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COVER PAGE

Buccinum undatum "*littoralis*" King – Photo and collection John Fisher
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ROSTRATED COWRIES OF EAST SINAI

by E. L. Heiman

Rostration is the extension of the shell extremities, resulting in their becoming beaked to a certain degree, which is not characteristic to a species. There are cowries of East Sinai which normally have shells with extended (rostrated) extremities and it is one of their diagnostic characters, for example *Pustularia cicercula* (Linnaeus, 1758), *Pustularia globulus brevirostris* Schilder & Schilder, 1938, and *Erosaria nucleus* (Linnaeus, 1758).

In other cowries in that area an excessive extension of the shell extremities (rostration) is rare. Several different forms of this phenomenon in cowries of East Sinai are discussed in Heiman (2002); perhaps the most striking examples of such shells can be seen in Figs. 1-6.

Usually both ends of the shell are rostrated but sometimes this happens with only one of them as can be seen in Figs 7-11. The shell of *Mauritia arabica grayana* Schilder, 1930 pictured does not look like a senile specimen and there seems to be no indication of serious damage to the shell. Still its anterior extremity is turned down and covered by an excessive callous deposit producing the effect of rostration. In rostrated shells of New Caledonia and Queensland, Australia the extremities are usually turned up that in extreme cases produce a "boat-like" effect.

Perhaps in the future new conchological information will help us to explain these phenomena producing such unusual shells.



Fig. 1 & 2 - *Erosaria turdus pardalina* (Dunker, 1852); 47.8 mm



Fig. 3 & 4 - *Erosaria nebrites* (Melvill, 1888); 30.8 mm.



Fig. 5 & 6 -

macandrewi (Sowerby, 1870); 27.4 mm

Erosaria



Fig. 7 – 10 - *Mauritia arabica grayana* Schilder, 1930; 80 mm.

Shelling in Istria - North Eastern Adriatic by Graham Saunders

In April 2007 I was able to spend a few hours in the water (or mud) near Piran, Novograd and Rovinj. Individual forays did not exceed forty minutes, as the water, particularly at Piran, was very, very cold. A couple of other sites were cursorily inspected.

Piran - North facing, a rocky foreshore below cliff path. 20th April 2007. (Pictured right) Boulders with *Patella caerulea*, *Osilinus* and *Gibbula* were riddled with borers such as *Lithophaga* and *Gastrochoena*. No Chitons were seen. The *Patella*'s are very large, beautiful and thin shelled. It was not possible to remove these without damaging them so none were taken.



Piran - West facing below the promenade. 21st April and 22nd April 2007. An area of wave swept boulders and rock with some loose stone and a little weed. The seabed shelves to deep water. The predominant gastropods were the *Hexaplex trunculus* with smaller numbers of the largest *Haliotis lamellosus* I have seen, and *Calliostoma*, *Pisania*, *Osilinus* and *Gibbula*. The most interesting find was a population of *Chlamys glaber*. These were restricted to a low tide depth band of 0.4 metres to 0.8 metres. Almost all of them were near the top of clean, curved rock domes, all attached by byssus. A couple were lower on the curve. They were below the thermocline in really cold water. Most were light colours. I had always assumed that they lived in deeper water but I was evidently wrong. There was a small number of *Chlamys varia* under stones, all were dark coloured. As previously mentioned, the water was very cold, even with wetsuit. The maximum functional time in the water was about 35 minutes. The church in Piran has a spectacular font incorporating a huge *Tridacna gigas* (pictured left).

Izola (or Isola if you are Italian) - evening, 21st April 2007. I checked the harbour area in passing. There were two particularly large *Bolma rugosa* crawling in shallow water on the lower harbour steps. On the harbour wall near a scallop trawl, I found a pile of *Corbula gibba* with one *Dentalium* and one *Hinia*. There were older broken Muricids and *Aporrhais* scattered nearby.

Piran, - 22nd April 2007.

They have a marine aquarium near the harbour with quite a few molluscs including *Mitra zonata* though I never saw one in the wild. They were unaware of the *Chlamys*, which lived 180 metres away. I persuaded a fisherman to bring back his net cleanings. He was away for less than 3 hours and had several items including a red sponge, potentially *Suberites domuncula* (olivi) but at 64mm it was more than twice the size reported as maximum for that species. This grows around the home-base shell of a hermit crab. In this case the original shell was a tiny *Polinices poliana*. When I was taking the sponge apart I discovered that *Bittium*



Specimens from the Fisherman's nets

had colonised it burrowing throughout its structure. There were 18, all clean specimens. Other live shells were *Bolinus brandaris* and *Hexaplex trunculus* but better specimens of these were in clear view crawling on the harbour wall. There is no easy access to the water. You need a net on a long pole. In the evening we ate at the Tratoria at the northern end of the promenade. "Moules" were on the starter menu. When these appeared they were actually *Lithophaga* which I knew was illegal in Croatia because of the damage done to the harbour walls by restaurateurs. I was not at that time aware they are on the CITES list. The Croats hype them as an illegal aphrodisiac. They do not taste as good as *Mytilus* and the aphrodisiac story is a con! These were the largest specimens I had ever seen.



