

# The Clipper Ships of the Nineteenth Century

**A Short History of the Great China Tea Clippers**

## PREFACE and INTRODUCTION

From a personal point of view, my maritime interests are concentrated mainly on the period from the early 1900's through until 1970's, covering the two World Wars, and focused primarily on the Merchant Navy.

From time to time, however, in the course of pursuing these interests, invariably there are occasions when some interface or another directs attention away into some other related aspects of maritime interests, whether it be marine engineering, Naval shipping, wartime conflicts and associations, or whatever.

One of these unintentional departures from the normal course took place in the Spring of 1995, when browsing through an old back-issue of a nautical magazine I came across a letter and article concerning the Great Tea Race of 1866, and noted that the winner of that great race in 1866 was a Clyde-built composite construction Clipper ship named 'Taeping' and, when delving further into the story, I also noted that her Captain was named Mac Kinnon, and therefore without too much doubt Hebridean.

Some months later, and having researched the story of the 1866 Tea Race some further, I noticed a letter in another shipping magazine, from someone who was looking for assistance in tracing the whereabouts of some rare maritime prints, pre-war collotypes published by Brown Son & Ferguson of Glasgow, depicting Briscoe's "Taeping and Ariel" and McDowell's "Sir Lancelot" amongst others. This led to inter-correspondence and by this time I was starting to take a greater interest in 'the days of sail'.

The attached short history covers much of the research and investigations carried out to date, and whilst it is intended primarily to cover the Great Tea Race of 1866, it has been necessary for the sake of completeness and the lay reader to include some fundamental information and details of the period before the Great Race of 1866, and a summary of the period directly following it.

A primary driving force in the early part of this undertaking was to identify who Captain Mac Kinnon was, strangely enough little appears to have been written about this great man, whereas many references can be found of his greatest rival, Captain Keay, thanks to the work in the early part of this century of the Clipper expert Basil Lubbock, who had direct access to Captain Keay's private journal, and log abstracts, along with many others of the great Clipper Captains.

I have recently, however, had the good fortune to have made contact with someone descended from the family of Captain Mac Kinnon, and from this learned some more regarding this great seaman from the Island of Tiree, which has been incorporated into the story of the Great Tea Race of 1866 which follows. At some future date, it is my intention to extend the history beyond the current period and relate the story of the subsequent years and the great ships which came later, e.g. "Thermopylae", "Windhover", "Cutty Sark", "Norman Court", "Caliph", "Wylo", "Black Adder", "Lothair", "Hallowe'en", "Ambassador", "Lahloo", "Leander", "Forward Ho".

## REFERENCES AND PUBLICATIONS USED FOR COMPILING THIS SHORT HISTORY

The investigative research necessary to compile this short, hopefully informative history of an important period in our maritime background was borne from a personal interest in the subject and made possible only by consultation with the under-listed establishments and publications

The Mitchell Library : Glasgow

The Carnegie Library : Ayr

The University of Glasgow Library

The Nautical Magazine (Various)

Sea Breezes Magazine (Various)

Time Life Books (1980)

The Greenock Telegraph (1914)

British Shipbuilding Yards : Volume 2 : 1994 (Norman L. Middlemiss)

Basil Lubbock Publications - Various

Lloyd's Register of Shipping - 1850 through 1876

Plans of David R. MacGregor

The National Maritime Museum

The Scottish Maritime Museum

Donald Mac Kinnon : Isle of Tiree

Various Maritime Publications too numerous to mention

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# WOODEN SHIPS AND IRON MEN

The Great Clipper Ships of the Nineteenth Century

## The Advent of the Fast Clipper Ships

The reign of the Clipper Ships came about in the 1840's, as a direct result of the Californian gold rush. Fortune hunters drawn from all parts of the world thronged to the city of New York, their aim being to secure the fastest possible means of transportation to the Pacific coast in order to try their luck at making a quick fortune in the prospecting of gold.

With the trans-American railway system still some 20 years away, and overland travel a dangerous gamble often leading in death by violence, starvation or thirst, the only route which offered these people a reasonable chance of survival was by sea, via Cape Horn. Some 14,500 miles of a voyage, this gave rise to the building of fast Clipper ships, generally referred to as the Baltimore Clippers, and their success was immediate. It was not until the 1850's that what are now regarded as the archetypal Clipper vessels began to emerge, built by master shipwrights such as Donald Mackay and Samuel Hall of East Boston, constructed of softwoods and typically of between 1,500 tons and 2,500 tons, square-rigged on all three masts.

## The American-built Clippers of Donald Mackay

Donald Mackay was regarded as probably just about the finest shipbuilder the world has known. He possessed a certain and peculiar genius, for no mere perfection of craftsmanship could have produced the wonderful models of ship which he produced. Donald Mackay's masterpieces were vessels such as 'Staghound', 'Flying Cloud', 'Sovereign of the Seas', 'Flying Fish', 'Westward Ho', 'Great Republic', and the four vessels he built for the English Black Ball Line of James Baines & Company, namely, 'Lightning', 'James baines', 'Champion of the Seas', and the 'Donald Mackay'.

American Clippers, built and launched in 1850-1851, are listed below, together with details of their Captains, Tonnages, Builders and Owners :

Ship's Name	Tons	First Commander	Name of Builder	Name of Owners
Celestial	860	Capt. Gardner	W.. H. Webb	Bucklin & Crane
Surprise	1361	Capt. Dumeresq	S. Hall	A. A. Low
Staghound	1535	Capt. Richardson	D. Mackay	Sampson & Tappan
Witchcraft	1310	Capt. Rogers	P. Curtis	S. Rogers
Sea Serpent	1337	Capt. Howland	G. Raynes	Grinnel, Minturn & Company
N.B. Palmer	1490	Capt. Low	J. A. Westervelt	A. A. Low
Flying Cloud	1793	Capt. Creesy	D. Mackay	Grinnel, Minturn & Company
Challenge	2006	Capt. Waterman	W. H. Webb	N. L. & G. Griswold
Comet	1836	Capt. Gardner	W. H. Webb	Bucklin & Crane\
Sword Fish	1036	Capt. Babcock	W. H. Webb	Barclay & Livingstone
Flying Fish	1505	Capt. Nickels	D. McKay	Sampson & Tappan
Witch of the Wave	1500	Capt. Millet	G. Raynes	Glidden & Williams
Nightingale	1066	Not identified	S. Hanscom	Sampson & Tappan

### **American Maritime Supremacy and the period 1840-1850**

No fewer than six of the above listed American Clippers were engaged in the English tea trade, namely, 'Celestial', 'Surprise', 'Sea Serpent', 'Challenge', 'Witch of the Wave', and 'Nightingale'.

A record time for the passage between New York and San Francisco was established in 1851 by the Californian Clipper 'Flying Cloud', under the command of her brilliant skipper Captain Josiah Perkins Creesy, sailing from New York on 3rd of June 1851, and anchoring in San Francisco Harbour at 11.30 a.m. on 30th of August 1851, this fine vessel covering the distance in 89 days and 21 hours, sometimes crashing through the water at speeds in excess of twenty knots with every inch of sail she carried being put to work, her best day being 374 knots, this in statute miles being the equivalent of just over 427 miles. The 'Flying Cloud' was to come close to repeating this remarkable passage in 1854 when she again made the passage in 89 days and just two hours short of her previous record run in 1851.

In the 1840's and through to the 1850's, supremacy of the mercantile marine between America and Britain was finely balanced, but it would be reasonable to postulate from the records and log abstracts of the primary vessels and passages of that time that America was in many respects our superiors. In mere numbers the two great maritime nations were about equal. Our hardwood constructions tended to last longer than the American softwood constructions, however, our hardwood builds could not be constructed for less than £15/ton, whereas the American softwood builds could be achieved for £12/ton or less. Other comparative statistics which gave advantage to the Americans at that time was that in model and design we had no answer to vessels such as the 'Sea Witch', 'Hinquá', 'Samuel Russell' and the 'Oriental', nor could we start to compete with the cut and set of the American sail plans of that time. America was also ahead of the British in terms of the number of men needed to crew and handle their vessels - principally owing to their use of deck winches, patent sheaves, light manila running gear and large blocks, whereas we were content with common sheaves, stiff hemp gear, and the hard-worked 'handy billy'.

### **The Turning Point in the early 1850's - The British Clippers arrive**

So much for the American Clippers and their domination thus far, including moving into the lucrative British tea trade. What brought about the turning point, where the British Shipbuilders, Owners and Merchants began to assert their own acumen and influence this trade? A significant even that might be regarded a turning point was the arrival of the American Clipper ship 'Oriental' at the West Indian Docks on 3rd December 1851, having sailed from Hong Kong on 28th August, a passage time of 97 days between ports, Loaded with 1,118 tons of new tea, her freight was valued at some £9,600 - approaching three-quarters of the cost of building this fine ship. Under the command of Captain Theodore Palmer, this vessel had achieved some distinguished performances on her maiden and subsequent voyages, and return passages, between New York and Hong Kong, so impressing three of the biggest tea firms in England that, through their Agents, they instructed them to charter her - at any price.

When the rivalry between American and British Clippers in the tea trade was at its peak, it was generally accepted that the British vessels were capable of delivering their cargoes in perfect condition, whereas the same could not be said in respect to the American vessels. The reason for this was the difference in strength of construction between the two nations' building methods, the American vessels were of relatively lightweight construction using softwoods, whereas the British vessels were significantly stronger in their construction and used hardwoods. It was well known that the American-built vessels when under the stresses of a heavy press of sail, tended to leak water badly, as compared with the British vessels were so beautifully built that they were described 'as tight as a bottle'. Such ships as the 'Ariel', for example, required a ten-minute spell at the pumps for the first 24 hours of the first week's outward bound passage, and required no further pumping for the remainder of the voyage. There was a later theory, however, that rigidity of build was a mistake and that a vessel sailed better if allowed some 'play' in her hull as well as in her gear. This was incorporated in some of the later Clippers, for instance the 'Thermopylae' under a heavy press of sail in heavy weather was noted as having her deck seams open up. It was quite possible, however, to attain strength without over-rigidity, this is evident by the length of life achieved by some of the hardest driven of the Clippers, the 'Cutty Sark' voyaging regularly up until 1922, and both the 'Thermopylae' and 'Titania' surviving through until the beginning of the 20th century.

#### **Speed of Tea Clippers compared against others and their Weatherliness**

Trying to draw any fair comparisons between the new breed of Scottish Clipper and the Black Ballers, Yankee Clippers and later iron Clippers is extremely difficult owing to the multitude of varying factors that have to be taken into consideration to ensure equitable comparisons. Factors such as trim, quality of cargo, condition of vessel's bottom, character of Captain and his Officers, strength and experience of crews, and of course general size and tonnage comparisons. Similarly, when trying to draw a fair comparison between two or more vessels on a passage between two known ports of sailing and arriving, it also goes without saying that such comparison should ideally involve the vessels involved sailing at the same time on the same tide give or take a few hours, and comparisons over a number of seasons can be entirely misleading due to the vagaries of weather differentials.

When raising the vagaries of weather differentials, it is also relevant to mention the great differences that can occur between the 'weatherliness' of one vessel against another, another factor to be considered when trying to assess the performance of one vessel against a rival. Examples recorded of this phenomenon as follows :

'Thermopylae', on casting off her tug 2 miles below the Gellibrand Lightship, set sail and stood over towards the St. Kilda Bank, stayed on the port tack headed for Point Cook, went round again and then fetched the head of the South Channel. The pilot who took her down was amazed, saying that he had taken many ships to sea under similar conditions but the weatherliness qualities of the 'Thermopylae' eclipsed anything he had ever experienced before. He declared that no vessel had ever made the South Channel in three tacks before with the wind from the same quarter, beating to Windward.

Through Messrs. Russell & Company, she was duly chartered at £6 / ton of 40 cubic feet, whilst British Clipper ships lay waiting for tea at £3.10s / ton of 50 cubic feet. It may be said that the situation cast a mood of gloom and despondency throughout the British Mercantile Marine, Nautical Societies, and the British press of the day.

In this general atmosphere of despondency, the only spark of hope at the time lay in the so-called 'Aberdeen Model'. The 'Aberdeen model' was devised by Alexander Hall, a shipbuilder of that town, as far back as 1841. The first vessel along these lines built by Hall of Aberdeen operated between her home port of Aberdeen and London, and soon earned a reputation for the speed of her passages. From 1841 through until 1850, Hall of Aberdeen produced no fewer than 50 vessels, ranging from the Clipper schooner 'Torrington' for the Chinese opium trade, to the more humble coasting vessels, with average tonnages of the order of 600 tons. The Hall Clipper model was soon being copied by other Aberdeen yards, the most famous being Hood of Aberdeen, the designer and builder of the famous Clippers of the Aberdeen White Star Line, amongst which was the famous 'John Bunyan'. Other well known Clippers of Aberdeen build were the 'Reindeer' and the 'Countess of Seafield'.

#### **The first of the British Clipper Ships - 'Stornoway' and 'Chrysolite' - 1851**

An immediate result of the American Clipper 'Oriental' success of 1850 was orders being placed on Hall of Aberdeen by Jardine, Matheson & Company for the construction of the Clipper 'Stornoway', and by Taylor & Potter of Liverpool for the construction of the Clipper 'Chrysolite'. It is regarded that these two Clipper vessels were the first of the British Tea Clippers, which, in their design, had nothing in common with the great American Clippers.

#### **Hall of Aberdeen's 'Cairngorm' of 1852**

Whilst the Scottish built Clipper vessels were without doubt faster than the larger American vessels, they were much smaller and therefore handicapped in terms of competing for cargoes. Recognising this fact, Hall of Aberdeen, in 1852, laid down a 1,000 tons Clipper with finer lines and stronger scantlings than anything that had been built before, using iron for the main deck beams and half of the hold beams, which provided more space for stowage. This vessel, bought by Jardine, Matheson & Company, was named the 'Cairngorm', and her Owners placed Captain Robertson, of the 'Stornoway', in command of their new vessel. This was the first British Clipper to not only rival, but excel the performance of the American ships, and because of her type of build she was additionally accredited of bringing her cargo home in a superior condition to her competitors. In 1853, the 'Cairngorm' on her first voyage, made the best passage back home with tea Shanghai, under 110 days.

#### **Scott of Greenock's 'Lord of the Isles' - 1853**

The year 1853 saw the construction of two celebrated ships for the China trade. The first of these was the Clipper 'Lord of the isles', a vessel well in advance of her times. She was built by Messrs. Scott of Greenock, a famous Clydeside shipbuilder.

The firm of Scotts' of Greenock was founded by John Scott as long ago as the year 1711, but until now had not previously attempted the construction of a Clipper vessel. She was constructed entirely of iron and had a greater beam-to-length ratio (6.4) than anything previously built. The other Clipper vessel was the Duncan Dunbar 'Northfleet', constructed at Northfleet on the Thames. Both these vessels attained remarkably fast times on their passages, and ironically both had tragic ends. The 'Lord of the Isles' caught fire on 24th July 1862 whilst on a passage from Hong Kong to Greenock. The 'Northfleet' end was a particularly tragic one, in 1873 whilst lying at anchor off Dungeness, outward bound for Tasmania with emigrants, she was cut down by the Spanish steam ship 'Murillo' and sank with the loss of 293 souls.

#### **The Tea Race of 1854**

The year 1854 was noted by the main International tea race which involved the vessels 'Chrysolite' and 'Celestial'. The 'Chrysolite' sailed from Foochow and the 'Celestial' from Whampoa, on 14th July 1854, with the 'Chrysolite' arriving at Deal after 108 days, one day ahead of the 'Celestial'. The 'Challenger' and the 'Stornoway' sailed out of Shanghai together and were still together when passing through the Sunda Strait, with the 'Challenger' arriving at Gravesend on 4th of December 1854, three days ahead of the 'Stornoway'. The 'Cairngorm' again made the best passage from Shanghai that year, but the new Sunderland-built Clipper 'Crest of the Wave', sailing on 20th of October, was only a few days behind her in passage time.

#### **The start of the end for the American Clippers**

The year 1855 was significant, in that it heralded the end of the American supremacy and was the beginning of the great era of British Clippers and in particular the beautiful Clyde-built vessels commanded by the finest of sailing masters. The American Clipper 'Nightingale' was the last of the American Clippers to distinguish herself in the English tea trade, achieving a passage from Shanghai to London that year in 91 days, her best day's run being 336 miles.

