

浙江德清淡水珍珠传统养殖与利用系统

Traditional Cultivation and Application System of Freshwater pearl in Deqing, Zhejiang

● 系统概况 Introduction

浙江德清淡水珍珠传统养殖与利用系统是南宋叶金扬（公元1200-1300年）发明珍珠人工养殖技术以来，德清人民依托良好的生态环境、丰富的水域资源从事珍珠养殖延续至今形成的包括人工植珠技术、珍珠养殖管理技术、珍珠品质鉴定技术、加工及深加工技术、鱼蚌混养技术、珍珠文化和地方民俗在内的农业文化遗产系统。

Since Ye Jinyang (1200-1300) invented the artificial pearl cultivation technique in the Southern Song Dynasty, Deqing people have engaged in pearl cultivation thanks to the excellent ecological environment and rich water resources, and developed an agriculture heritage system including artificial pearl implantation technology, pearl cultivation management technology, pearl quality identification technology, processing and deep-processing technology, fish-mussel mixed cultivation technology, pearl culture and local folklore. The as-formed agriculture heritage system is known as the traditional cultivation and application system of freshwater pearl in Deqing, Zhejiang.



● 附壳珍珠养殖技术 Ye Jinyang’s blister pearl cultivation technique

方法为：“将锡和其他金属的、木制的、骨质的浮雕放在蚌的贝壳和外套膜之间，经2~3年的养殖，即成。”这种将自然界珍珠的偶然形成转化成有意识的自觉培育过程，是古人的一大创举。该技术在当时德清的钟管和十字港一带推广，不仅解决了人们的生计问题，降低了采珠危险性，而且促进了珍珠贸易及加工业的发展。

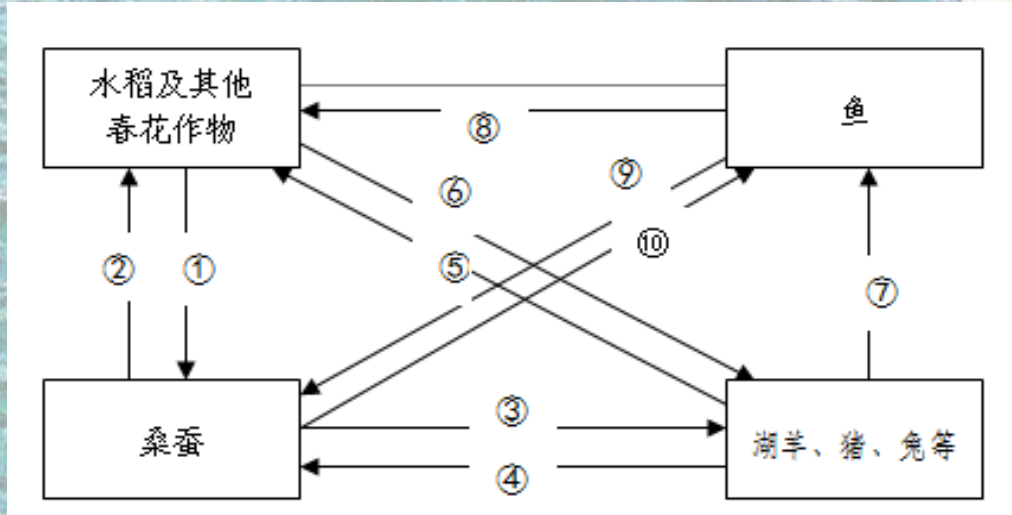
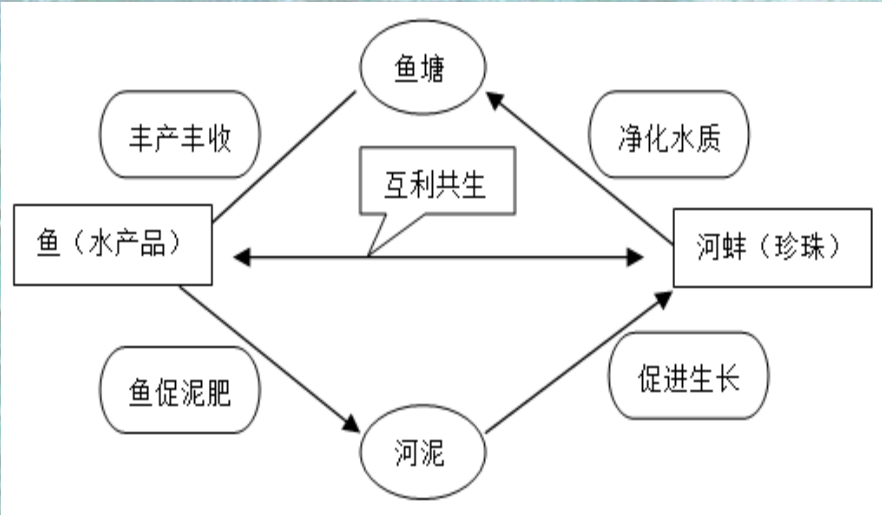
The detailed procedure is “After embedding tin, other metal, wooden or osseous reliefs between mussel’s shells and mantle and additional 2~3 year cultivation, blister pearls will be formed.” Transforming the occasional pearl formation in nature to a conscious artificial cultivation process is a pioneering work of ancient people. The technique was promoted in Zhongguan and Cross Harbor, Deqing, not only solving people’s livelihood and reducing the risk of pearl collection, but also promoting the industrial development of pearl trade and processing .



