

# EARLY CHINESE SHIPS AND TRADE

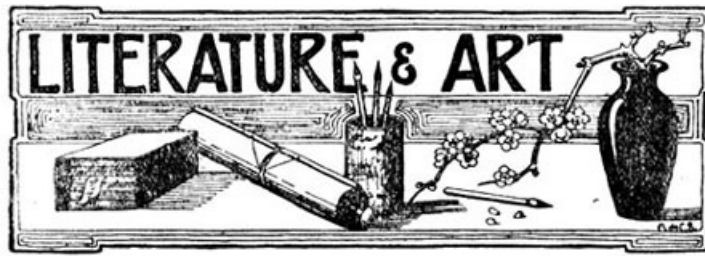


BY  
IVON A. DONNELLY

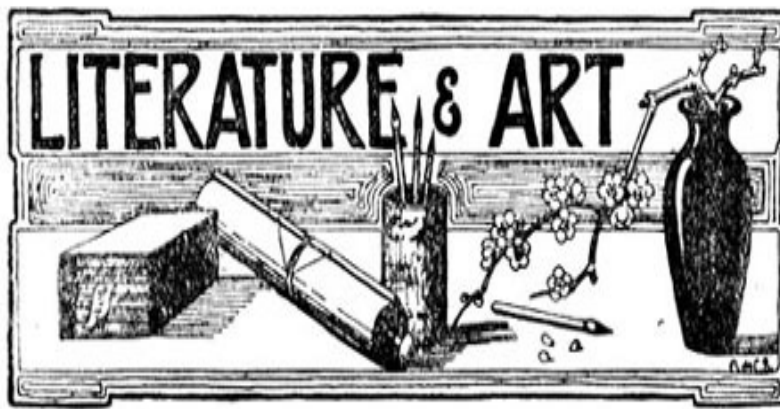


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## EARLY CHINESE SHIPS AND TRADE

BY

IVON A. DONNELLY.

[p.190]

The origin of Chinese vessels, like that of so many other " things Chinese " is completely wrapped in obscurity, no reliable records having been handed down by the Chinese themselves.

Leaves floating on the water are said to have given the Chinese the idea of building boats, and native writers attribute this invention to one or other of the mythical sages.

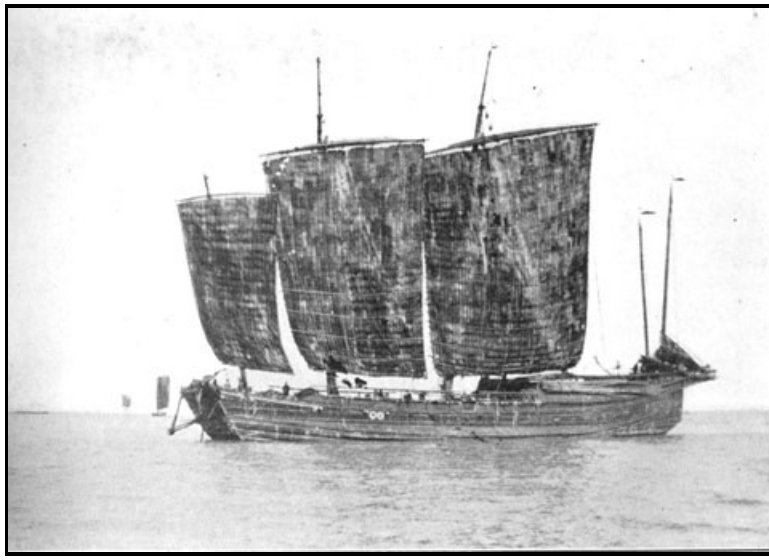
For instance, Confucius says that " Fu Hsi," described as the " Father of Civilization," and who is said to have reigned in the year B.C. 2852, made the first boats by hewing planks, and sharpening and planing wood to be oars. Huang Ti, another Emperor, reigning in the year B.C. 2687, is also said to have built roads, organized the country into administrative departments and constructed ships. To " Ho Shin Wu," a pious woman (who eventually became one of the eight Taoist Genii), is also ascribed the honour of the invention for the means of propelling craft. According to legend, this woman, who was in possession of a small raft with which to cross the river, was washing one day by the side of a creek, and noticing that the fishes swimming by used their fins and tails as a means of propulsion, fashioned herself some rude oars.

