

From left: Fig 1. Typical selection of beadless cultured pearls from *Pinctada maxima* © SSEF, 2010; Fig 2. Small curved dark line (cavity) in a beadless cultured pearl (micro X-ray tomography section) © M.S. Krzemnicki

Keshis entering natural pearl trade

The Swiss Gemmological Institute SSEF in Basel, Switzerland said it has been receiving large quantities of saltwater pearls for certification in recent weeks. These pearls are often accompanied with reports describing them as natural pearls, but their almost perfect appearance has raised doubts among many natural pearl dealers, the SSEF said.

Having tested these pearls with advanced technology, including X-ray radiography, X-ray luminescence, X-ray micro-tomography and radio-carbon age dating, the SSEF found that many of these pearls are beadless cultured pearls.

The arrival of large quantities of these “new” saltwater pearls, which are of far better quality than the many natural pearls treasured for centuries, represents a great danger to the natural pearl market, Dr Michael S. Krzemnicki, director of the SSEF, noted. “This is especially true because we have reliable information that some individuals are purposely selecting those cultured pearls with the most intriguing and potentially confusing internal structures (using radiography)

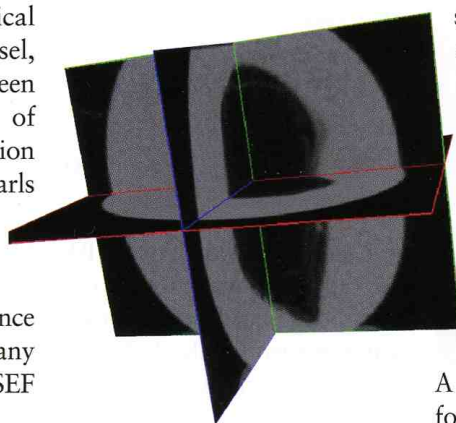


Fig 3. Large curved dark cavity in a beadless cultured pearl (three-dimensional view of micro X-ray tomography sections) © M.S. Krzemnicki, 2010

from the large stocks they purchase from pearl farms, so as to later introduce them onto the natural pearl market,” he said.

The cultured pearls in question are a by-product of beaded cultured pearl production and are sometimes described as keshi cultured pearls in the trade. “Although these pearls do not show one distinct feature that explicitly characterises them as cultured, it is the combination of internal and external structures, which enable an identification of this material. The pearls are often either button-, oval- to drop-

shaped, or baroque,” he added.

As the trade is overflowing with these beadless cultured pearls, the SSEF has taken measures to protect the natural pearl market from this threat. The first step is the use of more rigorous and specified definitions for natural and cultured pearls:

A natural pearl is a pearl which formed, without any human intervention, in a wild oyster or mussel living in its natural habitat, while any pearl stemming from a pearl cultivation farm is a cultured pearl.

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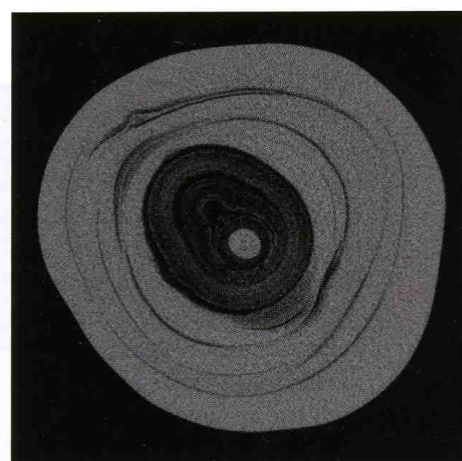


Fig 4. Dark centre with circular conchioline layers in a beadless cultured pearl (micro X-ray tomography section) © M.S. Krzemnicki, 2010

HK pearl body elects new board

The Hong Kong Pearl Association (HKPA), which represents over 90 percent of Chinese freshwater pearl companies in Hong Kong, has elected its new board of directors.

Johnny Chan, director of Pearl Sea (HK) Co Ltd, has

Hong Kong Pearl Association's Board of Directors 2010 to 2012

Title	Name	Company
President	Johnny Chan	Pearl Sea (HK) Co Ltd
Director-general	Sze Ho Yin	Heng Mei Pearl Co Ltd
Chief supervisor	Gordon Lam	Kings Bright Jewellery Co Ltd
Vice president	Laby Chan	LaraPearls Ltd
Vice president	Kenneth Choi	Gyso Pearls & Jewellery Ltd
Vice president	Ho Kong To	Fook Yue Pearl Co Ltd
Vice president	Lam Pui Tak	Master Glory Investment Ltd
Vice president	Ng Kit Man	Tai Woo Pearl (HK) Co Ltd
Vice president	Tony Ngai	Eastern Pearl Co Ltd
Vice president	Ruan Guangyin	Shanxiah Pearl (HK) Co Ltd
Vice president	Sze Sum	Heng Bo Pearl Group Ltd
Vice president	Wang Jizhong	Tian Di Ruan Pearl Group (HK) Ltd
Vice president	Wong Yuk Shing	Bay's Gem & Pearl Co Ltd
Vice president	Wu Meiyang	Luen Hing Pearls & Jewellery Ltd



From left: newly elected president Johnny Chan, chief supervisor Gordon Lam and director-general Sze Ho Yin

been elected president of HKPA. He, together with the board of directors, will serve a two-year term from July 2010, the month when the newly elected leadership will be inducted into office.

Established in 2006, the

HKPA aims to boost the development of the Hong Kong pearl trade and raise the competitiveness of Chinese freshwater pearls in the international pearl market. The association now has more than 80 members. **JNA**

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Cultured versus natural pearls

The most common internal feature (radiography) of beadless cultured pearls is a small curved dark line (Fig 2) or a larger curved cavity (Fig 3) at the centre of the pearl. This feature is well known and reported. Another common feature of these beadless cultured pearls, so far not reported, consists of a round dark core made of fine circular chonchiolin layers, often with one or more small nacre points in the centre (Fig 4). It is this last feature which may be misinterpreted as an indicator for natural growth and leads to the wrong conclusion that the

pearl is natural, according to Dr Krzemnicki.

As these pearls are often specifically, and often intentionally, drilled to hide internal structures,

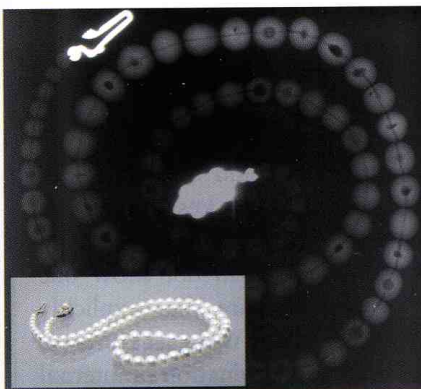


Fig 5. Radiography of a necklace with beadless cultured pearls, showing structures mentioned in the text © M.S. Krzemnicki, 2010

only careful radio-graphy and X-ray tomography analysis may reveal the true nature of these pearls, he explained.

The radiography of a necklace of white pearls (Fig 5) exhibits most of the characteristic internal structures (curved dark lines and cavities) that are typical of beadless cultured pearls. However, in some pearls these structures can only be traced using micro X-ray tomography. The uniformity in colour and surface condition of these white pearls are a strong indication that they all originate from the same cultured pearl production, he concluded. **JNA**