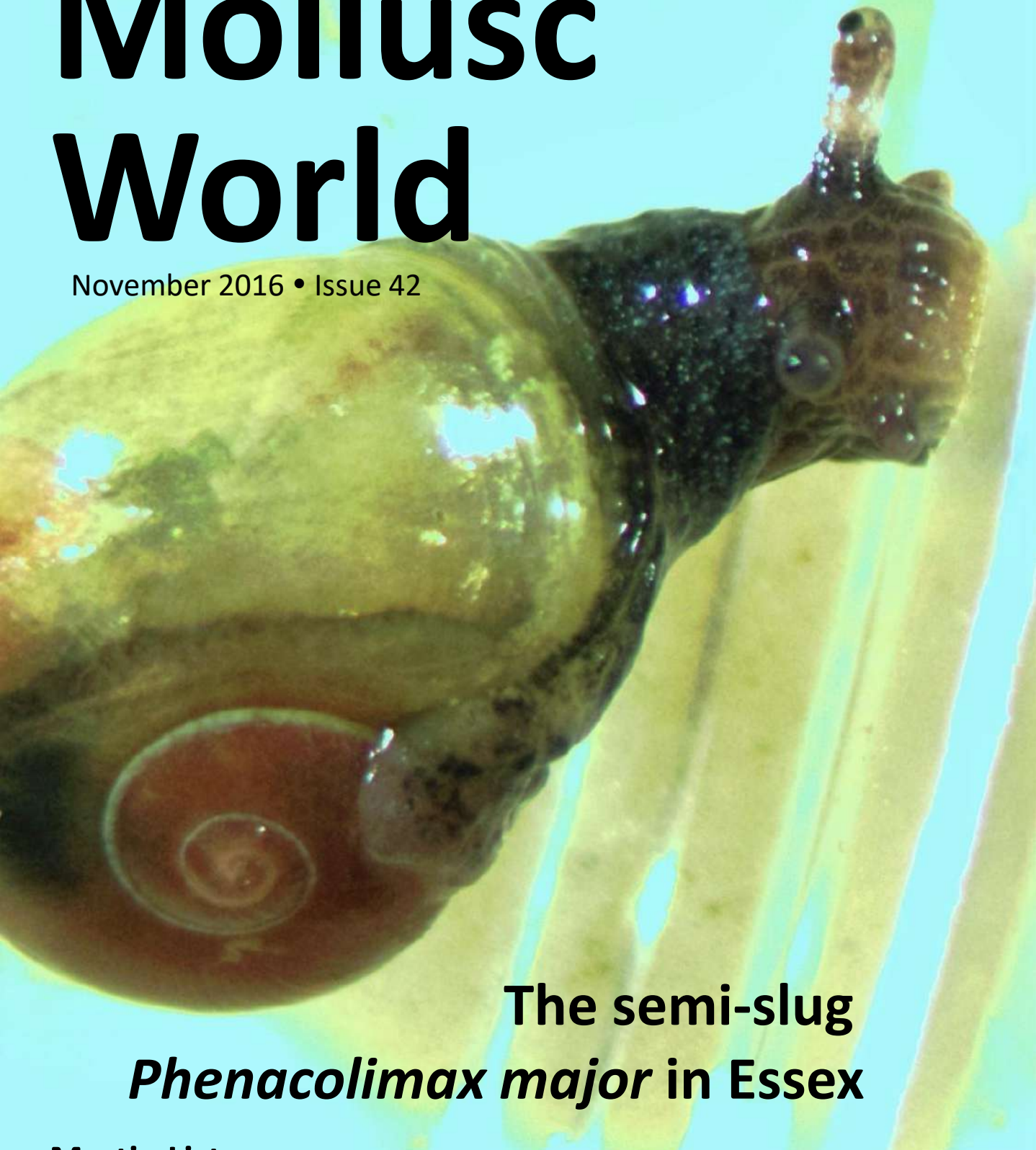


Mollusc World

November 2016 • Issue 42



The semi-slug *Phenacolimax major* in Essex

Martin Lister
Pioneer Conchologist

Mollusc use by the
Xhosa tribe



The
Conchological
Society
of Great Britain & Ireland

Helping to understand, identify, record and conserve molluscs

Mollusc World

This magazine is intended as a medium for communication between Conchological Society members (and subscribers) on all aspects of molluscs, in addition to the material found on our web site where a number of back copies are available for viewing. Mollusc World will also be of interest to all those enquiring about this subject or the work of the Society.

We welcome all contributions in whatever form they arrive (see page 31 for further details).

From the Hon. Editor

Firstly, a big thank you to those who sent in articles for this issue. It is a pleasure to include in this issue an article by Maureen Moore which includes some valuable observations of mollusc use by the Xhosa peoples of South Africa in the 1970s. Then Peter Dance celebrates the 50th anniversary of his classic book *A History of Shell Collecting* by way of a fascinating anecdote. Coming up to date there are reports from three of our field meetings that took place this year, which gives me the opportunity to thank all those who have taken time and commitment to organise and attend these. Turnout at these meetings has been varied, according to the availability of members, but even where attendees were few, some interesting records were made. Keep up the good work and start planning for next year!

December sees the launch of Volume 133 of the Collins New Naturalist series: *Slugs and Snails* by Robert Cameron. This long-anticipated book by a past Hon. President of this Society should be on all your Christmas lists!

Following my short piece about the Society's archives in issue 41, Gene Coan of Florida reminded me that there is a third article relating to the Society's history: Norris, A. (1982) The Conchological Society of Great Britain and Ireland: the early years. *The Naturalist* 107(963): 131-134.

Please note that due to a recent house move I have a new address for 'snail mail' correspondence, which can be found with other contact details on page 31.

Peter Topley



Participants enjoying a Conchological Society field meeting to Lower Winskill Farm (see p. 29). (photos: Sonia & Terry O'Connor)

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Printed by Short Run Press, Exeter, EX2 7LW.

Front Cover: *Phenacolimax major* from Copperas Wood, Essex. (see page 3) (photo: Peter Topley)

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Hon. Treasurer

This Society cannot run without the essential and valuable work of a treasurer. If you are concerned about our future and might be interested in supporting us by taking up this voluntary role at some stage to become part of the heart of our work, please contact us. Our current Hon. Treasurer, Nick Light (contact details see page 31), will be happy to explain what is involved.

A Significant New Record.

Field meeting to the Harwich area, Essex. 9th April 2016.

Simon Taylor

The vast majority of the coast of Essex, indeed the entirety of East Anglia from the Thames estuary to The Wash, is based on soft geology resulting in unconsolidated shores providing habitat mainly for infauna. The chalk outcrops in some places provide something resembling a rocky shore environment, whereas at Harwich there are horizons of cement stones within the London Clay (often referred to as the Harwich Stone Band) outcropping on the foreshore and providing a rare example of almost typical hard-geology shore conditions with extensive algal cover. Hence when asked to arrange a local excursion this emerged as one of my prime candidates. It is also one of the Anglian sites where specimens of the tiny Pyramidellid gastropod *Noemiamea dolioliformis* have been found in the past, associated with colonies of the tube-forming polychaete worms *Sabellaria* (Killeen & Light, 2000).

Taking advantage of a good spring tide made an early start imperative. Coupled with a less than promising weather forecast (which unfortunately proved to be rather accurate) the upshot was that although the meeting was billed as being held jointly by the Conchological Society and the Essex Field Club, only three hardy souls actually made the trip: myself; Field Club member Sarah White; and the Society's President Peter Topley, who took the opportunity to spend the whole weekend in the area, including some exploration of old family connections to Harwich and Dovercourt. With full waterproof gear donned, and with further insulation against the cold underneath, we trudged bleakly along the still somewhat twilight promenade towards the breakwater. The shore was already well exposed, there being just over an hour before low water, so we were able to head well out and start surveying immediately (figure 1).



figure 1: Sarah and Peter, dressed for the weather, on the shore at Harwich.

The section of shore with the best Stone Band exposure lies immediately north of the breakwater and, with coastal and old military defences to the landward side, the vista is dominated by the huge container port of Felixstowe just a mile or so across the mouth of the river Orwell (figure 2).



figure 2: Simon on the shore with Felixstowe container port on the horizon. (photo: Peter Topley)

Possibly connected with the continuous efforts to maintain a clear channel for the increasingly large cargo vessels visiting the port, parts of the upper foreshore were covered by banks of muddy silt which in places had smothered the hard geology and the associated flora and fauna. There remained, however, extensive areas of algal cover with thickets of the brown seaweed *Ascophyllum nodosum* (hosting *Littorina obtusata*) grading into *Fucus serratus* (with *Littorina fabalis*) and then into the smaller red algae, with sparse clumps of kelp at low water.

As is often the case in parts of the southeast, many of the dominant larger shore molluscs were alien species which have become established: slipper limpets (*Crepidula fornicata*) (figure 3); Japanese carpet shells (*Ruditapes philippinarum*) (in the usual array of attractive shell patterns) (figure 4); and the Pacific oyster *Crassostrea gigas*, (figure 5) which is becoming a serious shore pest in some areas although at the same time provides further solid substrate for epifaunal organisms. Live specimens of the native oyster *Ostrea edulis* were also present (figure 6).



figure 3: Stacks of *Crepidula fornicata* (length 15-40 mm), Harwich.



figure 4: *Tapes philippinarum* (width c. 60 mm), Harwich.



figure 5: *Crassostrea gigas* (length c. 12 – 20 cm). Living and dead shells on the upper shore, Harwich.

(photos: Peter Topley)



figure 6: A large *Ostrea edulis*, living on the lower shore, Harwich. (photo: Peter Topley)

Searching amongst the weed and stones near the LWST mark produced two nudibranchs, *Ancula gibbosa* and *Onchidoris muricata* (figure 8), while weed and holdfast samples were taken for later processing and held several species including *Hiatella arctica* and *Musculus discors*.



figure 7: The seaslugs *Ancula gibbosa* (above) and *Onchidoris muricata* (below) found at LWST, Harwich. (photos: Peter Topley)

In places on the shore there are softer bands of more typical London Clay between the harder horizons, often riddled with numerous borings. At times, particularly near the water's edge as the tide turned, squirts of water would shoot out of some of the borings. Investigation revealed the culprits not to be razor shells (*Ensis* sp.) (although shells of *Ensis directus* were found on the beach) but *Pholas dactylus* and *Barnea candida*. Also notable was live *Parvicardium exiguum*, and some small samples of *Sabellaria* marine polychaete worms were taken in the hope of yielding the pyramidellid snail *Noemiamea dolioliformis* which they indeed did, albeit a single specimen.



figure 8: Simon examining *Littorina saxatilis* on the upper shore sea defences, Harwich. (photo: Peter Topley)



figure 9: *L. saxatilis* on sea defences, upper shore, Harwich. (photo: Peter Topley)

In total 33 molluscan taxa were recorded but, all too quickly, the tide began to cover the shore and so, stopping only to investigate the *Littorina saxatilis* population on the splash zone sea defences (figures 8 and 9), we headed back onto what could barely be called 'dry' land given the weather conditions. Dripping, and with hands cramped by cold, the Station Café beckoned us and suitably restored with "mega breakfast" and cake we were able to face the second part of the day's itinerary.

As the low tide was so early, it had seemed appropriate to schedule a visit later in the day to some nearby woodlands to investigate the non-marine fauna. Stour Wood and Copperas Wood are respectively RSPB and Essex Wildlife Trust reserves on the southern shores of the picturesque Stour estuary between Essex and Suffolk. Both are ancient woodland, principally consisting of sweet chestnut and extensively coppiced historically, with a diverse understorey flora; our early April visit was heralded by large swathes of the floor of Stour Wood in particular being carpeted with the pinkish white of wood anemones (*Anemone nemorosa*) (figure 9).



figure 9: Stour Wood RSPB reserve, carpeted with wood anemones. (photo: Peter Topley)

The sweet chestnut leaves create a thick litter but the upper layer can be dry. There had been little rainfall in the weeks prior to our visit and despite the downpour on the day the woodland floor was still rather dry under the top layer of leaves, but burrowing into the litter or turning well embedded or rotting logs soon revealed a reasonable diversity of snails and slugs. Sarah proved to have a knack for finding specimens and in a short time the Stour Wood species list was into the teens, with *Discus rotundatus*, *Oxychilus alliarius* and *Arion intermedius* common, as one would expect, and also a good number of *Vitrina pellucida*.



figure 10: *Lehmannia marginata* in Copperas Wood.
(photo: Peter Topley)

It is but a short walk of a few hundred metres east alongside the Harwich-to-Colchester railway line from Stour Wood to Copperas Wood (“Copperas” refers to the iron pyrites nodules which erode out of the London Clay in the area and were extensively harvested in the past, forming the basis of a significant pre-industrial revolution chemical industry (George, 2015)). On the way we spotted several *Lehmannia marginata* taking advantage of the wet weather to climb hornbeams (figure 10). Once there, the hunting was initially less successful than in Stour Wood but a large pile of logs one the corner of two paths proved to be very fruitful habitat. It was here that Peter seemed to take considerable interest in the *V. pellucida* and eventually aired his thought that some of them may instead be *Phenacolimax major*; they seemed darker and flatter and the mantle flap certainly looked to extend almost to the protoconch when the animal was fully extended (figures 11 to 13 and front cover).

Eventually the species count for Copperas Wood made it into the teens too, although the pond we found yielded nothing other than juvenile *Lymnaea stagnalis*, and the decision was made to head off and look in more detail at the semislugs. Samples of *P. major* from both woods were subsequently examined under the microscope, photographed and later confirmed by various sources including the Society’s own Non Marine Recorder, Adrian Norris; our Secretary, Rosemary Hill, who has extensive experience of the species; and Ben Rowson at the National Museum of Wales. While the species is recognised as an indicator of ancient woodland (Kerney, 1999; Rowson et al., 2014), these records represent a significant extension of the distribution of the species, being the first known from East Anglia. Although historically Essex is not as thoroughly studied as many areas, how the species could have remained unnoticed in two extensively studied nature reserves remains a slight mystery; perhaps it has somehow been recently introduced or possibly the reason is that live adults of the species tend only to be found in a limited time window during spring and early summer (Rowson et al., 2014). Suffolk, the subject of rather more detailed past molluscan investigation (Killeen, 1992) and visible just across the estuary from the northern sides of both woods, has no reported occurrences of the species. Certainly it was present in reasonable numbers in both woods, given the relative ease with which it was found by a small party in less than ideal conditions. Its presence has been reported to both the RSPB

and Essex Wildlife Trust and will be documented locally (Taylor, 2016 in press), so perhaps yet further records will be forthcoming.



figures 11 to 13: Copperas Wood habitat of *Phenacolimax major* and specimens.
(photos: Peter Topley)

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Presidential Address delivered at the Conchological Society AGM, Natural History Museum, London, 16th April 2016

I first read about Martin Lister many years ago in Peter Dance’s book ‘Shell Collecting, An Illustrated History’ (Dance, 1966). Dance wrote that it was in Martin Lister that ‘we first observe a sustained scientific approach to the study of molluscs’, and he includes an engraving from what he described as ‘the first of the major shell iconographies’. The illustration is of a South American landsnail now called *Megalobulimus oblongus*, alongside its large egg and a recently emerged young shell (figure 1). The illustration is from Lister’s *Historiae... Conchyliorum*, first published between 1685 and 1692 and containing over 1000 engraved plates of shells. The particular specimen featured in this engraving was received by the collector William Courten in 1790 from Surinam (Wilkins, 1953). It amazed me that such an accurate engraving was produced at that time and it set me wondering about the man, Martin Lister and what connections and craftspeople had made it possible for such a ground-breaking and spectacular publication to see the light of day.

