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EARLY STEAMSHIPS IN CHINA

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In *East Asia: The Modern Transformation,* Professor J. K. Fairbank writes, "This carrying trade on China's waterways was to prove the Westerners' main point of entry into the Chinese economy, for here the introduction of the steamship could alter the inherited technology" As late as 1880 there was still not a single mile of railway in China, nor a single machine-driven loom or spindle. At that date, however, the three leading steamship companies owned forty-two steamships operating on the various routes on the Canton River, the Lower Yangtse, and between the various treaty ports on the coast. As K. C. Liu points out in his *Anglo-American Steamship Rivalry in China, 1862-74,* the steamship was not only a technological innovation. It was also a business innovation, because it brought with it new methods of capital organisation and management on a scale hitherto unknown in China. Many Chinese of the scholar-official class also recognised the importance of steamships, and of guns, and—by inference—the political system which made these things possible. From the mid 19th century onwards, memorial after memorial to the Throne emphasised this. Sir Charles Snow was not exaggerating so very much when he wrote that the steam engine helped to shape the modern world as much as Adam Smith or Napoleon. Unfortunately for China, officials closer to the Throne discouraged its occupants from pursueing modernisation.

Steam navigation in China began in the south, on the Canton River, and—like so many other aspects of the Western invasion—came by way of India. The first steamship in Asia seems to have been the Nawab of Oude's steam yacht, about which little information has survived. According to Prinsep, this was built at Lucknow in 1819, and equipped with an eight horse-power engine sent out from England, so she must have been very small. She is said to have been capable of seven to eight knots, but when the Nawab tired of her was allowed to go to ruin. Apart from this, the first

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steamships in India operated on the Hoogly in the early 1820s, mainly as tug boats.

The first steamship in the Dutch East Indies was the *Van der Capellen*, a paddle steamer of 230 tons, designed to operate a coastal service in Java. The *Van der Capellen* was built by a consortium of British merchants in Sourabaya in 1825, and equipped with engines built by Fawcett and Company of Birmingham.

Due to the close association between British India and Canton through the East India Company, it was not long before steamships were introduced on the Canton River. Although he did not live to see his scheme carried through, a Mr. T. J. Robarts of the Company's Canton staff is the pioneer of steam navigation is China. When on leave in London in 1821, just nine years after the *Comet* was launched on the Clyde, he suggested to the Court of Directors that a steam tug could be usefully employed on the Canton River. Because it was thought that the Chinese might object, his scheme was turned down, but Mr. Robarts decided to go ahead on his own. He ordered two 16 horse-power engines and a copper boiler from Henry Maudslay and Company of London, and a hull of oak frames; all of which arrived at Canton in 1822 and aroused great curiosity and admiration. Unfortunately, bad health caused Mr. Robarts to retire prematurely, and there was no one at Canton able, or willing to continue with his scheme. Everything was therefore sent to Calcutta, and arrived there in June 1822.

The parts were assembled at Kyd and Company's yard at Kidderpore, and the vessel, known as the *Diana*, was launched on 12th July 1823. However, the original oak hull was discarded in favour of a new hull built locally of teak. The name *Diana* was taken from the figurehead which had accompanied the original hull. The total cost of the *Diana* was 70,000 rupees, and—the government declining to take any part in the enterprise—this was financed by a group of Indian agency houses.

The *Diana* ran successfully, but not profitably, on the Hoogly for a year, and was then sold to the government for use in the Burma War, 1824-1826. It was Captain Marryat, then the senior naval officer in India, who recommended her purchase to the government. The *Diana* took part in the first expedition to Rangoon, and proved so useful that she was retained on the Irawaddy for the whole of the war. Sht suffered at times from overloading, as not

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only did she carry troops, but often had a gun brig and several small boats in tow. *Diana* seemed to produce an effect on the Burmese analagous to that produced on the Mexicans by Cortes' horses. She continued in government service until she was broken up at Calcutta in 1835, and her engines installed in a new ship of the same name. The second *Diana* was also built at Calcutta, and was employed by the government as a cruiser against pirates in the Straits of Malacca.