Piran Harbour and Marine Aquarium

Novograd - Croatia, or rather a couple of km up the coast. 24th April 2007.

An area of muddy stones and silty shallows with nothing very exciting; there was a lot of scallop debris and I managed to reconstruct some original pairs. They were all *Pecten jacobaeus* (if we are still recognising it as a species). *Conus* are in the area but they are all horridly eroded specimens.

Opatja - 26th April 2007

The rocks were almost barren and there was little in the way of marine life.

Rovinj - 27th April 2007

We took the ferry to the offshore islands controlled by the Istria Holiday complex. A causeway joins the large and small islands. On the south side the water is shallower and warmer. *Theridium* are white and the range of species is not exciting. A few feet away on the other side the water is colder and less shallow. The *Theridium* are all patterned brown and more exciting things can be found such as a variety of *Fissurella*, but best of all was a rock weighing about 15kg from about 1.5 metres of water. Underneath, between a number of beautiful white *Chama* were five *Galleoma turtoni*, each at the bottom of a shallow pit. I did not consider that the *Chama* could be removed without damage so they returned to the water as found. The shells seemed very small in relation to the size of the animal and at rest the whole thing was concave. We have seen photographs that appear to demonstrate that this animal travels with the two shells half closed. These are abnormal and misleading. A relaxed *Galleoma* travels extended and flat or follows the contours. Only a worried *Galleoma* will travel with shell half closed. A frightened *Galleoma* retreats totally into the shell though this looks totally impossible till you see it happen.



Northern Sardinia 2002 - Some notes on a week in May by Graham Saunders

These notes relate to two main areas and several secondary areas: Cala Piscaria facing North West, the South East peninsula of Caprera and several minor collecting points in Northern Sardinia and a few hours below the cliffs of Bonifacio ten miles over the water in Corsica.

Some species were widespread over most areas though others were confined to single pockets where 60% of the records for an entire reef came from an area less than one metre square. The only larger gastropod to be found in any numbers was *Hexaplex trunculus* though, where one found flat rock in shallows, there were generally a few *Fasciolaria lignaria*.

In most areas, Ceriths made up the bulk of the molluscan fauna. There were fewer microshells than I would have anticipated, even in suitable habitats, and there was a distinct shortage of Trochidae.

I found a single live *Trivia pulex* in weed in about 10 cm of water. I had always assumed that they lived in deeper water. Assumptions are often counter productive.

We took the car over to the Isla Magdalenas which include wilderness areas and a national park. There are many sandy bays which can only be reached on foot by overgrown tracks. The islands are small but you could spend weeks exploring. We found a perfect small beach close to an abandoned factory with jetty and slipway. It was on the eastern side of the island but very sheltered. In shallow water my attention was immediately drawn to an exceptionally large and perfect *Dentalium* and a scattering of smaller fresh material including some interesting Turrids. Weed washing and stone turning produced lots of smaller material including some nice *Engina bicolor*. As always, there were more of *Bittium* than any other species with Ceriths (not large) second in abundance.

Fossil Pleurotomariidae by Adrian Brokenshire

Following a recent article by John Batt on modern Pleurotomariidae in vol.36, No 2, Oct 2006, I thought I would have a go at an article on some fossil 'Pleurotomariid' gastropods. There are probably more fossil examples of this ancient subclass of Vetigastropod than recent ones, as their ancestry can be traced back to the Cambrian period. Many examples of the fossils are also distributed worldwide, the best known being from the Jurassic and Cretaceous periods.

'Pleurotomariid' gastropods are also known as Slit Shells due to the prominent open channel in the outer lip, which accommodated the exhalent or excurrent siphon. In older parts of the shell this slit can be traced around the whorls as a closed and sealed scar, often as a convex cord, the selenizone. The inner shell consists of nacre, formed from aragonite crystals arranged in stacks. The outer shell is made up of layers of calcite.

Unlike modern Slit Shells which are usually collected in deep water, the fossil record shows that they once lived in much more varied habitats, both in shallow and deep water. Most people will be familiar with modern Slit Shells being of a form that is almost as wide as it is tall (turbiniiform). This can also be said of the more familiar fossil forms such as *Pleurotomaria* and *Bathrotomaria*, but other shapes and features have also existed. Tall conical shapes (trochiform) as in *Pyrgotrochus* and *Conotomaria*, even ones where the aperture is much reduced to form a short slit as in *Orbonella* and *Leptomaria*.

Ornament in fossil examples varies considerably. Near smooth with fine growth lines but very prominent selenizone as in *Euconospira* and *Mourlonia*. Near smooth with large tubercles to fine spiral threads and riblets as in some *Pleurotomaria*. Fine spiral ribs either smooth or grainy with growth lines often forming a cancel late or reticulate pattern as in *Bathrotomaria*. Heavy cords and a combination of spiralling and thick radial ribs as in *Orbonella*. Fine spiralling lines and fine growth lines giving an almost cross cut pattern as in *Leptomaria*. *Pyrgotrochus* has heavy and fine tuberculate cords with a steep shoulder between the heavy cords. *Conotomaria* has steep flat sided whorls with flat, spiral bands separated by a thin spiral thread.