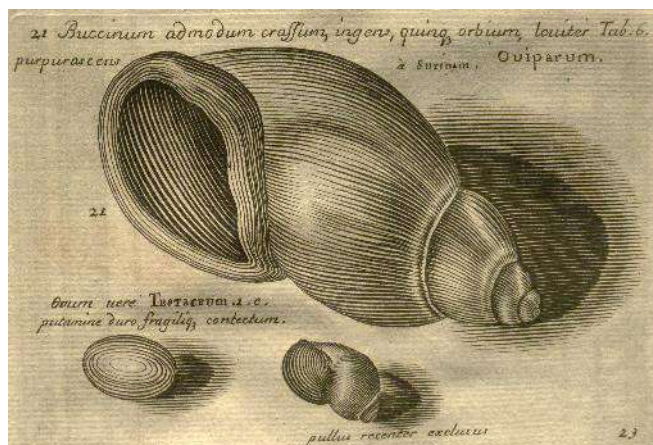


figure 1: Engraving of *Megalobulimus oblongus* from Martin Lister’s *Historiae... Conchyliorum*.

It was many years later that I was able to procure for myself a copy of the third edition of the *Historiae*, published in 1770. Immediately I was able to see for myself how remarkable the book was for the time it was originally printed, depicting many of the mollusc species known towards the end of the 17th century but also for the first time attempting to systematically arrange them into discrete groups. Who was this man Martin Lister and what was the story behind the production of this remarkable book?

There is only one portrait of Martin Lister; all we are left with is a poor black and white reproduction of the original painting from an auction catalogue of the early 1990’s (figure 2). The whereabouts of the original is unknown. The auction catalogue describes his frockcoat as blue with a white stock and he carries a gold-headed cane, the mark of a well-to-do physician. We have to go elsewhere to find out more about his life, and luckily many of Martin Lister’s letters and documents relating to his publications survive, due in part to a fortunate intervention of the curator of the Ashmolean Museum in Oxford in the mid-18th century, which saved many of them from destruction. The Bodleian Library now contains the bulk of Lister’s correspondence, totaling over 1,100 letters. Other letters are held elsewhere,

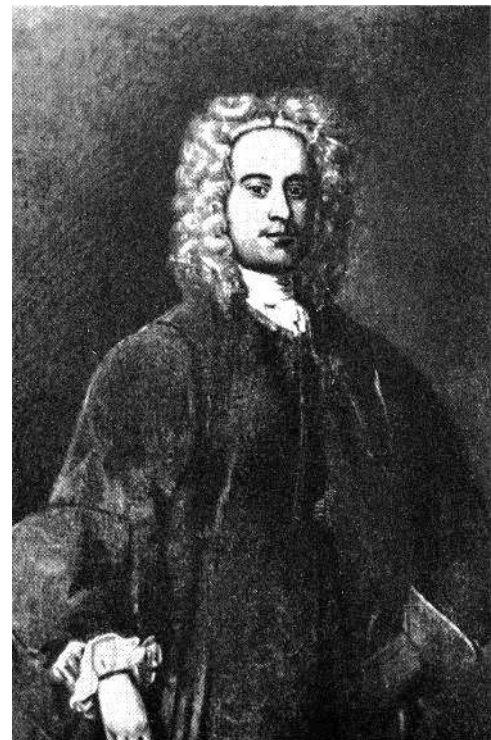


figure 2: Dr Martin Lister (public domain image).

chiefly in the archives of the Royal Society, the Natural History Museum, the University of Utrecht, and the British Library. Lister’s correspondence illuminates, and is illuminated by, his many other scientific manuscripts, which include a mass of unpublished works, drafts, notes, collections from other people’s papers, medical casebooks, and gardening plans. Due to the recent scholarship of Anne Maria Roos (Roos, 2011) and others in bringing to light the contents of these archives, more has now been revealed about his life and an assessment can be made about his achievements and legacy. This article draws heavily on information included in some of the available resources and a list of references is included at the end.

Our Martin Lister was born in Radclive manor, Buckinghamshire in 1639 and was baptised on 11th April of that year at Radclive church (figure 3).

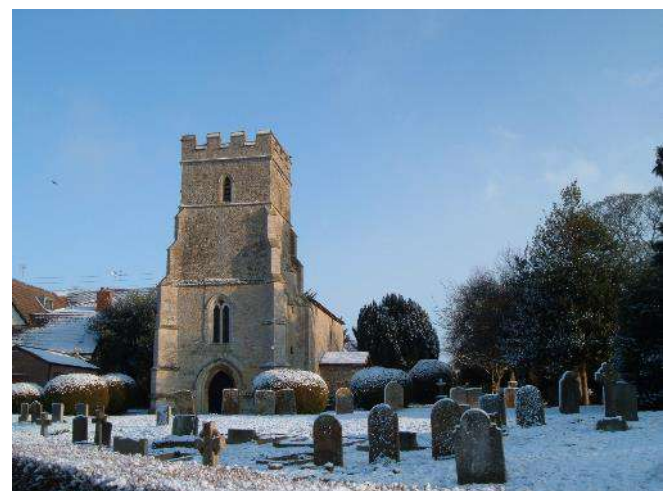


figure 3: Radclive church, Buckinghamshire, where Martin Lister was baptised. (photo courtesy of Dr Jeremy Howarth)

The house and church still survive and the church is next to the house, across the graveyard. The font where Martin was baptised can still be seen. The majority of other buildings associated with his life have been largely swept away during the course of nearly four centuries, but here it is perhaps easier to imagine the scene and his early years spent at the heart of this small village, no doubt encountering the plants and animals he was later to grow to observe so closely.

Martin came from a family of what we would call 'landed gentry'. His great grandfather, William Lister, owned an estate at Thornton-in-Craven in North Yorkshire. His grandfather Michael (1564-1618) was one of ten brothers and sisters, amongst whom Edward (1557-1620) and Sir Matthew (1571-1656) both became distinguished as physicians in ordinary to Elizabeth I, James I and Queen Anne and then to Charles I and Henrietta Maria. Sir Matthew acquired the estates of Burwell and Calceby in Lincolnshire for £15,000 and was later to have a significant influence on the education of his great nephew Martin. Martin Lister's father, Sir Martin Lister (1602-1670) was neither a scientist nor a physician but entered the King's service and was knighted at the age of 22. He became the sole heir of his uncle Sir Matthew, who died in 1656 and inherited his estates. Sir Martin's first wife was the Honorable Mary Wenman of Thame Park, Oxfordshire and they had four daughters but after Mary died in childbirth he married Dr Martin Lister's mother, Susanna Temple (1600-1669) (figure 4) and lived the life of a gentleman farmer at Radcliffe, Buckinghamshire.



figure 4: Martin Lister's mother Susanna Temple. 1620 portrait by Cornelius Johnston. (public domain image)

Susanna was the daughter of Sir Alexander and Mary Temple of Rochester in Kent. In her youth Susanna had been a maid of honour to Queen Anne of Denmark in James I's reign and had been considered 'the most distinguished beauty of her time' and the portrait of her by Cornelius Johnson shows some of this. She had been previously married to Sir Gifford Thornhurst of Agnes Court, Kent for

only two months before he died tragically young. Their grandchild, Sarah Jennings, was to marry John Churchill, 1st Duke of Marlborough and much later it was partly through her influence at court that her step uncle Dr Martin Lister became a physician to Queen Anne in his old age.

Martin Lister was the fourth of Sir Martin and Susanna's ten children. When Martin was aged about seven Sir Martin and his family moved to the manor of Thorpe Arnold, Leicestershire after the death of his uncle Captain Martin Lister. Although most of the Lister family supported Parliament during the civil war, young Martin was educated under the care of his royalist great uncle, Sir Matthew Lister, who had no children of his own. He attended Melton Mowbray School where he received a classical education. One of his teachers was Henry Stokes, who later taught Isaac Newton at Grantham. It is clear that Martin learned his lessons in languages well, for the Latin style in his later scientific works is apparently exceptional and includes references to the classics in the original Greek.

Martin was admitted in 1655 to St. John's College, Cambridge, where his tutor was Dr. Henry Paman, the renowned physician and later Professor of Medicine at Gresham's College.

On Sir Matthew's death in 1656 the family moved to his home at Burwell House, near Louth in Lincolnshire, to which Martin returned shortly after graduating in 1659. After the Restoration he was appointed a Fellow of St John's College by royal mandate, a college with strong royal connections. It is probable that he owed this to the royal service of his father and great uncles Edward and Sir Matthew.

In 1663 Lister travelled to France, during the most convenient years for young gentlemen to travel abroad, between leaving university and settling down to married life. He joined other English scholars at Montpellier. Protestants could not enrol at the university but he was able to join an academy through which he studied medicine, anatomy and botany. He encountered a number of Doctors and Natural philosophers who would shape his later thinking, including the Danish physician Nichols Steenson, known as Steno, known for his discovery of the duct of the parotid salivary gland (Steno's duct).

He travelled a good deal in France with the eminent botanist and naturalist John Ray, a former Fellow of St. John's and Philip Skippon, when they made observations on the natural history of the countryside. Lister's period in France came to a fairly abrupt end when, on 1st February 1666, King Louis XIV, in preparation for the War of Devolution, ordered all Englishmen to leave France within three months. Lister and Ray became friends and corresponded on scientific matters for more than ten years.

Lister did some teaching at St John's College, Cambridge, where he had rooms, but also spent time at Burwell in Lincolnshire, with his father or his brother Michael, but he secured some financial independence through a settlement of land in West Yorkshire from his father.

In the meantime, in 1669, through the assistance of John Ray he published his first paper in the Royal Society's *Philosophical Transactions* (4, 1011-1016) (in the form of a letter to John Ray) in which he put forward his arguments against spontaneous generation (a topical subject amongst the Royal Society's Fellows at the time). However, the paper opened with his observations on the phenomenon of

the shells of snails that are sinistral, ‘left-handed’ or coiled in a counter-clockwise direction. Early naturalists often didn’t notice the chirality of shells, printing them back to front in engravings, as is actually the case in Lister’s own first book on the subject. But Lister’s paper was the first to notice the significance of chirality and he had already been observing snails for a number of years. In his paper Lister noted that the sinistral specimens were small and fragile, so that he couldn’t send Ray any samples safely. Lister referred to a figure illustrated by Aldrovandi and the sinistral snail is probably a door snail, a clausiliid. He had also observed snails mating and affirmed that many could be hermaphrodite. He also mentions that to the Romans snails were ‘their most delicate food’ but to him ‘Their taste and relish is none, methinks, of the most agreeable.’

This paper is also important as it contains the first account of the ‘ballooning’ of small and juvenile spiders, sailing on threads of silk. Following the publication of this observation, an argument ensued as to whether Lister was the first to observe this phenomenon, which may have led to a later cooling of his friendship with Ray. Lister would go on to contribute over sixty papers to the Royal Society’s journal, and his letters demonstrate he was an innovator in archaeology, medicine, and chemistry, Robert Boyle considering him an investigator of ‘piercing sagacity’.

In 1669 Lister resigned his fellowship at Cambridge and married Hannah (1645–1695), daughter of Thomas Parkinson of Carleton Hall in Craven. He had met Hannah on a visit to the Lister estate in Winterburn, near Carleton Hall. For a short time, the couple lived at Nottingham and visited John Ray at Francis Willoughby’s estate at Wollaton Hall (the building is now Nottingham Natural History Museum). Ray published Willoughby’s *Ornithologia libri tres* in 1676. Like Lister’s books on conchology and arachnology, this is considered to be the beginning of scientific ornithology in Europe, revolutionizing ornithological taxonomy by organizing species according to their physical characteristics.

Hannah had inherited Carleton Hall from her father. It was there that Martin first settled, practicing medicine but also pursuing his natural history interests. Susanna, their first child, was born here and baptised on 6th June 1670.

In 1670 Martin, Hannah and baby Susanna moved to a house outside Mickelgate Bar in York, where he established a medical practice (figure 5). Their second child, Anne, was born here on October 13th 1671.



figure 5: Mickelgate bar, York, 1777 by Moses Griffith.
(public domain image)

In York Martin gathered around him an informal group known as the York Virtuosi, which included the artists Francis Place and William Lodge, who illustrated some of Lister’s works, the historian Ralph Thoresby and the glass painter Henry Gyles. Lister continued his correspondence with John Ray and with Henry Oldenburg, secretary of the Royal Society. Several of his letters were published in the *Philosophical Transactions* and in 1671 Lister became a Fellow of the Royal Society.

In York Martin Lister wrote his first book, the *Historiae animalium Angliae tres tractatus* (1678–1681) (Lister, 1678) (figure 6), of which the first part is a description of English spiders and their habits, the second about English terrestrial and freshwater molluscs, the third about marine molluscs and the fourth about fossil shells, or as Lister believed to be, typically for the time, ‘stones that have the shape of snail-shells’ (Jackson, 1944). Other books followed, on insects, mineral waters, and Lister’s collected papers from the *Philosophical Transactions*.

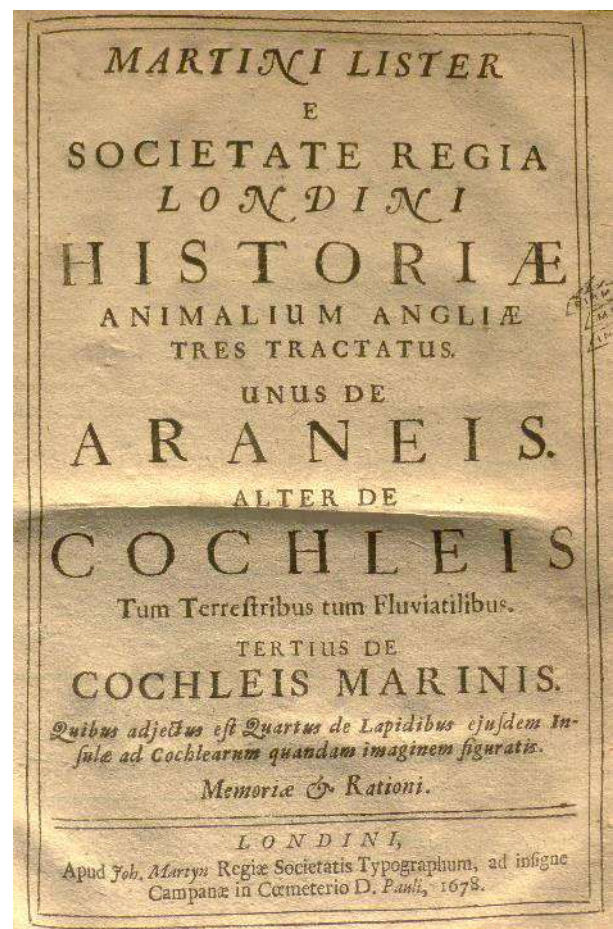


figure 6: Title page of Lister’s *Historiae animalium...* 1678.

In his introduction to the *Historiae animalium* Lister writes ‘I made a... decision [that]...I would arrange the animals of the individual genera in species. The obvious utility of this arrangement is that if hereafter other scholars’ experiments produce fresh information, this may be safely included in the present arrangement and each detail may be assigned to its correct place.’ Thus Lister was anticipating Linnaeus by around 80 years in attempting a logical arrangement of species based on identifiable characters; an aim that he carried on in the *Historiae... Conchyliorum*. He continues ‘Those who in the future undertake a like task will at least understand the extent of my labour and will see that to understand such minute details, even in outline, constitutes something of an achievement.’