There is, however, considerable doubt as to whether these people ever existed, although Dr. Giles of Cambridge states that he believes " Fu Hsi " was a real person, while Professor Terrion de Lacouperere gives it as his opinion that the Chinese originally came from Babylonia about the 23rd century B.C. If we take Professor Terrion de Lacouperere's theory as a likely one, it gives rise to serious doubts as to whether the first Chinese vessels were built in China or not.

It is, of course, quite possible that the aborigines who preceded the Chinese in this country had some sort of craft for crossing the great rivers that run from one end of China to the other, but I am inclined to the opinion that the idea was brought by the early colonists from the West. If the mythical sages, of whom we have just written, migrated to China from Babylonia, it is quite possible that they brought with



A Junk with Yuloh (Stem Oar).



A Pechili Trader of the Present Day.

[p.191]

them an early type of craft similar to that plying on the Euphrates and Tigris at the time. Although we have no definite evidence of the type of vessel then in use on these two rivers, it is more than probable that they were not far removed in type from the Nile craft of that period. There is a great similarity between the Nile, the Yangtze, and the Babylonian rivers, and when we consider that at the present day there are types of vessels on the Upper Yangtze practically identical with the Nile Barges of B.C. 1600, it seems reasonable to suppose that the know-ledge of boat building came from that source.

Later on in the Han Dynasty (B.C. 206 to 25 A.D.), we are told that the Chinese painted the figure of a water bird on the prow of their boats. This was, I believe, also an Egyptian custom. During the same period, we learn from Panku's history, emperors were rowed in boats on the Yangtzekiang, with oars resting on pivots far in the front and a rudder in the stern. It is, however, from her intercourse with the outer world only that we can obtain the first inklings of China's sea-borne trade, and her vessels.

The first mention we find of a Chinese vessel in history is B.C. 331, when Berenice is said to have traded with Musiris, exchanging goods there which were probably brought by native vessels from China to Ceylon.

There seems to be very little doubt that her wares came to the Near East and Europe before the Day of our Lord, but there is no tangible proof of this. Both Roman and Chinese accounts make it perfectly clear that land and sea trade in silk, iron, glass, textile fabrics, and many other articles existed between the Red Sea Ports (Petra, etc.) and the Indo-China Ports (Rangoon, etc.), and also between Mesopotamia and Si-an fu, during the first five or six centuries of the Christian era.

In the third Egyptian Room of the British Museum is to be seen a collection of painted porcelain bottles inscribed with Chinese characters, which were found amongst the ruins of the buildings and graves along the old caravan route from the Red Sea to Kena on the Nile. At one time it was thought that some of these bottles dated back to the XVIIIth Dynasty, but the late Sir Woollaston Franks was able to show that the kind of porcelain of which they are made was not known before the XIIIth century of our own era. It is, however, tolerably certain that they were brought to the Red Sea ports by either the Chinese or Arabs trading between China and East Africa, in the XVth or XVIth century.

Our knowledge of the early maritime routes from the Far East is almost exclusively confined to those between China, Arabia and the shores of Hindustan. Beyond this, all that is certain is that vessels from China, Bengal, and other parts of the East traded with Ceylon, and that some of the products of China found their way by circuitous routes—probably after passing through many hands—to the great central mart of Alexandria.