From the literature available to me it would appear that *Euconospira* is the common example in the Carboniferous, *Mourlonia* ranges from Devonian through to the Permian, *Pleurotomaria* more common in the lower Jurassic and *Bathrotomaria* more so in the middle/upper Jurassic and Cretaceous. *Orbonella* in the middle Jurassic, *Leptomaria* in the upper Cretaceous, *Pyrgotrochus* from the middle Jurassic to the middle Cretaceous and *Conotomaria* from the lower Cretaceous.

The trochiform 'Pleurotomariid' gastropods are probably more frequent than literature would have you believe. Most lists particularly in early papers and publications often list for example *Pleurotomaria* but then list other shells as just 'Trochus' sp. I know from my own experience that trochiform shells are often the more common in some lower and middle Jurassic deposits than turbiniiform shells.

Listed below are just a few of the European fossil Pleurotomariidae mentioned or featured in some literature.

<p><i>Euconospira conica</i> – Carboniferous</p> <p><i>Mourlonia carinata</i> - Devonian to Permian</p> <p><i>Mourlonia ontrina</i> - Permian</p> <p><i>Pleurotomaria multincta</i> - Early Jurassic, Upper Pliensbachian, Middle Lias</p> <p><i>P. similis</i> - Early Jurassic, Upper Pliensbachian, Middle Lias</p> <p><i>P. amalthei</i> - Early Jurassic, Upper Plienabachian, Middle Lias</p> <p><i>P. tuberculata</i> - Early Jurassic, Sinemurian, Lower Lias</p> <p><i>P. deshaysii</i> - Early Jurassic, Middle Lias</p> <p><i>P. dessina</i> - Middle Jurassic (France)</p> <p><i>P. constricta</i> - Middle Jurassic (Germany)</p> <p><i>P. rugata</i> - Late Jurassic, Portlandian, Portland Stone Series</p> <p><i>P. trochoides</i> - Middle Jurassic (France)</p> <p><i>Pyrgotrochus conoideus</i> - Middle Jurassic (France)</p>	<p><i>Orbonella plicopunctata</i> - Middle Jurassic (France)</p> <p><i>Leptomaria seriogranulata</i> - Late Cretaceous (Czech Republic)</p> <p><i>L. niloticiformis</i> - Late Cretaceous, Danian Chalk (Denmark)</p> <p><i>Bathrotomaria palaemon</i> - Middle Jurassic, Bajocian</p> <p><i>B. reticulata</i> - Late Jurassic, Lower Oxfordian to Lower Vimmeridgian</p> <p><i>B.perspectiva</i> - Early to Late Cretaceous, Albian to Upper Chalk</p> <p><i>B. dixonii</i> - Early Cretaceous, Cenomanian</p> <p><i>B. linearis</i> - Early Cretaceous, Cenomanian</p> <p><i>B. velata</i> - Early Cretaceous, Cenomanian</p> <p><i>Conotomaria percevali</i> - Early Cretaceous, Cenomanian</p> <p><i>C. chardstockensis</i> - Early Cretaceous, Cenomanian</p> <p><i>C. laticarinata</i> - Early Cretaceous, Cenomanian</p> <p><i>C. mailleana</i> - Early Cretaceous, Cenomanian</p>
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The photographs bellow are just a few fossil Pleurotomariidae from my own collection to give an idea of range, localities and forms.



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9



Figure 10



Figure 11



Figure 12



Figure 13



Figure 14

1. *Mourlonia ontrina*
Upper Permian, Ford Finn, Sunderland.
2. *Euconspira cf. conica*
Lower Carboniferous, Derbyshire.
3. *Pleurotomaria* sp.
Middle Jurassic, Bathonian, Forest Marble, Dorset.
4. *Bathrotomaria reticulata*
Lower Oxfordian, Upper Oxford Clay, Weymouth, Dorset.
5. *Bathrotomaria* sp.
Upper Jurassic, Upper Oxfordian, Normandy, France.
6. *Pleurotomariidae 'Trochus'* sp.
Middle Jurassic, Bajocian, France.
7. *Bathrotomaria reticulata*
Upper Jurassic, Upper Oxfordian, Corallian Beds, Osmington, Dorset

8. *Pleurotomariidae 'Trochus'* sp.
Middle Jurassic, Aalenian, Mapperton, Dorset.
9. *Pleurotomaria tuberculata*
Lower Jurassic, Sinemurian, Lower Lias, Stonebarrow, Dorset.
10. *Pleurotomaria* sp ?
Lower Jurassic, Upper Pliensbachian, Middle Lias, Marlstone Rock, Thorncombe Beacon, Dorset.
11. *Pleurotomariidae 'Trochus'* sp.
Lower Jurassic, Upper Pliensbachian, Middle Lias, Marlstone Rock, Thorncombe Beacon, Dorset.
12. *Pleurotomaria amalthei*
Lower Jurassic, Lower Pliensbachian, Lower Lias, Blockley, Gloucestershire.
13. *Bathrotomaria reticulata*
Upper Jurassic, Lower Kimmeridge Clay, Lingstead Bay, Dorset