Although her origin was so closely connected with China, the first *Diana* never operated in Chinese waters. The first steamship to be seen in China was the *Forbes*, also built at Calcutta and launched in 1829. The *Forbes* was much larger than the *Diana* and cost 300,000 rupees. After she had been running on the Hoogly for several months, the *Forbes* was chartered by Jardine, Matheson and Company to tow their *Jamesina*, a barque of 362 tons which had formerly been *H. M. S. Curlew*, to China. At this time great importance was attached to getting the opium from India to China as quickly as possible in order to command the highest price, and no satisfactory passages had been made from Singapore to China against the north east monsoon. The opium ships normally waited at Singapore until the monsoon was over before tackling the passage up the South China Sea, so that only one India-China voyage was possible in a season.

The *Forbes-Jamesina* convoy left Calcutta on 14th March 1830 the *Forbes* having 134 tons of coal on board, two-thirds English and the remainder Indian, while the *Jamesina* had another 52 tons of Indian coal for the *Forbes*, besides her main cargo of 840 chests of opium. Good weather was experienced on the passage to Singapore, where they arrived on the 27th, steaming for most of the time at 5½ knots, and at the most favourable times reaching 7 knots. Four days were spent at Singapore, during which time the boiler was cleaned and bunkering carried out. The monsoon was still strong when they left on 31st, and speed fell first to 3½ and later to 2½ knots. By 12th April *Forbes* had only 12 days coal left with over 500 miles to go and no sign of the monsoon easing. The *Jamesina*, therefore, was cast off and *Forbes* proceeded alone, reaching Lintin on 19th April, the first steamship to be seen in China. The *Jamesina* arrived two days later.

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The *Forbes* completed the last few days of her passage under sail, in order to reserve a few tons of coal for the river passage. When the Chinese pilot came on board to take her up to Lintin she was under steam with wind and tide against her. He showed no astonishment, however, and quietly gave the helmsman his orders as if everything was normal. At last the captain could stand his bland indifference no longer, and asked him if he had ever seen a steamship before. The pilot calmly replied that this mode of propulsion had once been common in many parts of China, but had fallen into disuse. He knew that everything was alright so long as black smoke came from the funnel, but as soon as white steam appeared he was uneasy. Chinese acquainted with 'pidgin English' came to call a paddle steamer like the *Forbes* "outside walkee", and a screw steamer "inside walkee".

Although this attempt to beat the monsoon failed in terms of the charter, it was still considered a success. During the passage between Singapore and Lintin coal had been transhipped from the *Jamesina* to the *Forbes* three times, each transhipment taking 3 to 4 hours. It was thought that 2 or 3 days could have been saved by speedier bunkering at Singapore and speedier transhipment at sea. That the experiment was not repeated was due to several factors. One was the lack of suitable fuel at Canton; the *Forbes* burned wood on her return passage. Another was the prospect of objections from the Chinese authorities.

The most important factor, however, was the greatly improved sailing ships which were being built at that particular time. In 1829, just a year before the *Forbes-Jamesina* experiment, the first and most famous of the opium clippers, the *Red Rover*, appeared on the scene. In her maiden voyage the *Red Rover* made the round trip between Calcutta and Macao in 55 days, carrying 800 chests of opium. She had equally successful passages in the next two years, by which time she had at least three rivals on the run. From then no one thought of employing steamships against the north east monsoon in the South China Sea, and the success of the opium clippers kept steamships out of the opium trade for another twenty years. The *Red Rover*, like many of her successors and rivals was built in India, at the Howra Dock Company's yard. She was launched in September 1829, and for her first few years was owned by her captain, the famous Captain Clifton, in partnership with

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Alexander and Company of Calcutta. In 1846 she was bought by Jardine, Matheson and Company, and remained in their service until she was lost in the early 1870s.

In 1835, Jardine, Matheson and Company brought out the small steamer *Jardine*, intending to run her as a passenger and dispatch boat between Canton, Lintin, and Macao. She arrived at Lintin on 20th September 1835, but was never allowed to run on the river. The Canton Register of 13th November described one of her first excursions, contributed by a passenger.

> We all assembled on board the steamer *Jardine*, alias 'fast ship Greig' (the name of her captain), and getting under weigh went round the different vessels lying in the anchorage, some of whom cheered the little craft on her experimental trip; she then started to make a tour of the island, which she accomplished in a little better than an hour; on her return she made another circuit round the shipping, and being cheered returned the compliment with a salute. It was indeed a pleasing scene; to see the velocity with which the little vessel (although not at her full power) ploughed the waters of the deep, and the readiness with which she answered her helm; to hear the echo of the music (which was kindly supplied by the commanding officer of the Balcarres, and which continued to play during the trip) reverbrating from the adjacent hills, and made more distinct still by the still calm of the evening; to see the setting sun gilding the western horizon with his last, expiring rays; the shipping at anchor; the blue hills which on nearly every side bounded the view; the whole scene being heightened by the presence of the colleens, produced a calm in the mind, foreign to those engaged in the busy world; indeed, here you might have beheld in the reality all that the speculative imagination of the lover of romance could picture to itself . . . . . .