Lister insisted on a high level of scientific illustration from William Lodge, making sure that ‘practically all the drawings of the animals were carried out in my presence. I first of all indicated with my finger the characteristics of each species that I most particularly wished to have depicted.’ He also borrowed engravings of mollusc fossils from Robert Plot’s *Natural History of Oxfordshire*.

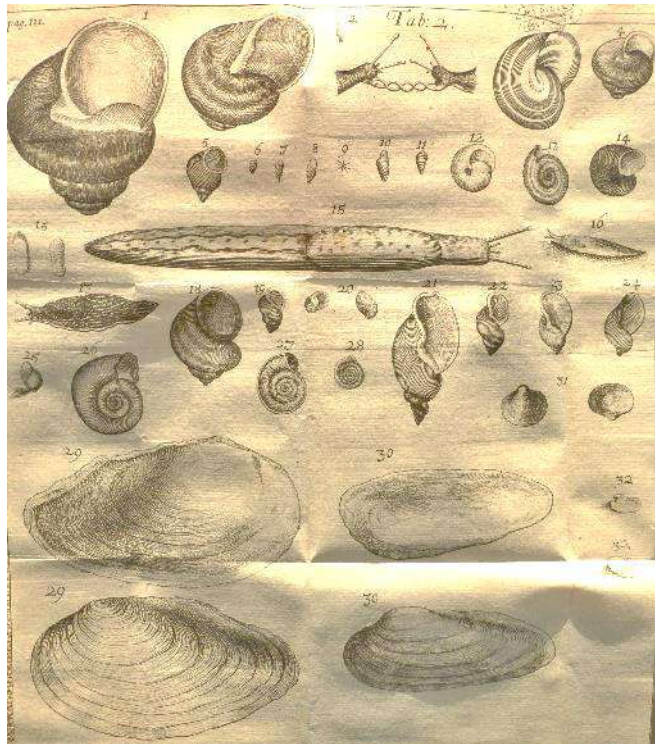


figure 7: Plate 2 of Lister’s *Historiae animalium*... 1678 engraved by William Lodge, illustrating land and freshwater molluscs.

In the 19th century Ferussac and Deshayes recognised that in the *Historiae animalium* Lister understood the science of conchology in a broader and higher manner than anyone before him and noted that Lister had described there several species for the first time, including the Lapidary snail, *Helicigona lapicida* (figure 8). Lister was also ahead of his time in his division of scallop species into groups based on the degree of inequality of the valves and ears of the shells. Lister also provided precise locality details of the land snails he found near Burwell, some of which can be found in the same places to this day. Furthermore, Lister made precise observations on the breeding habits, food plants and habitats of many snails and collected marine shells from localities such as Filey and the mouth of the river Tees (Jackson, 1944).



figure 8: *Helicigona lapicida*, first described in Lister’s *Historiae animalium*.

At this time Lister was also involved in experiments at his home laboratory in York to investigate mineral ores and metallogenesis and trying to establish a link between chemistry, natural history, and the nature of ‘formed rocks’ or fossils. Some of his conclusions sound strange today; for example, he considered that condensations of the ‘moist vapour both from pyrites and limestone’ found underground in mines as well as that from ‘the vegetation growing on pyrites and limestone’ to be ‘the greatest material for rain.’ He investigated petrification within the body in the formation of gall and bladder stones, believing that he had proved that magnetism lay behind their formation. He involved himself in the casting of mirrors, assisting in Isaac Newton’s work with telescopes.

In 1683 the Listers moved to London. The move included seven packing cases of books arranged by subject, mostly in natural philosophy, natural history and medicine. Although he had donated a good number of books to the Ashmolean Museum prior to his move, he still had around 700 in his personal library, a substantial number for a physician of his day. In September the Listers with their growing family arrived at their new home in Old Palace Yard, Westminster (figure 9). Old Palace yard was at the southern end of Westminster Hall and occupied the space between the Houses of Parliament and the Abbey. The location was excellent for building a clientele among the elite of London. Martin Lister began to participate in meetings of the Royal Society and was elected to its Council. However, lacking a medical degree, he was not permitted by the Royal College of Physicians to practise medicine in London. Perhaps to win goodwill Martin Lister made donations to the newly opened Ashmolean Museum of books, manuscripts, antiquities and other specimens. In 1684 he was granted a D.M. by diploma by the University of Oxford on the recommendation of its Chancellor the Duke of Ormonde. Two months later he was accepted by the Royal College and began to practise medicine and attended the post-mortem of Charles II. When James II renewed the Royal College’s charter Lister was nominated by the King and was admitted as a Fellow and in 1694 he was elected Censor, following in that office his great uncles Edward and Matthew.

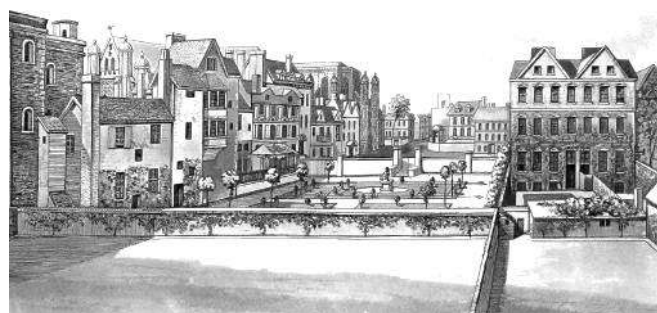


figure 9: Old Palace Yard, Westminster, 1720. (public domain image)

In 1685 Lister was elected vice-president of the Royal Society. The president, Samuel Pepys, was often absent and Lister chaired most of the meetings that year. In this role Lister recommended the publication of the late Francis Willughby’s *De Historiae Piscum*, edited by John Ray. Production of this book, with many expensive engravings, dragged on and when it was published it sold poorly, causing severe strain on the finances of the Society. This resulted in the Society being unable to meet its promise to

finance the publication of Newton's *Principia*. Martin's experiences in being involved in the publication process of this large and expensively illustrated volume also had its positive side as at this time he was involved in the production of his own *magnum opus*, the *Historiae sive Synopsis Methodica Conchyliorum* and he had his own ideas about minimising the cost: he made it a family project.

In the course of completing the *Historiae... Conchyliorum*, Lister not only used his own collection, described as 'not deficient, either in number or perfection of species', but also he was able to borrow many specimens of shells from a variety of collectors to complete his book. These included his friend William Courten (1642-1702), who then owned a collection of etchings by Wenceslas Hollar (now in the Royal collection) some of which were copied for use in Lister's book. Other specimens were borrowed from John Banister, Edward Lhwyd, James Pettiver, John Woodward and Hans Sloane. Several of the shells remaining from the Han Sloane collection now in this museum were identified by Guy Wilkins in part by comparison with engravings in the *Historiae Conchyliorum*. Engraving 797 shows a fully grown *Melo melo* of the subspecies *tesselata* copied from an etching by Hollar. Figure 798 is of a juvenile of the same species in the Sloane collection, which Lister had imagined the spines to have been worn away, but actually they had only just commenced to form (figure 20, page 13).

By 1692 his work had grown to 1059 plates of shells, slugs and molluscan anatomy. The four books were arranged and dated as shown in figure 10. The book was divided into Books, Sections and Headings, which approximate in some way to the Orders, Families and Genera that Linnaeus employed years later. There was no text other than section headings and specific descriptions engraved on the plates, so initially no movable type was employed. To assemble this vast work, Lister employed two of his daughters as principle draftswomen.

Historiae sive Synopsis Methodica Conchyliorum			
1st complete edition			
BOOK	DATE	PLATES	CONTENT
I	1685	1 – 105	Land shells and slugs
II	1686	106 – 160	Freshwater shells, snails & bivalves
III	1687	161 – 405	Marine bivalves
Appendix	1688	446 – 523	Fossil [lapidus] bivalves
IV	1688	524 – 1025	Marine molluscs/snails, anatomy
Appendix	1692	1026 – 1054	Fossil snails/ammonites
Appendix	1692	1055 – 1059	Minor addition to text/synopses
	1692	Tab. 1-22	Anatomical drawings

figure 10: Arrangement of the four books of the 1st complete edition of the *Historiae Conchyliorum*.

The frontispiece reads *Susanna et Anna Lister figuras pin* (figure 11). By the time Susanna and Anna Lister were eleven and ten, respectively, they were already demonstrating an interest in art. Dr. Lister attended to their early education, as was the norm, preparing them for what would eventually be their part in his work. He sent a gift of oil colors from France with a letter to his wife, 'I did send home a box of colour in oil for Susan & Nancy to paint with. As for the pencils sent with them, and the colours in shells, which are for limning, I would have thee lock them carefully up, till I return, for they know not yet the use of them.' Long before the invention of squeezable tubes, the earliest containers for artists' paints were shells, typically mussels. Little did Susanna and Anna know at the time the significance that shells would later have for them.

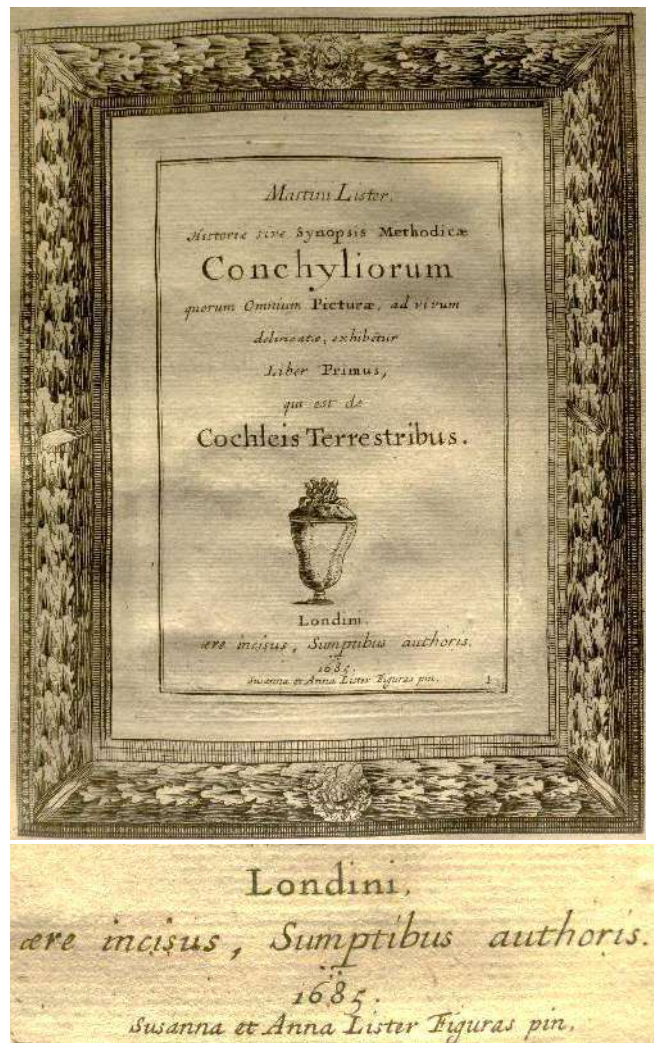


figure 11: 1685 Frontispiece of Book 1 of *Historiae... Conchyliorum* showing the elaborate border and details of the artists.

For such a major work, the production of the book was a family affair. The plates were printed on a press at home. The sisters designed some plates that were used as decorative borders. The same border plates were used repeatedly throughout the book, using a technique where a printed page was run through the press a second time with the decorative plate positioned around the first impression, in order to receive its decorative border, sometimes to the detriment of the paper. Some critics complained that this distinctly feminine touch was unprofessional.

Before the publication of the first two parts in 1685, *Historiae... Conchyliorum* was produced in several early versions. Lister sent bound copperplate engravings by his daughters to his colleagues both for their editorial comments and as gifts to acknowledge assistance in his other ventures. By the time this part was published, there were already existed several shorter, preliminary versions. Over the years this complex way of publishing has resulted in many different views being expressed of what the 'first edition' of this work actually was (e.g. Wilkins, 1957).

As the sisters grew up, they would have had the benefit of observing William Lodge engraving their father's early publications. Some illustrations that he had completed for previous Lister publications were used again in *Historiae... Conchyliorum* but the two sisters eventually replaced him as their father's illustrators and engravers for his grand work, as well as for the articles he and others published in the *Philosophical Transactions*. Johnston (1850) paints a

typically flowery but empathetic picture of Lister examining 'with fatherly pride and pleasure' his daughters progress on the plates. Most of the plates were unsigned, but the illustrations in *Historiae... Conchyliorum* are obviously the work of more than one hand. The few that are signed show variations of the sisters' names or initials.

To illustrate their father's work, Susanna and Anna made preliminary drawings which were then transferred to copperplate. Tools with a sharp metal tip called burins were used to engrave lines into the copper. The plates were covered in ink, then wiped clean so that ink remained only in the engraved grooves. Paper was then pressed onto the plates to produce prints that appeared as a mirror image of the engraving. Lister followed his earlier observations on chirality and insisted on illustrating shells in the correct orientation. Pasted in her sketchbook, now in the Bodlean library, Anna Lister had only a print of Rembrandt's engraving of *Conus marmoreus* with which to illustrate this species. The original print shows the shell with the incorrect orientation but Anna corrected this for the illustration that appeared in the *Historiae* (figure 12).

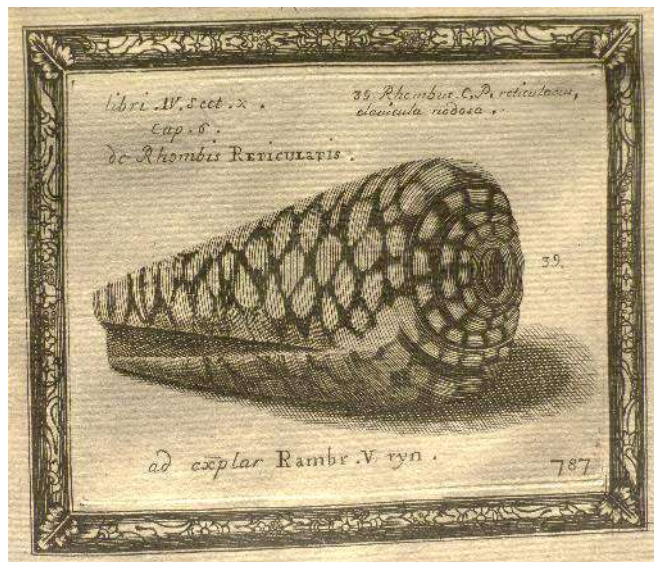


figure 12: *Conus marmoreus*: engraving by Anna Lister and shell.

In the book, Susanna's style is recognisable by the use of cross hatching in the shadows (plate 556) whereas Anna's style is of a more forthright character and uses straight graduated lines in the shadows and darker areas (Plate 554) (figure 13).

One engraving shows the styles of both women together. This is of a specimen in the Sloane collection of *Turritella exoleta*, the original of which has a damaged aperture. The original drawing by Susanna in the Bodleian library shows the damage but the final engraving has the aperture completed by Anna (589) (figure 14).

Anna and Susanna Lister would continue working for their father, correcting drawings and preparing more plates for

subsequent printings and the eventual publication of the full first edition in 1692. Edward Lhwyd, keeper of the Ashmolean Museum, was to write to Lister in February 1691 'I do not wonder your workwomen begin to be tired; you have held them so long to it.'