#### **Introduction of the great British Clippers**

It was in this year, 1855, that the celebrated firm of Robert Steele & Company of Greenock built their first Clipper vessel, the 'Kate Carnie', a little ship of some 600 tons. She was an immediate success, however she is best remembered for being the first Clipper vessel of a long list of superb Clipper vessels to come out of the yard of Robert Steele of Greenock, amongst which were the famous crack Clippers 'Serica', 'Taeping', 'Ariel', 'Sir Lancelot', 'Titania', and 'Lahloo'. It was also in this year that Chaloner of Liverpool launched the first 'Fiery Cross', which went on to make some very fine passages under her exceptional master, Captain Dallas, who later left her to superintend a new build (later to become 'Fiery Cross II') and 'Fiery Cross I' was wrecked under her new captain on her outward passage that autumn. The great rivals of 'Kate Carnie' and 'Fiery Cross I' that year were the two Aberdeen-built Clippers 'Robin Hood' and 'Friar Tuck'. (The 'Friar Tuck' was later wrecked in St. Mary's Roads, Scilly Isles in the 1860's when on a homeward bound passage. Her figurehead is at Tresco Abbey on the Scillies.)

### **The Tea Passages and Results of 1856**

The year 1856 was significant as the first year in which the £1 / ton premium on the freight was offered for the first tea of the season to arrive at the London Docks. The chief American Clippers taking part in the racing were the 'Maury', 'Ringleader', 'Celestial', 'Comet' and the 'Quickstep'. The 'Vision', Whampoa to Liverpool, was the first ship home, and the 'Cairngorm' second. The 'Lord of the Isles' was first away from Foochow, on 9th of June, followed by the 'Maury' on 13th of June. The 'Maury', a beautiful Clipper-barque of some 600 tons, built by Rossevelt & Joyce for A. A. Low & Brother, made a splendid race of it with the 'Lord of the Isles', the two vessels arriving in the Downs on the same day, 15th of October, 'Lord of the Isles' being 128 days out, 'Maury' being 124 days out. Off Gravesend, 'Maury' was leading by ten minutes, but coming up river Captain Maxton of the 'Lord of the Isles' had the better tug and thus managed to dock first and win the premium. 'Chrysolite' under Captain Jock McLelland, left Whampoa on the same day that 'Lord of the Isles' sailed from Foochow, had a bad passage, taking 144 days to reach home.

The best passage from Foochow was made by the 'Fiery Cross', leaving on 4th September and making the passage to London in just under 100 days.

The best passage from Whampoa was made by the 'Spirit of the Age', leaving on 20th of August she arrived in the Downs on 18th November, exactly 100 days out.

The 'Ringleader' came next, leaving on 14th of July and reaching London on 31st October, 109 days out.

Of the Shanghai ships, the 'Challenger' left on 8th of September and came home in 129 days - not one of her best passages, her average over eight separate passages from that port being 110 days, her shortest being 105 days, but all passages from Shanghai were long ones in this year. All these passages had been made under the command of Captain Killick, who eventually left her and founded the firm of Killick & Martin, and owned the well-known Clippers 'Kaisow', 'Omba', 'Wylo', 'Osaka' and the 'Lothair'.

### **The Tea Passages and Results of 1857**

The Clipper 'Fiery Cross' was first ship home in this year and took the premium. The other main Clippers involved were as follows :

Crest of the Wave	Foochow	London
Maury	Foochow	London
Cairngorm	Hong Kong	Deal
Northfleet	Hong Kong	Plymouth
Challenger	Shanghai	London
Robin Hood	Foochow	London
Spirit of the Age	Foochow	London
Fiery Cross	Foochow	Dartmouth
Celestial	Shanghai	London
Lord of the Isles	Shanghai	London

### The Tea Passages and Results of 1858

The fastest time home in this year was the Clipper 'Lord of the Isles' as seen in the following table which includes the other Clippers and shows the 'Fiery Cross' as the first vessel to bring the new season's tea to Britain :

Vessel Name	Port From	Port To	Sailing Date	Arrival date	Days
Fiery Cross	Foochow	London	27-06-58	20-10-58	115
Chrysolite	Foochow	London	08-07-58	26-11-58	141
Northfleet	Hong Kong	Plymouth	24-08-58	25-11-58	126
Kate Carnie	Foochow	London	02-08-58	02-12-58	122
Stornoway	Foochow	London	06-09-58	21-01-59	137
Robin Hood	Foochow	London	08-09-58	17-12-58	100
Challenger	Shanghai	London	18-09-58	11-01-59	115
Cairngorm	Whampoa	London	06-11-58	06-02-59	92
Lammermuir	Whampoa	London	08-11-58	09-02-59	93
Lord of the Isles	Shanghai	Dover	29-11-58	26-02-59	89

The fast performance of the late starters was undoubtedly attributable to the N.E. monsoon and the good favourable winds in the Atlantic. An abstract from the log of the 'Lord of the Isles' shows the following highlights of her 89-days run home :

Departure Shanghai	29 November
Rounded the Cape	14 January
Passing St. Helena	23 January
Crossing the Line	2 February ( in longitude 23 degrees 40' West)
Passing the Lizard	25 February
Arriving off Dover	26 February

For this passage, the 'Lord of the Isles' was carrying 1,030 tons of tea, and it is given that she had averaged 320 knots for five consecutive days crossing the trades in the Indian Ocean.

In this year of 1858, two other very fast little Clippers were built, namely the 'Ellen Rodger' out of Steele's yard in Greenock, and the barque 'Ziba' out of Hall's of Aberdeen. Although impressive in their own rights, both were shortlived, being outclassed by the new larger and even finer breed of improved Clippers which started to appear at the beginning of the 1860's.

Before leaving the 1850's to move into the zenith era of the Clippers, a mention should be given to another of the Aberdeen Clippers, the 'Chaa-sze', which followed the previously mentioned 'Ziba' of the stocks of Hall of Aberdeen, and was the first tea ship designed by Rennie. This little vessel was of particular interest having been laid down as a steam whaler of as strong a construction as possible, being teak throughout. Inside her teak frames which were four to six feet apart, she was diagonally planked. This, with three inch outside planking bound her up tightly with no less than nine inches of teak. She was so tightly bound up, in fact, that in use in the tea trade she has several of her lower deck beams made to be unshipped, in order to give her more 'play'. This idea was perhaps taken from the trick of the old 'slavers', which, when hard pressed to escape a cruiser, would saw through their deck beams, in order to improve their sailing, and indeed they often

attributed their escape to this method. In the case of the Clipper 'Chaa-sze', she made some very good passages from Whampoa in the early 1860's, and on one occasion she was in company, off Mauritius, with a Sunderland Clipper barque named the 'Chanticleer', both bound for China, and both having been together for four days with light and variable winds. At last a steady breeze arrived and the 'Chaa-sze' immediately began to show her heels and drop the other Clipper behind. The Skipper of the 'Chanticleer' remarked to his mate, " There she goes, they have unscrewed the beams and we shan't see her again" And they didn't.

#### **Designers & Builders of the Famous Tea Clippers**

With the retreat of the American influence and involvement, it was left to the British designers and builders to attain supremacy between themselves, and in this regard the competition between Aberdeen and the Clyde grew to be just as keen as that which had previously gone on between Great Britain and America. The Clyde was in the forefront with the two great builders Charles Connell and Robert Steele. It is ironic that Charles Connell, the son of an Ayrshire shipbuilder, John Connell, served his own apprenticeship under Robert Steele of Greenock, before moving up-river to join Alexander Stephen as a foreman at Stephen's Kelvinhaugh Yard, before deciding in 1861 to start building for his own account at the Scotstoun Yard, where he formed an early relationship with the famous City Line of Glasgow, managed by George Smith & Sons, obtaining his first order from that Company for the construction of the first of eight sailing vessels for the City Line, the 'City of Paris' of 1862. The China Clippers 'Taitzing' and 'Crusader' of 1865, the 'Spindrift' of 1867, and the 'Windhover' of 1868, were followed by twenty iron barques in the 1870's as well as the famous China Tea Clipper 'Fiery Cross' of 1878 for Messrs. J. D. Clink of Glasgow.

Robert Steele of Greenock, however, and importantly his brother the veritable genius William Steele who was responsible for the design of the Steele Clippers, was regarded the creator of the most beautiful and yacht-like merchantmen ever to sail the seas, with such famous and successful vessels as 'Taeping', 'Ariel', 'Serica', 'Sir Lancelot', 'Titania', and 'Lahloo', which carried all before them in the great tea races.

Aberdeen, however, were not standing still, and the two great Clipper building yards of Hall and Hood were formidable competitors producing fine craft, Hall's with their 'Flying Spur', 'Black Prince', and 'Yangtze', whilst Hood was producing vessels such as the 'Jerusalem', 'Thyatira', and the famous 'Thermopylae' for Thompson's Aberdeen White Star Line.

There were other Builders, of course, not perhaps as prolific as the two great builders of the Clyde and of Aberdeen mentioned above, but nevertheless made a significant contribution to the creation of fine Clipper vessels - Pile of Sunderland, Green of Blackwall, Chaloner of Liverpool, Laurie of Glasgow, Stephen of Glasgow, and of course Scott & Linton of Dumbarton who produced the immortal 'Cutty Sark'.

Whilst one cannot ignore the fine lines and performances of some of the vessels which these other Builders created, e.g. Pile with his 'Maitland' and 'Undine', Green with his 'Highflyer', Chaloner with his 'Fiery Cross', Laurie with his 'Leander', and Stephen with his 'Forward Ho', without question the creations of Robert Steele of Greenock were by far the most graceful Clippers to emerge during this period. As a rule most of the famous Clippers were designed in their Builder's drawing lofts. There were only two outside designers of note, Bernard Waymouth who was Secretary of Lloyd's Register, who designed the 'Leander' and 'Thermopylae', and the previously mentioned Rennie who designed the 'Fiery Cross', 'Black Prince', 'Norman Court', and 'John R. Worcester'.

Returning to the firm of Robert Steele of Greenock, of whom more details are provided in a separate paper appended to this article, Steele was without doubt the designer of the most beautiful little ships that ever floated, and like his more modern confrere, Fife, he was incapable of producing an indifferent design, let alone a bad one. There was not a line nor curve nor angle in vessels such as the 'Ariel' or the 'Sir Lancelot' which did not display and capture the idea of perfection in proportion and balance. The gracefully curving cutwaters and neatly rounded sterns complemented each other to perfection and artistic magnificence, providing an appearance of delicacy and an almost fragility and beauty that distinguished them from any other Clippers of the time. In addition, the finishing details were noted for their yacht-like standards, all their woodwork, whether above or below, was of the finest teak or mahogany, so beautifully fashioned as to compare favourably with the highest class of capability of the first class cabinet makers of the day. Bulwarks rails, stanchions, skylights, capstans, and binnacles shone with more brasswork than was ever found in any modern yacht.

Referring to articles from the archives of the Greenock Telegraph and other chronicles of that time, the building of these fine Clippers laid the foundations for the reputation of the Clyde's world supremacy in ship construction. Such was the pride of the workforce of these yards that shipwrights deliberately shortened the length of their foot-rule pockets in order to ensure display of the emblem of their proud trade! Another anecdote of the times, these men who were involved in leading the world in their art would virtually swagger into barbershops demanding to be shaved before the ordinary customers by virtue of their standing as shipwrights. They even took up oarsmanship, and a crew of Clyde shipwrights, calling themselves the 'Cartsdyke Worthies' (Cartsdyke & Cartsburn were the two adjacent Greenock yards renowned for their shipbuilding achievements) actually succeeded in winning the four-oared Championship of Britain at the Thames National Regatta in 1871.

#### **The Neatness Aloft of the Aberdeen Clippers and Sail Plans in general**

Whilst not personally very knowledgeable in regard to matters aloft, it appears to have been generally accepted that whilst the Clyde built Clippers were well in advance of the Aberdeen vessels in design and hulls, and high standards of on-board finishing, the Aberdeen vessels were superior in their smart looks aloft. Indeed, they carried this to extremes in some respect, with the result that owing to the smallness of their blocks they were regarded as 'heavy workers'.

It was not until freights had begun to fall that large blocks and small ropes replaced small blocks and large ropes. The 'Black Prince', a vessel noted for her small blocks, required two men to stick out her foresheet, and keep all her heavy braces and sheets rove through the light weather of the China Seas. Captain Shewan, who commanded both this vessel and the 'Norman Court', is recorded as having stated that although the latter vessel was 100 tons larger than 'Black Prince', she handled easier with 14 AB's than the 'Black Prince' with her 22 AB's.

It was not until 1865 that double-topsails appeared in Clipper tea ships. In the autumn of that year, 'Ariel' came out with double-topsail yards on all three masts, followed about a month later by the 'Sir Lancelot' with double-topsail yards on her fore and main masts but the single yard retained on the mizzen. The double topsail had one disadvantage, it was not so effective in light winds as the single topsail, owing to the splitting of the sail. This fact was evidenced further by Captain Keay of the 'Ariel' when he described his epic contest against Captain Mac Kinnon of the 'Taeping' in their celebrated 1866 race up the Channel during which the 'Taeping' showed an improved performance as the wind would slacken, whereas the 'Ariel' regained the advantage as soon as the wind freshened again, which Captain Keay put down to 'Taeping' with her single topsails responding better to light fresh winds than 'Ariel' with her double topsails. Double topsails also necessitated the slackening up of the lee topmast rigging when by the wind, in order to allow the lower yard to brace up well. When racing, it was customary on the tea Clippers to lace the foot of the upper topsails to the lower topsail yards. The vessels had their full complement of stunsails from the royal stunsails down to save-alls and watersails which were set under the lower stunsails.

In most tea Clippers, the topgallant stunsails were set from the deck. In favourable trades a staysail was laced on as a wing outside the lower stunsail. Captain Keay of the 'Ariel' was even known to lace two staysails together, thus making a square sail to go outside the the lower stunsail. A small set and a large set of stunsails was carried on these well-found Clippers.

Passarees were boomed outboard some 30 feet at the fore, and when before the wind, the foresail was set as flat as possible with its clews hauled well out on the passaree booms, whilst the clews of the mainsail were carried aft.

Staysails were bent on every stay, including that from the main skysail masthead. It was the universal practice amongst the later tea Clippers to haul down their staysails when close-hauled or turning to windward. The epoch-making 'Falcon' started this fashion and claimed that it enabled her to lay half a point nearer the wind than her rivals.

The Steele Clippers were noted for their fairy-like main-sky-sails, but the Aberdeen vessels and most of the others carried nothing above their royals, relying more on spread than on hoist. One of the largest sails set when racing was the main topmast staysail, which stretched the whole length of the stay.

Most of the earlier Clippers carried a huge jib, but in the later ships this very unhandy sail, which caused the deaths of many men in the first of the Aberdeen flyers, was split into the modern style inner and outer jib arrangement.

Some of the earlier Clippers, owing to their sharp bows, had a lot of rake in their spars, and often carried a great deal of weather helm. To overcome this, a 'jib-o-jib' or jib-topsail, was set well up on the fore-royal or fore-topgallant stay, and a sail called a Jamie Green made of No. 4 canvas, and cut as a main-topgallant stunsail with three feet of more hoist, was set along the bowsprit and jibboom under the headsails. This, a favourite with the tea Clippers, was filled mostly from the 'fool-wind' of the jib, but pulled hard, every inch telling in both light and moderate winds. It was always set on a wind, being carried even when making short tacks by the smart ships, and the Foc's'cle head men attended to it when 'going about'. The manner in which it was set is of interest - the sail was run out and in along rope travellers rove between the end of the jibboom and the cat-heads. The halliards went to the jibboom end, and the tack to the lower end of the martingale, and the inner or sheet clew of the sail was flattened or eased off by means of a pendant from the fore-rigging and a whip to the Foc's'cle head.

#### **Deck Plans : Dead-Rise : Ballasting : Sheer : Rigidity of Build**

The deck plans were generally alike between the various Clipper ships - a short topgallant foc's'le termed a monkey foc's'le, a small midship-house, boats carried on low skids between the main and mizen masts just forward of the mizen rigging, a raised quarter-deck, flush with the main rail and extending a few feet forward of the mizen-mast.

The midship section of the 'Sir Lancelot' shows the amount of dead-rise usual in Steele's constructions. Steele, like the American Donald Mackay with his later ships, believed in a full midship section and fine ends, but some Clipper ship designers cut their ships away almost like yachts. All tea Clippers required a deal of ballast, and besides some 100 tons of permanent iron kentledge stowed under the skin in the limbers, they also took in over 200 tons of washed shingle before loading tea. It took little to alter trim an inch or two. 'Ariel', during the famous 1866 tea race, used a shifting box 12' x 3' 6" x 2', made of 3 inch deals, and filled with kedges, anchor stocks, and coal, for trimming to windward. Moving of salt provisions from the fore peak, or putting the cables aft in the sail room, was enough to put the stern down an inch or two. When levelling the ballast before loading the tea, it was usual to trim about 3 feet by the stern, so that when loaded the ship often drew 4 or 5 inches more aft than forward. To get her correct trim was as important in these sensitive Clippers as it would be in a modern racing yacht, and a half an inch one way or the other often made all the difference in a ship's sailing behaviour.

Like the modern racing yacht, the tea Clipper had just the right proportion of sheer, and in this respect came half way between the Blackwall frigates - which had absolutely none - and the American Clippers, which in many cases carried sheer to excess.