14. <i>Pleurotomaria</i> sp. Middle Jurassic, Aalenian, Beaminster, Dorset

An Internet Interview with Koen Fraussen by Selina Wilkins

Over the last couple of years, Koen has been helping me increase the size of my *Fusinus* collection, because Fraussen, with Hadorn, has been busy identifying new species. At the last shell show we were chatting and I thought maybe other members would be as fascinated in this conversation. Due to Koen living in Aarschot, Belgium, the following interview took place using email, over the internet.

When and where did you first get interested in shells?

My parents tell me that I was grasping shells before I could walk. But I was grasping at everything: stones, mushrooms... and over time shells have turned out to be the most fascinating for me. My earliest shells, including single oyster valves, were collected on a North Sea beach. The exact location I do not remember anymore as I was only two or maybe three years old, even my parents do not remember anymore. The oldest box of shells I still have. The real start, focusing on unusual habitats and specimen shells, seems to be 1972, on the sandy beaches and muddy lagoons of Grado, a city at the northern Adriatic Sea. Then I was seven years old and my best *Diodora italica* is from that year.



Why do you specialize in Fusinus? Do you specialize in any other families other than Fasciolaridae?

I am interested in some Fasciolaridae, and especially fusinids, because they are close to some Buccinidae. It will sound strange, but I do not specialize in *Fusinus*: my favorite shells are the Buccinidae rather than the Fasciolaridae. But it is difficult to draw a line between both families: it happens that the morphological differences are sometimes little or overlapping. Consequently a quite large number of shells in my collection, all with a buccinid appearance, belong to Fasciolaridae or other families. And that is great fun, because it is a good reason to collect more.

Until 1993, when I met Roland Hadorn, and the fun turned into science. Our meeting is what I call "a case of inevitable coincidence". The phylogenetic problems which were circling around the genus *Afer* (then still in Vasidae), and especially the mysterious presence of 2 different shells with a "*Fusinus boettgeri*" label (one of them is now *Afer pseudofusinus* Fraussen & Hadorn, 2000), were the very start of my interest in *Fusinus*. Then came the *Siphonofusus chrysdomoides* question and again a good number of buccinid shells "deserted" to Fasciolaridae. During all these years I collected 3 small boxes with *Fusinus*: one with European marine species, one with ex-Buccinidae species and some more for comparison, and one box full of paratypes. Telling the truth, I do not have a real *Fusinus* collection.

I know you collect your own shells; where in the world have you travelled?

The first 18 years of my life I spent collecting on the North Sea beaches and in the northern Adriatic Sea (with one exception in 1978: Spain) and the mountains in Switzerland (albino *Helix pomatia*). After I met my wife, we travelled for freshwater shells to Poland (1988, the time that Gorbachov appeared on TV) and to Cuba (1991) for diving.

Later Guido Poppe took me to Venezuela (*Voluta musica*!). With our kids we went to the Philippines (Philippe Poppe and the early days of Conchology.Inc) and to South Africa (a true botanical heaven!). By myself I took the challenge of visiting the former Soviet Union, but I never went to Russia. For example Lithuania: a great place, with pine-trees everywhere and giant beer-cans containing a whole litre. If it was not for the Antonov-airplane that almost crashed when returning from that trip, then I would have travelled more into the east. Another remarkable place is Newfoundland, where I could visit Gander airport only, to eat sandwiches with cheese instead of shell collecting!

Where would you like to travel - to collect shells?

To the Arctic. Since I was a young boy, whilst studying obscure corners of the available maps, I have dreamt of visiting Disco Bay in western Greenland. And that place is still on my list. In the early '90s some friends of mine planned a trip to Lake Baikal in southern Siberia, but because of the increasing prices and our small student budget we had to cancel that. So, that place is still on my list too because it's said it's a great place for diving, with strange sponges.

I remember you went to the Philippines for a short period, why did you come back?

We loved the Visayas (central Philippines) and the people, the amazing underwater fauna, the raw nature on the islands. We found a nice house in the hills, an excellent school in Cebu for our two boys, and I had a dream job (molluscs of course!). But it seemed to be a little too far from our roots; so we feel more comfortable staying here in Belgium. Thanks to the family Poppe, I could stay for some time on Mactan.

Do you scuba dive? Have you taken digital images underwater of molluscs? Fusinus?

In Cuba, I took underwater pictures at the base of a 25 metre deep wall. I was lucky I could rent a robust Russian Zenit, a giant industrial looking piece of apparatus with 2 big wing nuts to close the hole. It was hermetic for sure, but the cold water caused the humid air trapped inside to condense, so all photos are a little too blue. Great pictures anyway. The molluscs were quite large because it was impossible to focus the smaller ones, *Strombus gigas* of course. No *Fusinus*.

Do you use fisherman to extend your collection?