The travels of Fa-h'sien in the 4th Century show that navigation was then carried on throughout the East, and that intercourse existed between China and India. Fa-h'sien, with several companions set out on his travels in 399 A.D. from Chang-an (modern Si-an fu) in the

[p.192]

Province of Shensi, and returned to Nanking in 414 A.D. It is said that he embarked at Nanking with a large number of merchants in a ship that would carry 200 persons, and arrived at Sinhala (Ceylon) in fourteen days, the winds being favourable. [1]

On the return journey he is said to have embarked from Ceylon in a merchant vessel of large dimensions and well provisioned for a long voyage across the Indian Ocean, and to have arrived in Java after a passage of ninety days. Having remained there five months, he set sail for China, and at the end of sixty days, being short of water, the vessel bore up for the Promontory of Lao (Kiaochao Bay), which is situated in the Province of Shantung, and bears the same name to this day.

In chapter 97 of the Sungshu, the history of the period from 420 to 478 A.D. and written about 500 A.D., there is a mention of the Roman Orient which says " all the precious things of land and water come from there . . . All this has caused navigation and trade to be extended to these parts."

Following in the footsteps of Fa-h'sien was the Buddhist pilgrim Huan-chwang, who, starting from modern Si-an fu in 629 A.D., practically covered the

same route, returning to his native place in 645 A.D.

These two are by no means the only priests who made important journeys. The Bonze, I-tsing, who wrote of his travels (643-713 A.D.) tells us how he himself wandered to Sumatra, "Malayu," the Nicobars, the mouth of the Hugly, and modern Behar, and returned by the same route, arriving in Canton, and continuing his journey to Ho-nan-fu where the Court then was.

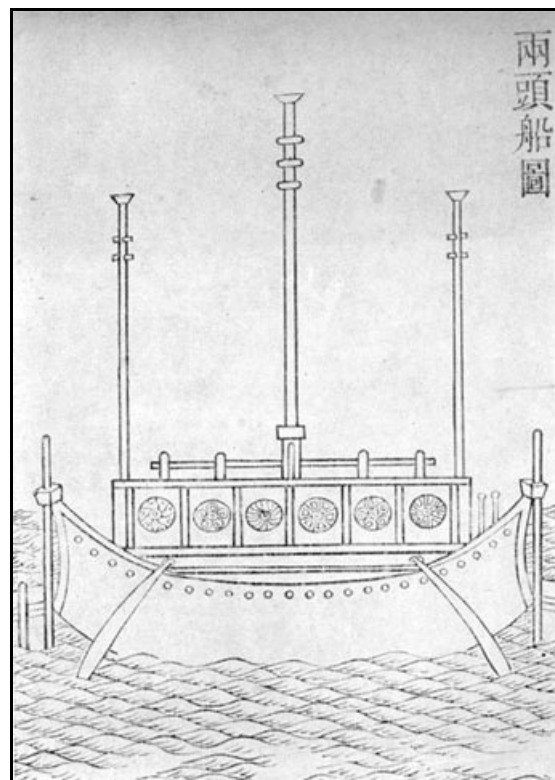
In 607 A.D. Sill Yang-ti sent a mission to Siam (Ch'i-t'u) to open commercial relations.

In 618-626 A.D. Yangchow, Tsuanchow and Khanfu (Canton) had Arab settlements.

We learn that in 622 A.D. the Chinese became much more enterprising as navigators. They no longer limited their communications with traders of the West to the Island of Ceylon, but, rounding Cape Cormoran, traded directly with the ports of the Malabar coasts and the Persian Gulf. From this period onwards, China carried on the most prosperous trade of any nation of the East, both by land and sea. Her caravans passed through Asia and Tartary, and her merchants conducted an extensive business with the provinces bordering on the west and north. Four hundred Chinese vessels are said to have been seen in the port of Ormus at the entrance to the Persian Gulf at one time. China is stated to have received Ambassadors from all countries of Asia, Constantinople, and the Khalif of Baghdad during this period, thus holding a direct intercourse with the whole civilized world.

The vessels of China, however, had ceased to repair to the Persian Gulf long before the Portuguese made their appearance in Calicut, but from the time of Cosmos to that of Marco Polo, they appear to have shared with the Arabians and Persians the carrying trade of the East, and to have extended their voyages even to the remote island of Madagascar.