Unfortunately, Chinese reaction was much less enthusiastic. No reply was received to a letter signed by all the foreign merchants at Canton and sent to the hoppo through Howqua, the senior hong merchant; which requested permission for the *Jardine* to run on the river as an unarmed passenger boat. Eventually a trial run from Lintin to Canton was attempted, but the *Jardine* was fired on from the forts on both sides of the Bogue, and a Chinese district official who was approached said that the orders were peremptory that the

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Jardine should not pass up the river. In the outcome, the passengers for Canton continued their journey in a sailing boat, and the *Jardine* returned to Lintin.

Some time later the Chinese repeated their demand that the *Jardine* must leave the country, and as her machinery needed repair, she left for Singapore under sail, and arrived there on 28th February 1836. After several ineffectual attempts to repair the engines and to sell her, the engines were removed and the *Jardine* was converted permanently to a sailing ship. As such she returned to China on 23rd September 1836, but was recognised at Lintin as the "smoke ship" which had been turned away some nine months before. Although now minus the offending engines and paddle wheels, the hoppo decreed that she must leave. Her later history is obscure, but she seems to have continued in Jardine, Matheson and Company's fleet as a schooner. In his *British Trade and the Opening of China, 1800-1842*, Michael Greenberg includes her in a list of the Company's ships on the China coast in 1840.

It was the operations of the steamships of the Royal Navy and of the East India Company in the First China War, 1840-1842, which proved the value and practicability of steamships in Chinese waters. By the end of the war there were 48 British warships on the coast, including hospital, troop, and supply ships. Fourteen of these were steamships, nine wooden and five iron, the best known being the *Nemesis*.

The *Nemesis* was a pioneer in several respects, and it was her exploits in the First China War which advertised the many advantages of steam over sail in coastal waters. She was the first iron steamship to round the Cape of Good Hope, and to operate in Chinese waters for any length of time. Her outward passage to China in 1840 was probably the longest and most perilous voyage undertaken by a steamship up to that time; and some of the problems posed by her iron construction were never fully solved in her time—compass errors and the effects of lightning, for instance. She was flat bottomed and of shallow draft, only drawing six feet when fully loaded. She had two movable sliding keels, one fore and one aft of the engine room, and was divided into seven watertight compartments. With her shallow draft (she could be made to draw as little as five feet when necessary) the *Nemesis* was especially handy for inshore work on the coast and rivers. She probably demoralised

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the Chinese more than all the rest of the British warships put together.

Chinese opposition to steamships was overborne after the First China War, and in the years between then and the Second China War 1857-1858, steam navigation in China was established on a secure foundation. During the first two decades of steam, American ships were as prominent as British on the Canton River and on the coast, and sometimes more technically efficient. This was largely because the Americans made good use of their experience on the Hudson and Mississippi Rivers, and also because their early steamships were designed specially for coastal and river conditions. Many of the early British steamships were merely sailing ships equipped with engines. The earliest American steamers were associated with Russell and Company, and Robert Benet Forbes was the man mainly responsible for bringing most of these early steamships to China. The first was the *Midas*, built at East Boston in 1844, which was the first American steamship to round the Cape of Good Hope, as well as being the first to be seen in China. The *Midas* arrived at Hong Kong on 21st May 1845, and was put on a twice weekly service between Hong Kong and Canton, the first regular steamship service in China. She also engaged in towing and salvage work, which was usually more profitable than carrying passengers or cargo; so that the advertised regular sailings were often more honoured in the breach than in the observance.