The Steele-built sister-ships 'Sir Lancelot' and 'Ariel' were specially noted for the manner in which they could beat dead to windward in a strong breeze. The following abstracts from Captain Keay's log testify to 'Ariel' handling characteristics:

*"Ship goes 12 knots on a bowline quite easy."*

*"Ship going close-hauled 8 or 10 knots, pitching much, lee side of deck constantly flooded, water coming over bow and lee quarter aft. Distance in 24 hours 222 miles against such a sea."*

*"Fresh gales, severe squalls, very high turbulent seas, she behaves splendidly, going 11 knots, against such a sea. Distance by observation from 9 p.m. to Noon 174 miles."*

Returning to the aspect of speed, the best performances with tea Clippers were obtained in smooth waters with a strong whole-sail wind about two points or so abaft the beam. The 'Cutty Sark' holds the record with 363 knots which she achieved more than once, on one occasion she achieved 362 knots and 363 knots on consecutive days, and on another occasion she recorded 182 knots in 12 hours. The 'Thermopylae' best was 358 knots, made when running her Easting down in 44 degrees South, 68 degrees East. The 'Ariel' best was 340 knots and the 'Sir Lancelot' 336 knots. The 'Falcon' best point was to windward where she showed a great superiority to her predecessors. Captain Keay, who commanded both of these vessels in turn, was of the opinion that 'Ariel' was one knot faster all round than the 'Falcon'.

The 'Titania', with more beam, was stiffer and not as sensitive to handling as the two sister-ships 'Ariel' and 'Sir Lancelot'. 'Spindrift' was very fast off the wind, but the Steele Clippers had slightly the best of her on a wind.

'Fiery Cross', 'Taeping', 'Serica', and 'Lahloo' with their single topsails were at their best in light breezes. 'Kaisow', a very narrow vessel, was not as fast as her contemporaries except in light winds. 'Forward Ho' and 'Windhover' were good wholesome all-round ships and very fast when sailed hard, which was not often. The 'Leander' was considered by many to be as fast as the 'Thermopylae', but she suffered from having a succession of poor Captains. The 'Lothair' was one of the fastest of them all in light to moderate breezes, but did not have the power to stand up to driving in heavy weather. The 'Norman Court' could out-weather and out-sail the fleet on a wind, but was not so fast running. 'Thermopylae' and 'Cutty Sark', being larger and more powerful, stood driving in heavy weather better than the graceful Steele flyers and had much the best of it when running their eastings down. In hard breezes, 'Cutty Sark' was the fastest ship of the fleet, but in light weather the 'Thermopylae' and the Steele cracks could beat her.

Yet, taking all things into consideration, there was very little difference in reality between the great and well known Clippers, and in terms of the races that were held between them, it would be safe to venture that the fundamental edge gained by one against the others was invariably as a result of the skills and audacity of the Captains rather than anything to do with the successes or failures of the ships themselves. For example, in 1868 when homeward bound, 'Ariel' and 'Spindrift' had been in company with each other for over a week in the China Seas, and 'Ariel' only succeeded in getting through the Anjer Strait, ahead of her rival, due to a daring and risky piece of navigation by her commander, Captain Keay.

By calculation, Captain Keay's daring act, some might have regarded it foolhardy, resulted in his vessel 'Ariel' being credited with the first landing of the season's tea in London that year, had he not taken that action his rival Captain Innes of the 'Spindrift' would have been the winner, as 'Spindrift' actually made the fastest passage that year, but set off from Foochow later than the 'Ariel'.

On many other occasions, there were examples of a similar nature where Clippers such as 'Fiery Cross', 'Ariel', 'Taeping', 'Sir Lancelot', 'Flying Spur', 'Norman Court', 'Kaisow', 'Thermopylae' and 'Cutty Sark' spent many days and sometimes weeks on end within a mile or two of each other, evidencing how little there was between the actual vessels themselves, the margins were very narrow indeed when examining the log abstracts, and it was nearly always down to the skills and techniques of the Captains and their crews who won out in the end. Probably the best example of this would be the greatest of all the tea races - that of 1866, which will be covered in greater detail further on.

#### **The Handling of a Tea Clipper**

The handling of a tea Clipper required a particular skill and Captains or mates who went into Clippers to engage in the tea trade after being accustomed to slower and less sensitive ships often found themselves 'all at sea' and sometimes in trouble. An example of this was the dismasting of the Clipper 'Titania' under Captain Bobby Deas. In Clipper ships, it was recognised as bad practice to put your helm up in a squall and experienced Captains invariably gave strict instructions to any officers who had just come from a non-clipper vessel never to keep away in a squall, but to luff and shake the squall out of her, whilst taking care not to get the vessel aback, and there was also the danger of splitting sails. The danger of putting the helm up in a sensitive and heavily-sparred Clipper was that as the wind freed the ship gathered more way and, her yards being more fore and aft owing to her long lower masts as compared with other ships, the sails got the full weight of the squall abeam. If the ship was the least bit tender, or it was an extra heavy blow, she would put her rail under so far that the helm lost its power over her. Then probably her halliards would be let fly, but, owing to the angle at which the ship would now be heeled over at, the yards would not come down - which meant that something had to give.

In the case of the 'Titania', she encountered a fierce squall just North of Cape Verds, and Captain Deas ordered the helm to be put up. Even so, had he been in time to get the ship off the wind before the weight of the squall struck her, all would have been well, but he was already too late in this regard and the squall caught her square on the beam. She went right over until her fairleads were in the water. The topsail yards stuck at the mastheads, and away went the foremast, jibboom, main topmast, and mizen topgallant mast.

The Clippers 'Titania', 'Ariel', and the 'Sir Lancelot' were all ships that required very careful handling and a good knowledge of their behaviour characteristics, but once a Captain was aware of their handling characteristics they would do anything for him short of speaking.

### **The Owners of the Tea Clippers**

The records would show that the majority of Owners were strong-minded men with high personal standards, who loved their ships and were first and foremost men of ships and the sea, and businessmen second, often taking a greater interest in their vessels than in their balance sheets. Many of these Owners had themselves been seamen and commanded vessels before moving into the business aspect of the tea trade, therefore they knew the ropes and looked after their Captains and crews with an empathy borne out of hard-won personal experience. They also showed great pride in their ships and spared no expense in having them maintained to high standards. Typical of these were the following men :

- Maxton - who commanded the 'Lord of the Isles' and 'Falcon'
- Rodger - who commanded the 'Kate Carnie'
- Killick - who commanded the 'Challenger'

These men loved their ships and took great personal interest in their successes and their failures, their crews and their Captains, and the loss of a ship meant far more to these men of character than a mere financial loss. A typical example of this was when Findlay, Owner of the fast Clipper 'Spindrift' learned of her loss at Dungeness, he was heartbroken and never recovered, finally losing his mind.

Even those Owners, who were not themselves old sea-captains, had themselves taken passage at some time or another on their own ships, and knew their ships as well as any of the sailors employed on them.

One of the most famous of them all was John Willis, popularly known as Captain John, who had commanded one of his father's ships before he was well out of his teens. A tough man who called a spade a spade, renowned for the high standards to which his ships were expected to be maintained, and a rich man who spared no expense in achieving and ensuring such standards prevailed. No ship of his ever docked or departed without his personal welcome or farewell, a familiar figure on the pierhead of the West India Docks, resplendent in the white hat which he always wore. John Willis was, of course, best known for his fabulous 'Cutty Sark'.

### **The Captains of the Tea Clippers**

In the China tea trade, commanding a fine thoroughbred Clipper necessitated many talents, and no man could influence the reputation and performance of these vessels more than their Captains. The qualities required were numerous. Daring, enterprise, skills and experience, exceptional seamanship, endurance, prudence, judgment, energy, and nerves of cast iron. Finding such a variety of demanding and diverse talents in conjunction with one single man was almost an impossibility, hence there were very few really great Captains, although there were many very good sea Captains. However, the majority were often either too cautious or too reckless. A born racing skipper was like a born cavalry leader, and just as rare. In these times, drunkenness was also common and often the reason for a fine vessel's non-success, or as was often the case, her destruction or total loss.

However, there were a few of these Captains who have gone down in the records and maritime folklore as commanding all the aforementioned attributes which distinguished them as the truly great Clipper commanders of all time, and they are easily picked out from the ruck for their ships were invariably frontline news and on everyone's lips in these halcyon days of the great China Tea Clippers. Amongst the best known and highest regarded of that elite few were the following men, and the particular vessels with which they are most commonly associated are included :

Captain Robinson	Sir Lancelot
Captain Keay	Ariel
Captain Mac Kinnon	Taeping
Captain Kemball	Thermopylae
Captain Shewan	Norman Court
Captain Smith	Lahloo
Captain Orchard	Lothair
Captain Burgoyne	Titania
Captain Robertson	Cairngorm
Captain Innes	Spindrift
Captain Dallas	Fiery Cross
Captain Maxton	Falcon

What made these men so special ? The reasons could be said to be many, ranging from a natural ability and understanding not given liberally to others, to sheer determination and pride coupled with superhuman effort. For example, many a ship was second-best or worse, or even foundered, due to causes that were attributable to nothing more than bad weather, bad luck, bad timing, and the like. Perhaps the moment of criticality took place whilst the Captain and first Mate were asleep or in some other manner indisposed. Certain Captains went to extraordinary measures to ensure such freak coincidences of timing and circumstance were avoided.

As good an example of this as any would be the practice of Captain Keay of 'Ariel', when passing down the China Coast, that notorious graveyard of many a sailing ship, to rarely sleep, only 'cat-naps' and these were always on deck, and never to undress except for bathing which had more to do with staying alert and awake than any aspirations towards hygiene.

Captain Robertson of the 'Cairngorm' in a similar fashion was noted as never going below on the homeward runs except for a change of clothes or to take a bath, preferring to dose in a deck chair on the poop.

Captain Robinson of the 'Sir Lancelot' was another skipper, who had the reputation of being able to add half a knot to any ship he ever commanded, who kept a sleepless vigilance on the welfare and progress of his vessels. These great Clipper captains were men under the most extreme of stress and pressures, some broke down after a few years of it, but the great names mentioned went on and on without rest, and incredibly experienced very few accidents or loss of lives on their vessels.

### **The Tea Passages and Results of 1859**

The year 1859 saw the launch of the Clipper 'Falcon' from the stocks of Robert Steele of Greenock. This vessel, with her lines and sail plan, has been spoken of as the pioneer vessel of the new Clipper era. The two Steele men who designed and built her must take the credit for this fine vessel, however, credit must also be given to Captain Maxton who superintended her construction, and went on to command her for her first few voyages. It was said at the time that many of the improvements and innovations that were introduced into her construction were from the brain of this famous skipper. 'Falcon' was chiefly known for her powers of going to windward, but she was also very fast in light winds, a trademark of the Steele Clippers. The 'Falcon' was not to arrive in China in time to load the new teas at Foochow in this year, but she gave a taste of her character by making the best run back home from her loading port - Shanghai - taking just 106 days. This year is remembered in the annals of the great tea races as the last in which an American Clipper participated in the English tea trade, this was the 'Sea Serpent' under her famous Captain Whitmore. The participants and results for this year are shown below :

Vessel Name	Port From	Port To	Sailing Date	Arrival Date	Days
Fiery Cross	Foochow	London	09-06-1859	26-10-1859	139
Ellen Rodger	Foochow	London	10-06-1859	24-10-1859	136
Crest of the Wave	Foochow	London	16-06-1859	10-11-1859	147
Ziba	Foochow	London	19-06-1859	31-10-1859	134
Sea Serpent	Foochow	London	19-06-1859	27-10-1859	130
Challenger	Shanghai	London	06-08-1859	21-11-1859	107
Falcon	Shanghai	London	23-08-1859	07-12-1859	106
Stormoway	Shanghai	London	04-09-1859	30-12-1859	117
Cairngorm	Canton	London	17-08-1859	07-12-1859	112
Robin Hood	Hong Kong	off Start	01-10-1859	11-01-1860	106
Kate Carnie	Whampoa	London	25-10-1859	08-02-1860	106

The 'Ellen Rodger' under Captain Keay was the first ship home with the new tea that year.

### **The Tea Passages and Results of 1860**

By this year, Foochow was the recognised main tea port, the majority of the cracks loading from there, and the other ports of Shanghai, Whampoa and Macao were left to the vessels which were past their prime or did not intend to race. The chief times from Foochow for the year 1860 were as shown below :

Vessel Name	Vessel Captain	Sailing date	Arrival Date	Days
Ziba	Capt. Tomlinson	17-06-1860	11-10-1860	126
Ellen Rodger	Capt. Keay	07-06-1860	04-10-1860	119
Falcon	Capt. Maxton	10-06-1860	28-09-1860	110
Chrysolite	Capt. Roy	27-06-1860	30-10-1860	125
Robin Hood	Capt. Cobb	19-07-1860	20-11-1860	124

Thus, 'Falcon' under Captain Maxton was the fastest Clipper home with the first tea.

The year 1860 was notable for the construction of two of the great Clipper ships, the second 'Fiery Cross', to replace the old 'Fiery Cross', wrecked in 1859, and the 'Flying Spur'.

The new 'Fiery Cross', designed by Rennie, and like her predecessor built by Chaloner of Liverpool and owned by J. Campbell, she was commanded on her first voyage by Captain Dallas who had been so successful with the first 'Fiery Cross', and then Captain Robinson until 1866. Under these two outstanding commanders she was almost invincible, receiving the premium for the first vessel to dock on no less than four occasions, and being within 24 hours of the prize in the years 1864 and 1866. Besides being at the forefront of the racing for years longer than any other vessel, the 'Fiery Cross' outlived all her contemporaries.

The 'Flying Spur' was built by Hall of Aberdeen, for Jardine, Matheson & Company, to take the place of the 'Cairngorm', and was the last Clipper in which Jardine & Matheson & Company was to have a large interest. Costing £20,000 to build, being of teak and Greenheart, Sir Robert Jardine was the largest shareholder in the new vessel, and her skipper, Captain Ryrie, who had left the 'Cairngorm' to take over the new vessel, had a 25% stake in her. Fully loaded she could carry 1,000 tons of tea. She was a very fast little ship, but her skipper, advancing in years, preferred to nurse her along rather than drive her hard, therefore she did not remain very long in the first flight along with the other cracks. Yet, she performed so well when in company with other Clippers, that there is little doubt that but for the cautiousness of her veteran skipper in carrying sail she would have made a name almost equal to that of the 'Fiery Cross'. Probably her best performance was 73 days out to Sydney, then on to China reaching Shanghai after 120 days out from England, with a best run at that time of 328 miles and a best week's run of 2,100 miles. Having discharged a general cargo at Sydney, then loading coal in her hold, and horses in her tween decks, she broke the record between Australia and Shanghai.

#### **The Tea Passages and Results of 1861**

In this year, the Clippers 'Ziba', 'Chrysolite', 'Northfleet' and 'Challenger' loaded their tea cargoes from Shanghai and all made passages of over 120 days. For the other contenders, running out of Foochow, the performances were as shown below

Vessel Name	Vessel Captain	Sailing Date	Arrival Date	Days
Ellen Rodger	Capt. Keay	11-06-1861	10-10-1861	121
Robin Hood	Capt. Cobb	11-06-1861	14-10-1861	125
Falcon	Capt. Maxton	11-06-1861	09-10-1861	120
Fiery Cross	Capt. Dallas	14-06-1861	23-09-1861	101
Flying Spur	Capt. Ryrie	14-06-1861	16-10-1861	124

Thus, 'Fiery Cross' under her brilliant skipper, Captain Dallas, again showed her superiority. This was, however, to be the last race for Captain Dallas, who along with Captain Maxton, two of the most noted Clipper Captains of that time, retired from the sea, Captain Maxton to take up a partnership in the firm of Phillips, Shaw, & Lowther, which was thereafter known as Shaw, Lowther & Maxton, leaving Captain Keay to take over the 'Falcon', and Captain Robinson the 'Fiery Cross'.

At the same time, Captain Rodger, noting that his crack 'Ellen Rodger' was being outclassed by the newer ships, decided to increase the sail plan of his vessel by putting her main yards to the fore, and giving her new main yards six feet long. This gave the vessel two widths more of canvas on the fore and three widths more on the main, with the result that her sailing was much improved in light winds. Notably, she made the best time of the whole fleet coming home in the following year, 1862, including three new ships - the 'Min', the 'Whinfall', and the interesting 'Highflyer' built at Blackwall by R & H Green, and commanded by the veteran, Captain Enright, who, after leaving the 'Chrysolite', had made himself world-famous by his wonderful passages to Melbourne, in the Black Baller 'Lightning'.