The Arabian traveller, Ebn Wuahab (877 A.D.), tells us of the routes taken by the Chinese from Canton to Bussora. From China to Ceylon



*Photo from MSS. in British Museum*  
Double Ended Boat.



Photo from MSS. in British Museum.  
Four Oared Tax Collecting Vessel.

[p.193]

they doubled Cape Cormoran, ran down the coast of Malabar, passed the mouth of the Indus, and thence to Siraph. [2]

The reports of the Arab merchant, Suleiman, upon the conditions of trade in the Far East during the ninth century, and the later comments of the Arab geographer, Abu Seid, who wrote one century later, confirm what the Chinese say, that a lively international traffic then pervaded the whole of the Indian Ocean.

From 968 to 1116 A.D. we find Chinese historians discussing the advantages of sea routes over those of the land.

In the P'ing-chou-ko-t'an (萍洲可談) by Chu Tu (朱 曠), said to have been written in the first quarter of the 12th century, there are some interesting notes on Chinese sea trade, but the majority of references to vessels seem to be in regard to foreign ships.

It is recorded that in the year 1141 rules governing sea-going junks were drawn up.

Edrisi (1156 A.D.) says—" Muskat, the ancient capital of Oman, was visited every year by great numbers of Merchant ships, and was much frequented annually by vessels from Sin " (China).

Marco Polo in describing the vessels in which he embarked on his return journey states they had four masts and had their hulls partitioned into separate chambers. They were also capable of being navigated with nine sails. The journey to Java took them three months and they spent 18 months cruising about in the Indian Ocean before arriving at their destination of Ormuz.

From Marco Polo's description these vessels are identical with the junks of the present day that are to be seen at Taku, at the mouth of the Peiho, at which port he embarked. [3]

We read in the account of the journey of Ibn Batuta from Tangier to Calicut on the Malabar coast in 1324, that he saw there fifteen Chinese junks. In his description of these vessels he says they were propelled by immense oars at some of which twenty-five men were stationed who pulled standing. [4]

The great Batuta in the same report tells us that the sails of these vessels were made of cane reeds, in which respect there has been practically no change. He also states, however, that there were a thousand men on board, four hundred being soldiers, and six hundred sailors. [5]

'We learn that in 1087 the junks from Zaitun traded regularly between the Loochoos and Japan at this time, and also between Sumatra, Java, and Borneo, which latter places they reached with the north-west monsoons in six weeks. They usually waited until the following spring for a favourable breeze to take them on to Ceylon, the Malabar coast, and the Arabian and African ports, among which Berbera, Shehr (Arabia) or Shaher, and Djarfar can be specifically identified by the Chinese characters used. There is ample evidence from standard Chinese history that Zanzibar was also included in the usual voyages. There are also descriptions of Cambay, Gujerat, Malwa, Baghdad, Basra and other places in the Persian Gulf.

In 1405, the Ming Eunuch, Cheng Ho, took sixty-two junks and 27,800 men from Shanghai [6] to Amoy, Faifo, Binh-thuan, Pulo Condo, and

Kampot (Cambodia). In 1407 he went to Palembang, Lambri, Malacca, Siam, Call and Ceylon, and after fighting several battles asserted China's over-sovereignty in a very decided way. In 1412 to 1416 he visited Pahang, Lambri (Acheen), Aru, Aden and Magadoxia, Jubba and Brava on the east coast of Africa above Zanzibar. In 1430 he again visited these places and sent his lieutenants up the Persian Gulf and Red Sea, from where they brought back detailed accounts of the land of Mahomet.

It is said that some of the ships in this expeditions were 440 feet in length and 180 feet beam. This of course is absurd !

A Mexican priest residing in Manila in 1638 said Chinese junks came there from Foochow and Tsuan-cheow (north of Amoy) and went back in ballast.

