The traumas of Retrieving Shipworms

Tom Clifton

On 4th October 2006, I was surveying a remote, 2½ miles long stretch of sandy/stony shore some distance east of Pwllheli on the Lleyn Peninsula which eventually leads to Pen-chain headland SH435353, once the site of a Butlin's Holiday Camp, now a private holiday village.

There was not a wide range of molluscan species on the beach which, from the upper drift line to the sub littoral, was a mixture of sand and pebbles and was quite lifeless as is often the case on some stony shores in this area; most of the marine life here seems to be sub littoral. About 1½ mile along the drift line at the point SH420355, I came across something I had been hoping to find for many years. It was a large piece of timber, not wreck timber, but circular in section, light in colour and probably an old piece of pier strut. On one side there were many small holes looking very much like woodworm, but on the other side where the surface had broken away, there was a mass of large holes up to ¼ in diameter, I had finally found one of the shipworm species. Some of the holes still had the white calcareous linings.

Having another mile to travel along the shore to complete the survey, I left the log in the middle of the shore in a prominent position so that it could not possibly be missed on my return. The shore was unusual in that although there were not many species, shells of *Pecten maximus* were abundant, some old and worn, some fresh and some with the recently dead animal still inside. Also present were *Lutraria magna* and *Lutraria angustior*, both new to me.

On my return journey I toiled with the problem that shipworms must sometimes occur in very large pieces of timber as was the case in question, and how on earth was I going to carry it the 1½ miles back to the car? The specimen was large, 10" in diameter and 2' 6" long, wet through and was extremely heavy.

Eventually my initiative kicked in as it sometimes does, and managed to find some old thick rope on the drift line which I was partly able to untangle, the sea ties some very good knots, and tied it into a large loop which I doubled and slung round my neck and over my shoulders. I was now able to carry the log, slung across my chest in a rope sling and with my rucksack on my back, with remarkable ease.

There was a long length of excess rope trailing behind as I did not have a knife with which to cut it, and on the greatly frayed end there was a mass of miscellaneous rubbish, tins, paper, seaweed and other unmentionable items which I had not been able to untangle. My trousers were now wet through with the water that poured out of the holes in the log but as there was nobody else on the beach at the time, it didn't really matter, I was too happy with my find to worry. There was no way this specimen was going to be left behind.

On reaching the end of my journey, other people started appearing some distance ahead so I jettisoned the log and rope along with the rubbish in the sand dunes and was able to bring the car to a nearer location to retrieve the log without too much embarrassment, in spite of the strange glares from a few bewildered onlookers.

Closer examination at home revealed that the boreholes were made by *Psiloteredo megotara* and opening up the log revealed a mass of boreholes and hundreds of shells some in complete pairs though there were no live specimens. It was interesting to note that the animals had avoided the hard wood knots in the timber by spiralling round them: they also avoided the outer ½ of wood as this presumably becomes waterlogged with salt water. They seem to prefer the softer, dryer parts of the wood in which to bore.

I thought that after 30+ years of shell collecting that this was a good find. Little did I know then that within as little as 10 weeks, my initiative and determination were going to be put to the test again to a greater extent.

On 11th December, I was on the North West coast of Anglesey just south of Church Bay at Porth Trwyn SH296877 where I found some beautiful but large examples of limestone that had been bored out by *Hiatella arctica*, not the usual rounded boulders, these were freshly broken slabs probably disturbed by the recent severe gales. Some of the empty shells were still inside the holes. This was a perfect set of props for a talk I was going to give in March 2007 on "Boring Molluscs".

Further north however on the same day at Church Bay SH310894, I came across another piece of timber which appeared to be full of shipworms. This one was big, 10 inches square by about eight feet long, heavily creosoted and wet through, there was no way I was going to be able to drag this back to the car.

I returned the following day armed with a bow saw complete with new blade and a heavy duty two wheel trolley which a neighbour had given me. It was relatively easy to cut the log into three manageable sections. As I did so, an ominous looking liquid poured from the saw cut suggesting that there may be something still inside the log. As one piece was loaded onto the trolley I noticed a five foot long length of rope nearby which was ideal for tying the log onto the trolley.

It was at this juncture that I realised that two wheel trolleys don't move very well on shingle, especially when carrying a very heavy weight. With an outburst of the foulest language I could muster, it seemed to help at the time, I was eventually able to get the trolley onto firm wet sand and wheel it along the beach and up a very steep, rough concrete road back to the car. Fortunately I had brought enough bin liners with me to go over the ends of the timber. This exhausting process had to be repeated two more times to retrieve all the wood. As I leaned on the trolley for a few moments to regain my breath before making the second trip, I thought to myself, "you silly b…, you shouldn't be doing this sort of thing at your age".