### The Tea Passages and Results of 1862

Vessel Names	Captains	From	To	Sailing Date	Arrival Date	Days
Fiery Cross	Capt. Robinson	Foochow	London	28-05-1862	27-09-1862	122
Robin Hood	Capt. Mann	Foochow	London	29-05-1862	13-10-1862	137
Min	Capt. Smith	Foochow	London	31-05-1862	09-10-1862	131
Flying Spur	Capt. Ryrie	Foochow	London	02-06-1862	29-09-1862	119
Falcon	Capt. Keay	Shanghai	London	13-06-1862	13-10-1862	122
Ziba	Capt. Fine	Shanghai	London	15-06-1862	12-11-1862	150
Whinfall	Capt. Yeo	Foochow	London	15-06-1862	13-10-1862	120
Ellen Rodger	Capt. MacKinnon	Foochow	London	19-06-1862	13-10-1862	116
High Flyer	Capt. Enright	Shanghai	London	27-06-1862	03-11-1862	129
Challenger	Capt. Macey	Shanghai	London	09-07-1862	14-11-1862	128
Chaa-sze	Capt. Shewan	Canton	London	15-08-1862	15-12-1862	122

Thus, in 1862, the first Clipper home with the new tea was again the 'Fiery Cross', and the fastest run home was the 'Ellen Rodger' under Captain Mac Kinnon, with her new sail plan. It is of interest however to note that in this year's race, the 'Flying Spur', under Captain Ryrie, should have been first home with the new season's tea. This came about as follows : The 'Flying Spur' was the leading ship in the channel, and when she was off Brighton, and with the wind being very light, a tugboat came alongside offering to tow the vessel to dock for a fee of £100. Captain Ryrie declined the offer and offered a lesser sum, whereupon the tugmaster hailed to say that he would approach the 'Fiery Cross' with a similar offer as the latter vessel was only a short way astern, off the Isle of Wight. Captain Ryrie, believing this to be only a bluff, allowed him to go. Some hours later, however, with the 'Flying Spur' lying totally becalmed and helpless to make any further progress to her port, Captain Ryrie suffered the mortification of seeing the same tugboat steaming past with the 'Fiery Cross' at the end of her tow-rope. In this manner, 'Fiery Cross' got to be first to dock, gained the premium on the freight, and earned Captain Robinson a gratuity of £300, and her officers and men an extra month's pay.

1861 / 1862 also saw the launch of several new Clipper ships : Steele's 'Min' and 'Guinevere', Green's 'High Flyer', Pile's 'Kelso', Lamport's 'Whinfall', Portland's 'Silver Eagle', Bilbe's 'White Adder', Hall's 'Coulnakyle' and 'Star of China', Stephen's 'Polson', Vernon's 'Vigil', and Brocklebank's 'Burdwan'.

Of the 1861/1862 additions, the Steele fast Clippers 'Min' and 'Guinevere' were the 'pick of the bunch', although they did not fully satisfy the aspirations of either their Owners or their Builder, principally because it was felt that they were not fine enough in the buttocks, and when at full speed heaped up a wave under the lee buttock which detracted from their pace. Nevertheless, the 'Min' was the first ship home from Shanghai in 1866, and 'Guinevere' distinguished herself by beating Stephen's 'Eliza Shaw' from Shanghai in 1864 in a dual race for high stakes. These two ships undoubtedly taught the Steeles' a great deal, however, regarding the finer points of Clipper construction, because they were followed by the all-time masterpieces from that esteemed Builder - 'Serica' and 'Taeping' of 1863, and the 'Ariel' and 'Sir Lancelot' of 1865.

### Tea Passages and Results of 1863

Vessel Names	Captains	From	To	Sailing Date	Arrival Date	Days
Fiery Cross	Capt. Robinson	Foochow	London	27-05-1863	08-09-1863	104
Falcon	Capt. Keay	Foochow	London	27-05-1863	05-10-1863	130
Min	Capt. Smith	Foochow	London	28-05-1863	05-10-1863	129
Flying Spur	Capt. Ryrrie	Foochow	London	01-06-1863	05-10-1863	126
Ellen Rodger	Capt. MacKinnon	Foochow	London	03-06-1863	05-10-1863	124
Robin Hood	Capt. Mann	Foochow	London	04-06-1863	05-10-1863	123
Ziba	Capt. Jones	Foochow	Liverpool	05-06-1863	19-09-1863	106
High Flyer	Capt. Enright	Foochow	London	08-06-1863	20-10-1863	134
Challenger	Capt. Macey	Hankow	London	14-06-1863	20-10-1863	128
Coulnakyle	Capt. Morrison	Shanghai	London	20-06-1863	29-10-1863	131
Silver Eagle	Not identified	Shanghai	London	22-06-1863	30-10-1863	130
Guinevere	Capt. MacLean	Shanghai	London	27-06-1863	28-10-1863	123
Chrysolite	Capt. Varian	Hong Kong	London	15-07-1863	14-11-1863	122
White Adder	Capt. Bowers	Shanghai	London	17-07-1863	07-11-1863	113
Friar Tuck	Not identified	Shanghai	Scilly	23-07-1863	27-11-1863	127

The 'Fiery Cross' once again had a great run home and landed the first tea, and also achieved the fastest run home under Captain Robinson. The year 1863 saw the launching of the following new Clippers :

Vessels	Builders	Owners
Taeping	Steele of Greenock	Rodger
Serica	Steele of Greenock	Findlay
Belted Will	Feel of Workington	Bushby
Eliza Shaw	Stephen of Glasgow	Shaw, Maxton
Pakwan	Peverill of Sunderland	Patton
Black Prince	Hall of Aberdeen	Baring
Fychow	Hall of Aberdeen	Dunbar
Elizabeth Nicholson	Nicholson	Nicholson
Dunkeld	Duthie of Aberdeen	Foley
Wild Deer	Connell of Glasgow	Albion Company
Red Deer	Barr	Adamson
Roslyn Castle	Connell of Glasgow	Skinner
Yangtze	Hall of Aberdeen	Lewin

The 'Serica' and 'Taeping' of 1863 from Robert Steele's yard were to become two of the most celebrated Clippers of this period. The 'Serica' was launched from the stocks on the 4th of August of that year, and the 'Taeping' on the 24th of December. The 'Taeping' registered 59 tons more than the 'Serica', was two feet shorter, but three feet deeper. In performance, it was accepted that 'Taeping' was slightly faster all round. They were both 'fine handy sea-boats', as it was described in these times, very fast on light airs, and, as customary with all Steele creations, they were very sightly vessels. Owned by such keen racing men as Findlay and Rodger, and so well skippered as they were, they were both raced for all they were worth.

Of the other Clippers launched in 1863, the 'Black Prince' and 'Belted Will' were without any doubt the fastest, however they were never driven, the 'Black Prince' being particularly handicapped by an over-cautious Captain, who should never have been given command of a fast tea Clipper. The 'Belted Will' made a very fine run on her maiden voyage, but never did anything after that that called for notice.

The final development worthy of note for the year 1863 was the introduction of composite construction techniques in Clipper vessels. Before this date, several vessels including 'Min', 'Guinevere', 'High Flyer' and 'White Adder' had been built with iron beams, but 'Taeping', 'Black Prince', 'Eliza Shaw', and 'Pakwan' were the first ships engaged in the tea trade to be composite built in the true sense of the description.

It is generally believed that the inventor of this construction method was a certain John Jordan, whose first effort was a schooner named 'Excelsior' launched in 1850

Bilbe & Perry of Rotherhithe were amongst the earliest of supporters for the principle, their first composite construction being the 'Red Riding Hood' of 1857. The concept of composite construction, of which only a few examples remain today, was relatively short-lived, perhaps 10-12 years only, and was restricted in the main to the Clippers operating the China tea trade and the Australian wool trade. The great advantage of composite construction was the perfect blend of strength without rigidity, allowing these fast ships to be driven very hard without failing to yield when necessary and twisting out of shape as a consequence of the high stresses raised when being driven hard in this manner.

Two fine examples of composite construction, with below-waterline hull sheathing, remain in existence today in the form of the 'Cutty Sark', built at the yard of Scott & Linton in Dumbarton on the Clyde in 1869, beautifully preserved and lying in a permanent dock at Greenwich on the River Thames. More of this vessel follows later. The other example, which has just started a 10-year restoration programme, and is lying on the site of the old stocks of what was the Ayrshire Dockyard Limited at Irvine in Ayrshire, is the old 'City of Adelaide', built by Pile of Sunderland in 1864 on behalf of Owners Devitt & Moore of London.

The long life that these vessels survived, under the most extreme and arduous of working conditions, testifies to the great strength and reliability that composite construction had to offer, whilst maintaining handling characteristics of these ships.

### The Tea Passages and Results of 1864

The star of the show during the 1864 tea race was the new Steele Clipper 'Serica', under Captain Innes, who landed the first tea of the season and took the premium.

Vessel Names	Captains	From	To	Sailing Dates	Arrival Dates	Days
Fiery Cross	Capt. Robinson	Foochow	London	29-05-1864	20-09-1864	114
Flying Spur	Capt. Gunn	Foochow	London	01-06-1864	13-10-1864	134
Serica	Capt. Innes	Foochow	London	02-06-1864	19-09-1864	109
Belted Will	Capt. Graham	Hong Kong	London	03-06-1864	20-09-1864	109
Young Lochinvar	Capt. Glass	Hong Kong	London	04-06-1864	08-10-1864	126
Robin Hood	Capt. Darling	Hong Kong	London	06-06-1864	run down and sunk on passage	
Childers	Capt. Enright	Shanghai	London	09-06-1864	21-10-1864	134
Scawfell	Capt. Thompson	Canton	London	07-06-1864	13-10-1864	128
Min	Capt. Smith	Foochow	London	11-06-1864	14-10-1864	125
Ziba	Capt. Jones	Foochow	Liverpool	14-06-1864	13-10-1864	121
Red Riding Hood	Not identified	Foochow	London	14-07-1864	14-11-1864	123
Eliza Shaw	Not identified	Shanghai	London	14-06-1864	21-10-1864	129
Guinevere	Capt. MacLean	Shanghai	London	17-06-1864	20-10-1864	125
Challenger	Capt. Macey	Hankow	London	17-06-1864	25-10-1864	130
Yangtze	Not identified	Foochow	London	17-06-1864	22-10-1864	127
Ellen Rodger	Capt. MacKinnon	Foochow	London	19-06-1864	21-10-1864	124
Falcon	Capt. Keay	Hankow	London	20-06-1864	14-10-1864	116
Kelso	Not identified	Hong Kong	London	25-06-1864	24-10-1864	121
Taeping	Capt. MacKinnon	Shanghai	London	01-07-1864	Disabled on passage home	
Coulnakyle	Not identified	Shanghai	London	01-07-1864	Disabled on passage home	
Whinfall	Not identified	Foochow	London	01-07-1864	15-11-1864	137
Silver Eagle	Not identified	Shanghai	London	08-07-1864	11-11-1864	126
White Adder	Capt. Bell	Shanghai	London	08-07-1864	16-11-1864	131
High Flyer	Capt. Smith	Shanghai	London	11-07-1864	16-11-1864	128

The new Steele Clipper 'Taeping', having only been launched at the end of 1863, was not able to get out to China in time to load the new teas at Foochow and had to settle for Shanghai. On the first day of July she left that port laden with tea and in the company of the Aberdeen Clipper 'Coulnakyle' whose commander was thought to be Captain Morrison from her previous voyage. The 'Taeping' was under the command of a most able skipper, Captain Donald Mac Kinnon. When beating down the China Sea, both ships came to grief, being so disabled that they were compelled to make for port to effect essential repairs. The 'Taeping' put into Amoy, where she arrived on 23rd of July, and the 'Coulnakyle' made for Hong Kong where she arrived on 20th of July. Following the completion of the necessary repairs, 'Taeping' finally sailed out of Amoy in October 1864, and making best use of the favourable monsoon weather conditions prevailing at that time of the year in those parts, she arrived in London in early January 1865, only 88 days out, which gave some indication of the pace this vessel would demonstrate in later times. It is almost certain that had she not had the misfortune of serious disablement on her 1864 homeward passage she would have recorded the fastest run home.

Similarly, in the following year, although the 'Taeping', under Captain Donald Mac Kinnon, was to record the fastest time for the run home, well ahead of the other crack skippers and Clippers, her late start from Foochow, on 29th June 1865, again denied her the ultimate distinction she and her superb Captain so richly deserved.

## The Tea Passages and results of 1865

Vessels	Captains	From	To	Sailing Dates	Arrival dates	Days
Yangtze	Not identified	Foochow	London	26-05-1865	05-10-1865	132
Ziba	Capt. Jones	Foochow	London	27-05-1865	07-10-1865	133
Serica	Capt. Innes	Foochow	London	28-05-1865	11-09-1865	106
Fiery Cross	Capt. Robinson	Foochow	London	28-05-1865	11-09-1865	106
Flying Spur	Not identified	Foochow	Off Scilly	30-05-1865	04-10-1865	127
Belted Will	Capt. Graham	Macao	Off Plymouth	05-06-1865	04-10-1865	121
Black Prince	Capt. Inglis	Macao	Off Falmouth	05-06-1865	05-10-1865	122
Min	Capt. Smith	Macao	London	08-06-1865	08-10-1865	122
Young Lochinvar	Capt. Glass	Foochow	London	09-06-1864	07-10-1865	120
Eliza Shaw	Not identified	Shanghai	Off Plymouth	11-06-1864	04-10-1865	115
Pakwan	Not identified	Macao	Off Lizard	14-06-1865	04-10-1865	112
Taeping	Capt. MacKinnon	Foochow	in the Downs	29-06-1865	09-10-1865	102

With 'Taeping' a late starter, this race was essentially between the two great rivals, 'Serica' and 'Fiery Cross' and what a race these two fine vessels with their great commanders made of it ! On completion of the loading formalities at the port of Foochow, Captains Robinson and Innes arranged to be towed down the Min River by the same tug, and were cast off at the mouth of the River at precisely the same moment whereupon they immediately set sail. After being in constant company down the China Sea, they were recorded passing Anjer as follows :

'Serica'	On 23rd June 1865	27 days out
'Fiery Cross'	On 24th June 1865	28 days out

They continued to be in company many times again, on their homeward-bound passage, finally arriving off St. Catherines simultaneously, on a Sunday, with a light Westerly wind blowing. Off Beachy Head, the 'Serica' was leading by two miles, but 'Fiery Cross' had the good fortune to fall in with a tugboat, and being taken in tow reached Gravesend on the same tide. With no other tugboat about, 'Serica' stood out into mid-channel in order to get the benefit of the flood tide, and she was up to the Foreland before a tug hove into sight and passed her a towrope, thus she just missed the tide which had carried the 'Fiery Cross' into the River and gave her the race. With some very heavy wagers having been placed on 'Serica' and 'Fiery Cross' the result of the race caused a considerable degree of dissatisfaction in certain quarters, but the result stood firm, and 'Fiery Cross' notched up another famous success of her highly distinguished and profitable career.

Of the Macao-loaded ships, the 'Pakwan' made the fastest time home, much to the surprise of even her own Captain, and a very tight race was played out between the 'Belted Will' and the 'Black Prince'.

To illustrate the relative inferiority of steamers at this time as compared with the fast Clippers, the steamship 'Annette' left Macao on 31st of May 1865, before any of the Clippers had sailed, and did not reach the Downs until 13th of October 1865, i.e. 135 days out, thus making a worse passage than the slowest of the Clippers.

## Preamble to the Great Tea Race of 1866

Before proceeding into details of the greatest tea race of them all, that of the year 1866, it is perhaps worth recalling the new Clipper vessels that were built and launched in 1865, with some additional details concerning two of these builds :

Vessels	Builders	Owners
Ariel	Steele of Greenock	Shaw, Maxton
Sir Lancelot	Steele of Greenock	J. McCunn
Taitsing	Connell of Glasgow	Findlay
Chinaman	Steele of Greenock	Park Brothers
Ada	Hall of Aberdeen	J. Wade
Maitland	Pile of Sunderland	Kelso
J. R. Worcester	M. Inv. Company	Patton
Fusiyama	Stephen of Glasgow	Killick
Lennox Castle	Moore	Skinner

### The Robert Steele Clipper 'Ariel' :

The 'Ariel' was launched on 29th of June 1865, being built for her Owners - Shaw, Maxton & Company. Her dimensions according to her Builders were as follows :

Length of Keel and Fore-Rake	195 feet
Breadth of Beam	33.9 feet
Depth of Hold	21 feet
Tonnage	1,058.73 tons

She was launched with 100 tons of fixed iron ballast, moulded into the limbers between the ceiling and the outer skin, laid along the Keelson, and tapering towards the bow and stern. In addition, she was given a further 20 tons of movable pig iron ballast, all of which gave the vessel a draft of 10 feet. When loaded with tea, she would also require further ballasting of about 200 tons of washed shingle. So sensitive were these yacht-like tea-clippers that their proper ballasting was one of the most important considerations with their Captains, and had not a little to do with their successful handling and performances. During the three voyages that Captain Keay commanded the 'Ariel', he gradually lessened the tea ballast and trimmed her more by the stern :

First Voyage	340 tons ballast, with a mean draft of 13' 6"
Second Voyage	324 tons ballast, with a mean draft of 13' 4 1/2"
Third Voyage	310 tons ballast, with a mean draft of 13' 3"

Her best trim was as much as 5" by the stern.