In a work entitled " Things produced by the works of Nature " published in 1639.<sup>[7]</sup> there are three chapters devoted to " Canal Boats, Sea Boats and other boats," and from the very detailed measurements and descriptions given of one or two of the types it has been possible to reconstruct drawings of them, the result being a type of vessel practically identical with craft of the present day. There is also mention of the compass and a detailed description of the lee board and the method of its working. The routes taken by the various vessels are also given.

John Albert de Mandelso in writing of the Chinese in 1639 A.D. <sup>[8]</sup> states :

" But the Chinese are, of all foreigners here, most industrious in their trading, being looked upon no otherwise than the Jews in Europe. One of their main businesses is to forestall and buy up the pepper in the country (Java) against the coming of their Chinese fleet to Bantam (which consists commonly in ten ships of fifty ton each) in January. The Chinese sell their porcelain here at cheap rates and bring also silk, satins, and damasks of their own manufactory, which they exchange for pepper, lacquer, indigo, sandalwood, nutmegs, cloves, tortoise shells, and ivory."

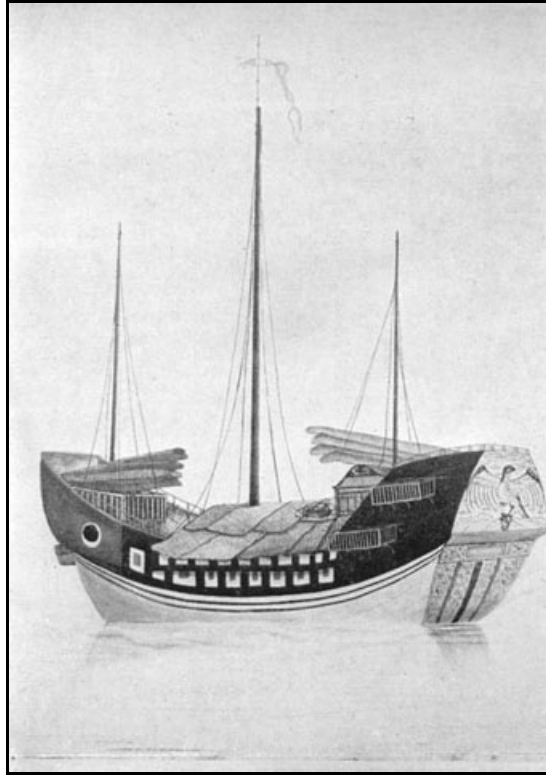
This gives one a fairly good idea of the trade they were engaged in at the time.

The next mention of Chinese vessels that we find in history is 1687 when Father le Comte, describing them in detail, gives an account of their having sailed all over the Indian seas and discovered the Cape of Good Hope before the advent of our Lord. He states there is no doubt whatever that the Chinese understood more about navigation than the Greeks and Romans at that time, and speaking of them in his own days says " this day they sail more securely than the Portuguese."

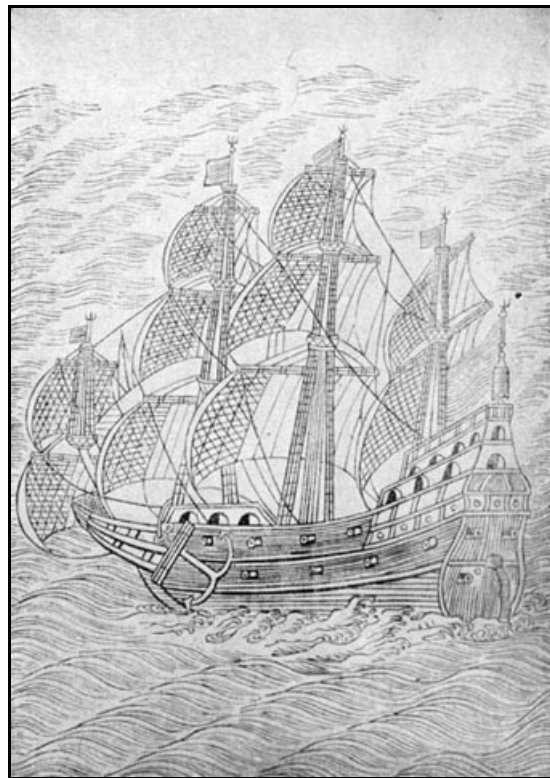
It will not be out of place here to give Father le Comte's description of a contemporary Chinese vessel:

" Their barks are made of a very fine light timber which makes them more apt to take all impressions one has a mind to give them. They divide into five or six compartments, so that if they touch upon a point of rock which makes a break in their vessel, only one part of the boat is filled, and the others are dry, and defend them until they can mend the hole in the other."





*Photo from MSS. in British Museum.*  
The Amoy (Fukien) Type of Junk.



*Photo from MSS. in British Museum.*  
Sea Going Junk?

[p.195]

" Their vessels are like ours of all rates, but not so fine. They are flat-bottomed ; the forecastle is cut short without a stem, and the stem opens in the middle to the end that the rudder which they shut up as in a chamber may be defended on each side from the waves. Their rudder is much longer than ours, and is strongly tied to the stern post by two cables that pass under the whole length of the vessel to the forepart.

" Two other cables hold it up and facilitate the hoisting of it, or lowering of it, as occasion serves. The bar is as long as is necessary for the guiding of it. The seamen also at the helm are assisted by ropes fastened to the larboard and starboard, and rolled upon the end of the bar which they hold in their hands and fasten and slacken as they see occasion to thrust or stop the helm. The mizen mast is quite toward the forepart, and the mainmast stands near

the place where our mizen. A cord which goes from starboard to larboard serves them for a stay and shrouds. The boltsprit which is very weak is at the larboard. Their round tops are very short, but their mainmast is prodigious, high and thick, and strongly seized by two side beams that strengthen it wonderfully. Their low sails are of very thick matt, trimmed with laths, and long poles at two feet distance to strengthen them, and fastened to the whole lengths of the masts by several little loops. They are not fastened in the middle, but have three-quarters of their breadth loose, that they may be accommodated to the winds and readily tack as occasion serves. They do not use melted pitch and tar for their okam to caulk with, but a composition of lime and oil, or rather a particular gum with flax of rasped bamboo. This matter is not so apt to fire, and 'tis so good okam that their ships seldom if ever leak. Neither do they ever use the pump ; a well or two serves to keep the keel dry. In their larger vessels their anchors are of iron but in their middle, sort of a hard heavy wood, strengthened at the ends. But these latter are not sufficient for a spring tide or a fresh gale runs them adrift, and they often run the risk of being cast away. Their cables are of flax of Coco, or Rotin a long cane."

In the account of Lord Macartney's mission to the Court of Peking in 1792, it is mentioned that they came across certain Chinese vessels in Bantam, in Java, but even this trade, which for so long was entirely in their hands, has now been lost.

Sir George Staunton in his work " Macartney's Embassy to China " published in 1797 says :

" The Chinese juncks also, so ill calculated for long voyages which were at anchor in the roads (Batavia) already indicated the vicinity of that Empire."

Another extract reads :

" Marble and granite are brought thither from China in vessels belonging to that country commonly called " juncks," which generally sail for Batavia from the ports of the provinces of Canton and Fukien on the Southern and South Eastern Coasts of that empire

[p.196]

laden chiefly with tea, porcelain, and silks. In these junks great numbers of Chinese come constantly to Batavia."

From time to time, in " Dampier's Voyages," " Hakluyts Travels " and other works, we find mention of big Chinese vessels being met with in ports far away from home, but as years have gone on, competition from foreign vessels, has, owing to Chinese conservatism, driven them from the trade routes of which they had the monopoly. They gave up going to the Persian Gulf ; in time they forsook Calicut ; and after that we do not hear of them at any place farther afield than Singapore or Java ports. It is not many years ago that large five-masted Pechili Traders were to be seen in Singapore and other Straits ports. Now this also is a thing of the past. The advent of steam left the Chinese junks only their own coast on which they could trade profitably, and here again each successive year sees the number of coastwise traders diminishing. On the China Coast sail is giving way to steam and motor as it is all over the world.