● 和谐共生的生态系统 Harmonious ecosystem

鱼、蚌均生活在水中，利用它们共生原理，在池塘中进行混养，可实现优化生产结构，以鱼带蚌，以蚌补鱼，获得良好经济效益。同时，千百年来，区域内劳动人民发明和发展“粮桑鱼畜”生态循环模式，形成了种桑、种稻（麦）、畜牧和养鱼相辅相成，桑地、稻田和池塘相连相倚的江南水乡典型的“粮桑鱼畜”系统和生态农业景观。

Taking advantages of a co-existence and complementation principle, fish and mussel is mix-cultivated in water to optimize the production structure and enhance economic benefits. At the same time, for thousands of years, the local people has invented and developed the “Grain-mulberry-fish-livestock” ecological circulation mode, where mulberry planting, rice (wheat) cultivation, animal husbandry and fish farming complement each other. The mulberry farm, paddy and ponds connects to form the typical ecological agriculture landscape of canal towns south of the Yangtze.



注：①稻草供蚕“上山”结茧
②“蚕砂”肥田
③老桑叶、桑地杂草喂牲畜
④牲畜粪便等肥地
⑤牲畜粪便可肥田
⑥稻草麦秆等可作饲料，也可垫畜舍
⑦牲畜粪便可喂鱼
⑧鱼塘底泥可返桑地作肥料
⑨鱼塘底泥可返桑地作肥料
⑩“蚕砂”喂鱼
虚线：稻田养鱼



● 丰富的物种资源 Rich species resources

德清水域面积广阔，水质优良，适合淡水蚌生长繁殖，自古便是珍珠养殖的重要地区，能用于育珠的蚌类有10余种。境内浮游植物有8门55属，浮游动物有75种。底栖动物约有26种，以螺、蚬为主要优势种。共有鱼类42种，隶属于7目13科36属，以鲤科鱼类最多，占总数64.29%；其次为鲈形目和鲇形目。此外，有国家一级保护动物朱鹮、白颈长尾雉；国家级保护植物南方红豆杉、银杏、榧树等。

Deqing has a vast water area and high water quality for the growth and cultivation of freshwater mussels, and over 10 kinds of mussels can conceive pearls. Since ancient times it is an important area for pearl culture. There are 8 phyla-55 genera, 75 species, 26 species (snails and clams dominant) and 42 species (belong to 7 orders, 13 families, 36 genera; the most, 64.29%, is Cyprinidae, and the second most is perch and Silhouette) for phytoplankton, zooplankton, benthic fauna and fish, respectively. Besides, there are also national level protection animals and plants like crested ibis, Elliot’s pheasant, taxus, ginkgo, torreyia grandis, etc.



● 形式多样的珍珠文化 Diverse pearl culture

德清人民在长期的劳动和生活中，形成了丰富多彩、种类繁多的农耕文化，流传着众多的传说、民歌、谚语，保存了众多的农业工艺以及乡风民俗，它们深深地根植于民间，代代相传。以“放鱼秧”、“请财神”、“拜塘头五圣”、“吃鱼汤饭”等为特色的传统民俗以及纪念叶金扬的相关活动，形成了德清珍珠丰富的文化内涵和历史底蕴。传统节庆活动如蚕花庙会、乾元龙灯会等也独具特色。

During the long term labor and life, Deqing people created a wide variety of farming culture, spread plenty of legends, folk songs, proverbs, and preserved a large number of agriculture technologies and rural folk customs, which are deeply rooted and are handed down from generation to generation. Traditional folk customs like “Fish stocking”, “greet God of wealth”, “Worship five kinds of holy fish in ponds”, “Eat fish-soup rice” and other commemorative activities of Ye Jinyang is the cultural connotation and history background of Deqing pearl. Traditional festivals such as Canhua Miaohui, Exhibit of Qianyuan Dragon Lanterns also has their own features.



● 一二三产深度融合的珍珠产业 Deeply integrated pearl industry

德清形成了从河蚌养殖到加工成珍珠终端产品的完整的产业链条。河蚌的蚌肉可以食用，味道鲜美，蚌壳可以加工成各种各样装饰品和首饰，珍珠饰品的加工制作，更是促进了整个珍珠产业的良性循环。2016年德清珍珠深加工总量近100吨，占全国淡水珍珠总产量的10%左右，已成为全国最大的淡水珍珠深加工基地，珍珠养殖与深加工年产值超50亿元，带动就业人员近万人。同时，优美的生态环境、浓郁的珍珠文化和健康的生态产品促进了区域休闲农业的发展。

Deqing has its own complete industry chain from mussel farming to pearl end products. The meat of mussel is edible and shells can be processed into a variety of decorations and jewelry. The processing production of pearl decorations further promotes the pearl industry a benign cycle. The total amount of pearl deep processing in Deqing approached 100 tons in 2016, accounting for 10% of the national total output of freshwater pearls. Deqing has become the national largest processing base of freshwater pearls, creating an annual output value of over 5 billion RMB and driving the employment of nearly 10,000 people. At the same time, the beautiful ecological environment, strong pearl culture and healthy ecological products promote the development of regional leisure agriculture.