It is impossible to build up a good collection of deep sea shells without fishermen as diving depth is limited. Most of my Arctic whelks are collected by fishermen. Also scientific surveys are often on board of commercial fishing vessels. Moreover, the arctic is not the most comfortable place for diving shells. It is a very ecological way of collecting, even when the fishing techniques are destructive, as our shells which are a by-catch are worth saving for scientific study or for visual appreciation.

Is shell collecting harmful for nature or should it be banned for ecological reasons?

Most localities for shell collecting are easy to reach; consequently they are close to urban structures. It is evident that waste water and soil erosion, over-fishing and other human activities will disturb the sea floor a thousand times more. Important collections usually end up in a museum and it is great that these collected specimens are saved for human knowledge instead of being just extinct. We have to ban pollution.

Do you have any special tips on how to clean gastropods, particularly right up in the top whorl? One dealer once said they would bury shells in the sand near ants.

The ants in my garden are involved in the cleaning process too, but they do not clean all shells well. Usually I use the classic way, with bleach, warm water and shaking. A powerful shot of water from an old needle is very useful to flush the upper whorls. *Fusinus*, and other slender shells have many whorls, and then I pour H₂O₂ in the shell and let it rest for some hours. Patience is important. Shaking the shell for a long time, can be a sudden help, after some time. When no cleaning can be done in advance then I dry the shell and keep it apart for some weeks or months. Later the contents will crumble and are more easily removed during a next cleaning session.

Because of my Arctic whelks I'm quite specialized in cleaning shells with periostracum. Often the periostracum is separated from the shell. With water I put it in shape again, on the shell, wrap thin toilet paper around and fix it with many soft elastics. When the whole is well dry and the paper removed, the periostracum can stay or will get loose again, then I will fix it with an acetone-superglue solution. Of course the periostracum has to be fixed on exactly the place it was before. My record is a whole afternoon spent for a single shell, but the work is worth the result.

When did you first meet Hadorn? How did you get to work together on identifying new species?

The very first time we met was in the fall of 1993, at the shell show in Berlin. Roland came to me and showed pictures of *Fusinus*. Among them a picture of a "*Fusinus*" with a buccinid radula (Seven years later, we described that shell as *Afer pseudofusinus* Fraussen & Hadorn, 2000).

It took some time before we started working together, for the simple reason that it is quite difficult to communicate about rare or unique shells without name, especially when it is hard to figure out to which family they belong. We took pictures of our shells and would send them with a letter. You can imagine: "my" Buccinidae and "his" Fasciolaridae, some were the same species. One of my "*Manaria* sp." was *Fusinus subangulatus* (von Martens, 1901), another we named *Fusinus valdiviae* Hadorn & Fraussen, 1999, after the famous vessel "Valdivia" where von Martens got his material from. Another example: my "*Aeneator* sp." from Chile became a *Fusinus kazdailisi* Fraussen & Hadorn, 2000.

After these publications, Philippe Bouchet (director of Malacology at the Muséum national d'Histoire naturelle in Paris) contacted us with the offer to work on the MUSORSTOM material. So we went to Paris and started studying the innumerable samples, and we are still busy doing that. The deep sea fauna yet known is just a fraction of what is out there in the abyss. Each expedition is bringing up new species and new genera.

During our collaboration the web was introduced and now we can correspond much more easily by e-mail. In the beginning we had to print our manuscript to mail each other even to introduce a correction. A lot of time is saved nowadays, each time I push the "send" button for mailing a manuscript I remember these "old days".

How do you decide you have a new species - is there a process, an order of steps which you always follow?

- The first step is separating the material in distinct morphotypes, which is quite simple, as long as we do not question if the specimens are forms or species, or try to attach a name to it.
- Secondly I try to lump as much together as possible. I mean that I try to find similarities in the protoconch, early sculpture etc. - not as simple as it sounds. For this step I use the stereo-microscope which is also used for the larger specimens because many important details are not seen by the naked eye. I also use a good map to plot the localities, to understand the distribution and try to detect if the variability is geographically indicated.
- After this second step the material may be ordered in a quite different way than after the first step, usually it is already separated into species. Look, for example, at our latest paper on *Amiantofusus*, all 6 forms of *Amiantofusus pacificus* were distinct after the first step because they "look" different. After the second step we had to conclude these differences were not the important ones, but look like many intermediates.
- The third step is trying to find a name for it, leafing through dusty books. As a matter of fact, such little known groups as the deep water fusinids have a large number of species without name.

Yes in summary: my way of working is lumping. You understand that the way I work is quite opposite to the way often seen amongst collectors. There may be an occurrence of much excitement at a shell show because there are too many shells labelled as "new species". In fact they should be labelled "name not found yet". One may not feel too much "describomania", as I call it. New species are afraid (of being named) and will stay hidden in the dark, even whilst the collector is searching for it desperately. It feels as if these new species are hiding. One has to work correctly and with great passion, then many remaining, undescribed species will be found waiting for you. You will not find a new species when you are searching for it.