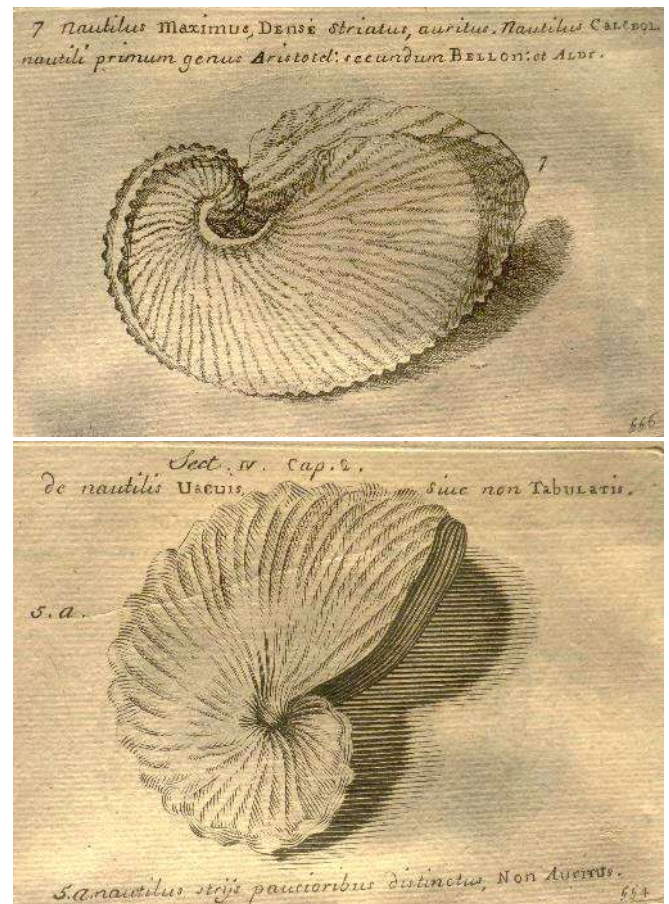


figure 13: Engravings from the *Historiae... Conchyliorum* showing the two styles of Susanna (above) and Anna (below).



figure 14: Engraving of *Turritella exoleta* showing the styles of both the Lister daughters.

News of the achievements of the Lister sisters spread throughout Europe. In May 1694 John Place, physician to the Duke of Tuscany, thanked Lister on the Duke's behalf for his present of a copy of the *Historiae*. Place wrote that when the Duke was told the 'figures were the work of your daughters' it 'surprised him extremely'. In exchange for his

gift, the Duke sent Lister bottles of Florentine wine. After the Lister sisters illustrated their father's book, they passed into obscurity. In 1707 or 1708, Susanna Lister married Gilbert Knowler, a vicar in Kent. Nothing more is known about Anna.

Although the influence of the Listers' work has endured for over four centuries, Anna Lister's identity in particular was nearly lost. Recent interpreters, such as Keynes (Keynes, 1981) (figure 15) and Parker and Harley (1992), assumed that a very young woman could not be so talented and the illustrations were attributed to Dr. Lister's wife Hannah. Another reason for the confusion, was that in the past, names and their spellings were more fluid. Anna, Anne, Ann, and Nancy are all derivative of the name Hannah, and in the 17th century, were used interchangeably. The discrepancy can be settled in Dr. Lister's own words when he proudly referred to the plates as 'the original drawings of my daughters.'

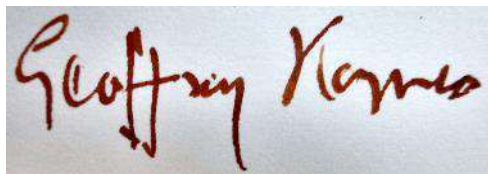
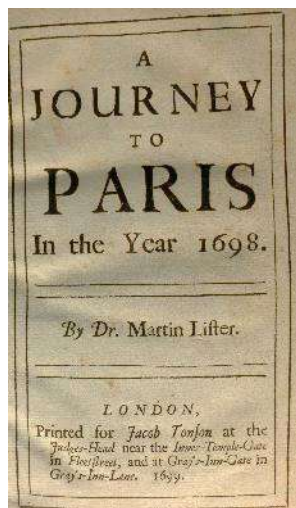


figure 15: Sir Geoffrey Keynes (1887-1982), signature.

Martin Lister ceased to attend meetings of the Royal Society in 1686. He founded in 1689 and regularly attended meetings of the Temple Coffee House Botanic Club. He continued to publish books including descriptions of the internal anatomy of Mollusca: *Exercitatio anatomica* (1694–1696) and essays on common diseases in order 'to stop the censorious mouths who think and say a man that writes on Insects can be but a trifler in Physic.'

Two of the Listers' eight children, Michael and Jane, died young. A tablet was erected to them both in Westminster Abbey (the church nearest to their home in Old Palace Yard) and includes the simple statement 'Jane Lister, dear childe, died Oct 7th, 1688'. Hannah Lister died in 1695 and was buried at St Paul's church, Clapham. Their only surviving son, Alexander, matriculated at Balliol College, Oxford in the same year, but in 1697 displeased his father by an imprudent marriage. In 1698 Dr. Martin married Jane, daughter of Peter Cullen.

In 1697 Lord Portland was sent on a diplomatic mission to Paris and Lister accompanied him as physician. He was there for six months and on his return published what was to become the most popular book in his lifetime: *A Journey to Paris in the Year 1698* (Lister, 1699) (figure 16, below).



Whilst visiting the city he was shown around the Royal Library by Mons. Clement, the Deputy Library Keeper who 'made me in particular a very great compliment, as a considerable benefactor to that place, showing me most of the books...I had published in Latin; and shewed a great satisfaction, that he had got the *Synopsis Conchyliorum*, which he had caused to be bound very elegantly. I told him that I was very sorry to see it there, and

wondered how he came by it; for it was, I assured him, but a very imperfect trial of the plates, which I had disposed of to some few friends only, till I should be able to close and finish the design; which I had now done to my power, and would redeem that book with a better copy at my return into England.' The book is not a traditional guide book to Paris but it includes descriptions of Lister's visits to prominent libraries, natural history collections and cabinets of curiosity. Of the six plates included, one is of a living specimen of the oblong megasnailed *Megalobulimus oblongus* that had recently been brought to France from Jamaica (figure 17). The book ran to three editions and was reprinted as recently as 1967, but was lampooned by contemporary satirist William King, although it is a valuable account of Parisian scientific and medical society and of the city and its life. A reviewer in the New York Times in 1872 remarked 'there is about our worthy Doctor a very fair amount of astute discernment' (Anon., 1872).

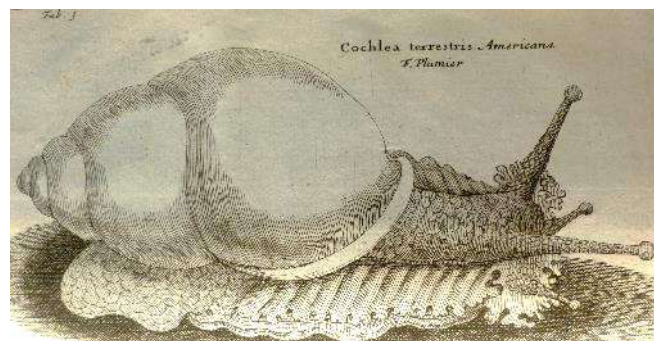


figure 17: *Megalobulimus oblongus*, illustration from *A Journal to Paris*.

Lister was asthmatic and disliked the 'choakie air of London.' In 1699 he and Jane moved to Leatherhead and then in 1702 to Epsom, although he still travelled to London. At Epsom he continued to write, translating the aphorisms of Sanctorius and Hippocrates and a Roman cookery book. His last works were published in 1710: an essay on body fluids, and an account of British beetles appended to John Ray's posthumously published *Historiae insectorum*. In 1710 he was appointed second physician to the Queen but he died at Epsom in 1712 and was buried beside his first wife at Clapham.

Dr. Lister left the copperplates of the *Historiae... Conchyliorum* to Oxford University as part of a bequest. This safe-keeping allowed them to be used once again for two later editions. A second complete edition was published at Oxford in 1770 by William Huddesford, Curator of the Ashmolean Museum, in whose custody were the original copperplates (Lister, 1770). Huddesford's imposing volume was produced under the patronage of the famous collector the Dowager Duchess of Portland (Tobin, 2014), to whom it was dedicated (figure 18), and with the encouragement of interested naturalists of the day. This edition contained everything to be found in the first complete edition plus



figure 18: Dedication to the Duchess of Portland in the 1770 edition of *Historiae... Conchyliorum*.

some extra plates, an editor's preface, about six pages of notes printed for the first time from Lister's manuscripts, and two indices in Latin and English. However, some conchologists of the time, including da Costa (1776), pointed out that Huddesford had not done much editing and had missed an opportunity to bring the volume up to date or provide any historical or contextual analysis.

Then in 1823 the Clarendon Press reprinted all the plates of the *Historiae... Conchyliorum*, which were issued with an index by L. W. Dillwyn as a third edition. This index included the pages of Lister's notes from the Huddesford edition, with identifications of nearly all the species figured and occasional remarks by the compiler. This was the last edition printed. Lister's Bibliographer, Sir Geoffrey Keynes, who amassed a large collection of Lister's publications, begun at a time in the 1930's when a copy of parts 1 and 2 of the *Historiae* could be picked up for 10 shillings, stated that he had not seen a copy of the 1823 edition. This is because, as stated by Guy Wilkins, quoting a letter of 1828 inserted in his copy 'Upham tells me there were only thirty copies of this new edition printed at the Clarendon Press.' But the index was printed separately and in quantity.

The publication of two further editions of his work, the final one over a hundred years after his death, indicates that Lister was acknowledged as being pre-eminent in his knowledge of natural history in his time and his works were still consulted in the 19th century (Johnston, 1850), although his use of Latin and his pre-Linnean era nomenclature has meant that their importance has been undervalued until fairly recently. Lister's work was also recognised in other fields, in his invention of the histogram, in archaeological studies that demonstrated York's city walls were Roman, in receiving the first reports of the Chinese smallpox vaccination, in being the first to suggest the importance of a geological survey of the UK and in the donation of the first significant natural history collections to the Ashmolean Museum.

Finally, Lister had several species named after him, including what is now called *Mirabilistrombus listeri*, once considered the rarest of the Strombidae (figure 19). In a now classic example of the care required in setting up an exhibition, the type specimen of this species was crushed in 1986 during preparations to set up a display for the Ninth International Malacological Congress in Glasgow in 1986 (Dance and Reilly, 1998). His name has also been commemorated in other mollusc species including the Princess Venus Clam (*Periglypta listeri*), the speckled tellin (*Tellina listeri*), Lister's viviparous river-snail *Viviparus listeri* (now known as *Viviparus contectus*), a landsnail from the Philippines, *Obba listeri* and a tetragnathid spider, *Pachygnatha listeri*. He was also commemorated by the *Dorsa Lister*, a ridge on the moon.



figure 19: *Mirabilistrombus listeri* illustrated in plate 855 of *Historiae... Conchyliorum*.

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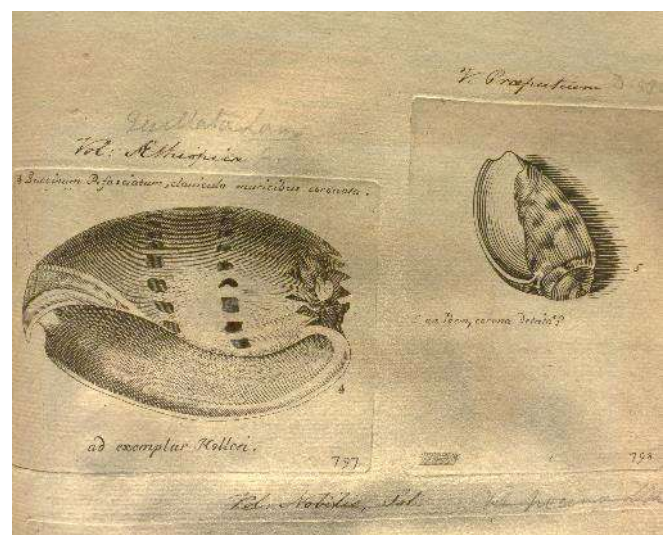


figure 20: *Melo melo tessellata* (Lamarck, 181) (syn. *Cymbium tessellata*). Figures 797 and 798 of *Historiae... Conchyliorum*.

National Trust bioblitz, Lundy Bay.

Sebastian Payne and Peter Topley



figure 1: Lundy Bay, north Cornwall.

Last year, the National Trust held bioblitz events at many of its coastal sites to celebrate the 50th anniversary of Project Neptune – their project to acquire and manage substantial lengths of our coastline. The Conchological Society took part in one of these, at Godrevy Towans in north Cornwall. This year, we were back to take part in another north Cornish bioblitz, at Lundy Bay (NGR SW 95 / 79), between Padstow and Port Isaac, on the weekend of 2–3 July (figure 1).

The site faces north, sloping down fairly steeply to the sea, with small valleys and damp valley-bottoms. Despite a concentrated examination of the different non-marine habitats over the weekend, which included an organised ‘bug and snail’ walk on the second day, only a small list of 15 terrestrial and freshwater molluscs was recorded, including many of the large and conspicuous brown-lipped snails (*Cepaea nemoralis*) and a large colony of common door snails (*Clausilia bidentata*) under sea campion (*Silene maritima*) on exposed rock ledges (figure 2).



figure 2: *Clausilia bidentata*, Lundy Bay.

There were areas of patchy grass and heather on the cliffs, a suitable habitat for the green snail (*Ponentina subvirescens*) but none were found during a fairly thorough search of the area, despite this species being recorded from similar localities on the North Cornwall coast (figure 2). A small pond covered in duckweed (*Lemna* spp.) yielded just common pond snails (*Radix balthica*) and stones in a small stream almost on the shore held large numbers of Jenkin’s spire snail (*Potamopyrgus antipodarum*).



figure 3: Cliff-top habitat above Lundy Bay.

There is easy access to the shore at the head of Lundy Bay; access to the small bays on either side is only easy when the tide is low enough to make it possible to walk round on the sand. The shore is fairly steep and exposed: the upper shore is rocky, with shallow rock pools but few turnable stones, the lower shore is sandy. Conditions weren’t ideal – the predicted low tide was not very low (+1.1m), and on the Saturday, on-shore winds ponded the water up making it impossible to walk round to the other bays. On the Sunday, the wind had died down, and it was possible to reach the small bay to the west; however, the rock pools were fairly sandy and there was little on the strandline (apart from a few land snails!) (figure 4).



figure 4: Bas examining a rock pool, Lundy Bay.

Rather predictably, the number of species recorded was fairly low. On the rocks, all three species of *Patella* (limpets) were common, as were mussels (*Mytilus edulis*) and dog whelks (*Nucella lapillus*); lined top shells (*Phorcus lineatus*) were fairly common as also purple top shells (*Gibbula umbilicalis*) lower on the shore. But relatively few other larger species were found, and there were notable absences and scarcities, especially common periwinkles (*Littorina littorea*) (none seen), and grey top shells (*Gibbula cineraria*) (two juveniles seen); the absence of juvenile *Phorcus* and the very small number of juvenile *Nucella* was also interesting. The flat periwinkle, *Littorina obtusata* was scarce, and the rough periwinkle (*Littorina saxatilis*) only frequent in a few sheltered places; small periwinkles (*Melarhaphé neritoides*), however, were abundant (figure 5), and found lower down the shore than usual, sheltering in dead barnacles between the clumps of mussels. In places, numbers of the air-breathing celtic seaslugs (*Onchidella celtica*) were crawling on shaded rock faces. Weed-washing samples produced a fair number of *Rissoa parva*, *Lasaea adansonii* and *Mytilus* spat, but very little else – no *Onoba*, for instance, and no *Lacuna*. Overall, only about 35 species of marine mollusc were found, 22 of which were live.



figure 5: *Melarhaphé neritoides*, Lundy Bay.

