

Historic industries in Maltese waters



Short byssus threads of the Noble Pen Shell are harvested and woven into sea silk. The practice is nowadays unique to a small island off the southwestern coast of Sardinia.

Malta can be considered as the quintessential maritime state, not just because of its island status but also due to its extensive marine resources. Its territorial waters are almost 14 times the islands' land area and its strategic location in the Mediterranean make it a mandatory port of call for many.

An aspect of Malta's maritime ethos that is often overlooked is the existence of a number of small-scale industries revolving around the exploitation of a few coveted marine species, namely the harvesting of bathing sponges, precious red coral and marine snails.

Evidence suggests that harvesting of precious red coral has occurred in Maltese waters ever since the first century BC

- Alan Deidun

While the harvesting of bathing sponges was traditionally associated with Greek and Turkish waters, especially with the islands of Symi and Kalymnos, banks of such sponges were subsequently discovered off the Tunisian coast and Lampedusa, and the Maltese authorities occasionally received requests from Greek companies for licences to ply Maltese waters for this purpose.

Intriguingly, evidence of sponge-painting of walls, which is still practised nowadays, was found in the Queen's room at the Knossos Palace (1900-1750BC), suggesting that the Minoans already harvested such sponges from their waters.

Bathing sponges retained their appeal through the ages, with Homer mentioning them as hygienic tools in the Iliad and Odyssey. Aristotle even talks of a "peculiar, elephant nose-like tube" used to fish for sponges from the depths. And in Roman times, every Roman soldier was supplied with a sponge for personal hygiene and to stuff their helmets, with Cicero using the verb *spongiare* in 56BC to signify daubing or cleaning.

The first sponge collectors were skin divers who could rely simply on rudimentary equipment, such as a 15-kilo stone, known as the *skandolopetra*, flung down from the boat to keep a taut shot line up to help the skin diver emerge quickly from the water. Sharks were much more numerous in Mediterranean waters then and the sponge-skin divers were petrified of encountering them.

The richest sponge grounds were identified through the use of a transparent glass pane on board, known as lo specchio. Sponge harvesting did not mutate until the mid-19th century, when in 1865 the skafandro or macchina (a hard diving suit in which divers breathed air pumped from the surface) was introduced in Greece and Turkey, allowing divers to walk on the seabed and spend much longer periods of time under water.

Despite being originally hailed as a major advancement, ironically this invention resulted in the decimation of sponge divers as a result of ignorance of hyperbaric dangers.

In fact, in her book *Bitter Sea*, Faith Warn gives some sobering statistics about this phenomenon – for instance, between 1886 and 1910 about 10,000 divers died and 20,000 were permanently disabled, mainly as a result of embolism – this condition affected about half of all sponge divers.

The new technology inevitably spearheaded sponge exploitation and led to the decline of many species. A single sponge diver would collect around 100 sponges of between 20cm and 40cm in diameter all in a day's work, consisting of three hours of diving.

Sponges were not just used for bathing purposes and wall painting but also for other purposes. For example, in the 19th century, the species *Chondrosia reniformis* was sold in Trieste as *fegato di mare* as it visually resembles a liver. They were also used to sooth babies, to administer anaesthesia and even as a contraceptive.

There is evidence to suggest that harvesting of precious red coral has occurred in Maltese waters ever since the first century BC, with unworked white and pale red coral being retrieved from the Tas-Silġ archaeological site which dates from the same period. During the time of the Knights, several expeditions by corallari from Trapani were seen in Maltese waters.

In the mid-1980s the Government sanctioned the Mediterranean Coral Fishing Company to harvest precious coral species in our waters (mainly *Corallium rubrum* and black coral species), and it effectively exploited just over a ton of precious red coral over the 1984 to 1987 period.

Precious red coral was believed to derive its deep red hue from the blood of the gorgon monster Medusa, after its head was cut by Perseus, and was thought to have protective properties against disease, the devil and supernatural forces. In fact, it was frequently placed around toddlers' necks as a talisman to ward off evil influences. It was even reputed to cure dogs of rabies.

Some invertebrate species have withstood man's exploitation since antiquity and have even survived the passage of several empires. For instance, the banded dye murex and the spiny murex, sources of the much sought-after Tyrian purple, were exploited to a staggering extent in antiquity, without obliterating the species.

Although the Phoenicians are credited with discovering the way of extracting the colour pigment from the marine snails, it seems that the Minoan civilisation actually pioneered the technique, as piles of empty murex snail shells were discovered in Crete, dating back to the 20th and 18th centuries BC. Incidentally, similar piles of empty shells were discovered at the Tas-Silġ site too, further underpinning the Phoenician link with the pigment extraction.

Instructions on how to extract the pigment were also etched on cuneiform tablets in Mesopotamia in 500-600BC. Greek legend has it that Heracles' dog inadvertently unearthed the purple pigment extraction secret by gnawing at some beached murex shells when taken for a stroll by his master.

Vast numbers of murex shells were placed in large vats to decompose, producing a hideous stench – some authors comment that it would take 12,000 murex shells to extract 1.4 grams of the purple pigment, which was only enough to colour the trimming of one large garment.

The pigment was so highly prized that it was equivalent in value to silver, and the donning of royal purple (*porpora*) garments was the preserve of nobility. Mosaics of Byzantine rulers, such as Justinian I, highlight the status of tunics coloured in Tyrian purple. So much so that after the fall of Byzantium, no empire in Europe could afford fitting its rulers in such luxury, and Europeans started looking for cheaper alternatives. One of these was vermilion, extracted from the scale insect *Kermes vermilio*, and which is similar to crimson. The insect feeds on the sap of certain plants such as the *Kermes* oak tree in the Mediterranean region.

Further afield from our islands, an extraordinary maritime industry in Sardinia traces its origins way back to the ancient Egyptians. The industry specifically targets the minute byssus threads which attach the Noble Pen Shell (*Pinna nobilis*, or *nakkra* in Maltese), a large bivalve endemic to the Mediterranean, to the rock.

These silky threads, which were soaked in lemon juice to give them a golden hue that never faded, were eventually woven into a fabric, known as sea silk, which in turn was used to

embellish a wide range of accessories, including gloves, stockings and ties. The most cosseted virtue of sea silk was its extremely light and warm quality.

What is inconceivable by today's standards (*Pinna nobilis* is now a strictly protected species) is the sheer number of individuals of this bivalve species needed to support this industry. For instance, a single noble pen shell produced just one to two grams of raw byssus threads, so about 1,000 specimens were needed to produce 200-300g of fine byssus silk.

No wonder the craft only persists nowadays through a handful of women on the island of Sant'Antioco, off the southwestern extremity of Sardinia.

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