Where do the new holotypes come from? (You've mentioned museums?)

Selecting a holotype is quite difficult, it has to bear all, or most, characteristic features of the species, and that's not easy when the species is quite variable. We prefer to select type material from museum samples, because the data is more detailed ("22° 22' S, 43° 03' E, 530 m"), then from fishermen ("off Madagascar"). Moreover, each holotype selected from our own collections is a specimen that we had to buy or exchange somewhere, so it also has a financial consequence, especially because we select a good holotype and not just a broken shell.

What happens to the holotype, who gets to keep it - you, Hadorn, or a museum?

Some years ago, it became a rule to deposit holotypes in the country of origin (if there is a safe museum present). Therefore, the holotype has to be stored in a museum. No question that we keep it. During later studies we even have to return to the museum to compare shells with our own holotypes.

Can you tell me the stories behind the shells you and Hadorn have named? How do you choose a new name - do you take it in turns?

Most of the names have a story indeed. I like leafing in a Latin dictionary trying to find a fitting name, therefore I do most of the etymological work. Here is some of my reasoning.

- Occasionally we have to name a shell after the person(s) who has discovered it ("*Pararetifusus*" *dedonderi* Fraussen & Hadorn, 2001) or we like to honour the museum staff who have worked on the material (*Fusinus virginiae*, Hadorn & Fraussen, 2002).
- Mostly the shell is named after a distinctive characteristic, e.g. *Fusinus (Chryseofusus) artutus* Hadorn & Fraussen, after the rather *sturdy* and *solid* shell.
- Or the resemblance to something, i.e. the golden *Serratifusus sitanius* Fraussen & Hadorn, 2003 after golden *summer wheat* and the quite horrible *Fusinus (Chryseofusus) acherusius* Hadorn & Fraussen, 2003 after the *dreary underworld*.
- Some shells get their name by coincidence. One day Roland sent me an e-mail with one more species of *Granulifusus* to be named. I shouted "Really?" So we have named that shell after that expression: "babae" in Latin.
- *Afer pseudofusinus* was quite easy to name, it tells the taxonomic past of the shell as a "*Fusinus*".



Fig. 3

Fig. 2
Fig. 4

Fig. 1



- Fig. 1 - *Fusinus (Chryseofusus) acherusius* Hadorn & Fraussen, 2003 Fasciolaridae
 Fig. 2 - *Granulifusus babae* Hadorn & Fraussen, 2005 Fasciolaridae
 Fig. 3 - *Afer pseudofusinus* Fraussen & Hadorn, 2000 Buccinidae
 (Gloria Maris vol. 38 of 1999 but printed in 2000)
 Fig. 4 - *Serratifusus sitanius* Fraussen & Hadorn, 2003 Buccinidae

What are your favourite 10 shells and why? Do you have a single favourite, the absolute favourite?

Very difficult question, there are hundreds of great shells, it is hard to decide which of them is really greater. In my top 10 are:-

- | | |
|---|---|
| <i>Neptunea heros</i> , | a rather simple shell, but the specimens from eastern Bering Sea are impressive |
| <i>Kapala kengrahami</i> , | an Australian buccinid deep water species that looks as if from outer space |
| <i>Fusinus rostratus</i> , | now called <i>F. sanctaluciae</i> , from Mediterranean |
| " <i>Fasciolaria</i> " <i>thersites</i> | from South Africa |
| <i>Nucella lapillus</i> | one of my British favourites, because of the many colour forms |
| <i>Conus marmoreus</i> | my absolute favourite as a schoolboy; now I prefer <i>C. textile</i> . |
| <i>Cypraea mariae!</i> | |
| <i>Musculus niger</i> | |
| <i>Astarte</i> species | |
| <i>Mytilus edulis</i> | of course but with French Fries and a beer! |

It is even more difficult to choose among land shells! There my absolute favourites are *Helix*, *Cepaea* and *Amphidromus*.

What is your most expensive shell?

My most expensive shell was an *Entemnotrochus rumphii*, (approx £1000) which I got in exchange for a large quantity of Australian land shells. After keeping it in my collection for a few years I exchanged it again for an egg of the elephant bird (Madagascar) and a piece of Inuit art (Greenland). The cheapest shells I have are my collection Pleistocene shells, a loaf of bread will cost more. One can collect them by the millions, however finding a nice specimen can take some time.

Are there any shells you still have on your wish list?

Plenty. I would love more rare deep water Buccinidae, for example *Buccinum undatum* f. *infracarinatum* which is a deformation with a strong carina situated below the suture.

Anything else you would like to tell me about shelling and Fusinus...

Shelling is great when one can discover new facts. The *Fusinus* are a great group, beautiful shells, elegant shape, I feel a strong craving to start collecting them!

From the front cover

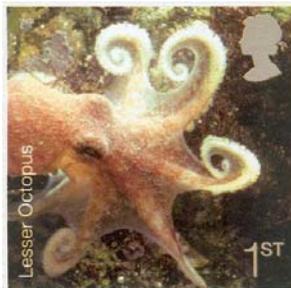
Buccinum undatum is generally found in the sub-littoral region all around the British coast. It is trapped for the food industry in whelk pots; however, occasionally it is found in the littoral region as illustrated on the front cover.

