

Pearls: reading

Tina: "For an important birthday my father offered to buy me something special. He said he'd like to buy me some pearl earrings but instead of taking me to a shop in town we drove to a large workshop called *Pearl World* in the countryside. It was while we were driving there that I realised I knew very little about pearls. I knew they were beautiful of course but, to be honest, I wasn't exactly sure what pearls were. My head was full of questions: "Are pearls animal, vegetable or mineral, or something else? Why do they have that lovely shine on them? Why are they expensive? Why do oysters have pearls inside them, and are they only found in oysters? Is it easy to tell the difference between real and fake pearls? What are cultured pearls? Where in the world do they grow - do they *grow*? Are they rare?" Feeling rather embarrassed by my ignorance I began to look forward to not only receiving but also learning more about pearls.



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Luckily for me the lady who showed us around was very helpful and more than willing to answer my daft questions. Pearls, it seems, are an organic gem. They are found in bivalve molluscs (shellfish which have their shell in two parts) such as mussels or oysters, but mainly oysters. Natural pearls are formed by accident, through a defence reaction of the shellfish. It seems when an irritant has penetrated the shell, for example parasites, larvae or fragments of shell (but not grains of sand which the oyster is used to) the oyster isolates the foreign body by building up layers of calcium carbonate and conchiolin. Each pearl is made up of thousands of these layers, which are so minute they are difficult to see through a microscope. For jewellers the combination of calcium carbonate and conchiolin is called nacre, but most people call it mother-of-pearl. In the past, because natural pearls are only made by chance, thousands of oysters had to be found for only one pearl, so they were therefore incredibly expensive.

Today, however, pearls are cultured by man. An irritant is deliberately placed in the oyster, often a small bead, and the oyster is placed back in the water. Once the bead has been covered in nacre and a pearl has been formed it is harvested, usually three years later. Most cultured pearls are produced in Japan where the process was first developed. In the South Pacific, where the waters are warmer, larger oysters produce large South Sea cultured pearls and Tahitian black pearls. Freshwater pearls are cultivated in freshwater mussels, mostly in China. It makes sense then that cultured pearls are usually less valuable than natural pearls.

Imitation pearls, on the other hand, are often made from glass beads and are coated in a solution containing fish scales, this makes them easier to spot that they are fake. The *Pearl World* lady had three pearls for us to look at. She wanted us to decide which one was a fake, which one was cultured and which one was natural. Well, they all three looked the same to my dad and me! So she suggested we decide if one was heavier or lighter than the others. We agreed that one seemed a little lighter. Then she told us to, very carefully, rub the pearls along the edge of our teeth. The lighter pearl was much smoother, like glass, whereas the other two had a slightly rough surface. "That's the fake one, real pearls are heavier and the layers of nacre have a texture like fine sandpaper." Feeling pleased with ourselves we were then

disappointed to learn that only jewellers can tell the difference between a cultured and a natural pearl. "One way this is done is by x-raying the pearl. If the centre is perfectly round it has been placed in the oyster to produce a perfectly round pearl. If the centre is irregular the jeweller realises it is genuine and gives it a higher value."

She also went onto explain that jewellers can recognise a fake pearl by its lustre. She made us look at the real pearls and to tell us what colour they were. The more we looked, however, the more colours we saw. The pearls were not just cream or pink; there were lots of other colours too. "That's iridescence," she explained. "The successive layers of nacre that are deposited are translucent and the way they overlap causes the light falling on the pearl to break up. The reflection and refraction of the light creates this beautiful lustre which pearls are famous for. Real pearls keep this lustre, whereas in a fake pearl it is less intense and will fade." The real pearls did indeed look incredible, and I was pleased that the time had now come for us to choose the earrings.

When my mother saw them she was delighted, and I suspect a little jealous. "Ah, but maybe these aren't real, maybe they're imitation!" she suggested, which of course allowed me to prove otherwise as I could now impart my newfound knowledge of pearls!"