In recording terms, the yield was pretty low – a small list. A few of the species are new NBN records for that 10 km square, including *Cerithiopsis tubercularis* (one, live) and *Turbonilla cf acuta* (one, dead shell) (figure 6), neither surprising.

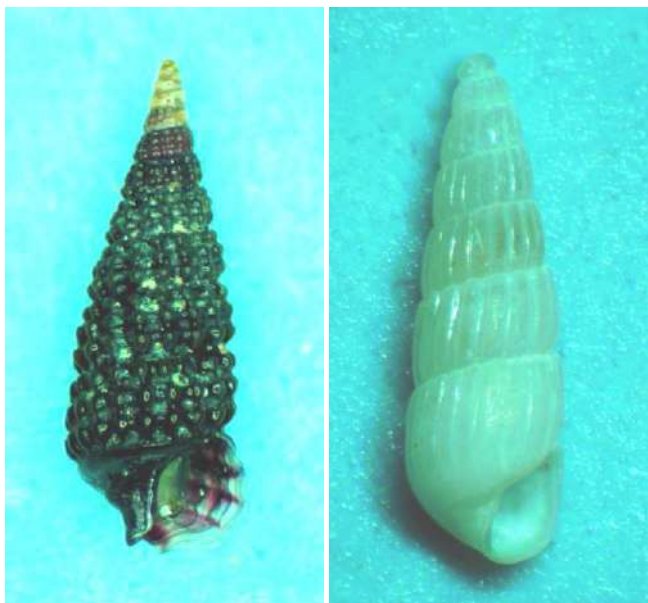


figure 6: *Cerithiopsis tubercularis* (height c.5 mm) (left) and *Turbonilla cf acuta* (height c. 3.5 mm) (right), from weed washings, Lundy Bay.

So – was it worthwhile? In recording terms, it isn't a rich shore, and it would undoubtedly have been better to choose a weekend with lower tides, which would probably have produced a lot more species. But there were other benefits. Around 200 people came to the event; the Society had two

tables and a small display in the base camp marquee (figures 7 and 8); and links were made and refreshed between the Society and other organisations and groups, notably the National Trust, and groups from Coastwise North Devon and the Marine Biological Association.



figure 7: Base camp marquee, NT Lundy Bay bioblitz.



figure 8: Conchological Society banner and exhibit tables in the marquee.

A two-lipped *Cepaea* and other notes

Gordon Collett July 2016



The top photo shows a *Cepaea hortensis* with two lips. I have had this one in captivity for over 18 months and it must be enjoying life enough to decide to have a second final year. It has formed a ring inside like the mouth of a Kentish snail (*Monacha cantiana*). Since this photo was taken the animal has absorbed the inner ring, but externally the white line is still visible. It does now seem to have a mantle problem as the new growth has an irregular area.

I have found two dun coloured *C. hortensis*, each with a striking pink/maroon inner mouth band. One is local, the other from Dorset.

Having observed the copse snail (*Arianta arbustorum*) in the wild eating dead snails, I now put a little bit of cat biscuit in the feed of my captive ones! I did have trouble keeping these, but this seems to work. Old publications state this species is herbivorous, but Wikipedia has it as also eating corpses and dung. Baur (*Behaviour* 103(4):259–265, 1987) notes that this species displays age-dependent egg cannibalism.

The slug *Arion vulgaris* is taking over the Thames path near Eton. It is now roughly in a ratio of 50:1 with *Arion rufus*; this used to be the only big *Arion* that worked that path in daylight five years ago.

The bottom photo is of a common periwinkle (*Littorina littorea*) covered in serpulid worm tubes, showing a flared lip, from Goodrington, Devon collected on Good Friday 2016 on shore rocks. I picked it up as it is one of the biggest I have seen (34.5 mm), even compared to when, as a child, I lived in Leigh-on-Sea, Essex and would go through the cockle-fishing discards.

And lastly, that crow (and I am sure it is the same individual I mentioned in *Mollusc World* issue 39, based on its personality traits and its blasé familiarity with my cycling by) is back fishing mussels out of the Thames. (This behaviour has declined since June; now it is just occasional so I presume it times in with brooding needs).



A biologist's observations on the use of Mollusca by the Xhosa peoples of South Africa

Maureen J Moore (formerly M.J. Latigan)

Shell studies in the Eastern Cape

To put these observations in context, background needs to be provided. Until 1975 I was Conchologist at the East London Museum, Cape Province, South Africa. At the East London Museum, it was the task of the biologists to map (and preserve, describe and educate public about) the biota of the area, including the mollusca. Taxonomy was the backbone of this work. The geographical area of our coverage was the Eastern Cape, formerly known as Border and Transkei.

Because of the mix of currents bathing the coastlines, a complex picture of molluscan distribution and variety exists.

The warm Mozambique and East Madagascar currents merge to form the Agulhas current which flows down the south east of the continent – the largest boundary current and the second swiftest – topped only by the Gulf Stream current. The Agulhas undercurrent reaches 2,000 m deep and 40 km wide. It then loops back on itself off the Eastern Cape.

On the west coast, the cold upwelling Benguela current flows up from Cape Point towards the equator. Between these two major currents is the area called the Cape Cauldron where a number of things happen, including:

- Chaotic eddies
- Counter currents
- Agulhas peel-off rings
- Rogue waves on counter winds

This all results in three major marine provinces:

1. To the east of the country, the warm water species from the Indo-Pacific region at their westernmost edge of distribution (many species but some are rarely found)
2. To the west of the country are the cold water species (fewer species, found in great numbers).
3. On the southern coast, in the Cape Cauldron area, are South African endemics – found nowhere else – and in great variety. Because of the chaotic current conditions, some species are only found after lengthy gaps and considered rare.



figure 1: The Transkei countryside is often difficult to access. (photo: Jean Moore)

Getting to the best shelling spots

While there was a tarred road through the centre of the Transkei, other roads were unsurfaced, and many merely tracks. It was difficult to access in many areas, so they remained little-known (figure 1). The biological riches we had seen were amazing and oft-times unique. We needed to know more and so we arranged a series of field trips from 1972 to 1985 to this fascinating territory. Even after I had left the Museum in 1975, I continued to collect, starting my own reference collection.

Getting to and from the best shelling spots was arduous. On a trip to Nthlonyane, we were stranded by two rivers which had come down in flood between us and our tent. When we tried to go home, the car could not pull up the hill, as the tyres kept slipping on the mud. Fortunately, the chief had a 16-span of oxen with which he pulled our car up the long steep hill - an incongruous sight.

The spot we returned to most years was Mbotyi (figure 2), a place name which meant *beans* in English, after a cargo of beans washed ashore after a shipwreck. To get there, after leaving the tarred road, there was about 30 miles on a sandy and very dusty road, then a turn off to a track to the edge of the escarpment. Going down it was a very steep unsurfaced track clinging to the mountain side on the right and dense tropical forest on the left which fell away so steeply that only the tops of the trees were visible. It is the only place I have seen where there was a road sign with an arrow pointing straight downwards! My task was to sit on the car bonnet giving purchase to the wheels, inching over one boulder at a time.



figure 2: A scene of one of the few beaches in the Mbotyi area. (photo: Jean Moore)

Accommodation and the local scene

Because the Transkei was tribal territory at that stage, people lived a traditional lifestyle for the most part, doing things the way their ancestors had done for countless ages. Our accommodation was in a traditional house, built with wattle and daub walls and a thatched roof. It was wonderfully cool in the heat and cosy when it was cold outside. There were no services of any kind. In good years rain water run-off from the roof filled the tank. When the rains failed, we took our own water with us. All rubbish was buried, but there was not much of this, as the local people, who without the luxury of supermarkets, reused food tins, plastic bags and much else. There was actually a shop at Mbotyi, but the owner, in order to stock the shop

had to walk to the nearest town where there was a shop – Lusikisiki - and walk back over 30 miles using the paths described above, carrying a box of stock on her head. Occasionally she got a lift. The stock – when there was some – would be perhaps condensed milk and tobacco one week, and tea and flour the next.

The school was in a traditional round hut. Only children up to about ten or twelve attended; older children had to go to school in the towns – if they did at all – depending on the wealth of the parents and their views about schooling.

The Xhosa and their traditional way of life at Mbotyi

Apart from the shop, school and occasional visitors from other cultures such as us, the remainder of life was traditional. This area of the Transkei (now called Eastern Cape) was the home of the Mpondo tribe of the Xhosa peoples. Other tribes of the Xhosa peoples include the Mpondomise, the Bomvana, the Xesibe, and the Themba. The Bhaca and the Mfengu now also speak the Xhosa language. There are around 5 million Xhosa in the Eastern Cape and another 3 million in the rest of South Africa.

There are 5 distinct click sounds in Xhosa, borrowed from the Khoisan (Bushman) people with whom they interfaced. There are also other sounds which Europeans find difficult to say, e.g. the place name Nqabara is pronounced something like n-click/ab-aggh-a.

Although the Xhosa people are cattle herders and have sheep flocks, these are never very numerous. The grass looks lush and green, but is poor in nutritional value. At the western end of the East Cape, for example, in the Zuurveldt (sour pastures) the farmers sometimes ran only one cow per 17 acres. Because these cattle are also a measure of the wealth of a man and are needed for bride-price, they are not eaten routinely. Pigs are not eaten as they are scavengers and chickens ranged free. In other areas of the Transkei, goats were kept and these contributed greatly to soil erosion, but in the Mbotyi area, none were seen, probably because they competed with the cattle for pasture.

The everyday diet consisted mainly of dried corn kernels cooked together with dried brown beans, or finely ground maize meal cooked as a stiff porridge. Sometimes pumpkins, traditionally grown between the maize plants, were added, as were wild vegetables. Because there were not enough chickens to cook regularly, these coast-dwelling people turned to the sea for the protein shortfall in their diet. Women of child-bearing age were not allowed to eat eggs.

The milk from the cattle was drunk, usually in a soured cultured form, similar to yoghurt. There was a beer made of millet.

Four cows were the usual payment as a bride price. Most men had to save for many years before they could afford this. Cattle were not eaten except at very special occasions. Similarly, sheep flocks were small and only killed for feasting at rituals.

Rituals are important events in tribal life, marking transitions in life, and also to cement the tribe socially. The major rituals in the life of Mbotyi people were:

- Childbirth
- Puberty and male circumcision
- Marriage
- Funerals

At these rituals meat was eaten, to cater for all those who came from far and wide, especially at marriages and funerals. Much beer was also drunk, especially at marriages.

Methods of sea food collection

Because the seas are very rough with large waves crashing over the rocks – the area is also known as the Wild Coast (figure 3) – places for the collection of living mollusca are few and far between. I only saw these being collected in the one rock pool, sheltered by a rock reef from the breakers - the only one in a stretch of coast many miles long. About a dozen women of around 40 years old, not accompanied by children or younger women, came in a group as soon as the tides were low enough to be safe. This infers that this food was collected on lines of sex and age. Probably the younger women were left at home to do chores like fetching wood and water. The collectors tucked their skirts up and their feet were bare. They waded in to a depth of about three feet. Each had a can, such as tinned peaches came in, large enough to serve four or five. The lid had been opened either with a blade or the old-fashioned ripper type can opener, but was not entirely removed. Two to three inches of lid were left unopened and this was bent backwards to serve as a handle, wrapped in a scrap of cloth.



figure 3: A typical wild coast scene with waves crashing onto the rocks. (photo: Jean Moore)

The water was fairly warm, and it was not the temperature which called a halt to their collecting, but the state of the tide. There is only one low tide there during daylight, and generally it is lowest at 09H00 to 10H00 at a full moon. By noon, it would be getting too high to reach the best spots. Neap and other tides were also low enough to collect in the less deep part of the pool. Collecting was done at these tides, but the amount collected was less.

As each gastropod was collected, it was scooped out of its shell with a bit of stout wire, which each woman had. This would be jabbed into the mouth of the shell beside the columella, in the middle. The right hand holding the wire was then revolved anti-clockwise, while the left hand holding shell would be turned clockwise. The animal came out coiled as it had been in the shell; - it had been “unwound”. The shell was then discarded back into the sea and the meat put into each collector’s own tin. Thus they did not have to carry home needless weight, especially if they came from a distance.

On my first visit to Mbotyi, when the women saw me collecting shells on the beach, they came over and wanted to

see what I was collecting. I tipped my shells out and they rummaged through them. When they realised I was not collecting the meat inside the shell, but the shell itself, they thought this very funny and laughed heartily because I was collecting their discards! This was obviously territorial behaviour as noted by their interest in my collecting, thinking that I was taking their families' meat that was traditionally in their collecting area, much as a farmer would protect his or her crops in their fields.

I only saw gastropods being collected. The natural biota of the area includes mussels and oysters, but whether these had been already stripped bare, or whether gastropods were preferred, I could not determine. Certainly I saw no-one scraping though the beaches for bivalves such as clams.

A wide mix of gastropoda were collected. None were very big: the biggest I saw taken was *Monoplex parthenopius* (von Salis, 1793) and immature *Charonia lampas pustulata* (Euthyme, 1889) of around 75mm, which are too young for reproduction (figure 4). The adult *Charonia pustulata* can grow to 200 mm and live for about 30 years, but these large specimens I have only seen in older collections. Some other species were so small that it hardly seemed worth collecting them, and a great many had to be collected. I think that this indicates a strong need for this protein.



figure 4: (above) *Monoplex parthenopius* (height 80 mm); (below) *Charonia lampas pustulata* (h. 70 mm) (from the author's collection).

It should be noted that as I did not get too close to them while they were collecting, I could not identify all they took, especially the smaller ones which in their tins looked like an amorphous mass, not at all easy identifiable without their shells. We called their collecting bay 'Nerita Bay' because a lot of them washed up there, so this infers that they would have collected a lot there too (figure 5).



figure 5: The only picture I have of 'Nerita Bay', where the women collected molluscs. It was the only sheltered bay on this stretch of coast. I learned to carry heavy, wet shingle – full of small shells – on my head, like the local ladies. (photo: Jean Moore)

I collected these *Nerita* species from there (illustrated from left to right in figure 6):

<i>Nerita albicilla</i> Linnaeus, 1758	20 – 25mm
<i>Nerita polita</i> Linnaeus, 1758	20 – 35mm
<i>Nerita plicata</i> Linnaeus, 1758	20 – 25mm
<i>Nerita textilis</i> Gmelin, 1791	25 – 35mm

The sizes given are typical in my collection from Mbotyi. Because these shells are shaped like upside-down slippers, and the walls are thick, there is not much meat in each. The stripping of this bay does not bode well for conservation and one hopes that the species that live there are not dependent on the bay and can also reproduce in other habitats.



figure 6: The four species of *Nerita* from 'Nerita Bay' (from the author's collection) – see above for details.