In the 19th century King split the species into a number of forms and the littoral form was assigned f. *littoralis*, a name which some of us continue to use today. As you can see from the illustrated shells, they are much darker than the normal whelk which is trapped offshore and have a beautiful velvety purple aperture. These were found crawling along the edge of Bladderwrack covered rocks about 6 ft from the shore in the Helford Estuary, Cornwall, as the tide was receding.

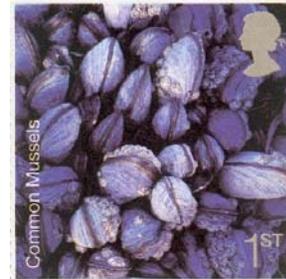
A Talk on Shells on Stamps by Selina Wilkins

On the 8th December 2007, family Wilkins travelled into London to enjoy a night at the theatre, Christmas lights and as an extra delight, a talk at the Natural History Museum on “Shells on Stamps” by Tom Walker at a meeting of the Conchological Society. We found our way easily to the museum as we have often traversed its hallowed halls. We were delighted to spot the guest speaker Tom; otherwise I wonder would we have found the Palaeontology Demonstration room, off a corridor, accessed through doors marked no public access!

The lights dimmed and Tom spoke with great humour, showing photographs and scans of the stamps, projected onto a huge screen. From the beginning, we were captured and taken into a different world, by being shown the first shell on a stamp being *Strombus gigas* on a stamp issued in the Bahamas on 10th June 1859. A few statistics revealed that 267 countries have included shells on stamps, and all classes of mollusc have been represented. Tom showed us a few examples of the diversity of shells represented from the different classes. Sadly Britain does not lead the world on shells on stamps, with a lesser octopus and the humble mussel shell being our last offerings in early 2007.



*Did you see these
British stamps issued
last year?*



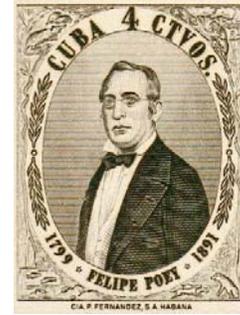
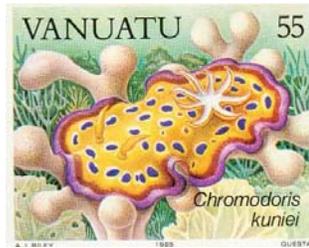
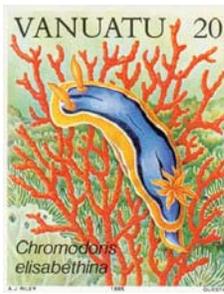
As the leading expert on shells on stamps, Tom didn't show us just the common place or obvious. He led us through shell fossils on stamps of which I particularly liked the design and red background colour of *Virgatosphinctes transitorius*.



We saw examples of landsnails and freshwater snails. I was staggered to see the anatomy of the *Trichia lubhuana* from Korea, all marked in Korean! Tom questioned whether anyone in the audience could authenticate that the accuracy of the labels!

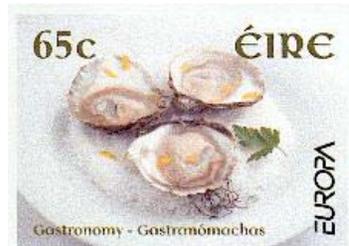
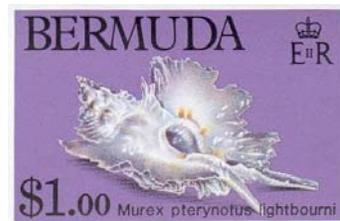
Startling were the vivid colours of the terrestrial slugs and sea slugs, the latter reminding me of that fantastic exhibit from Cardiff Museum a few years ago.





We all know and appreciate the subject of conchology is vast, so I was impressed that Tom also has stamps of the naturalists who have authored or studied many of our favourites, such as, Linnaeus, Darwin, Quoy, Poey, and Carlos de la Torre.

Then the fun really began. Tom revealed the rare stamps, the shells which have represented money, rare shells, the environment, the Shell company, shell food, shell musical instruments, shells in art, coats of arms people and places. Then nearing his finale the errors on shell stamps, shells made sinistral by incorrect printing, incorrect labelling, even fictitious shells. Tom is meticulous at checking the identification of the shell, artist and even source material. One artist confessed that the shells they had illustrated were imaginary, drawn from memories of childhood seaside holidays. After showing the minutiae, he ended on Christmas stamps which had shells in them.



I loved the shell nativity from the Gilbert and Ellice Islands. If you wish to know more about shells on stamps, catch up with Tom Walker at any of our meetings. His hard work is also catalogued on the Poppe's website: (www.conchology.be/en/shelltopics/stampshome.php).



Maybe you should start collecting stamps with shells today!



