & FORBES E., 1847. Notices of new or rare British animals observed during cruises in 1845 and 1846. *Annals and Magazine of Natural History*, 19: 96–98.
- MCGHIE H. A., 2008. Catalogue of type specimens of molluscs in the collection of The Manchester Museum, The University of Manchester, UK. *ZooKeys*, 1: 1-46. doi: <https://doi.org/10.3897/zookeys.4.32>.
- MCMILLAN N. F. & GREENWOOD, E. F., 1972. The Beans of Scarborough; a family of naturalists. *Journal of the Society for the Bibliography of natural History*, 6(3): 152–161.
- MENDOZA N., 2017. *The Mendoza Review: an independent review of museums in England*. Department of Digital, Culture, Media and Sport. London. 110 pp.
- MILLER J. S., 1822., A list of the freshwater and landshells occurring in the environs of Bristol, with observations. *Annals of Philosophy, new series*, 3: 376–381.
- MOLLUSCABASE, 2020. *Lyonsia norwegica* (Gmelin, 1791). MolluscaBase, Accessed at: <http://www.molluscabase.org/aphia.php?p=taxdetails&id=140291> on 2020-04-13.
- MONTAGU G., 1803. *Testacea Britannica or Natural History of British Shells, Marine, Land, and Fresh-Water, Including the Most Minute: Systematically Arranged and Embellished with Figures*. J. White, London, Vol. 1, xxxvii + 291 pp.; Vol. 2, pp. 293–606, pl. 1–16.
- MONTAGU G., 1808. *Supplement to Testacea Britannica with Additional Plates*. Woolmer, Exeter. v + 183 pp., pl. 17–30.
- MONTAGU G., 1816. An account of some new and rare marine British shells and animals. *Transactions of the Linnean Society of London*, 11(2): 179–204, pl. 12–14.
- NBN GATEWAY, 2020. *Opeas hannense* (Rang, 1831). <https://species.nbnatlas.org/species/NHMSYS0020528238>. Accessed 14 April 2020.
- NORRIS U., 1966. "Charles Norris, Tenby Artist, and his Family". *Cylchgrawn Llyfrgell Genedlaethol Cymru (The National Library of Wales Journal)*, 14 (4): 489–496.
- OLIVER P. G. & MORGENROTH H., 2018. Additional Type and other Notable specimens of Mollusca from the Montagu Collection in the Royal Albert Memorial Museum & Art Gallery, Exeter. *Zoosystematics and Evolution*, 94(2): 281–303.
- OLIVER P. G., 2015. Old shell collection casts new light on an alien species. The Dark False Mussel (*Mytilopsis leucophaeata*) may have been in Britain as early as 1800. *Journal of Conchology*, 42(1): 63–66.
- OLIVER P. G., MORGENROTH H. & SALVADOR A., 2017. Type specimens of Mollusca described by Col. George Montagu in the Royal Albert Memorial Museum & Art Gallery, Exeter and The Natural History Museum, London. *Zoosystematics and Evolution*, 93 (2): 363–492.
- PREECE R. C. & SPARKS T. H., 2012. *Fauna Cantabrigiensis*. London: The Ray Society Publications. 234 pp.
- SHERBORN C. D., 1922–1932. *Index Animalium sive Index Nominum quae ab A.D. MDCCLVIII Generibus et Speceibus Animalium Impositi sunt*. 10 vols. Cambridge University Press, London, cxlvii + 7056 pp.
- SOWERBY G. B. I, 1821-1834. *The genera of recent and fossil shells, for the use of students, in conchology and geology*. London. Published in 42 numbers. Vol. 1, pls 1-126 [1821-1825]; vol. 2, pls 127-262 + text (unpaginated) [1825-1834]. London: Sowerby.
- SOWERBY J., 1812. *The mineral conchology of Great Britain; or coloured figures and descriptions of those remains of testaceous animals or shells, which have been preserved at various times and depths in the earth*. [Vol. I]. London, privately published, pp. i-vii, 9-234 + index [2 pp.], pl. 1-102.
- SOWERBY J., 1818. *The mineral conchology of Great Britain; or coloured figures and descriptions of those remains of testaceous animals or shells, which have been preserved at various times and depths in the earth*. [Vol. II]. London, privately published, pp. 1-235 + index, errata

- and addenda [3 pp.] + supplementary index to vol. II, pp. 240-251; pl. 103-233.
- TIPTON J. E., 1997. *Charles Norris, 1779-1858, and his legacy to Tenby*. John Tipton. 13 pp.
- TORRENS H. S., 1976. Fate of the Walcott geological collection. *Newsletter of the Geological Curators Group*, 1/6: 291–293.
- TORRENS H. S., 2004. Walcott, John (1754- 1831), naturalist. *Oxford Dictionary of National Biography*. doi: <https://dx.doi.org/10.1093/ref:odnb/53899>.
- TURTON W., 1819. *A Conchological Dictionary of the British Islands*. J. Booth, London, xxvii + 272 pp., 28 pls.
- TURTON W., 1822. *Conchylia insularum britannicarum*. London: Nattali, and Leicester: Combe. xviii + 280 pp., 20 pls.
- TURTON W., 1826. Description of some new British shells. *Zoological Journal*, 2: 361–367.
- TURTON W., 1831. *A manual of the land and fresh-water shells of the British Islands, arranged according to the more modern system of classification; and described from perfect specimens in the author's cabinet: with coloured plates of every species*. Longman, Rees, Orme, Brown, & Green, London, viii + 152 + 16 pp.
- TURK S., 1979. Conchology, An inherited or acquired characteristic. *The Conchologists' Newsletter*, 68: 121–122.
- WATKINS M. G. & DAVIES G. J., 2004. Rackett, Thomas (1755- 1840). *Oxford Dictionary of National Biography*. doi: <https://doi.org/10.1093/ref:odnb/22972>.