Young boys dived for the crayfish, *Jasus lalandii* (H. Milne-Edwards, 1837), in the reefs (rock, not coral, which does not grow so far south) during quieter sea conditions. Because crayfish lived in the same rock crevices as moray eels, as they reached in to get them, many had their hands bitten by the morays, causing dreadful injuries such as the loss or fingers or portions of the hand missing. The crayfish were sold to tourists and I do not know whether they were eaten in the tribal diet. It appeared that the motivation to collect was rather the money that the tourists paid the boys for them. These crayfish are delectable, and when one views Mbotyi on the internet, large platters are advertised as being a speciality of the area. I fear that the stocks are fast being depleted.

Although fish were plentiful, I never saw any Xhosa people fishing. This may have its roots in their history: according to some sources they were an inland people who were pushed southwards by the Zulu wars some 200 years ago, and their traditional food would not have included things from the sea. If this is the case, one wonders if the desperation of hunger during droughts and famines started the women collecting. The preference, though, is still for red meat.

Other uses of shells

I saw shells being put to no other uses during my time in the Transkei. Because many of the shells are pretty and colourful, I would have thought they would have been used for ornamentation or children's play things. Beads are used for ornamentation, with lavish configurations of head and neck wear, especially for important occasions. Occasional copper or other wire bangles were also seen.

While at the East London Museum, the Ethnologist had reported that she saw a giant African land snail, *Achatina* (= *Cochlitoma*) *zebra* (Bruguère, 1792) (figure 7) being used as a baby's feeding bottle. This was far from the coast, in the hinterland north of East London.



figure 7: *Achatina zebra* (height 174 mm). Specimen from Eastern Cape. (Photo/collection: Peter Topley)

Dr R. N. Kilburn (1983) reported that the larger *Anadara* (Ark shell) species are eaten in Mozambique.

When I used to dive the coral reefs off the Bazoruta islands group between 1966 and 1971, money cowries, *Monetaria moneta* (Linnaeus, 1758), were plentiful (figure 7). Beach washed shells were purple in the middle on a white ground, while live-taken shells were cream with a greenish-yellow middle. According to local legend, in the 1800s and before, it used to cost 40,000 money cowries to buy a wife – and 10,000 to buy a donkey!



figure 7: *Monetaria moneta* (length c. 27 mm) (from the author's collection).

Modern Mbotyi

Now, when one 'Googles' Mbotyi on the internet we see hotels and holiday lodges and a developed area. The roads must have been improved to enable this construction and access for visitors. With the added influx of people from the towns, and probable development of some services and commerce now that the Eastern Cape is integrated in South Africa (it used to be a self-governing tribal area), more and more Xhosa people appear to be adapting, at least in part, to a cosmopolitan lifestyle.

Conclusion

Because development in this rural area has been spurred by the growth of infrastructure and tourism, the scenario I have described is or soon will be a thing of the past. These changes have been rapid, over the last 30 – 45 years that I have seen. I was privileged to be able to experience the peace and calm and the wonderful slow pace of tribal life (figure 8).

Finally, it has to be concluded that in this case, absence of proof is not proof of absence. If the women collectors had taken the whole mollusc home and extracted their meat there, piles of discarded shells would have resulted in the formation of middens nearby their homes. Future archaeologists, if working in this area and finding no middens, could conclude that there is no proof that these people ate mollusca.

Reference

Kilburn, R.N. (1983) The Recent Arcidae (Mollusca: Bivalvia) of Southern Africa and Mozambique. *Annals of the Natal Museum* 25(2) 511–548.



figure 8: A general early morning scene of local houses at Mbotyi. (photo: Jean Moore)

British Shell Collectors' Club

Saturday 29th April 2017 Shell Convention
Saturday 28th October 2017 Shell Show

Theydon Bois Community Centre,
Coppice Row, Theydon Bois, CM16 7ER.
Open from 9am to 5pm. Admission free.



Please check web site for up to date and further information:
www.britishshellclub.org



figure 1: Adult *Omphiscola glabra* netted from a flooded area of field at The Sturts SSSI, Herefordshire, placed on an oak leaf for scale, December 2015.

Omphiscola glabra (Müller, 1774) is an aquatic species (figure 1) restricted to north-west Europe. In the UK, it was widespread but local and has declined significantly, probably due to loss of the specialised habitat it prefers. It is a species of small temporary freshwater pools, ditches, marshes and seepages, especially on unimproved grassland and heaths with nutrient-poor water. It can also occur on the edges of permanent pools in the drawdown zone. It is associated with habitats that undergo periodic drying, which the snail survives by burrowing into soft mud. These specialised habitats are vulnerable to succession, nutrient enrichment and changes to the hydrology. It is now classed as Vulnerable (RDB2, UK Red Data Book), Near Threatened by the IUCN and is a Section 41 Priority Species (NERC Act, 2006).

In Shropshire, there were just two sites where the mud pond snail had been recorded since the late 1800s, both in the north of the county; the first record (det. M.P. Kerney) came in 1966 from a marsh, which was bisected by the Hodnet village bypass about 10 years ago. The second, more recent,



figure 2: Brown Moss SSSI, pool 2 where *Omphiscola glabra* was most numerous in the marginal vegetation (rear of photo), January 2016.

record was in 1993 (K.G.Allenby, det. by M.P.Kerney) in a ditch on Whixall Moss (part of the Fenn's, Whixall, Bettisfield, Wem and Cadney Mosses SSSI and NNR).

I made a thorough search of both these previous locations for the Freshwater Habitats Trust who are currently resurveying sites for rare species through the PondNet Survey, but I did not find any *O.glabra*. The ditch on the edge of Whixall Moss was still present though it may have changed in character as restoration of the degraded raised bog has proceeded. The peat-stained water of the ditch did support *Pisidium* sp., *Physella acuta* agg. (Draparnaud, 1805), *Sphaerium corneum* and *Galba truncatula*. The marsh near the Hodnet bypass had *Lymnaea palustris*, *Succinea putris* and *Pisidium* sp. amongst the vegetation which included *Glyceria maxima*, *Iris pseudacorus*, *Carex paniculata*, *C.acutiformis* and *Caltha palustris* amongst others. This must be a remnant of what was probably a more extensive and interesting area of fen before the bypass. Attenuation/mitigation ponds were built nearby and have developed into varied wildlife ponds, with nine common and widespread species of aquatic mollusc found when I surveyed them earlier this year, but unsurprisingly I did not find *O.glabra*. As far as I know the original marsh was not checked for *O.glabra* prior to road construction, an illustration of how easily and quietly these important pockets of habitat supporting specialist species can be degraded.

Nearby is Brown Moss SSSI, SAC, a Common and Shropshire Council Nature Reserve, which seemed the next obvious place to search despite no previous records, as it has a suite of semi-natural wetlands with a rich variety of characteristic flora. The wetlands form a complex of pools within a mosaic of acid grassland, remnant heath and secondary birch woodland. The water levels in the pools fluctuate in response to rainfall, being fed by shallow surface groundwater in the glacial drift plus a few small drains from surrounding land. There are 13 pools, varying in character from open to shaded, on deeper peat to shallow organic mud over sands and gravels, and sure enough *O. glabra* proved to be present in 7 of the 13 pools, and I have yet to sample the main and largest one. It was frequent in pool 2, occasional in pools 5, 10 and 13, and rare in the more shaded pools 3a, 3b, 4 and 8 and not found in pools 1, 7, 11, 12 and 9 (the latter a Schwingmoor or floating bog so an unlikely candidate in any case). At pool 2, *O.glabra* was most numerous in the marginal vegetation (see figure 2), in association with *Physella acuta* and *Pisidium nitidum*. The

preferred habitat specifically comprised dense *Juncus effusus* (soft rush) with *Comarum palustre* (marsh cinquefoil) (figure 3) with a water depth at the time of 10–30 cm, pH 5.73 and low conductivity 32 ppm, 64 µs. The vegetation transitioned into *Typha latifolia* (bulrush) in deeper water where *O. glabra* was no longer found in the samples.



figure 3: The preferred habitat for *O. glabra* at pool 2, Brown Moss SSSI was dense *Juncus effusus* Soft Rush with *Comarum palustre* Marsh Cinquefoil, photo by Mags Cousins, Feb. 2016.

The overall conservation objective is to restore the wetlands at Brown Moss by reducing tree cover and shading, reducing diffuse pollution and instigating light cattle or pony grazing, and this will all benefit *O. glabra*. However, ideas to remove nutrient-rich silt for the benefit of aquatic macrophytes such as *Luronium natans* (floating water-plantain), the SAC feature, could have detrimental effects and needs even more careful planning if it is to take place. The pool numbering system devised by the renowned Shropshire naturalist Charles Sinker in 1959 has proved extremely useful for recording the numerous interesting species at Brown Moss, and for planning and charting sensitive wetland restoration and management.

There could be other locations in Shropshire where *O. glabra* may be found, including some other quality SSSI wetlands with relatively natural hydrology which will be searched in due course.

Weird Winkles

In the late 1960s, I had an interest in the rough winkle *Littorina saxatilis*. Some observations I made at the time struck me as unusual and may be of interest. Unfortunately, the notes I took at the time have disappeared in one of the many house moves since then, so the following is from memory.

Sexing *L. saxatilis*

I wanted to look at the brood pouches of *L. saxatilis* which involved breaking open the shells and, not wanting to kill more than necessary, I looked for a way to separate the sexes so I would only crack open the females. I read that it could be done by the shape of the shell mouths but when I tried using this it proved unreliable. So I went down on to the shore on the north west end of the Gareloch (Argyll and Bute, Scotland) and picked up mating pairs. Carefully pulling them apart, I determined which had the penis and separated them into males and presumed females. Cracking the latter, I discovered that about 30% of the ‘females’ were in fact males! Also, during my searches for copulating pairs, I found two occasions when the *L. saxatilis* male was mating with a common winkle, *L. littorea* (sex undetermined) (figure 1). I had to harden my heart and just collect a batch of winkles from the shore and crack them open to find the females before examining the brood pouches.

Regeneration of opercula

On one occasion when I went down to the shore of the Gareloch there was a strange scum on the water and all of the winkles had detached from the rocks and were lying on the shore. A couple of days later, many had died but some had recovered and had climbed back on the rocks but had shed their opercula. I contacted the Clyde River Purification Board but they had no record of a pollution incident and, unfortunately, I had not collected a sample. On my next visit to the Gareloch some weeks later I found that those *L. saxatilis* had regrown their opercula but in an unusual fashion. The operculum is produced by a slit in the foot of the winkle below the end of the widest coil of the

Jim Logan

operculum. Usually the newly formed section attaches to the preceding coil of the operculum as it is made. As there was no existing operculum on these snails, the new growth had nothing to attach to so grew in a straight line out through the mouth of the shell.

High rise *L. saxatilis*

On holiday in Shetland (also in the 1960s) we travelled to Eshaness and walking to the cliffs to do a spot of birdwatching. I came across a pool of saltwater about 300 feet above sea level in which were a number of *L. saxatilis*. The pool was at the end of a large rock fissure which came through the cliffs. Probably waves were funnelled up through the fissure during storms and sprayed sea water and live winkles into the pool where they were able to live happily.

Mark and recapture

One thing I learnt when working on the beach at Garelochhead was not to try mark and release experiments on a beach used by the occasional holidaymaker. I had marked some *L. saxatilis* with nail varnish and put them on the beach to see how far they travelled. Three days later one group had apparently sprinted 100 yards along the beach and climbed above the high water mark to the foot of some stairs. I can only assume that a child collected the pretty coloured snails and then was made to drop them as he/she left the beach.



figure 1: *L. saxatilis* mating with *L. littorea*.

Shells depicted in two sets of 17th century lime-wood carvings

Peter Topley and Kevin Brown

The famous woodcarver and sculptor Grinling Gibbons (1648-1721), born and educated in Holland of English parents, settled in Deptford from 1667. By the time he was established he led a large workshop, and the extent to which his personal hand appears in later work varies. Most of his work is in lime (*Tilia*) wood, especially decorative Baroque garlands made up of still-life elements at about life size, made to frame mirrors and decorate the walls of churches and large houses. The majority of the carvings comprise flowers and foliage, sometimes combined with other elements depending upon the context, such as musical and scientific instruments, classical vases etc. Occasionally shells are included in these carvings and an example is shown here, along with a second by another carver of the period.



figure 1: Altarpiece of St James' church, Piccadilly showing Grinling Gibbons' lime-wood shell carvings (arrowed).

The Gibbons lime-wood carvings behind the altar of the church of St James, Piccadilly, date from 1684. 'These carvings are dominated by the Pelican in its Piety, placed above the middle loop of a festooned garland, elaborately composed of fruits, flowers, shells and wheat-ears, arranged to fall in three wide and two narrow loops, and ending in two great knotted pendants' (<http://www.sjp.org.uk/buildinghistorya.html>) (figure 1). The shell carvings here are both naturalistic and 'of a scale'. It is possible that the woodcarver had access to specimens from sailors in Deptford since 'it is also known that some carvers such as Grinling Gibbons started out as ship carvers and then left that trade to pursue a non-ship-carving career' (McCarthy, 2015). The species depicted in the St James' church carvings (figures 3 and 4) have a geographical distribution of either European/British (e.g. *Pecten* cf. *maximus*, *Mytilus* cf. *edulis* and *Haliotis* cf. *tuberculatus*) or Caribbean/Florida (e.g. *Melongena* cf. *melongena*, *Cypraecassis* cf. *testiculus*, *Cymatium* cf. *femorale* and *Cassis* cf. *madagascariensis*). There are also a couple of Indo-Pacific species (e.g. *Lambis* cf. *lambis*, and *Charonia* cf. *tritonis*). The *Charonia* is unlikely to be one of the Atlantic/ Mediterranean

species/forms as it is too slender and has fewer pronounced knobs on the shoulder; *C. tritonis* was certainly known at this time as it was depicted in numerous paintings and sculptures of the period.



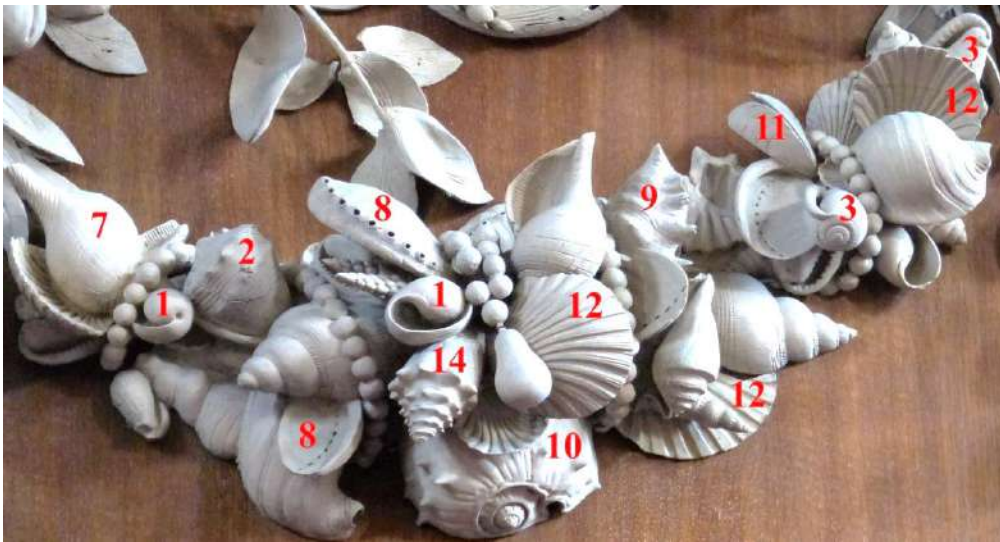
figure 2: Lyme, Cheshire.