The *Midas* was followed by the wooden screw bark *Edith*, also built at East Boston, which arrived at Macao on 2nd September 1845 and Hong Kong a few days later. The *Edith* was originally intended to run in the opium trade between India and China, but plans were changed and she was loaded with general cargo for Shanghai. Bad weather and engine trouble foiled two attempts to make this passage, and the *Edith* was eventually sent back to Boston via Rio de Janeiro, reconditioned at Boston and then chartered to the United States War Department. In 1846 Forbes sent the small 20 ton screw steamer *Firefly* on another ship to Hong Kong, and put her in service between Hong Kong and Whampoa until 1849, usually making two trips daily. She was withdrawn in 1849 and sent to California by sailing ship.

In 1846 Jardines were successful in inaugurating the first British steamship service on the river, with the *Corsair* between Hong Kong

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and Canton. Jardines were neither owners or agents of the *Corsair*, but there seems to be no doubt that they sponsored this service. The *Corsair* had been built in 1827 for the Irish Sea service, but after several years went out to Australia. She arrived in China from Australia early in 1846 consigned to Jardines, and soon afterwards was making two trips per week between Hong Kong and Canton, and also doing occasional towing and salvage work. She continued on the river until July 1849 and then disappears from the scene, probably because of her age, either being dismantled or allowed to fall to pieces.

From this time British and American steamers appeared at Hong Kong at short intervals, most for the river service, but some for service between Hong Kong, Shanghai, and intermediate ports. Landmarks from the British point of view were the entry of the P. and O. into both the river and the coast services, and the formation of the Hong Kong and Canton Steam Packet Company. The P. and O. started their mail service from Ceylon to Hong Kong by the *Lady Mary Wood* in 1845, operating this in connection with their Suez-India service. Early in 1849 they put their iron paddle steamer *Canton* on the Canton River service, a steamship much superior to any of the others then operating on the river. When the *Canton* suffered severe damage through running on a sunken rock, she was replaced by the *Sir Charles Forbes*, which the Company chartered from the Bombay Steam Navigation Company. When the *Canton* returned after repairs, she was put first on the Hong Kong-Amoy service, and then on the Hong Kong-Shanghai service. The P. and O. originally ran these ships mainly as feeders for their overseas ships, and charged very high freights. In 1854, however, and about the time the Hong Kong and Canton Steam Packet Company was about to be liquidated, the P. and O. increased their river service and made it more attractive to outsiders.

The Hong Kong and Canton Steam Packet Company was formed in 1847, Alexander Campbell of Dent and Company and Alexander Matheson of Jardine, Matheson and Company being the men mainly responsible. Nearly all the foreign merchants in Hong Kong and Canton took shares in the new company, the first steamship company to be formed in China, although they knew that the P. and O. were on the point of improving their river service. Two sister ships were ordered in England, and the first of these, the *Canton* arrived in

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Hong Kong on 30th August 1849, just six months after the arrival of the P. and O's *Canton*. The second ship, the *Hong Kong*, arrived barely a month later. They went into service soon after their arrival, but not until modifications to the *Canton's* engines in early 1850, could they be said to be operating a regular service. They then commenced a regular schedule, leaving Hong Kong and Canton every Monday, Wednesday, and Friday at 8.00 a.m., and calling at Macao and Cumsingmoon as inducement offered. Saloon passenger rates were $8.00 between Hong Kong and Canton; $5.00 between Hong Kong and Macao; and $1.00 for Chinese passengers between any two ports. Although the two *Cantons* and the *Hong Kong* were a great improvement on earlier steamships, they were still liable to frequent accidents and breakdowns, and still often withdrawn for the more lucrative towing and salvage work.

On 21st December 1854 the China Mail wrote:

> We are now pretty well supplied with river steamers, having no fewer than seven (*Hong Kong* and *Canton* of the Hong Kong and Canton Steam Packet Company; *Canton, Sir Charles Forbes* and *Tartar* of P. and O; and *Spark* and *Ann* of Russell and Company). The *River Bird* is on its way out (from America) and other three (*Rose, Thistle,* and *Shamrock*) are being assembled in Hong Kong. There is plenty of room for all of them, however, for every day seems to raise river steamer traffic higher in the estimation of the natives, and a very short time will elapse before Chinese merchants become steamboat proprietors.

The Hong Kong and Canton Steam Packet Company, however, was not proving profitable, and the prospect of still more competition decided the company to wind up its affairs and offer its ships for sale. Shortly after this optimistic forecast by the China Mail, river traffic was almost completely disrupted—first by the continuing Taiping Rebellion and then by the Second China War.