With regard to her sail plan, 'Ariel' was not 'over-hatted', yet carried a sufficiency of canvas to make her a vessel that required careful and watchful handling, especially when being heavily pressed, which was often the case for this successful Clipper. Her actual sail area was about the same as that of the 'Sir Lancelot', of whom more later.

She had very long lower masts and her courses were very deep with her main tack coming right down to her deck. These big courses gave her a good pull in light and moderate winds. Like all 'sharp' ships, she was very 'wet' in bad weather, indeed her officers could not show themselves outside the midship-house without getting drenched in anything of a blow, and they were little better off than water rats when running their easting down. Her chief spar measurements were as follows :

Mainmast - deck to lower masthead	62 feet
Mainmast - deck to truck	138 feet
Mainyard - boom iron to boom iron	70 feet
Spanker Boom	50 feet
Knightshead to Flying Jibboom end	67 feet

And finally, to highlight just how well regarded this famous Steele creation was as one of the finest Tea Clippers to grace the seas, no one could be more qualified to give an account of the 'Ariel' than her skipper throughout her victorious years, who knew his ships and was generally recognised then and now as one of the greatest of the top sailing men, Captain Keay :

*" Ariel was a perfect beauty to every nautical man who saw her; in symmetrical grace and proportion of hull, spars, sails, rigging, and finish, she satisfied the eye and put all in love with her without exception. The curve of the stem, figurehead and entrance, the easy sheer and graceful lines of the hull seemed grown and finished as life takes shape and beauty; the proportion and stand of her masts and yards were all perfect. On deck, there was the same complete good taste, roomy flush decks with pure white bulwark panels, delicately bordered with green and minutely touched in the centre with azure and vermilion. She had no topgallant bulwarks, her main rail being only three foot high, but stanchions of polished teak, protected by brass tubing let in flush. It was a pleasure to coach her. Very light airs gave her headway and I could trust her like a thing alive in all evolutions; in fact she could do anything short of speaking. Ariel often went 11 and 12 knots sharp on the bowline, and in fair winds 14, 15, and 16 knots for hours together. The best day's work in south latitude, running east, was 340 nautical miles by observation, and that was done by carrying all plain sail except mizen royal, the wind being three or four points on the quarter. We could tack or wear with the watch, but never hesitated to call all hands, night or day, tacking, reefing, etc., in strong winds."*

#### The Robert Steele Clipper 'Sir Lancelot':

Launched on 27th of July 1865, just a month after the 'Ariel', and of composite construction similar to 'Ariel', the 'Sir Lancelot' was built for Owner J. MacCunn. It had been the wish of Mr. MacCunn that the 'Sir Lancelot' would be 10 feet longer than 'Ariel', but this idea was given up and her Builder's measurements worked out the same as the 'Ariel', though her net register made her 34 tons larger, and her registered dimensions also differed slightly. Like 'Ariel', she was teak planked to the bilge, elm bottomed, and her ballasting arrangements were identical to 'Ariel'. She delivered 1,430 tons of tea on a mean draft of 18' 8". No expense was spared with her outfitting. In those times, a crack Clipper or Packet was as smartly kept up as a modern yacht of today, and as artistic beauty was thought more of in these days than it is today, such vessels as 'Ariel' and 'Sir Lancelot' were perhaps the most beautiful fabrics ever created to please the nautical eye of mankind. A knight in mail armour with plumed helmet, his visor open, and his right hand in the act of drawing his sword, formed the figurehead of the 'Sir Lancelot'.

Two frequent errors which have worked their way into various works, articles and publications concerning this vessel are as follows :

The spelling of her name is often the subject of conflict, is it 'Sir Lancelot' or should it in fact be 'Sir Launcelot' ? Her Owner, James MacCunn, corresponded on this subject with no lesser a personage than Tennyson, to seek his expert view. Tennyson wrote back to Mr. MacCunn advising him that the correct spelling was in fact 'Lancelot' therefore this was how she was so-named.

The other popular misconception is in regard to her sail plan. Many publications and references credit the 'Sir Lancelot' as having had a total sail area of 45,000 square feet of canvas. The actual detailed sail plan of 'Sir Lancelot' was given to the famous Basil Lubbock by Mr. James MacCunn, and this shows that her net sail spread worked out at 32,811 square feet, well short of what has been claimed by other writers and historians. However, the details given make no provision for any additional canvas that she might have carried from time to time as circumstances permitted, e.g. flying kites such as the Jamie Green, ringtail, water-sails, bonnets and wings to lower stunsails, which were items generally made on board the ship by her sailmaker, under the Captain's instructions. If all these auxiliaries were in fact utilised and set to work, it would have the effect of increasing these vessels' total sail area by an additional 2,000 to 2,500 square feet to the full working suit of the ships. Let us therefore make the allowance, as Captains of the cracks were not given to moderation or caution when aspiring to obtain the maximum results from their thoroughbreds of the seas. In this case, it is possible therefore that the 'Sir Lancelot' sail area total may have amounted to somewhere in the region of just over 35,000 square feet - but not the 45,000 square feet claimed elsewhere.

#### The Outward-Bound Maiden Voyages of 'Ariel' and 'Sir Lancelot'

Things rarely go absolutely right on a vessel's maiden voyage, thus it is important to place the command of such a vessel in the hands of a highly experienced Captain. In this respect, Shaw, Maxton & Company were most fortunate to have a man of the calibre of Captain Keay in command of their 'Ariel', who, after making good the minor mistakes of builder and riggers, put the ship through her paces and learnt her ways on the passage out until he had her tuned to the nines by the time she reached Foochow to load the new teas. The maiden voyage, until then, had not been without the usual incidents as the log abstracts will testify.

As for the 'Sir Lancelot', however, it was not until her second voyage that this fine vessel had a chance to show what she could do. Unlike 'Ariel', James MacCunn was not fortunate in obtaining a first class skipper for her maiden voyage out, in fact the Captain whom he had in mind for the job was lost to him, being snapped up by another firm, which was partially due to a slight delay in the completion of building 'Sir Lancelot'. The man who MacCunn eventually got for the job, a Captain MacDougall, came with good credentials, however it was clear from the outset that he was totally unfit to command a thoroughbred of the seas such as a China Clipper, possessed neither nerve nor go, and blundered through the whole voyage

After a protracted intermediate passage to Bangkok, and back to Hong Kong, with rice, the 'Sir Lancelot' reached Hankow and was lucky enough to be loaded by Jardine, Matheson & Company at the rate of £7 / ton. However, at Hankow, a collision which damaged her main rigging and head gear, and lost her anchors and cables, destroyed the last remnants of her Captain's nerve.

Instead of bravely facing the intricate navigation of the China Seas, and taking the Anjer route home in accordance with convention and the Owner's instructions, Captain MacDougall chose the safer Eastern Passage via Ombai. After wandering aimlessly along in continual calms, he took 42 days to clear Sandalwood Island, and even in this drifting performance he managed to carry away the slings of his mainyard. Whenever there was a good breeze, and the opportunity to sail the ship as she was designed to be sailed, he shortened sail.

Captain MacLean of the 'Guinevere', which had been wrecked in the Yangtse, had a passage home on the 'Sir Lancelot', and whether it was as a consequence of these two incompetents being liquored up too much, or whatever the reasons, they managed to make a complete hash of the homeward voyage, with the result that this beautiful Clipper took 122 days to struggle home, and it was in this manner that 'Sir Lancelot' missed the great tea race of 1866, in which her sister-ship 'Ariel' was to give such a magnificent account of herself.

#### **The Great Tea Race of 1866**

Returning now to the actual event. It is probable that no race ever sailed on blue water ever created the excitement and drama that preceded the great race of 1866. The Clipper ships, in particular those covering the China tea trade, caught the public imagination, and the attention of the press of the day. Their evocative names were on the lips of an admiring public on both sides of the Atlantic and often in the four corners of the globe. The annual races from Foochow and Hong Kong to London were looked forward to by the public with great anticipation, and it was a poor man indeed who did not risk a wager, no matter how small, on his favourite Clipper ship being the first to reach London with her valuable cargo of tea for the first season's tea for the London and indeed the British market. Even the occupants of sleepy inland villages looked eagerly down the shipping columns of newspapers for the latest news on the racing Clippers. If this level of interest could be shown by landsmen with no connections whatsoever with the sea, the ships or the trade, it may be imagined the effect it had on the great British Shipping community, Shipowners and Builders, Agents, Shippers, seamen of all sorts. In many cases, huge wagers were placed on the outcome of these races, including the Captains and crews of the actual vessels involved. The crews of those old antagonists, 'Fiery Cross' and 'Serica', for example, wagered a month's pay against each other. As for the Captains, it was almost a form of etiquette on the China Coast for a captain to back his own ship. An exception to this was Captain Anthony Enright, who steadfastly refused to become involved in such wagers - on religious scruples.

Apart from the natural pride and professionalism of the famous Captains involved in the running of these Clippers, there was in addition to the inherent prestige factor a great financial incentive in being the first 'home' with the valuable tea cargo, in voyages of up to some 16,000 miles. The successful Captain could, for example, expect a bonus of £100 or even £200, and the vessel Owners a premium of around 10 - 20 shillings per ton on the cargo freight. In a day when men counted their wealth in pennies, this was no mean inducement, however it was invariably of far greater importance to these Captains and their crews to be recognised forever more as the winners of the global race that set man against the elements in a contest second to none involving the most difficult and dangerous of undertakings in conditions which were punitive and excessively demanding.

In 1866, the freight rates had risen to the new level of £7 / ton for the first six to eight vessels loading at the Port of Foochow, and at the beginning of May that year sixteen of the best known and finest Tea Clippers were anchored at the Pagoda Anchorage waiting for the first season's tea to come down the River. The Pagoda Anchorage lay some 11 miles from the town of Foochow, on the River Min, and some 22 miles inland from the open sea.

Of the large fleet of famous Clippers assembled there in May 1866, there were nine who were identified as being participants in the race home with the first tea, however, in the event, there was to be five principal contestants in this year as will be seen later. Details of the Clippers considered to be the main runners are shown hereunder, together with their relevant details. and it is interesting to note the role played by Scottish owned and Scottish built vessels when reviewing the front-runners in the Table below, with no less than eight of the nine vessels being of Scottish build, and five of the eight being Scottish owned :

Vessel	Tonnage	Captain	Where Built	Builders	Year	Owners
Ada	687	Capt. Jones	Aberdeen	Hall	1865	J. Wade & Coy
Ariel	852	Capt. Keay	Greenock	Steele	1865	Shaw, Maxton & Coy
Black Prince	750	Capt. Inglis	Aberdeen	Hall	1863	Baring
Chinaman	668	Capt. Downie	Greenock	Steele	1865	Park Brothers
Fiery Cross	695	Capt. Robinson	Liverpool	Chaloner	1860	J. Campbell
Flying Spur	735	Capt. Ryrie	Aberdeen	Hall	1860	Jardine, Matheson
Serica	708	Capt. Innes	Greenock	Steele	1863	Findlay & Coy
Taeping	767	Capt. MacKinnon	Greenock	Steele	1863	Rodger & Coy
Taitsing	815	Capt. Nutsford	Glasgow	Connell	1865	Findlay & Coy

The 195 foot 'Ariel', with her 33,000 square feet of sail canvas, was the newest and the largest of the ships taking part in the 'first home' race, and was the favourite to win under her experienced and most capable Captain, John Keay, a man noted for his high personal standards, example and code of discipline. The beautiful 'Ariel' lay below the rest of the fleet, close to the Pagoda Rock. On the 24th of May 1866, the first lighters of new tea came downriver and 'Ariel' immediately commenced her loading, stowing her flooring chop of 391 chests and 220 half-chests. On Sunday, 27th of May, she had sixteen lighters alongside, with Chinese coolies working day and night loading the tea on board. By 2.00 pm on Monday afternoon, 28th of May, the last tea chest was loaded on board, completing the loading of 'Ariel'.

The total cargo loading of the 'Ariel', together with the other most fancied of the crack Clippers for that year is recorded below :

Ariel	1,230,900 lbs.	( 558,331 kilograms / 558.2 tonnes )
Fiery Cross	854,236 lbs.	( 387,409 kilograms / 387.4 tonnes )
Taeping	1,108,700 lbs.	( 502,812 kilograms / 502.8 tonnes )
Serica	954,236 lbs.	( 432,760 kilograms / 432.8 tonnes )
Taitsing	1,093,130 lbs.	( 495,751 kilograms / 495.7 tonnes )

'Ariel' was the first of the Clippers to complete loading and make ready her departure downriver for the open sea. At 5.00 pm on the 28th of May she slipped her moorings and, with the company of the tug-boat 'Island Queen', dropped well below the other shipping and anchored for the night.

Activity on board the other four Clippers in the anchorage increased to fever pitch when the long bowsprit of 'Ariel' was seen to be pointing downstream as she started her passage down the River to the open sea under tow of the steam paddle-tug 'Island Queen'. The tension was high as the last of the tea chests were manhandled into the hatch coamings of these other four Clipper ships. The 'Fiery Cross' was the first of the other ships to ship her hatchboards and tarpaulins, and such was the haste of her Captain Robinson to get away and reduce the lead of the 'Ariel', he sailed without signing the Bills of Lading for his cargo, twelve hours later, and the 'Fiery Cross' was duly followed by the 'Taeping' and the 'Serica' - which finished loading and got away together - then came the 'Taitsing', a day behind. However, as was about to be proved in this instance, the first vessel to finish loading was not always the first vessel to clear the River.

At 5.00 am on Tuesday, 29th of May, the 'Ariel' hove up and proceeded down the River with her tug-boat towing alongside. At 8.30 am, when nearing Sharp Rock, she discharged her Chinese river pilot and the tug was sent ahead to tow. The River Min, like many others, is a swift running river with the tidal water becoming a veritable sluice wherever the river narrows, and in those days tug-boats were not what they are today, and thus it came about that no sooner was the 'Island Queen' ahead than she began to sheer wildly and became completely unmanageable, and the 'Ariel' was compelled to let go her anchor in a hurry to avoid a potential disaster.

A further attempt was made shortly later with the tug alongside again, using every ounce of steam available, going outside the wreck of the Green Clipper 'Childers' which had been wrecked on the Min River on only her second voyage, in a vain attempt to beat the tide. However, the tug-boat was unable to manage it and there was enough 'top' on the water to cause some damage to both the tug and her charge. Captain Keay wanted to try the tug towing from ahead again, but the pilot refused to go on in the attempt until there was more water available, so there was nothing more to be done but drop anchor again.

Captain Keay's mortification at this bad start was further compounded by the sight of his great rival, the 'Fiery Cross', coming down the River with a good tug ahead of her. Whereas 'Ariel' was drawing about 18' 5" on a mean draft, the 'Fiery Cross' drew considerably less, and was thus able to proceed downriver and to the open sea without delay, and passed the 'Ariel' with three mocking cheers of 'farewell'.

That night, 'Ariel' was again delayed by the fates, and although by then there was sufficient water below her to proceed, due to thick and showery weather conditions the pilot refused once more to proceed downriver. An additional problem which the wasted night was used to put to rights, was the vessel's trim, which was badly out, with her head down by about 5", which required considerable weight shifting throughout the ship throughout the night to bring her back to a more acceptable and safer trim for her forthcoming passage.

At 9.00 am on the morning of the 30th of May, the 'Ariel' once more got under way, her tug-boat going ahead with a towing hawser from each quarter. The delay, however, had given Captain Robinson of the 'Fiery Cross' some 14 hours of a lead, and to make matters even worse for 'Ariel', the 'Taeping', commanded by Captain Mac Kinnon, and 'Serica', commanded by Captain Innes, were snapping at her heels, and were only a few minutes behind 'Ariel' when crossing the Bar.

By 10.30 am that morning, all three Clippers, 'Ariel', 'Taeping', and 'Serica' were outside the Outer Knoll and hove-to in order to drop their pilots. Once again, 'Ariel' suffered from bad luck when her paddle-tug 'Island Queen', in lowering her boat to fetch off the pilot, capsized the small boat and was so long in trying to save the boat's crew, who were struggling in the water, that the 'Ariel' had finally to signal for a pilot boat to come out and take off the pilot. Finally, however, at 11.30 am, Captain Keay filled his mainyard and stood away S by E for Turnabout Island.

