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THE FISHERIES OF CHINA

Hui-ch'ing

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Second Secretary Imperial Chinese Legation, Washington, D. C.

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By WEI-CHING W. YEN,
Second Secretary Imperial Chinese Legation, Washington, D. C.

Mr. President, Fellow-Delegates to the Fourth International Fishery Congress: My colleagues and I deem it a great honor to participate in the proceedings of this assembly, and our only regret is that owing to unexpected circumstances two others were prevented from leaving Shanghai, thus reducing by one-third the strength of our delegation. Doctor Smith, the distinguished and learned secretary-general of this congress, has very courteously requested us to address you in a general way on the fisheries of our Empire—for various reasons so little known to the outside world. While it is true our principal object in attending this congress has been to avail ourselves of the opportunity of obtaining information from the distinguished assembly present on all questions pertaining to fisheries, it is also our object to inform the world of the efforts being made in our country to investigate the conditions of our fishing industry, to collect statistics, to study its needs and defects, to introduce new types of vessels and fishing apparatus and methods, and to initiate legislation and regulation—in short, to organize and develop the industry and to place the culture and propagation of fishes on a scientific basis.

The history of fisheries in our country, like that of many other things, is an old one. Our ancient classics refer to the times when our primitive ancestors tied ropes together to form fishing nets, and mention the appointment, several centuries before the Christian era, of special officials to rule over and protect our fishermen. The first statesman that recognized the importance of the fishing industry was Chiang Tzŭ-ya, who lived in the eleventh and twelfth centuries B. C., and who rose to eminence from an humble home on the coast. It is said that this wise and virtuous angler, then 80 years of age, was fishing with a straight piece of iron, upon which the fishes readily allowed themselves to be caught, when the Emperor Wên Wang discovered him, and for twenty years he served his imperial master faithfully and successfully. Through his ardent efforts and wise planning, fishing first became an important industry among our people, and with it also grew up its allied industry, the manufacture of salt, without which the former would have been seriously crippled for want of preservative facilities.

Our most ancient pisciculturist was Tao Chu Kung, who lived in the fifth century B. C. His method of fish culture combined both knowledge and ignorance. He dug a pond of the size of an acre, leaving nine small islands scattered about. In the pond he placed 20 female carps 3 feet in length and 4 male ones of similar size. This was done in the month of March. In March of the following year there were found 5,000 fishes one foot long, 10,000 two feet long, and 15,000 three feet long. In the third year the number had been multiplied ten or twenty times, while in the fourth year it was not possible to keep count. The nine islands were to deceive the fishes, who would believe that they were in the big ocean traveling around the nine continents.

Pisciculture in our country has been confined to fresh water kinds. The fry are fed with the yolk of eggs, with very fine bran, or with beans ground to a powder. When the fish reach the length of a foot or so, they are transferred to a pond, where they are fed with young grass. It is considered advisable not to have the ponds too deep for fear of the water getting too cold for the young fish, and certain plants and trees are grown around and over the pond for various purposes and with various objects. For instance, it is believed that the dew from the plaintain leaves has a medicinal effect on the fishes, the berries of a certain tree are relished by the young fishes as a food, the grape vines which cover the pond prevent birds from polluting the water, and the luxuriant growth of the hibiscus along the edges repels the invasion of beavers. Of course, all these beliefs and theories are not scientific, but are based on tradition and experience.

With the division of the people of the Empire into four distinct classes—scholars, agriculturists, artisans, and merchants—the men and women who followed the trade of fishing for a livelihood were placed in an anomalous position, in that they were not included in any of the four classes. Thus socially ostracised to a certain extent, they clung more and more to themselves, forming groups and colonies of their own along the coasts and on isolated and rocky islands. They lived in a world of their own, knowing nothing of the affairs of their country and caring less. To this day they do not come into direct contact with their countrymen on the mainland or in the interior, disposing of their catches of fish to fishmongers, who go out to them during the fishing season with silver or with the necessaries of life in exchange for the fishes.

Throughout our history the importance of the fishing industry has been dwarfed by its allied industry, the manufacture of salt, which, having been transformed into a government monopoly, has engrossed the attention of the official and merchant classes.

In discussing the fisheries of our country attention must be called to the difference in taste between our people and those of the West. In the first place, our epicures do not care much for deep-sea fishes, and a fish like the salmon would not at all appeal to our palates. We delight in eating those of the finny

tribes whose meat is soft and fine, and they are to be caught in rivers, brooks, lakes, ponds, and the surface of the ocean. Another factor which has checked the development of deep-sea fishing has been the lack of rapid transportation facilities and of refrigerative means, necessitating the preservation of deep-sea fishes in salt before they could be sent inland. On the other hand, there are products of the sea which are regarded by us as delicacies of the table, but which have little or no consumption in the West. Just to mention a few well-known ones, the fins of the shark, the bêche-de-mer, the cuttlefish, the jellyfish, the scallop, and the awabe form important articles of domestic commerce, but are not bought or sold to any extent in the West. Many people of the West poke fun at us for what may be termed our motley taste for fish food. They declare that we are omnivorous, as far as eating the products of the sea is concerned. It seems to us that if the standard of civilization is partly to be measured by the ability and ingenuity of the people to maintain life by utilizing the variety of foods placed at its disposal, then we have helped to solve one of the important problems of life. We have found so many of the finny tribes suitable for food and capable of being transformed into delicious dishes that it is possible for us to have a fresh species on our table every day during the year.