The fortunes of steamships as a whole, however, were very little affected by these events. Several were chartered by the Royal Navy for service in the war, and others went on coast services to Shanghai and intermediate ports. During these troubled years the foreign factories at Canton were burned, and Canton was blockaded and then captured by the Anglo-French forces on 29th December 1857. After this the tide of war moved north to the Peiho River, and peace was quickly restored to the Canton River. Admiral Seymour gave

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official notice on 18th January 1858 that the mail service between Hong Kong and Canton would be restored, at first by naval ships, and then on 10th February the blockade was lifted. Soon after this regular steamship services were re-established on the river, and the pioneer days of steam navigation in China were over.

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APPENDIX

EARLY STEAMSHIPS CONNECTED WITH CHINA

Vessel		*Material*	*Tons*	*Builder*	*Dimensions*	*Engines and Builder*
Diana	1823	Wood	89	Kyd & Co., Kidderpore, India.	100'0" × 16'8" × ?	2 of 25 h.p., Paddle. Henry Maudslay, London.
	Remarks: *Materials sent first to Canton, then to India;* Diana *never operated in China.*					
Corsair	1827	Wood	186 net	J. Wood & Co., Port Glasgow, Scotland.	136'0" × 18'0" × 11'9"	Paddle, D. Napier, Glasgow, Scotland.
	Remarks: *Although built in 1827 did not arrive in China until 1846.*					
Forbes	1829	Wood	162	Howra Dock Co., Calcutta.	126'10" × 22'6" × ?	2 of 60 h.p., Paddle, Boulton & Watt, Birmingham.
	Remarks: *Towed barque* Jamesina *to Lintin in 1830, and was first steamship to be seen in China.*					
Jardine	1835	Wood	59 net	A. Hall & Co., Aberdeen, Scotland.	82'0" × 17'0" × 9'6"	2 of 24 h.p., Paddle, J. Duffus & Co.
	Remarks: *After first arrival in China never operated in Chinese waters.*					
Ann	1839	Wood	239 gross	T. Isemonger, Littlehampton, Sussex, England.	117'0" × 19'7" × 13'3"	Paddle, Conley & Co., South Shields.
	Remarks: *Built as a schooner, lengthened and fitted with engines in 1846.*					

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Vessel		*Material*	*Tons*	*Builder*	*Dimensions*	*Engines and Builder*
Nemesis	1839	Iron	630 gross	Laird & Co., Birkenhead, England.	184'0" ×29'0" × ?	Paddle, Forrester & Co., Liverpool.
	Remarks: *First iron steamship to round the Cape of Good Hope, played prominent part in the First China War.*					
Lady Mary Wood	1842	Wood	297 net	T. Wilson, Liverpool. England.	?	250 h.p., Paddle, Fawcett & Co., Birmingham.
	Remarks: *Inaugurated first regular mail service to China in 1846. First P. and O. ship to visit China.*					
Midas	1844	Wood	145 gross	S. Hall & Co., Boston, Mass.	?	Twin screw, Hogg & Delameter, New York.
	Remarks: *First American, and first propeller-driven steamer to round the Cape of Good Hope; operated first steamship service in China.*					
Iron Prince	1845	Iron	180 gross	J. Hodgson & Co., Liverpool,	119'8" ×17'4" ×11'8"	Paddle, by shipbuilders
Sir Charles Forbes	1846	Wood	211 gross	Mercantile Dock, Bombay.	130'1" ×18'5" ×10'2"	?
	Remarks: *Chartered by P. and O., and their second ship on Canton River.*					
Canton	1848	Iron	349 gross	Tod & Macgregor, Glasgow.	172'7" ×21'4" ×10'7"	150 h.p., Paddle, by shipbuilders
	Remarks: *First P. and O. ship on Canton River.*					

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Canton	1848	Wood	235 gross	W. Pilcher, Northfleet, Kent.	133'0" ×18'0" ×11'9"	Paddle, by H. W. Harrison, Northfleet, Kent.

Remarks: *First ship of Hong Kong & Canton Steam Packet Company.*

Hong Kong	1849	Wood		as above	as above	
Queen	1853	Wood	137 net	Lamont & Co., Hong Kong.	?	?

Remarks: *First steamship to be built in Hong Kong.*

Note. Ships in above list arranged in chronological order of building, and particulars were obtained from a variety of sources. Most of the above were auxiliary ships, that is, they were equipped with sails as well as engines, and methods of calculating tonnages varied.