There was a moderate N.E. wind at the time and all three Clippers set main skysails and fore topmast and lower stunsails. It was therefore as level a start as could be wished for the three favourites, although Captain Keay of 'Ariel' must have been very frustrated at having lost the 12-hour lead advantage he thought he had held over the others in getting over the bar before them. For a time the three great ships kept close to each other, the 'Ariel' slowly gaining on both the 'Taeping' and 'Serica', but the weather was thick and before nightfall the three racers had lost sight of each other. As far as the other contenders were concerned, the 'Taiting', commanded by Captain Nutsford, was the next away, crossing over the Bar and entering the open sea at midnight on the 31st of May 1866. She was followed by the others thus:

Black Prince	Captain Inglis	3rd of June
Chinaman	Captain Downie	5th of June
Flying Spur	Captain Ryrie	5th of June
Ada	Captain Jones	6th of June

The others followed at later dates : 'Falcon', 'Coulmakyle', 'Yangtze', 'Belted Will', 'Pakwan', 'White Adder', and the 'Golden Spur'. The race to be first home was however confined to the first five starters, as none of the other later vessels held any chance of outstripping these crack Clippers at sea.

The 16,000 mile race was now on in earnest, with the four Scottish-built Clippers, 'Fiery Cross', 'Serica', 'Taeping' and 'Taiting' possibly determined to show their sterns to the sole English-built contender and race-favourite, 'Ariel'.

The Tea Clippers would usually follow the well-tried route down the South China Sea, passing first to the North and East of Formosa, and then on a dog's leg course across to the coast of Indochina and South to the Sunda Strait, gateway to the Indian Ocean. With the fickle S.W. monsoon of June, it was a case of courting the land and sea breezes down the Cochin China Coast, then crossing to the Borneo coast and repeating the operation. Knowledgeable Captains showed great skill in tacking in and out, so timing it that they were well under the land about the hour that the land breeze was due to spring up, which was often not until the middle of the night. The ships usually went through the Api Passage and then South to Anjer by the Gaspar Strait.

The South China Sea was, as it still is, a most hazardous area often cursed with poor visibility, and dotted with low lying islands, sunken reefs and hidden shoals. In the 19th century it was poorly surveyed and accurate charts were hard to come by. The many wrecks on its reefs were stark testimony and memorials to those who had been foolish enough to ignore the old seafaring rule of "lead, log and lookout". Navigation was therefore tricky at best, faultily charted reefs, rocks blocking the fairway of narrow channels, and currents generally behaving in a contrary manner than set down in published sailing instructions and often appeared where there should be none. It was small wonder, therefore that many of the crack Clipper masters rarely went down below or left their quarter-decks for anything more than a few minutes during this first leg of the voyage home.

Running free before a fresh North-Easterly wind, Captain Robinson of the six year old veteran 'Fiery Cross' led the way on the passage down to Anjer, through the Bashi Channel between Formosa and the Philippines, and by 3rd June was passing to the North of Paracells - an extensive group of islands and reefs about 180 miles to the East of what is now known as Vietnam. To the Southward of the Paracells they met with strong S.W. winds. Holding his South-Westerly course until within 50 miles of the coast, Captain Robinson then brought 'Fiery Cross' around to bear due South for the Natuna Islands, which lie to the North-West of Borneo and guard the approaches to the Sunda Strait, with the wind now in the South-West and freshening. This was the most trying section of the voyage home invariably, where every advantage had to be taken of the least ripple in the water, where S.W. monsoon weather was unpredictable with wind coming in a rush from nowhere then dying away just as quickly again to nothing. Squalls could come up so quickly that it was almost impossible to avoid getting caught aback - and woe betide the vessel that got caught aback with flying kites aloft, one of the surest ways of losing spars and sails. In this area and weather pattern, it could be baking hot with a scorching calm and glaring sun for one moment, and the next a squall would sweep up out of nowhere, accompanied by a cascade of rain, the wind would come with the strength of half a gale in one squall, and in the next perhaps there would be little or no wind at all, but a blinding sluice of rain.

All three race leaders passed the Paracells safely on 3rd of June, 'Fiery Cross' in the lead, 'Ariel' passing next with the North Shoal bearing South 8 miles at 1.00 pm and the 'Taeping' closing up a short way behind the first two. The 'Serica' had dropped back at this stage and was running about one day behind the others. Although the three front-runners were so close together on the 3rd of June, none of them sighted any of the others that day, but 'Taeping' and 'Ariel' had been in company on the previous day. After the Paracells, they were too preoccupied with dealing with the bothersome S.W. monsoon weather.

On 7th June, when East of Saigon and in a position closing down on the Ladd Reef, Captain Robinson of the 'Fiery Cross' had the first sight of one of his rivals since the departure from the Min River a week previously, when a large fully rigged ship, on an opposite tack, appeared briefly on the horizon astern of 'Fiery Cross'. It was the 'Ariel', with the formidable Captain Keay using all of his considerable skills in an effort to overtake his rival. The other Clippers, although out of sight, were following up close behind, and on the following day, 8th of June, 'Taeping' and 'Fiery Cross' passed each other on opposite tacks, and on the following day again, 9th of June, in a position 7 degrees North, 110 degrees East, the 'Taeping' and 'Ariel' exchanged signals, 'Taeping' at the time being 3 miles to leeward at 5.00 pm. Both ships held on the same tack throughout that night and when the morning broke, 'Ariel' had the satisfaction of seeing that she had weathered on her rival a little, 'Taeping' being about 4 miles on her lee quarter. After this the ships did not meet or see each other again before Anjer, Straits of Sunda, which was passed in the following order, slipping past the doomed Island of Krakatoa to the starboard :

1.	Fiery Cross	At 12.00 pm on 18th of June	21 days out
2.	Ariel	At 7.00 am on 20th of June	23 days out
3.	Taeping	At 1.00 pm on 20th of June	22 days out
4.	Serica	At 6.00 pm on 22nd of June	24 days out
5.	Taitsing	At 10.00 pm on 26th of June	27 days out

With strong South-Easterly winds blowing in the Indian Ocean all five ships made good time, 'Ariel' logging 330 miles on the 26th of June, and 'Fiery Cross' logging 328 miles on the 24th of June, i.e. average speeds in excess of 13 knots for the days run. Needless to say, between Anjer and Mauritius was an area where the Tea Clippers were accustomed to making their best times, under the influence of the S.E. Trades of the Indian ocean, coupled with the habit of piling on every possible inch of sail available to them - Ringtails were bent outside the Spanker with a watersail underneath the boom, wings in the shape of spare mizen staysails were laced onto the lower stunsails, the Jamie Green was almost a fixture along the bowsprit, a bonnet was laced on the foresail, watersails hauled out under the passeree booms and a spare flying jib run well up on the fore royal or fore topgallant stay as a jib topsail. Every stay to the main skysail had its staysail, whilst the fore topmast and main topmast staysails were so voluminous that their heads came to the collars of their respective stays. Then the large suit of stunsails, from the royal down, were sent aloft, tea Clippers as a rule having a large and a small suit. Thus it was the normal practice to pile on every possible stitch of canvas to maximise on the favourable conditions normally to be experienced on the run from the Sunda Strait to rounding the South of the Island of Mauritius.

The ships passed the longitude of Mauritius without changing their order :

1.	Fiery Cross	29th of June	10 days from Anjer
2.	Ariel	1st of July	11 days from Anjer
3.	Taeping	1st of July	11 days from Anjer
4.	Serica	4th of July	12 days from Anjer
5.	Taitsing	9th of July	13 days from Anjer

From Mauritius to the Cape, all kinds of weathers were encountered by the racers, from light airs to heavy storms. 'Fiery Cross' steered close into the Natal coastline in an effort to make the most of the Agulhas current and actually sighted the Cape, but 'Ariel' and 'Taeping', further to the Southward, were luckier with their winds and closed up on 'Fiery Cross', whilst 'Serica' steering a more Southerly course than the others got caught up by the Westerlies and had to tack up North again in order to pick up the favourable current.

Whilst rounding the South African coast, the tea Clippers had a chance of showing their paces against other fast homeward-bounders. On the 10th of July, with a fresh Southerly breeze, 'Ariel' passed one of Smith's smart little City Line ships, the 'City of Bombay', going nearly two feet to her one foot, and again on the 15th of July, with a light North-West wind, 'Ariel' overhauled the Donald Currie flyer 'Tantallon Castle' with the greatest of ease.

The order of the Clippers when passing the Cape of Good Hope was as below :

1.	Fiery Cross	15th of July	16 days from Mauritius	48 days from Foochow
2.	Ariel	15th of July	15 days from Mauritius	48 days from Foochow
3.	Taeping	16th of July	16 days from Mauritius	48 days from Foochow
4.	Serica	19th of July	15 days from Mauritius	51 days from Foochow
5.	Taitsing	24th of July	16 days from Mauritius	55 days from Foochow

Once around the Cape of Good Hope and into in the South Atlantic, and despite the favourable run of the Benguela current, and the strong South East trade winds, the race lost some of its momentum. The 'Fiery Cross' and 'Ariel', steering a similar course, had light winds. Captain Mac Kinnon with his 'Taeping', however, decided to keep some 300 miles nearer to the African coast and had better luck. On the 19th of July, all three ships were abreast of each other though out of sight of each other, and 'Taeping', continuing to gain on the other two, was the first vessel to pass St. Helena. Meanwhile, Captain Innes of the 'Serica', following in the wake of 'Taeping', was making the best time of all the Clippers at that stage, and actually went ahead of the 'Ariel' for a day or two. Passing St. Helena, the order was :

1.	Taeping	27th of July	11 days from the Cape	59 days from Foochow
2.	Fiery Cross	28th of July	13 days from the Cape	61 days from Foochow
3.	Serica	29th of July	10 days from the Cape	61 days from Foochow
4.	Ariel	29th of July	14 days from the Cape	62 days from Foochow
5.	Taitsing	5th of August	12 days from the Cape	67 days from Foochow

Between St. Helena and Ascension Island, 'Ariel' got a slant and was able to make up some lost ground, a full day, and drew level with 'Fiery Cross' once again. At the same time, Captain Nutsford of the 'Taitzing', which had lagged behind for so long, began to make up ground also. The order as the racing fleet passed Ascension Island was as shown below :

1.	Taeping	31st of July	4 days from St. Helena
2.	Fiery Cross	1st of August	4 days from St. Helena
3.	Ariel	1st of August	3 days from St. Helena
4.	Serica	2nd of August	4 days from St. Helena
5.	Taitzing	8th of August	3 days from St. Helena

On the Equator, 'Fiery Cross' and 'Ariel' had again drawn level with 'Taeping', all three vessels crossing the Line together, on the same day, in the following order :

1.	Taeping	4th of August	4 days from Ascension
2.	Fiery Cross	4th of August	3 days from Ascension
3.	Ariel	4th of August	3 days from Ascension
4.	Serica	6th of August	4 days from Ascension
5.	Taitzing	12th of August	4 days from Ascension

On the 9th of August, in the Latitude 12 degrees 29 ' North, the 'Taeping' and 'Fiery Cross' exchanged signals, the 'Ariel' being at that time just a day behind them and further to the Westward, but during the following few days 'Ariel' was to make up the time and resume the lead once more. Meantime, 'Taeping' and 'Fiery Cross' remained in company, in light and variable winds, until 17th of August, their position at Noon on that day recorded as being 27 degrees 53' North, 36 degrees 54' West. - thus reaching the furthest point West in their long curving sweep out into the Atlantic Ocean, one thousand miles West of the canaries, to sniff at the Southern edge of the N. E. Trades. At this point, bad luck befell Captain Robinson in the 'Fiery Cross', whose ship lay in a dead calm, and as he fumed and trimmed his sails to tempt every passing 'cat's paw' of wind, the 'Taeping' under Captain Mac Kinnon, clawed her way over the Southern horizon within four to five hours of having had the good fortune to pick up a fresh breeze, whilst 'Fiery Cross' remained motionless. Reviewed retrospectively, it can be safely said it was this incident that lost 'Fiery Cross' the race. Meanwhile, the relative positions and times of passing San Antonio, in the Cape Verde Islands, was as shown below :

1.	Ariel	12th of August	8 days from the Equator Line
2.	Taeping	13th of August	9 days from the Equator Line
3.	Fiery Cross	13th of August	9 days from the Equator Line
4.	Serica	13th of August	7 days from the Equator Line
5.	Taitzing	19th of August	7 days from the Equator Line

Thus it was, that for the first time since her ill-fated attempt to be the first across the Min River bar, some three months earlier, 'Ariel', the London-registered Clipper, under Captain Keay, went into the lead in the great 1866 tea race, and the 'Serica' had closed up on 'Taeping' and 'Fiery Cross', whilst 'Taitzing' had shortened her distance from the leaders by a few days, the race now becoming closer than ever.

As the racing Clipper fleet approached the Western Isles (Azores Group) the ranks continued to close up further and, on 29th of August, the first four contenders passed the small Island of Flores to the West of the Azores within a 24 hour period, the 'Ariel' still holding the lead, but the most noteworthy aspect of this recent run was the performance of the 'Taitzing' which had made up three days on the leading ship. The positions at this stage of the race were as follows :

1.	Ariel	29th of August	17 days from San Antonio	91 days out
2.	Fiery Cross	29th of August	16 days from San Antonio	92 days out
3.	Taeping	29th of August	16 days from San Antonio	91 days out
4.	Serica	29th of August	16 days from San Antonio	91 days out
5.	Taitzing	1st of September	13 days from San Antonio	93 days out

With about some 1,500 miles still to go, and all the ships running free before the prevailing West and South-Westerly winds, it was still anyone's race, but the 'Ariel', with her significantly larger sail area, had the advantage and was the most likely candidate. Much would now depend on the individual sailing skills and seamanship of the Clipper Captains.

At 1.30 am on the morning of 5th of September, Captain Keay of the 'Ariel' sighted the light from the Bishop Rock Lighthouse at the South of the Isles of Scilly, and, with all possible sails set, tore along at great pace for the mouth of the Channel. As dawn broke on the morning of 5th September however, and with 'Ariel' off Lands End, alone and confidently in the lead, Captain Keay sighted a vessel on his starboard quarter, carrying a large press of sail, and although he did not know it at the time, he was later to confirm that his instinct told him the other vessel must be Captain Donald Mac Kinnon with the 'Taeping', and as usual for Captain Keay, his fine instinct in such matters did not let him down on this occasion, it was indeed the 'Taeping' which had loomed up out of the haze to close on the 'Ariel'. Considering that these two ships had last sighted each other some 70 days previously, it was a remarkable situation that they should now come 'face-to-face' as the race home was so nearing its concluding stages.

Captain Keay and Captain Mac Kinnon were old rivals, both having proven that in terms of seamanship and experience of handling the finest vessels ever to put to sea, they had few equals anywhere in the world.

With the Lizard Light abeam at about 8.00 am, Start Point by Noon, and crowding on every available stitch of canvas, going at 14 knots with royal stunsails and all flying kites set, the 'Ariel' and the 'Taeping' raced up the Channel, side by side, running their gunwales under and almost on their beam ends at times before a stiff West-South-Westerly wind. Off Portland Bill, at about 6.00 pm, both ships were compelled to take in their Jamie Greens in order to be able get their anchors over. At about 7.30 pm, the two vessels were just South of St. Catherine's Point at the South of the Isle of Wight, and at midnight Beachy Head was abeam at about five miles distance. All this time there had been no alteration to speak of in terms of the distance between the two vessels, 'Ariel' kept her lead, gaining slightly as the wind freshened, and letting 'Taeping' close up again when it would take off.

At about 3.00 am on the morning of the 6th of September, when nearing Dungeness, 'Ariel' began to reduce sail and send up rockets and burn blue lights, to attract shore attention and notify her requirement for a pilot. At 4.00 am, when abeam of Dungeness Point and the light, and hove-to about one and a half miles off, she continued signalling with flares and rockets for a pilot.

At 5.00 am, 'Taeping', who was close astern of 'Ariel', and also signalling for her pilot, still showed no signs of heaving to and Captain Keay, fearing that his rival meant to run ahead of him closer to Dungeness Harbour and therefore be in a better position to pick up the first pilot available, decided to bore up athwart her hawse, determined at all costs to prevent Captain Mac Kinnon from beating him to the first pilot. This daring manoeuvre succeeded, Captain Mac Kinnon, who was furious that his vessel was threatened in this manner, at once gave in and hove to, then headed up into the wind, when he saw the threat of 'Ariel' running into his ship. It was a dangerous and desperate ploy on Captain Keay's part, but one he was prepared to take with such high stakes at risk. Captain Mac Kinnon was not prepared to endure the same risks however.

At 5.30 am, the pilot cutters were seen coming out of the Roads and the wily Captain Keay at once kept away and laid his 'Ariel' between the 'Taeping' and the approaching pilot cutters. At 5.55 am, the pilot stepped on board the 'Ariel' and saluted Captain Keay as 'the first tea Clipper ship of the season from China'. Captain Keay is reputed to have replied " Yes - and what is that to the Westward? We have no room to boast yet" and this of course was precisely the position, as he was up against one of the finest Clippers and Captains of them all in 'Taeping' and Donald Mac Kinnon, besides which, the race was not ended until the ships were docked and the tea was unloaded on the dock.