It was the smell in the car on my way back home that confirmed the existence of decaying bodies inside the timber, along with the disgusting substance that was oozing out of some of the holes as I struggled to lift the heavy pieces out of the car at home.
It took many days of various attempts to get rid of the smell in the car.

However, in spite of this, the joy of finding out what was inside the logs greatly outweighed the trauma of retrieving them. If I come across any more timber with shipworms inside, I will not hesitate to endeavour to bring them back home.

As a result of my pain and efforts, I now have many wonderful examples of *Psiloteredo megotara, Teredora malleolus* and *Teredo navalis* along with some fascinating examples of bored timber. I also have some specimens that were still sufficiently intact to justify preserving them in spirit. Adult pairs of *Teredora malleolus* when opened out are far more beautiful than the picture in Tebble suggests, they look like angel's wings. The various shapes of the bored timber fragments make fascinating conversation pieces and are lovely examples of modern natural sculptures and would most likely be highly valued by many people.

It is not often these days that any of these species get washed up on our shores, especially the *Teredora malleolus* which have in the past had a very limited distribution on British shores.

Two new records for *Mytilopsis leucophaeta* in Britain

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On 15th November 2006 I visited the South Forty Foot Drain at Swineshead Bridge, Lincolnshire (TF218429) to collect an invertebrate sample for the Environment Agency's biological monitoring programme. At this site the river was approximately 12 metres wide and over one metre deep. The substrate was predominantly silt with some boulders. Some sections of the bank were artificially reinforced and there was a substantial amount of detritus along the margins. The marginal vegetation was relatively sparse and consisted primarily of *Glyceria maxima* and *Carex* sp. I took a sweep sample consisting of several net-sweeps through the margins with some disturbance of the substrate.

While sorting through the sample in the laboratory I found a number of small mussels with a brown periostracum and lacking the distinctive dark bands of the Zebra mussel, *Dreissena polymorpha*. On internal examination a triangular tooth was observed on the septum, a feature indicative of the Dark false mussel *Mytilopsis leucophaeta* (Killeen *et a*l. 2004). Externally, the periostracum was not as coarse as in the photographs of *M. leucophaeta* in Killeen *et al.* 2004. In total, I found seven specimens of *M. leucophaeta* in the sample. Subsequent to this, on 30th November 2006, one of my colleagues, Chris Extence, found one specimen of *M. leucophaeta* in the South Holland Main Drain at Clifton's Bridge, Lincolnshire (TF380189).

Prior to these discoveries *M. leucophaeta* was known from only two sites in Britain, Roath Dock in Cardiff and Cliffe Fort Lagoon in Kent. These new records from Lincolnshire are the first from river habitats in Britain.

At both sites the rivers showed evidence of saline ingress. Although the sites are not tidal there are sluices downstream of the sites which leak. The South Forty Foot Drain at Swineshead Bridge was monitored quite regularly during the second half of 2006. Between 14th July and 27th October, 11 readings were taken. At the top of the water column salinity varied from a low of 0.58 ppt (0.058%) to a high of 7.8 ppt (0.78%). At the bottom of the water column salinity varied from a low of 0.60 ppt to a high of 18.6 ppt. Both sites are also sampled monthly as part of a regular monitoring programme. Approximate salinity levels for each site for 2006 have been calculated: for the South Forty Foot site the minimum and maximum salinity levels were 0.20 ppt and 7.01 ppt. The average over 12 months was 1.96 ppt. For the South Holland Main Drain site the minimum and maximum salinity levels were 0.89 ppt and 5.62 ppt. The average over 12 months was 2.44 ppt.

Other molluscs present in the sample were *Bithynia tentaculata, Radix balthica, Lymnaea stagnalis, Physa* sp. and *Potamopyrgus antipodarum* in the South Forty Foot Drain, and *Radix balthica* and *Pisidium casertanum* in the South Holland Main Drain. The samples also contained crustaceans commonly found in the saline reaches of rivers, *Gammarus tigrinus* and *Corophium multisetosum* in the South Forty Foot Drain and *G. tigrinus* in the South Holland Main Drain.

It appears that *Mytilopsis* is a relatively recent arrival to the Wash drainage system. Shipping from Holland into the ports of Sutton Bridge on the River Nene, and Boston on the River Witham are a possible source of the introduction.

Reference

Killeen, I., Aldridge, D. & Oliver, G. 2004. *Freshwater Bivalves of Britain and Ireland*. AIDGAP Series, Field Studies Council.