Papillifera papillaris (Müller, 1774)
A New Shell On The British List
by Tom Walker

In April 2004 a volunteer gardener, while cleaning an old balustrade at Cliveden House, Berkshire, noticed a snail which he did not recognise. Later that month he attended a talk at the Marlow Archaeological Society on "Snails in Archaeology", given by Janet Ridout Sharpe; he sent some shells to Janet who recognised them as *Papillifera papillaris* (Müller, 1884). The identification was confirmed by Geraldine Holyoak, then Non-Marine Recorder for the Conchological Society. Two specimens were deposited with the Natural History Museum, and the shell was accepted as new to the British list in 2005.



Papillifera papillaris

This beautiful shell is quite unlike any other British clausiliid, having a distinctive line of white papules on a brown stripe just below the suture. The mouth contains two palatal but no parietal lamellae.

Papillifera papillaris is native to the mainland Italy, Sardinia, Sicily, Corsica and the Maltese islands. It seems to have limited powers of natural dispersal, but has been spread outside its native area by the actions of man. Thus it has recently been reported in Turkey, Greece, Gibraltar, France, Spain, and North Africa in sites associated with ancient buildings, especially Roman, and it seems to have been transported either with building material or other trade goods.



Cliveden House, with the balustrade in the foreground

So how did this shell come to be in Britain, and what is its status? The Balustrade at Cliveden was purchased by William Waldorf, 1st Viscount Astor, who was developing an Italian theme for the house and gardens, which he had bought in 1893. This particular wall was imported from the Villa Borghese in Rome, and was installed at Cliveden in 1896; it consists of travertine marble with brick infill panels, and was originally carved in 1618-19. It seems almost certain that the shells were imported on some of the marble, and found this new habitat to their liking. What is extraordinary is that they remained undetected for so long; it took 108 years before they were first noticed.



The balustrade at Cliveden



A feeding shell

The shells are found in crevices within the wall, either on the marble or among fragments of decaying mortar in the brickwork. Visits to Cliveden show that there are many living shells on the wall, but also numerous dead specimens among the debris at the base of the wall. They have now spread across the lawns between the balustrade and the house (a distance of about 30 yards), and a few can be found on the grand staircase and walls of the house itself.

To date Cliveden is the only known site where this shell occurs in Britain. There may well be other buildings with imported stone hosting a population, so keep your eyes open next time you visit historic houses!

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DAY SHELLING TRIPS TO HERM ISLAND (OR GUERNSEY) by Graham Saunders

I have just returned from several days in Sark and have available the current information on the potential for day trips to Herm and other islands from Weymouth using the fast trimarans.

If there is no last minute special offer, the cost ranges from £23.80 to £37.80. These prices are inclusive of the Condor and the Trident return sea crossings. The top price relates to an August Saturday.

Condor boats leave Weymouth at 07.15 and arrive at St Peter Port at 10.15. The Herm service leaves at 11.15 (10.30 in October) and you land there 20 minutes later. Depending on the tide you will land either at Rosiere Steps or the Harbour. Rosiere = 10 minutes extra walking but it does mean an extra low tide. It will take most people 25 minutes to walk from the Harbour to the headland between Belvoir Bay and Shell Bay. You have 5 hours of actual collecting time. The ideal is to arrive 1 hour before a good low "Spring Tide" with a high pressure area on the weather forecast. Even with a Neap Tide, there is a lot to be found, particularly in the Southern corner of Shell Bay and the drift and strand lines extending North, and the strand line of Belvoir Bay. If you are a "party", delegate one person to skim, sieve and bag up the entire drift line at Belvoir and divide it later. There will be a large concentration of microshell material but one person could clear it in 40 minutes.

At the bottom of the tide you should be checking sub-littoral rocks and weed then turn back towards the main beach where the water draining from the mass of sand will be cutting channels and sweeping an assortment of bi-valves down towards the sea. Look also for Naticids washing out. In the cuts look for the coral coloured siphons of *Lutraria*. Lighter material such as *Gari*, Tellins and the small Cardiums tend to end up in the strand lines. Venerids are heavier and are mainly in the drift lines. This year gastropod numbers are down except for *Trivia* but bivalves are abundant. As the tide starts to come in fresh material moves with it and this is your best chance of finding such things as *Solecurtis scopula*.

For those who can tear themselves away from Shell Bay, the Western and Northern beach may yield interesting sub-littoral results but you will be going for quality not quantity. There is another bay beyond Belvoir which can only be accessed at VERY low tide. There are rumours that *Mactra glauca* and *Callista chione* may be found there. There are beach cafes at both Belvoir and Shell Bay. The WC is half way between the two.

The last Trident leaves at 17.45 (17.00 in October). You have a couple of spare hours which, if you are fit, you might want to use checking the strand line towards St Sampson's, or, if the tide is still low enough, the reef to the far side of Havalet Bay for *Calliostoma*. The better restaurants at St Peter Port tend to be a bit pricey. Cheaper facilities exist but the food is not exciting. Boats depart Guernsey at 21.50, arriving Weymouth at 23.50. Assuming I am in the country at the time, I could probably offer shuttle and accommodation for small numbers or help arrange.