At 6.00 am, both ships, with their pilots now on board, stood away for the South Foreland. 'Ariel' set all plain sail, but the 'Taeping' sent aloft topmast, topgallant, and lower stunsails on her starboard side. With this extra canvas, she managed to close up a little on her rival, but 'Ariel' was still a mile ahead when Captain Mac Kinnon, after shifting his stunsails across to the port side on hauling up through the Downs, was at last compelled to take them in off Deal, as the angle was too close and the sails would not draw.

Here, both ships took in their white wings and 'signalled for steam', with their numbers flying from their peak halliards. This time it was 'Taeping' who got the better break insofar that the best steam tug coming out from behind the Ness sent her towline to the nearest of the two Clippers, which, being the sternmost one, was the 'Taeping'. The 'Ariel' on the other hand had to put up with a poorer steam tug which was waiting in the Downs. As at the start of the race 3 months previously, in the River Min at Foochow, 'Ariel' was to suffer from being allocated a second-rate tug-boat. Captain Keay would have taken a second tug alongside, but by his thinking there seemed no object in attracting the additional expense this would involve as in any case they would have to wait at Gravesend for at least a couple of hours according to his calculations, waiting for the tide to make.

'Taeping' with her superior tug, arrived at Gravesend 55 minutes ahead of 'Ariel', but the latter avoided anchoring by taking another tug alongside, and as soon as there was enough water both vessels proceeded up-river, the destination for 'Ariel' being the East India Dock, and for 'Taeping' the London Docks, thus giving the 'Ariel' an advantage over her rival as the East India Dock was, of course, not so far up-river as the London Docks to which 'Taeping' had to proceed.

At 9.00 pm, 'Ariel' arrived outside the East India Dock gates. At this stage, Captain Keay and his crewmen watched with satisfaction as the 'Taeping' passed by them on her way up the River Thames, having every reason to think themselves the winners at last.

However, it was not over yet. The tide was still too low for 'Ariel' to be warped alongside the East India Dock and enable them to throw the first chests of tea ashore and qualify as the winners of the season's first tea ship to unload. Captain Keay and his crew had to wait another exasperating 1 hour and 23 minutes to do go alongside. Meanwhile, Captain Mac Kinnon and his 'Taeping', which drew slightly less water, was able to tie up at her more distant dock further up the River Thames, which she did just before 10.00 pm, where they learned that their rival 'Ariel' had still not docked, thus making the 'Taeping' the victor of the 1866 great tea race from Foochow to London.

The final outcome of the 1866 tea race was therefore as follows :

1.	Taeping	Captain Mac Kinnon	London Docks	9.45 pm : 6th September
2.	Ariel	Captain Keay	East India Docks	10.15 pm : 6th September
3.	Serica	Captain Innes	West India Docks	11.30 pm : 6th September
4.	Fiery Cross	Captain Robinson	London Docks	8.00 am : 8th September
5.	Taitsing	Captain Nutsford	Dock not identified	Forenoon : 9th September

The national and indeed international interest and acclaim that the 1866 race created was sensational, such a close and exciting finish had never before been seen in an ocean race of this kind, where the first three Clippers had set out on their epoch-making voyage of almost 16,000 miles on the same tide in the River Min, 99 days previously, and all three had docked on the same tide in the River Thames within less than two hours of each other.

Nowhere was the pride associated with this fine performance felt more than in Scotland, as all three Captains of the winning Clippers came from that country, and the final icing on the cake, all three Clippers, 'Taeping', 'Ariel' and 'Serica' were the creations of the finest Clipper designer and builder of them all, William and Robert Steele of Greenock.

This is not to say that other designers and builders were eclipsed in any way by the Steele productions, examples such as the 'Thermopylae' by Hood of Aberdeen, the 'Cutty Sark' by Scott & Linton of Dumbarton, the 'Taitsing' by Connell of Glasgow, the 'Stornoway' by Hall of Aberdeen, the 'Lord of the Isles' by Scott of Greenock, are evidence sufficient, but the Steele Clippers were simply superb and the best.

## The Aftermath of the 1866 Tea Race

As a consequence of the large glut of tea that was about to descend on London with the arrival of the 1866 fleet from China, tea prices in London had taken a steep and sudden dive in the month or two prior to the arrival of the new tea, whilst the gallant Clippers and their crews were making their passages homeward. Tea merchants were now regretting the open-handed promises they had given in happier times and Shipowners were looking grimly towards the future. It therefore occurred to the Owners of 'Ariel', Shaw, Maxton & Company, and the Owners of 'Taeping', Rodger & Company, that in the event of a dispute over the results of the race the Merchants might very well seize on this as an excuse to withdraw the prize altogether. On learning by telegram from Deal that the two cracks had arrived off the Downs and were proceeding to dock, members of these two companies held a clandestine meeting in London, where it was agreed that they had nothing to lose and everything to gain by reaching a quiet understanding. They therefore pledged that the Clipper that docked first should be publicly declared the winner of the Merchants' premium, 10 shillings per ton, without protest from the opponent, and that the winner would discreetly divide the premium with the 'loser'. The £100 bonus promised by the Owners themselves would be similarly split between the two Captains of the two Clippers. Whilst perhaps not a satisfactory outcome to all parties involved for one reason or another, this was an astute piece of thinking and quite understandable considering the manner in which the tea trade was declining and the power of the Merchants which they would exploit without compunction given any reason.

Thus it was then that the official verdict on the 1866 tea race was announced on the morning after the first Clippers docked in London, i.e. 7th of September 1866, when the 'Taeping' under Captain Donald Mac Kinnon was declared the official winner.

The Owners, together with the two Clipper Captains, then went to the Ship & Turtle tavern, in Leadenhall Street, where they divided up the prize.

The 'solution' made nobody happy really, Although Captain Keay and his crew got half the prize under this 'arrangement', they did not have the glory of public acclamation of being the winners of the race, and although Captain Mac Kinnon and his crew did have that honour and respect, they reaped only half the rewards it should have entitled them to.

The general public, even without knowing anything about the Owners' collusion and the special arrangements arrived at, was no more satisfied with the outcome than anyone else. Partisans of the 'Ariel', on whom it must be remembered large wagers were placed owing to her being the clear favourite, felt that as she was the first to have reached Deal, she should have been declared the winner, as thereafter the matter lay in the hands of the tugs and not seamanship skills. Others held that 'Taeping' having been first to dock alongside her berth and unload her tea cargo was the obvious winner, this being the remit set by the Merchants before the race took place. Private bettors were left to fight the issue out between themselves.

Whilst officially the Scottish Clipper ship 'Taeping', under the command of Captain Donald Mac Kinnon was the winner of this great race, in reality there were no 'winners' in the race of 1866. With so many Clippers arriving in the Port within the space of a few days of each other, the London market found itself with about 5.2 million pounds of fresh tea from the first five Clippers to dock - advertised at the time as being half a year's consumption for the whole of Britain at that time, which was a gross exaggeration, it was more of the order of 5% of the national consumption at that time - with the result that prices dropped heavily. (As a matter of interest, the price of tea at that time in London was advertised at between 3 shillings and four shillings per pound, depending on quality of tea concerned - Reference : 1866 Advertisement by Burgon & Company, Tea Merchants, London)

From that year onwards it was decided to discontinue the cargo premium for the 'first ship home'. The annual Clipper races still went on, but they were never the same again after the 1866 race.

#### **The Less Romantic Aspects of the Great Sailing Ships**

Whilst the Clipper era was a romantic affair that caught the vast public attention, it has to be said that it was all too easy for those safely on shore to endow the Clippers and those who sailed them with a romance all of their own. The clean lines and the billowing white sails of these fine sleek ships were sufficient to generate passion in even the stoniest of landsmen's hearts. For the seamen involved, however, it was often quite a different matter.

On long voyages - and they were always long - the food was monotonous in the extreme, and often too rotten for a starving man to eat. Such was the low freeboard of Clippers, and so hard they were driven, that the decks and accommodation were rarely dry, making life on and off watch a nightmare of permanent dampness and discomfort. All the hardships and discomforts endured on deck, however, paled into insignificance when seamen went aloft. Here, on swaying yardarms, 150 feet above the sea, where the snapping canvas ran riot, it was an unending fight for survival, a fight which men lost with frightening regularity. Yet despite all the hardships and dangers, there was an immense prestige associated with sailing before the mast, pride and passion was involved, and few Clipper men would have it any other way.

The men who commanded the Clippers were an elite, the likes of whom the world may never see again. Speed was their God, on whose altar they were prepared to sacrifice all human comfort, dignity, and, when necessary, life itself. Obsessed with the need to pile on more and more sail, they would do so until it seemed the ship must drive herself under, or, at the very least, lose her spars and masts. However, with a foresight borne of long experience and natural sailing skills, they seemed to know just how far to push their ships and the elements, stopping just short of the point of potential disaster. Their navigational skills were beyond any serious doubt.

Their mode of discipline was often so harsh as to be completely outwith the Law, even in those times of relative unenlightenment. They used fists, clubs, and sometimes even guns to back up their orders where necessary, were respected and cosseted by their Owners, often feared and sometimes hated by their crews, but admired by all for their sheer audacious professionalism. They were indeed 'iron men', sailing their 'wooden ships'. The seamen of the Clipper trade endured the ultimate test of men and ships, the perfect marriage of human tenacity and skill, with the products of the world's finest shipyards. But the sacrifices called for and the risks taken inevitably exacted a heavy toll. Men grew old before their time, if they indeed survived, and died before they should. Ships were lost when they should not have been lost, often due to the demands on a skipper reaching the point where his best judgment was impaired if not bordering on the reckless.

The American Clippers and large Barques had a very bad reputation in this regard, whereas their British counterparts went about their business in a vastly more civilised and responsible manner, with only a few notable exceptions.

#### **Captain Donald Mac Kinnon of the 'Taeping'**

Captain Mac Kinnon of the victorious 'Taeping', took ill during the outward passage in the winter of 1866 and was landed at Table Bay, Cape Town, in South Africa where he died in January 1867, in his fortieth year, and was buried. His place on 'Taeping' was given to a Captain Dowdy, who remained with 'Taeping' for at least the next 3-4 years before taking over the Steele Clipper 'Titania'. Born in 1826, on the Hebridean Island of Tiree, in the Baugh township, near Heanish, Donald Mac Kinnon was one of a family of five sons and three daughters. Three of these sons were to become seafaring men, all becoming sea-Captains in a tradition for which the Island of Tiree was renowned. His brother, Angus Mac Kinnon, was master of the legendary Steele Clipper 'Ellen Rodger'. Donald Mac Kinnon himself rose to command at an early age, in the timber 'droghers' engaged in the trade between Greenock and Quebec where he proved his ability by setting a record passage home from Quebec in the Barque 'Jane Brown'. For this accomplishment he was presented with a gold watch by the Provost Pattison of Greenock, the Owner.

In the 'Book of Scotsmen' of 1880, he is noted as having 'commanded vessels from the Clyde to the St. Lawrence' and 'having had an extraordinary run home in 1865 from Amoy'. This latter accolade refers, no doubt, to the 1865 Tea Race, when Captain Mac Kinnon recorded the fastest passage home in that year, sailing from Foochow (not Amoy) on the 29th of June and arriving in the Downs on the 9th of October, an incredible passage of 102 days, that was faster than any of the other crack Clippers taking part, including such leading lights as 'Fiery Cross', 'Serica', 'Flying Spur', 'Belted Will', 'Black Prince', 'Young Lochinvar', 'Min', 'Eliza Shaw', 'Pakwan', 'Yangtze', and 'Ziba'. Without doubt, however, his claim to fame was the achievement as described in the main narrative, i.e. the 1866 Tea Race when his vessel 'Taeping' was first home after a passage run of 99 days from the Port of Foochow on China's East coast to the Port of London.

As a mark of his achievement of 1866, Donald Mac Kinnon was donated a piece of land on his native Island of Tiree, called 'A Chrannaig', at Heanish. Further research into this interesting and special family of Tiree is ongoing through the helpful assistance of current day descendants, and already a previously unknown event of significance which was held as being contributory if not responsible for the untimely death of the great Captain Donald Mac Kinnon, has come to light as a result of this, details of which are as follows :

Following his great achievement of 1866, Captain Donald Mac Kinnon returned to his native Island of Tiree where his wife and family awaited him. At the end of his well earned leave at home, and returning South on 27th of October 1866, he was crossing over from Tiree to Tobermory in Mull on the island steamer 'Chieftain's Bride', when the vessel was thrown over on her beam ends in a heavy sea when in a position about one and a half miles S.E. of the Island of Coll. Such was the panic amongst the crew of the steamer, that Captain Mac Kinnon took command. The first necessity was to lighten the ship, and this he did almost single-handed, throwing overboard 54 head of cattle and sheep, after which the vessel was able to be put back to the Isle of Coll for further lightening. The struggle in the wave-pounded vessel with maddened animals, however, had caused severe internal injuries to Captain Mac Kinnon, and although he continued South and took his ship 'Taeping' back out East again, he was not to survive to make any further record passages.

#### **The Fate of the Great Tea Clippers**

In 1869, 'Spindrift', under Captain Nutsford who had just joined her two days previously having transferred over from 'Windhover', was wrecked on the Kent coast due to error on the part of the second Mate and the Pilot.

In 1872, Captain Mac Kinnon's beautiful Clipper 'Taeping' was lost when she ran onto the Ladd Reef, on 26th of September, in the South China Sea, when on a voyage from Amoy to New York.

In 1872, the beautiful Steele fast Clipper 'Lahloo', due to the incompetence of her Mate, was lost when she piled up on Sandalwood Island of the 30th of July that year.

In that same year, 1872, the gallant 'Ariel' also met her end when outward bound, the general belief being that she must have been badly pooped and broached to, while running her easting down, with the loss of her entire complement.

The year 1872 also saw the loss of that other lovely Steele Clipper, 'Ellen Rodger', which was wrecked in the Java Seas.

In 1873, Captain Innes died, with all but one of his crew, in 'Serica', when she was wrecked on the Paracels in the Spring of that year.

In 1873, the 'Falcon' after some years trading on the west coast of South America after her tea trading days had ended, came home for re-classification and was found to be in bad condition and sank into obscurity. However, it is known that she was still afloat in 1887, under Austrian ownership and renamed 'Sophia Brailli'.

In the late 1870's, the 'Fiery Cross' was sold to Norwegian owners, and was still afloat around about the 1914.

In 1880, the 'Chinaman' was run down and sunk by a steamer in the Yangtze River.

In 1881, the 'Forward Ho' was wrecked.

In the early 1880's, precise year not verified, the 'Flying Spur' went shore on the Martin Vaz Rocks.

In 1882, the famous Pile Clipper 'Undine' of 1867 underwent a tragic experience when she was literally 'swept bare' by an abnormal wave taking her second Mate and the whole of his watch overboard. Captain Bristow, who had been in her since his apprenticeship, was found dead under her spare spars the following morning. Shortly after this tragedy the 'Undine' was sold to M. Ivetta of Ragusa and disappeared into oblivion from that time.

In 1883, the 'Taitsing' was lost off the coast of Zanzibar.

In 1889, the proud 'Fiery Cross' came to a sad end when she sank in the Medway, her cargo of coal having ignited setting the vessel alight and to her destruction.

The 'Min' was sold off to Hawaiian owners and sailed in the island trade for many years under the name 'W. B. Godfrey'.

The 'Black Prince' was lost in the Java Sea soon after her owners sold her, in the early 1870's.

The 'Windover' remained under the British flag to the end, trading mostly to Australia, however she was wrecked on the Australian coast around about 1888.

The 'Kaisow' also remained under the British flag until the end, but in late 1890 whilst on a passage from Valparaiso with a cargo of manganese ore for the United Kingdom, she was lost on the 15th of November that year after being struck by a heavy sea which hove her on her beam ends and shifted her cargo, only just giving her crew enough time to get one of her boats away before she filled and sank.

The 'Sir Lancelot' survived her sister-ship 'Ariel' by many years, experiencing a varied career until finally sold by her owners in 1886 to Visram Ibrahim of Bombay, and was engaged in trading the Indian Ocean very successfully until 1895, when she was sold to an Persian owner, and foundered on her first voyage under an Arab skipper in October of that year, ending the life of this most beautiful of ships.

The 'Norman Court' remained in the tea trade until 1880, although converted to a Barque in 1878. After that she was sold to a Glasgow firm for the Java trade, but on her homeward passage under her new owners she was a total loss when she went ashore at the back of Holyhead and broke up.

The 'Hallowe'en' of 1870, considered by many as the only other Clipper that could seriously rival those two great later Clippers, 'Thermopylae' and 'Cutty Sark', in speed, was lost on 17th of January 1887 when she ran ashore, near Salcombe, and became a total wreck.