The 17th century house at Lyme Park in Cheshire (figure 2), home of the Legh family until given to the National Trust (NT) in 1946, includes some carvings, also dating from about 1684, that the guidebook (Rothwell, 1998) says are 'attributed to Grinling Gibbons by family tradition'. Some of these carvings are very fine. Much of the contents of Lyme, including the carvings, remained 'on loan' to NT but in 2014 the carvings were accepted in lieu (AIL) of inheritance tax by the Arts Council and allocated to the house. At this time the AIL Panel and their advisers felt that the carvings were more likely to be by another master carver, possibly the work of a local carver who learned from or who was aware of Grinling Gibbons but went on to develop his own style (Anon., 2014). A small section of the carvings depicts a group of shells (figure 5) as part of a frieze. These carvings are both cruder and more stylised than those described earlier, and include a sinistral gastropod. This may indicate that book illustrations or prints (which at the time sometimes showed gastropod images 'reversed', thus appearing to be sinistral) were used as a source for the carvings, rather than specimens themselves.

A few years ago we described the shells depicted in the borders of some late 17th century Gobelin tapestries on display at Burghley House, Lincolnshire (Topley and Brown, 2012). The tapestries were made at around the same time as the lime-wood carvings. Of the 26 identifiable species depicted in the tapestries, six of them (*Cymatium femorale*, *Cypraea* sp., *Cypraecassis testiculus*, *Haliotis* cf. *tuberculata*, *Melongena melongena* and *Strombus gigas* juvenile (?)) were also included in the wood carvings described here. Examination of such 'alternative' sources of historical shell depiction forms a useful adjunct to information obtainable from contemporary documents, publications, painting and collections.

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Key

- 1. *Bulla* cf. *ampulla*
- 2. *Cassis* cf. *madagascariensis*
- 3. *Cassis* sp.
- 4. *Charonia* cf. *tritonis*
- 5. *Cymatium* cf. *femorale*
- 6. *Cypraeassis* cf. *testiculus*
- 7. *Fasciolaria* sp.
- 8. *Haliotis* cf. *tuberculata*
- 9. *Lambis* cf. *lambis*
- 10. *Melongena* cf. *melongena*
- 11. *Mytilus* cf. *edulis*
- 12. *Pecten* cf. *maximus*
- 13. *Pecten* sp.
- 14. *Strombus* sp. (*gigas* juv. or *pugilis/alatus*?)

figures 3 and 4: Grinling Gibbons shell carvings at St James' church, Piccadilly.

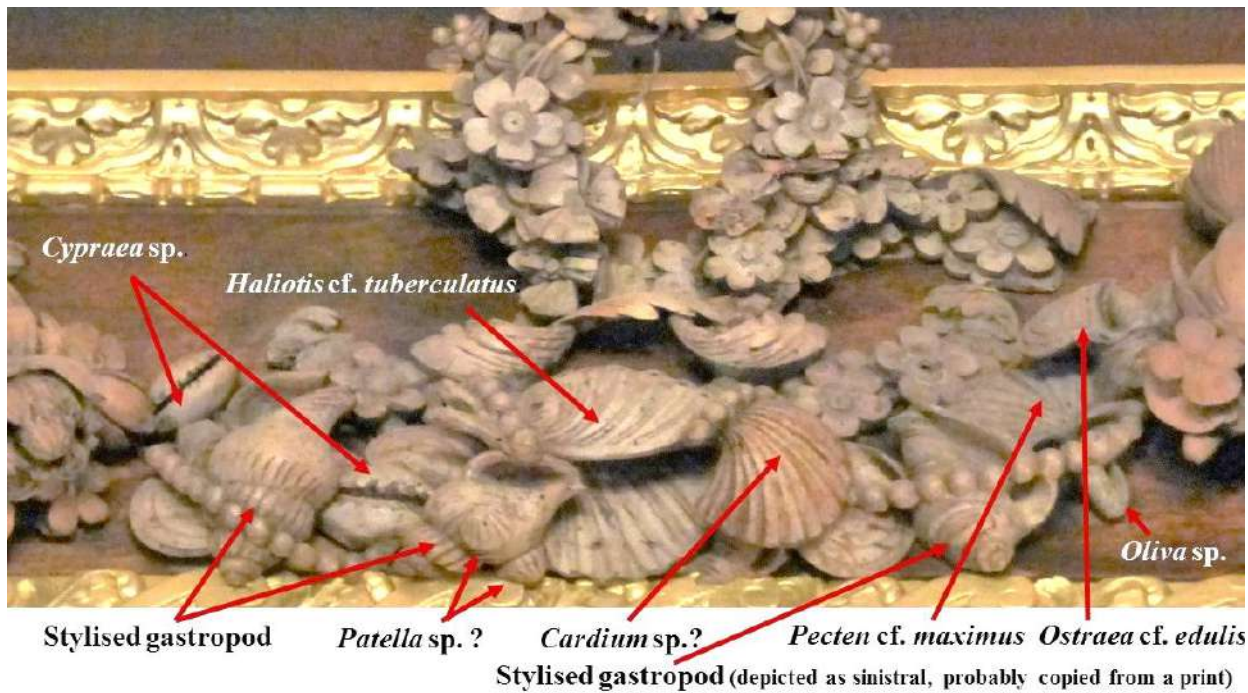


figure 5: Shell carvings at Lyme house, Lyme Park, Cheshire.

Acknowledgements

The images of shell carvings are included here with the kind permission of both the National Trust and St. James Church, Picadilly.

How a conchophobe helped a conchologist's daughter get in touch with me

S. Peter Dance

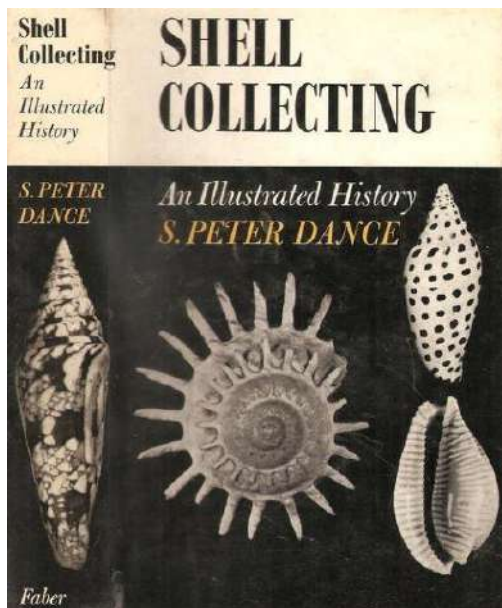


figure 1: Shell Collecting, An Illustrated History. First edition, published fifty years ago this year. (photo: Peter Topley)

On 31st July 1966 there appeared in *The Sunday Times* a lengthy review of my first book, *Shell Collecting, an Illustrated History*, then just published by Faber and Faber and the University of California Press (figure 1). The reviewer was Cyril Connolly (1903–1974). I could not understand why the foremost literary critic in Britain at that time had written it, because the usual targets of his criticism were publications by such luminaries as T. S. Eliot, James Joyce, George Orwell, Henry Miller and Ian Fleming. It was reasonable to suppose he would have had little interest in natural history in general, even less in something as esoteric as conchology, none at all in a book on the history of shell collecting by an unknown author!

Reading his review, however, I realised my supposition was wide of the mark, for it transpired that he was the son of Matthew Kemble Connolly (1872–1947), a leading authority on African non-marine snails, whose extensive collection, including shells of many species he was the first to name and describe, is stored in London's Natural History Museum. I had often handled his shells when I was employed there in the 1960s. Totally engrossed in his speciality, the elder Connolly was highly respected by other leading authorities in the shell world, but not, it seems, by his son who found his father's fastidious obsession with snails anything but engrossing: 'It made me a conchophobe' he said. Nevertheless, he reviewed my book favourably, noting that I was 'a young writer' who had an 'uncanny flair' for following the fate of shells at auctions and for 'tracing the fluctuations in price of noted rarities from specimen to specimen down the centuries.' This, from a man inclined to dismember literary reputations on his critical chopping block, was high praise indeed! Apparently Cyril Connolly had a good opinion of the review himself because he reprinted it in his book *The Evening Columnade*, 1973 (pp 496–499).

Most reviews of my book appeared in specialist journals, but Connolly's reached a wider, more eclectic audience. This explains why, a few weeks after the review was published, I received a letter from Gwendolen Brodie Hoare (figure 2), a daughter of the multi-talented James Cosmo Melvill (18845–1929) (figure 3). A glittering star of British conchology, Melvill was especially noteworthy for his many publications dealing with the marine shells of Eastern Arabia and the non-marine shells of South Africa. His shell collection contained thousands of scientifically valuable specimens and was unrivalled during his lifetime for its many rarities, including a superlative example of the then virtually unobtainable *Conus gloriamaris*, which shell I had often admired while working on the shells housed in the National Museum of Wales in Cardiff, the repository of his collection. As his daughter's letter indicates, however, Melvill's interests were not confined to conchology. Meole Brace Hall, his Shropshire home, must have been more like a natural history museum than a domestic residence.

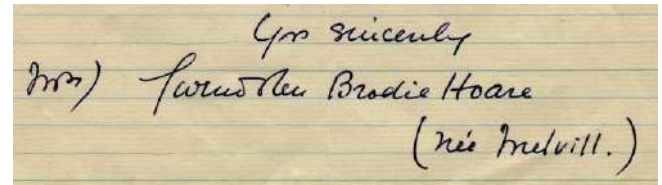


figure 2: Signature of Gwendolen Brodie Hoare (National Museum of Wales (NMW)).



figure 3: James Cosmo Melvill. (Photo from original in the Conchological Society archive; signature courtesy NMW).

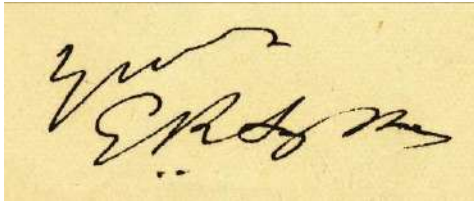


figure 4: Signature of Ernest Ruthven Sykes (NMW).

Also mentioned in the letter is Ernest Ruthven Sykes (1867–1954) (figure 4). He married Gwendolen’s sister and so became Melvill’s son-in-law. Both men, apparently, had been attracted to conchology independently. By publishing many articles on shells and amassing a large and scientifically valuable shell collection, Sykes also earned an honourable, if less glittering, position in the conchological firmament. His collection I knew from my days in the Natural History Museum, where it is housed, but the man I knew only from the shakily written letter he sent me shortly before he died. More information about Melvill and a little about Sykes may be found in my book.

Apart from adding a few punctuation marks and substituting ‘and’ for ampersands throughout, I have allowed Gwendolen Brodie Hoare’s letter to speak for itself.

[Meole Brace Hall, Shropshire]

September 12th 1966

Dear Sir

I have been very interested in your illustrated history of ‘Shell Collecting’. I am the daughter of the late James Cosmo Melvill D. Sc. who you frequently mention in your book, and it has brought back to me so many memories of the past. How well I remember my father’s pride in ‘Gloriamaris’, and I think he always gave it first place in his collection. My sister, the late Mrs Ernest R. Sykes, as a child used to help him sort out the microscopic shells when a fresh consignment arrived from the Persian Gulf sent by Mr Townsend, they were so microscopic in size and quite difficult to find in the sand. The collection was most beautifully arranged laid out on wool in drawers in a number of large mahogany cabinets, the smaller shells all in boxes neatly labelled. My sister married the late Mr E. R. Sykes. I think after his death some specimens were sent to the British Museum.

My father was a most unusual man, his memory quite amazing, as apart from conchology, he was a very well known botanist and his vast collection of plants was left to the Manchester Museum 1904. My father began collecting plants as a school boy at Harrow and with his two friends, the Hon. F. G. and the Hon. G. O. M. Bridgman they wrote ‘The Flora of Harrow’. In later years he collected and arranged ¾ of the plants of the world. This wonderful herbarium was given to the Victoria University, Manchester, followed by the grasses of the world, and a collection of ferns in which no part of the world is unrepresented, he also arranged one third of all seaweeds known, and painted a large number of various fungi (as these could not be pressed!). His collection of butterflies, moths, wasps, bees and various flies and insects were often exhibited and finally were left to various schools, Harrow, Shrewsbury museums etc.

He was one of the oldest fellows of the Linnean Society and Conchological and was at the time of his death President of the Malacological Society of London.

My father retired in 1904 and came to live near Shrewsbury and after his death my husband and family came to live in our old home.

My son Commander E. N. Brodie Hoare, DSc., Royal Navy, read the review of your book in *The Times* and gave me a copy which has been of great interest, and I feel I must congratulate you on what must have taken a great deal of research.

Yrs sincerely

Mrs Gwendolen Brodie Hoare (née Melvill.)

Acknowledgments

I am pleased to acknowledge the National Museum of Wales for granting me permission to reproduce Gwendolen Brodie Hoare’s letter and the photo of her signature, and the signatures of James Cosmo Melvill and Ernest Ruthven Sykes. I am also grateful to Harriet Wood of the Department of Natural Sciences of that museum for providing the images reproduced.

THE SNAILS AT CHEDWORTH ROMAN VILLA

As you are walking around the villa you may be lucky enough to see some very large snails. These are ‘Roman Snails’ (*Helix pomatia*) and are the largest European terrestrial snail.



This snail is one of the most popular edible snails and is thought to have been introduced to Britain by the Romans 2000 years ago.



Roman snails hibernate by closing their shell with a self-made lime lid and hiding in a secure earth hole.



The Romans fed their snails on milk until they were so fat they couldn’t get back into their shells! They would then be cooked and eaten as a delicacy.



Roman Snail Facts

Distribution: Rare. Found in southern to central England.
Habitat: Lime rich soils and chalk downland.
Appearance: Often pale in colour with brown bands.
Size: Body - up to 4 inches. Shell - up to 2 inches diameter.
Food: Plant matter.
Life Span: Up to 10 years

ROMAN SNAILS ARE A PROTECTED SPECIES—PLEASE DO NOT TOUCH!

The Roman snail, *Helix pomatia* is a protected species and for this reason the location of colonies are not normally revealed. However, at Chedworth the National Trust is very proud of the fact that it hosts a large colony of this species among the ruins of the Roman villa. The site information poster is reproduced above by kind permission of Sarah Merriman, the Operations manager at the site.

In June 2016 Nick and I were invited to stay with some friends on their boat in the south of France. They keep their boat in the marina at Frejus, just by St Raphael which is in the heart of the French Riviera. The aim during the three weeks we were with them was to make a crossing to Corsica and maybe Elba. Unfortunately, a blast from the Mistral followed by a series of mechanical upsets, delayed our departure to the point that the envisaged cruise would not be possible within the window of opportunity available to us. So we contented ourselves with coastal sailing and during those three weeks we gained a good flavour of the resorts strung out along the coast. Names such as St Tropez, Cannes, Nice, Villefranche-sur-mer, Cap Ferrat became reality, as we plied our passage to the west and east of our resident port. These coastal settlements looked pretty densely populated to me and I was quite content to view from afar.