The more common of the edible fishes in our country are the perch, mackerel, sturgeon, goby, pomfret, eel, gudgeon, shad, sole, mullet, flounder, herring, carp, bream, etc.

With our dense population it is a matter of necessity that we seek our food from the waters as well as from the air and the land. As a writer has said, "All waters are vexed with our fisheries. Our nets and other contrivances for capturing fish display great ingenuity, and most of them are admirably adapted for the purpose (and no wonder, with our centuries of experience and experimentation). The right to fish in running streams and natural waters is open to all, with a few exceptional cases, while artificial reservoirs, as ponds, pools, tanks, tubs, etc., are brought into available use; rice fields near tide water are turned into fish ponds in winter. As to the modes of securing the inhabitants of the deep, they are killed with the spear, caught with the hook, scraped up by the dredge, ensnared by traps, and captured by nets; they are decoyed to jump into boats by painted boards, lifted by lifting nets, and dived for by birds—for the cormorant seizes what his owner could not reach." The last-named method is unique, I believe, in the world, and in our country is confined to one family, the Liu family. The fishes caught, however, are limited to those of creeks and small streams and of unpalatable kinds, bought and eaten only by very poor people.

With the spread and growth of new ideas through intercourse with western nations, the possibilities of the fishing industry have become more and more apparent to our leaders, and it is realized that for a proper development the whole industry must be thoroughly organized and all modern improvements in

the way of vessels, apparatus, and methods of fishing, aquiculture, etc., must be introduced. A bureau of fisheries, modeled much after the pattern of the West, with headquarters in Shanghai and branches in Mukden, Tientsin, Chefoo, Canton, and Foochow, has been established. The maritime provinces of Fêngtien, Shantung, Chêkiang, Kiangsu, Fukien, and Kuangtung have interested themselves in the work of this bureau. Investigation has been made of the different types of vessels, nets, and other apparatus employed in the industry, of the groups of fishermen and their methods of fishing, of the habits and rules and traditional usages obtaining among fishermen, with a view to governmental legislation and regulation, and also of the numerous islands and rocky coasts, which have for centuries been the resorts of our fishermen. The last-mentioned work has been carried out with the cooperation of instructors from our naval college at Nanking. This fisheries bureau, more commonly known as the Kiang-Chê Fishery Company, is authorized and recognized by our Ministry of Agriculture, Works, and Commerce, and has for commissioner-general the taotai of Shanghai.

Established only about four years ago, the fisheries bureau is of course only in an embryo state, but in a general way much has been accomplished. The industry has been encouraged and developed in that protection has been afforded to the fishermen from attacks of pirates, from clandestine fishing by foreign vessels in Chinese waters, and from illegal exactions by official underlings. By the construction of houses for the storing of natural ice, the sale of fresh fish has greatly increased. A fishing vessel propelled by steam power was purchased, but so far the vessel has proved to be a failure from the financial point, for the simple reason that deep-sea fishes can not fetch good prices in our country. Two years ago the bureau succeeded in sending a very complete exhibit of the fisheries of our Empire to the Milan Exposition, and those of you who were present will remember the numerous models of fishing boats and fishing nets and the hundreds of finny creatures caught in Chinese waters that were placed on view. We have with us this time models of 19 different kinds of fishing nets, which you may examine at your leisure.

It is proposed to establish a large fishery school at Woosung, the entrance to the city of Shanghai and the resort of numerous fishing boats, the funds being contributed by the governments of 11 provinces. The site has already been chosen and leveled, and construction of the building will begin in the immediate future. As a nucleus of this future college—for it is hoped the institution will grow into a college—we have already organized a school, with 100 pupils, mostly sons of fishermen. Connected with the school is a museum, and it is planned to construct an aquarium on a large scale.

One of the more important duties of the bureau has been the collection of statistics, a branch of knowledge much neglected by us in the past. The work is full of difficulties, but from a cursory examination it is found that the total

number of salt-water fishing vessels is in round numbers 200,000, one-fifth of which hover on the coast of Chêkiang Province.

The canning and preserving in other ways of fish after new and improved methods is growing gradually into importance. In Canton, in particular, it is becoming a valuable industry.

Such in brief is the state of the fisheries of our country. The activities of the bureau, you will notice, have been confined to the practical rather than the scientific side. There is a great deal more to be done, but at present its usefulness has been circumscribed by the lack of funds and of competent men. So many new measures are being introduced that necessarily the energies and resources of the Empire have been very much divided.

In attending this congress my colleagues and I have had it impressed on us to gather as much information as possible, to visit the various centers of fish culture, and to meet the leading scientists and experts engaged in the work, from whom we expect much assistance and with whom we hope to work together in the future.