In none of the very early Chinese manuscripts have we been able to discover any pictures of contemporary Chinese craft, but the illustrations given here taken from MSS in the British Museum will give the reader some idea of Chinese vessels in the 18th century.

In the Ti Shu Chi Ch'eng, XXXII, 178 (A Chinese Encyclopedia) published in 1726, will be found depicted several types of Chinese craft.

The four-oared tax collecting vessel is a type that will be seen any day round the mouth of the Min River, while the double-ended boats seem to have disappeared altogether. The sea-going junk as will be seen from the illustration is obviously a Galleon of Elizabethan days.

A MSS of coloured drawings of Chinese craft (Bibl. Lansdown, 1242 Oriental Brit. Mus.), published some two hundred years ago, gives us a dozen types of that period.

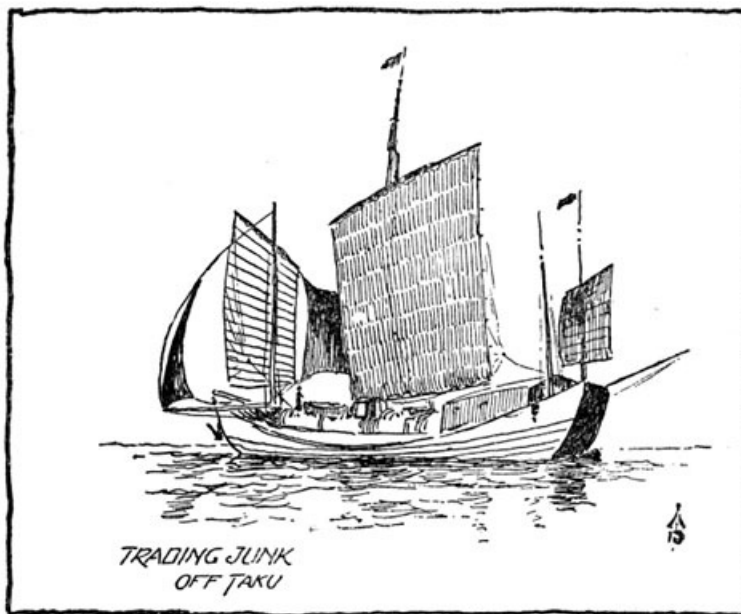
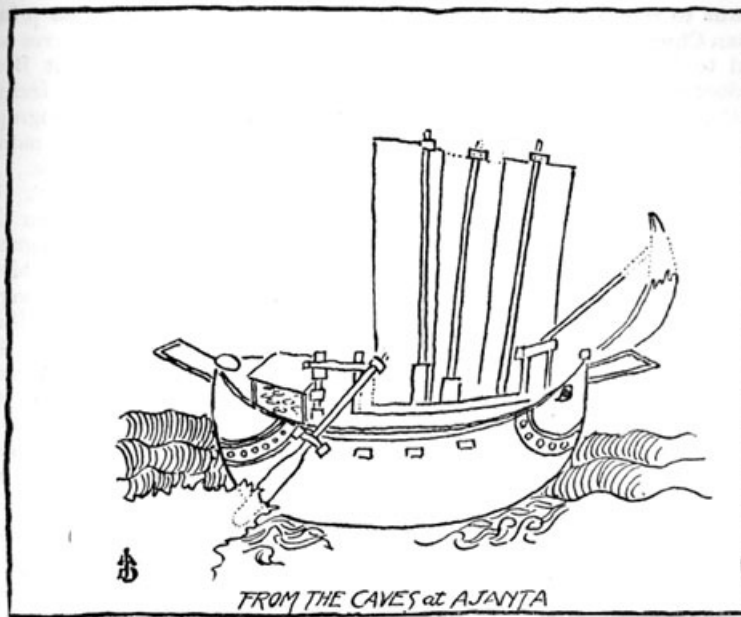
We find a junk of the Amoy type which is practically identical with the vessels that sail from this port at the present day ; a Hangchow Bay trader, painted grey, but with an " eye," undoubtedly the same in build as those met with every day round the Yangtze Cape. River craft of all types are also depicted, some grossly exaggerated, yet others which are exactly the same as those now frequenting the Yangtzekiang and its tributaries.