One morning our host announced that there would be a market, strung out along the promenade at Frejus. With every kind of stall that can be imagined we viewed the goods and shopped for supplies. Before we set off together however, Francois slipped out early to visit one particular stall which sells fish and seafood. He was in search of 'Violets'. This was evidently a vernacular name for a particular 'fruit de mer' and when he described them to me I could not even imagine to which phylum they belonged (figure 1).



figure 1: At 26 Euros a kilo these unprepossessing 'fruits de mer' have to be something of a delicacy.

When he returned with his booty Francois showed us a plastic bag containing what I took to be small irregular rocks with assorted encrustations and frondose attachments. Well, 'fin bref', as the French say, the dozen individuals turned out to be sea squirts, or ascidians. When I eventually ran the species down it turns out that the so-called 'violets' (which are not violet at all), or sea figs as they are sometimes called, were *Microcosmos sabatieri*. They are eaten in various parts of the world including China, Japan, Korea and in countries bordering the north coasts of the Mediterranean. Quick reference to Wikipedia tells you that they are eaten raw, often with a sharp condiment such as lemon juice or shallot vinegar and have a slight taste of iodine. You simply cut through the stout fleshy tunic to expose the sulphur yellow soft parts, loosen them from their point of attachment and swallow them back, as you might slurp an oyster. Their texture and flavour are distinctly marine, and they are not dissimilar to oysters but the taste is stronger (figures 3 and 4).



figure 3: François prepares the 'Violets'.



figure 4: Behold, one 'Violet' prêt-a-manger.

'Ah', I hear some say. 'But they aren't molluscs are they?' No, but the 'Purples' Francois bought on the same foray most certainly were. The second plastic bag was opened to reveal some twenty *Murex* shells. Smaller than *Buccinum* whelks and larger than *Ocenebra* or *Nucella* shells the species that was being sold locally, and which I was staring at, was *Hexaplex trunculus* (figure 5). Now I have written a bit about certain muricid species, i.e. those that harbour the hypobranchial gland whose secretions are capable of producing purple dye, in the context of Tyrian purple production. There are sources that document the use of *Nucella lapillus* and *Stramonita haemastoma* as a foodstuff but I had not come across references to *Hexaplex* as a comestible.



figure 5: *Hexaplex trunculus* washed and ready for the pot.

To cook them a litre of water was drawn and 30g of salt was added to replicate, more or less, seawater. A good glug of oil and some hefty shakes of ground pepper were added. The whelks were rinsed and then boiled for 10 minutes after which one was tested for easy removal of the body. Over-cooking toughens the flesh. All marine snails are tricky to extract from the shells. Bits get left behind. But I managed to find enough meat to dip into freshly-made mayonnaise. I'm used to eating whelks and the *Murex* were similar but with a more pronounced flavour (figure 6). At the end of the meal I noticed that the aperture exteriors of some of the shells had picked up some purple staining. I must confess that I rushed to a mirror to see if my tongue had stained blue. My tongue was unscathed.



figure 5: A supper of 'Purples'.

Postscript: Slightly off the point, but molluscan nevertheless, I recently received a French friend and her five-year old grandson for a short stay in Dorset. During the course of the visit Noe spotted my microscope and asked to investigate it. We found a moment and I showed him a multi-celled slide with an assortment of mounted rissoids. Whilst at the microscope I glanced at a slide which contains a specimen of *Graphis albida*. This minute and exquisitely sculptured shell is a marvel (figure 6). You could hardly see it in the slide. I put it under the 'scope and showed Anne. Inevitably Noe wanted to see it too. I replaced him at the microscope, helped adjust the eye-pieces and racked up and down, asking him to tell me when the image was clear. I have never been confident that such young children can give the right call on this. When he told me he could see the specimen I asked him what it looked like. I hoped he would tell me he was looking at a shell. Instead he told me that it looked like the 'horn of a unicorn'. No doubt about that!

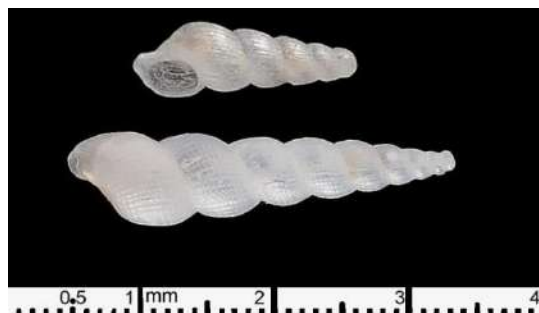


figure 6: Images of *Graphis albida*: two specimens taken from shellsand at Fanore, Co. Clare.

(Photo: Ian Smith)

Field meeting to Lower Winskill Farm, Langcliffe, Yorkshire *Adrian Norris*

This meeting took place by kind permission of the owner of the farm (figure 1), Tom Lord, on August 7th 2016 with members and visitors including Adrian Norris, Bas Payne, Michael Pearson and Terry O'Connor, the field meeting organiser. Several wives and visitors also attended but did not take part in the recording process, all of which took place within the square SD8266 (figure 2 and page 2).

The morning was spent on a windy westward slope called the Hags examining old derelict walls, which produced twenty species including *Vertigo pygmaea* and *Acanthinula aculeata* and a single specimen of *Clausilis dubia suttoni* which was found on a large limestone boulder just above the main wall we spent most time examining. After a leisurely lunch provided by Sonia O'Connor in the field course 'classroom', out of the wind, the afternoon was spent examining the old limestone Caker Scar and Crutching Close in which we located two small colonies of *Helicella itala* (figure 3) spreading from SD82786653 to SD82706661. We also spent some time within Parrock Stones Plantation which is an area of wooded limestone pavement completely surrounded by stone walls. Within this we found a specimen of *Limax maximus* and two *Boettgerilla pallens*, the latter of which is the first record of this introduced alien slug in any of Yorkshire's limestone pavements. In total, we found thirty species.

The records show that we previously visited this area on July 23rd 2006, when we visited the Hoffman Kiln at Langcliffe at SD8266, locating thirty-one species, bringing the total now for the 1 Km square to forty. It is also

interesting to note that we also recorded *Helicella itala* at this site in 2006, which is very close by.



figure 1: Lower Winskill, Farm.



figure 2: The author recording near Lower Winskill Farm.



figure 3: *Helicella itala* on limestone, Caker Scar.

(all photos: Terry O'Connor)

Exmouth: home of The Cockles



A cockle featured on the sign board for the Exmouth Rugby Football Club (above left), a splendidly sited pitch on the shore of the Exe estuary near the railway station. A quick look on the shore, immediately below, revealed cockles in plenty on the beach, together with lots of *Peringia* (formerly *Hydrobia*) *ulvae* (above right).

June Chatfield

Blog: Biodiversity of Cyprus

biodiversitycyprus.blogspot.co.uk

This web site was brought to my attention by Alan Outen, who leads Natural History trips to Northern Cyprus. Although general in nature, it gives a good overview of the plants and animals of the island, with interesting descriptions accompanying some good photos. The marine molluscs illustrated are rather few, including some seaslugs, a nice photo of living hammer oysters (*Maleus regula*) and the scallop *Flexopecten hyalinus*. There are more examples of non-marine molluscs, both land and freshwater, including various introduced species, which include the tropical apple snail *Pomacea bridgesii* and one of our native species, the great ramshorn snail *Planorbarius corneus*. The web site is hosted by George Konstatinou, who took many of the photos that are featured.

High climbing snails

Suzette and Michael Scott, two friends of ours who live in a nearby Bedfordshire village, wrote to say that they have come to realise this year how keen snails are on climbing: 'They have been scrambling up the terrace work

over the front of the house. This morning, their slimy, silver trails were to be seen glistening in the sunshine on the red brickwork very high up on one of our chimney stacks. I have no idea if this is a well-known characteristic of snails.!'

Hon. Ed.



Cornu aspersum on a yellow flag plant, island of Iona, Scotland.

(photo: Adrian Sumner)

About the Conchological Society

The Conchological Society of Great Britain and Ireland is one of the oldest societies devoted to the study of molluscs. It was founded in 1876 and has around 300 members and subscribers worldwide. Members receive two publications: Journal of Conchology which specialises in Molluscan Biogeography, Taxonomy and Conservation and this magazine. New members are always welcome to attend field meetings and indoor meetings before joining.

Some key contacts (see web site [<http://www.conchsoc.org/pages/contacts.php>] and 2016 membership list for additional contact details)

HON. PRESIDENT/EDITOR OF MOLLUSC WORLD: Peter Topley
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E mails: president@conchsoc.org /magazine@conchsoc.org

HON. GENERAL SECRETARY: Rosemary Hill
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Anna Holmes, National Museum of Wales, Cathays Park,
Cardiff, CF10 3NP Email: journal@conchsoc.org

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Tom Walker, 38 Redlands Road, Reading, RG1 5HD.
E mail: tom@tmwalker.co.uk

How to become a member

Subscriptions are payable in January each year, and run for the period 1st January to 31st December. • Ordinary membership £33
• Family/Joint membership £35 • Under 18 (receiving Mollusc World only) £5 • Student membership £15 • Institutional subscriptions £47

In view of the high cost of overseas postage, members living in Europe will be asked to pay an additional postage charge of £8, and members living in the Rest of the World an additional postage charge of £17. See website for further details.

Payments in sterling only, to Carolyn Postgate, CIRCA Subscriptions, 13-17 Sturton Street, Cambridge, CB1 2SN,

(shellmember@gmail.com). For UK residents we suggest payment by standing order, and if a UK tax payer, please sign a short statement indicating that you wish the subscription to be treated as Gift Aid. Another simple and secure way of paying for both UK and overseas members is by credit card online via PayPal from <http://www.conchsoc.org/join>. Overseas members may also pay using Western Union, but a named person has to be nominated, so please use the Hon Treasurer's name, Nick Light.

How to submit articles to Mollusc World

Copy (via e mail, typed or handwritten) should be sent to the Hon. Magazine Editor (contact details above). If sending copy using e-mail please include a subject line 'Mollusc World submission'. When emailing several large file attachments, such as photos, please divide your submission up into separate emails referencing the original article to ensure receipt. Electronic submission is preferred in Microsoft Word. Images and Artwork may be digitised, but we recommend that a digital image size 200Kb- 1.5Mb (JPEG preferred) be sent with your submission. All originals will be treated with care and returned by post if requested. Authors should note that issues of the magazine may be posted retrospectively on the Conchological Society's web site. Copy intended for the March 2017 issue should be with the Hon. Editor prior to 1st February 2016; inclusion in a particular issue is at the Hon. Editor's discretion and depends upon the space available but contributions are always welcome at any time.

Advertisements in Mollusc World

We are pleased to invite advertisements, provided they are in line with the Conchological Society's charitable objectives and responsibilities. Advertisements of shells for sale from commercial shell dealers will generally not be accepted. Please contact the magazine Editor for further details.

Membership update

The following Conchological Society member has not previously been included in either this column of Mollusc World or in the latest edition of the Members' Guide (2016). Please note that to be included here members must sign a data protection consent form. If you have not been included and now wish to be please contact Carolyn Postgate at CIRCA subscriptions (details above).

(name and contact details removed)

The codes in italics indicate the member's interests:

A – Applied conchology; B – Conchological books; C – Conservation; D – Diving; E – Ecology and pollution; F – Fossils; G – General malacology including genetics/physiology; Mb – British marine; Mf – Foreign marine; Nb – British non-marine; Nf Foreign non-marine; P – Photography; Z – Captive breeding.



Conchological Society of Great Britain and Ireland

Diary of Meetings

Please check the website (www.conchsoc.org) for further details and any updates, including other meetings arranged at shorter notice.

Saturday 19th November 2016: REGIONAL INDOOR MEETING: National Museum Wales, Cardiff.

Organisers: Anna Holmes, Harriet Wood, Jen Gallichan, and Ben Rowson (Anna.Holmes@museumwales.ac.uk).

10:30 – 16:00: A day of talks, exhibits, and discussion, including a tour of the mollusc collection.

For full details please see website.

Saturday 26th November 2016: WORKSHOP MEETING: Woking, Surrey.

10:00 – 17:00: by kind invitation of Judith Nelson at Hilbre House, Pembroke Road, Woking, Surrey GU22 7ED. The annual workshop offers members the opportunity to receive tuition and share problems and experiences. Those who wish to come should ring Judith (01483 761210) in advance for more details and to reserve a place. A fee of £5 will be charged to cover expenses.

Please note that Hilbre House is a non-smoking property.

Saturday 10th December 2016: INDOOR MEETING: A Christmas miscellany.

14:00 – 17:30: Angela Marmont Centre, Natural History Museum.

As usual, a meeting made up of a series of short presentations (5-20 minutes) by members: these can be anything mollusc-related, with or without exhibits. This will be followed by a glass of Christmas wine (free!); and then by supper at a nearby restaurant (pay your share ...). If you would like to make a presentation, or want a place at the restaurant, please get in touch with Bas. (Council members please note that there will be a Council meeting before this meeting.)

Saturday 21st January 2017: INDOOR MEETING: Lecture and exhibits.

Guest Speaker: Jen Jones: 'On the trail of Galapagos snails'.

14:00 – 17:00: Angela Marmont Centre, Natural History Museum, Cromwell Rd., London SW7 5BD.

(Council members please note that there will be a Council meeting before this meeting.)

Saturday 25th February 2017: FULL DAY INDOOR MEETING: Demonstrations, discussion, exhibits and lecture.

Guest Speaker: Bryce Beukers-Stewart: 'Seeking sustainable scallop fisheries in a changing ocean'

11:00 – 17:00: Angela Marmont Centre, Natural History Museum, Cromwell Rd., London SW7 5BD.

The lecture will start shortly after 14:00.

(Council members please note that there will be no Council meeting before this meeting.)

Saturday 8th April 2017: ANNUAL GENERAL MEETING

Speaker: Helen Scales: 'Spirals in Time; exploring the secret life and curious afterlife of molluscs'.

14:00 – 17:30: Angela Marmont Centre, Natural History Museum, Cromwell Rd., London SW7 5BD.

(Council members please note that there will be a Council meeting before this meeting.)

Please note the following dates in 2017 for your diary:

probably Saturday 20 May – Wednesday 31st May 2017: MARINE FIELD MEETING, Orkney.

Saturday 21st October 2017: INDOOR MEETING 14:00 (preceded by Council meeting)

Saturday 18th November 2017: REGIONAL MEETING (venue probably Cambridge)

Saturday 9th December 2017: INDOOR MEETING 14:00 (preceded by Council meeting)

possibly 6-12th October 2017: MARINE FIELD MEETING with some non-marine on later days, Gower (S. Wales).

Indoor meetings at the Natural History Museum take place in the Angela Marmont Centre for UK Biodiversity, Darwin Building. From the main entrance hall, turn left at the tail of the *Diplodocus*, go past the dinosaur exhibition, then down the stairs, and then turn left. The door of the Centre will be locked; please ring the bell and someone will come to open it. **Please bring plenty of exhibits and demonstration material.** A group of us usually go out for a drink and a meal at a local restaurant after indoor meetings, with the speaker if his or her travel arrangements permit; please let Bas (contact details below) know if you would like to join us, if possible by the preceding Wednesday so that a large enough table can be booked.

If you intend to attend a **field meeting**, please remember to inform the leader beforehand, and if, on the day, you are held up in traffic or your public transport is delayed, please try to contact the meeting leader if possible.

We are always happy to receive any suggestions for speakers for indoor meetings, or offers to lead field meetings, and also any suggestions about Society participation in the meetings of local and other societies.

Programme Secretary: *Bas Payne, The Mill House, Clifford Bridge, Drewsteignton, Exeter EX6 6QE;*