Another MSS (Bibl. Egerton 1095 Brit. Mus.) shows 72 types of Chinese boats, the majority of which are exactly the same to-day as they were when the MSS was published (said to be 1700).

The duck-keepers beat is a curious type which is not often seen in the present day. It has a cage on either wide, and a little platform for the ducks to strut up and down on when they become tired of the water. The long pole with a net on the end shown in the illustration is used by the duck-keeper to gather them in should they swim too far away from the boat.

In the caves of Ajunta in India there is a representation of a four-masted vessel which some writers are inclined to believe is of an early Indian vessel. From the striking likeness of this vessel to the present day Pechili trader, I am inclined to the theory that this is

[p.197]



[p.198]

meant to represent a Chinese vessel of the time of the Buddhist priest Huan Chwang's pilgrimage to India, at about which date these caves are said to have been completed. The majority of the carvings at Boro Bodoer in Java, which give us fairly clear representations of the Indian craft of this period, are of an entirely different type, while the photograph reproduced herewith of a Pechili trader together with a copy of the painting of Ajunta will show the great similarity between the two types.

Before closing this article it may be interesting to trace back the origin of the term "junk." It is believed to have been taken from the word "Junco," the name given to craft of this kind by the Portuguese navigators who were the first Westerners to visit the Coasts of China. This word no doubt had its derivation from the Javanese word "ajong," or the Malay "jung," a large boat. Legge in "Records of Buddhist Kingdoms," 100-112-113, and Chavannes, "Religious Eminent," 42, say on the Authority of the I-tsie-king-yin-I (Ch. I) that the vessels called Po ( 舶 ) were some 200 feet long and could carry from 600 to 700 persons. Ships called "ch'uan" ( 船 ) were probably of smaller dimensions. According to Ibn Batuta, only the larger type of sailing vessels should be called junks, but the term is now used in connection with all sea-going boats, and the more bulky of the river craft.

## NOTES

- 1.—It would appear that some error has crept into the records handed down in regard to this, as even in these days of rapid communications, a voyage of this length would take considerably longer than fourteen days.
- 2.—Siraph or Siraf—the modern Tahiri on the Persian Gulf.
- 3.—The illustration of a present day trading Junk off Taku will give one an idea of the type of vessel to which Marco Polo refers. It will be seen that this Junk has only five sails set but when one bears in mind that flying staysails, topsails, and stunsails are often made use of in very light airs, nine sails could very easily be accounted for.
- 4.—Nowadays these oars have completely disappeared and the YULOH on each side is not generally used in the ocean-going Junks, except to assist in bringing the vessel around in a light wind and for propelling purposes in a calm, or when coming to an anchorage (see illustration).
- 5.—This most certainly is an exaggeration, as the greatest known Junks have not been more than a thousand tons burden.
- 6.—Although in the records that have been handed down, Shanghai is mentioned as the port of embarkation, this can hardly be correct, as at that time the main port for Soochow (the Capital) was Liu Chia Chiang, at the mouth of the Liu ho, on the south bank of the Yangtze, opposite the city of Tsungming, on the island of the same name. Shanghai did not exist except perhaps as a little village on a small creek, and in the work entitled " Things produced by the work of Nature " (Tien kung Kai Wu 天工開物 ) by Sung Yng Hsin ( 宋應星 ), published in 1639, Liu Chia Chiang is mentioned as being the port for Soochow.
- 7.—Translated by Dr. V. K. Ting (Cambs).
- 8.—Ref. " Collections of Travels & Voyages "—1705.