The 'Leander' was still under the British flag in the 1890's, and was sold to Muscat owners in 1892, and went on to be lost by foundering in an almost identical manner to 'Sir Lancelot', under Arab crew again, and around about the same time and place of the 'Sir Lancelot' loss.

The 'Titania' survived many years in varied ownerships and services also, finally being broken up at Marseilles in 1910.

**APPENDIX 1**

**LIST OF BRITISH TEA CLIPPERS FROM 1850 THROUGH 1870**

YEAR	TONS	VESSELS	BUILDERS	OWNERS
1850	506	Stornoway	Hall of Aberdeen	Jardine, Matheson
1851	471	Chrysolite	Hall of Aberdeen	Taylor & Potter
1852	699	Challenger	Green of Blackwall	Lindsay
1853	938	Cairngorm	Hall of Aberdeen	Jardine, Matheson
1853	896	Northfleet	Northfleet	Duncan Dunbar
1853	770	Lord of the Isles	Scott of Greenock	Martin
1853	924	Crest of the Wave	Pile of Sunderland	Brice
1854	878	Spirit of the Age	Pile of Sunderland	T. Gibb & Company
1855	788	Fiery Cross (1)	Chaloner of Liverpool	J. Campbell
1855	576	Kate Carnie	Steele of Greenock	Rodger
1856	852	Robin Hood	Hall of Aberdeen	Beazley & Company
1856	952	Lammermuir	Pile of Sunderland	J. Willis
1857	662	Friar Tuck	Hall of Aberdeen	Beazley & Company
1858	585	Ellen Rodger	Steele of Greenock	Rodger
1858	497	Ziba	Hall of Aberdeen	J. Wade
1859	794	Falcon	Steele of Greenock	Shaw & Company
1860	695	Fiery Cross (2)	Chaloner of Liverpool	J. Campbell
1860	735	Flying Spur	Hall of Aberdeen	Jardine & Company
1860	846	Lord Macaulay	Hall of Sunderland	Brodie
1861	1012	Highflyer	R. & H. Green	R. & H. Green
1861	629	Min	Steele of Greenock	Rodger
1861	556	Kelso	Pile of Sunderland	J. Kelso
1861	834	Whinfall	Lamport	Lamport
1861	903	Silver Eagle	Portland Ship Company	Joseph Soames
1862	915	White Adder	Bilbe of London	J. Willis
1862	646	Guinevere	Steele of Greenock	J. MacCunn
1862	579	Counakyle	Hall of Aberdeen	Jamieson
1862	770	John Lidgett	Stephen of Glasgow	Lidgett
1862	794	Star of China	Hall of Aberdeen	Adanson
1862	550	Vigil	Vernon	Potter
1862	803	Burdwan	Brocklebank	T. & J. Brocklebank
1863	767	Taeping	Steele of Greenock	Rodger
1863	708	Serica	Steele of Greenock	Findlay
1863	812	Belted Will	Feel of Workington	Bushby
1863	696	Eliza Shaw	Stephen of Glasgow	Shaw, Maxton
1863	795	Pakwan	Peverill of Sunderland	Patton
1863	750	Black Prince	Hall of Aberdeen	Baring
1863	710	Fychow	Hall of Aberdeen	Dunbar
1863	904	Elizabeth Nicholson	Nicholson	Nicholson
1863	699	Dunkeld	Duthie of Aberdeen	Foley
1863	1126	Wild Deer	Connell of Glasgow	Albion Company
1863	775	Red Deer	Barr	Adamson

YEAR	TONS	VESSELS	BUILDERS	OWNERS
1863	644	Roslyn Castle	Connell of Glasgow	Skinner
1863	688	Yangtze	Hall of Aberdeen	Lewin
1864	816	Dilkhoosh	Major	Fleming
1864	624	Dilpussund	Langley	Fleming
1864	678	Douglas Castle	Connell of Glasgow	Skinner
1864	735	Gossamer	Stephen of Glasgow	Potter
1864	639	St. Andrew's Castle	Connell of Glasgow	Skinner
1864	657	Golden Spur	Ogier of Guemsey	G. T. Carrington
1865	852	Ariel	Steele of Greenock	Shaw, Maxton
1865	886	Sir Lancelot	Steele of Greenock	J. MacCunn
1865	815	Taitsing	Connell of Glasgow	Findlay
1865	668	Chinaman	Steele of Greenock	Park Brothers
1865	687	Ada	Hall of Aberdeen	J. Wade
1865	799	Maitland	Pile of Sunderland	J. Kelso
1865	844	J. R. Worcester	M. Inv. Company	Patton
1865	556	Fusiyama	Stephen of Glasgow	Killick
1865	693	Lennox Castle	Moore	Skinner
1866	879	Titania	Steele of Greenock	Shaw, Maxton
1866	967	Sir W. Wallace	Duthie	Tulloch
1866	623	Huntly Castle	Connell of Glasgow	Skinner
1866	700	Wemyss Castle	Connell of Glasgow	Skinner
1867	899	Spindrift	Connell of Glasgow	Findlay
1867	799	Lahloo	Steele of Greenock	Rodger
1867	883	Leander	Lawrie of Glasgow	Joseph Soames
1867	796	Undine	Pile of Sunderland	J. Kelso
1867	943	Forward Ho	Stephen of Glasgow	Catto
1867	799	Kinfauns Castle	Connell of Glasgow	Skinner
1868	948	Thermopylae	Hood of Aberdeen	George Thompson
1868	847	Windhover	Connell of Glasgow	Findlay
1868	795	Kaisow	Steele of Greenock	Killick
1868	836	Omba	Stephen of Glasgow	Killick
1868	879	Carrick Castle	Elder of Glasgow	Skinner
1869	921	Cutty Sark	Scott & Linton	J. Willis
1869	799	Wylo	Steele of Greenock	Killick
1869	834	Norman Court	Inglis of Glasgow	Baring
1869	914	Caliph	Hall of Aberdeen	Hector
1869	527	Osaka	Pile of Sunderland	Killick
1869	774	Erne	Connell of Glasgow	J. Wade
1869	887	Doune Castle	Elder of Glasgow	Skinner
1869	692	Ambassador	Walker of London	W. Lund
1870	918	Black Adder	Maudsley of London	J. Willis
1870	920	Hallowe'en	Maudsley of London	J. Willis
1870	794	Lothair	Walker	Killick

## APPENDIX 2

STEELE - A NOTABLE GREENOCK FAMILY OF SHIPBUILDERS

## STEELE - A NOTABLE GREENOCK FAMILY OF SHIPBUILDERS

The name of Steele bears an honoured place in the history of Shipbuilding in Scotland, having played an important part at an important time in the development of shipbuilding, taking in the change to steam from sail and to iron from wood. The four generations of the Steele family, all called Robert, whose genius and business acumen were respected by all who knew them, are profiled hereunder :

**Robert Steele (Primus)                      Born 1745    Died 1830    Aged 85 years**

The second son of James Steele, Burgess and Guild Brother of Ayr. Was engaged for some time on his own account in building fishing vessels and coasters at Saltcoats. On the death of his father, in the year 1786, he entered into a partnership with a John Carswell, and founded the firm known as Steele & Carswell. The original contract of partnership was dated 16th October 1786 and it is understood that this document was still in existence in 1914, together with the records giving the principal particulars of all the vessels built by the firm in Greenock from 1796 through until 1863.

In the year 1816, some 30 years after its formation, the partnership of Steele & Carswell was dissolved and the remaining Partner, Robert Steele, brought his sons into the firm, Robert (Secundus) and James, and changed the name of the firm to Robert Steele & Company. At this time, Henry Bell's famous 'Comet' was just a few years old, and already a few other steamships had begun to trade between Glasgow and Greenock, and between Greenock and ports in England and Ireland. From its inception, the firm of Robert Steele & Company commenced building steamships, and many of the finest steamships owned by Messrs G. & J. Burns, the Dublin Steam Packet Company, and the Isle of Man Steam Packet Company were constructed by Robert Steele & Company.

James Steele died on 16th May 1827 at the age of 52 years. His father, Robert Steele (Primus) died on 14th April 1830 at the age of 85 years. Thus, Robert Steele (Secundus) was left as sole Partner.

**Robert Steele (Secundus)                      Born 1791    Died 1879    Aged 87 years**

Born on 30th November 1791, entered the firm under his father at the age of 25 years, succeeded his father at the age of 39 years. The business continued to expand under his care, and in due course, he assumed as Partners his two eldest sons, Robert (Tertius) and William, the firm retaining its name.

From this time on, Robert Steele & Company built many large vessels, both steam and sail, including several of the earlier vessels for Cunard Line, J. & A. Allan, North German Lloyd, Donald Currie & Company, George Smith & Sons, and numerous other Owners. They were at that time, and for many years after, one of the most important shipyards on the Clyde, and their fine ships helped to make the port of Greenock famous in every part of the world.

Shortly after the new Partners were assumed, the firm acquired the Works of the Shaws Water Foundry and Engineering Company, and were thus able to take on the construction of engines and boilers for their own ships. At about this time also, and with the advent of iron as a material for the construction of ships' hulls, the firm opened a new yard for the construction of iron vessels, retaining the old original yard for building wooden ships and yachts.

Although immersed in the family business of shipbuilding, up to within a few months of his death, Robert Steele (Secundus) found time to devote himself to public work for at least 30 years, from about 1840 through to 1870. He was a Member of the Town Council and a Magistrate for 10 or 12 years, and was elected a Baillie on at least two occasions. He was one of the originators of the Victoria Harbour in Greenock, the construction of which he strongly advocated and supported. He was also one of the original promoters, a large shareholder, and a Director of the Shaws Water Company, remaining so until the Company's Works were taken over by the Water Trust.

Similarly, he was a promoter, large shareholder and Director of the Glasgow-Paisley-Greenock Railway, later to become the Greenock & Glasgow section of the Caledonian railway. He had similar interests in the Greenock Cotton Spinning Company. In addition to these interests, Robert Steele (Secundus) was a leading member of the Masonic body, and, acting as Provincial Grand Master of Renfrewshire, it was he who laid the foundation stone of the Garvel Dock.

Late in his life, Robert Steele (Secundus) toured through the United States of America and was much impressed by the progressive business methods employed successfully by the Americans. In 1877, when he had just reached the age of 86 years of age, the great esteem and respect felt for him by the community was reflected by the presentation to him of his portrait, in oils, painted by distinguished fellow-townsmen, Norman Macbeth. His interest in the working of his firm continued until practically the end of his long and strenuous life, having paid a visit to the yard within four months of his death on 4th July 1879, only a month away from his 88th birthday.

**Robert Steele (Tertius)                      Born 1821    Died 1890    Aged 69 years**

Along with his brother William, Robert Steele (Tertius) was educated at King William's College, Isle of Man, joining that school in the year of its opening, 1833. On leaving this school, he proceeded to Glasgow University, after which he travelled abroad for some time before taking up his duties within the family firm, under his father, at Greenock.

Although from this time on an extremely busy man, and of a somewhat retiring disposition, he did not confine his interests to his own pursuits and the management of the family business, but like his own father before him and with due sensitivity for his obligations to his fellow-townsmen, he found time to advance the interests of the community. He entered the Town Council in 1852, aged 31 years, was made a magistrate in 1859, aged 38 years, and after rendering some notable services retired from municipal life in 1861, aged 40 years.

Robert and William Steele were renowned for their fairhandedness and were revered by their workers. They were at the peak of their reputation in the earlier days of the firm when they were building the first vessels for Cunard Line, and later on when turning out their famous China Clippers. The firm was probably at its strongest in these days, when every worker was proud to be associated with the success of their firm. On the death of their father in 1879, Robert (Tertius) and William continued the business as before but within a few years, owing to financial losses which were unconnected with the shipbuilding side of the business, and in point of fact had been incurred in their father's lifetime, they began to find themselves in difficulties.

In 1883, the firm went into liquidation, and their last vessel, the sailing ship 'Inveruglas', was launched in September 1883. Robert Steele (Tertius) was 63 years of age at this time. Shortly after this, both Yards of Robert Steele & Company were taken over by Messrs Scott & Company and added to that Company's already extensive premises.

The eyesight of Robert Steele (Tertius), which had been gradually failing for some time before this, failed completely soon after this period and he became totally blind. This did not prevent him from going about as usual amongst his friends or depress his fine spirit, and his cheerfulness and patience with his great affliction was a constant wonder and source of admiration by those who knew him. Robert Steele (Tertius) died on 1st November 1890 - within a few months of his 70th birthday.

His brother and erstwhile Partner, William, who had been in charge of the Drawing Office in the Shipyard, and, as a designer, contributed largely to the high reputation of the firm, left Greenock about 1884 and took up residence in London. He was still living, and in good health, at the age of 92 years, in London, in 1914. This effectively ended the line and continuity of the Robert Steele Company and its contribution to maritime history, however, it does not quite finish there, as the son of Robert Steele (Tertius) continued the family connection with maritime matters.

**Robert Steele (Quartus)**

**Born 1859 Died 1913 Aged 53 years**

Robert Steele (Quartus) was born at Greenock on 28th November 1859, eldest son of Robert Steele (Tertius). He was educated at Mostyn House School, Cheshire, and at Merchiston Castle School in Edinburgh. In 1877, at the age of 18 years, he was apprenticed to his father's firm of Robert Steele & Company, where he worked his way through the various departments and trades. On completion of his apprenticeship, he became Assistant Manager. In 1885, at the age of 26 years, he went abroad for some time, and on his return to Scotland he was appointed Manager of Messrs Archibald MacMillan & Sons' shipyard at Dumbarton, another great shipbuilding firm, of which more later, from which position he was soon promoted to Managing Director.

In 1889, he left Dumbarton to settle down in London, and began practice there as a Consulting Engineer and Naval Architect. His name and reputation soon became widely known through his great technical ability, an extraordinary capacity for assimilating details, tireless energy, and unflinching tact with which he met and dealt with all difficulties.

He was always recognised by the Admiralty and Commercial & Arbitration Courts as a sound and reliable expert witness, counting amongst his clients the British Admiralty, Royal Mail Steam Packet Company, Atlantic Transport Company, Hamburg-Amerika Company, La Veloce of Genoa, Laeiz of Hamburg and numerous British and Foreign Underwriters.

He appeared as a technical witness in a large number of important Board of Trade inquiries, and gave evidence on the subject of watertight subdivision of Merchant ships before the Bulkhead Committee in 1913. He was also Consulting Engineer and Advisor to the South-Eastern and Chatham and Dover Railway Company, a Member of the Institution of Naval Architects, the Institution of Mechanical Engineers, and the Institute of Marine Engineers.

Robert Steele (Quartus) died on 2nd May 1913, at the early age of 53 years, due to pneumonia, following a short period of illness. His premature passing was much lamented by friends, peers, and the world of shipping. Many tributes were paid to this great man. He left behind an only son to continue the Steele name, also named Robert Steele, who, in 1914, the year after his father's death, was a student of Naval Architecture at Durham University.

The portraits of the four generations of Robert Steele's, who made this great name famous, were presented to Greenock's James Watt Memorial Technical School around about 1913 - 1914 and, as far as is known, are still in the possession of that College, viz :

Robert Steele (Primus)	1745 - 1830
Robert Steele (Secundus)	1791 - 1870
Robert Steele (Tertius)	1821 - 1890
Robert Steele (Quartus)	1859 - 1913

#### **Famous China Tea Clippers Built by Robert Steele & Company of Greenock**

1855	" Kate Carnie "	Captain Alexander Rodger & C. Carnie Esquire
1858	" Ellen Rodger "	Captain Alexander Rodger & C. Carnie Esquire
1859	" Falcon "	Phillips Shaw & Lowther
1861	" Min "	Alexander Rodger Esquire and Others
1862	" Guinevere "	John Mac Cunn Esquire and Others
1862	" King Arthur "	John Mac Cunn Esquire and Others
1863	" Serica "	James Findlay Esquire ( launched on 4th August )
1863	" Taeping "	Alexander Rodger Esquire ( launched on 24th December )
1865	" Chinaman "	Park Brothers
1865	" Ariel "	Shaw Lowther and Maxton (launched on 29th June )
1865	" Sir Lancelot "	John Mac Cunn Esquire ( launched on 27th July )
1866	" Titania "	Shaw Lowther and Maxton ( launched on 26th November )
1867	" Lahloo "	Alexander Rodger Esquire ( launched on 23rd July )
1868	" Kaisow "	Alexander Rodger Esquire
1869	" Wylo "	Killick, Martin and Company

**TRANSCRIPTION OF THE FUNERARY INSCRIPTION OF ROBERT STEELE GRAVE**

(The Old Cemetery : Greenock)

The following is an exact transcription of the original with all its idiosyncrasies of punctuation and abbreviations, and possibly one or two errors (currently under separate investigation and research) and it should be remembered that it is the work of several different monumental masons over years.

***Robert Steele shipbuilder in memory of Elizabeth Scott, his mother who died March 24, 1800, aged 50 years , and of his father Robert Steele, who died April 14, 1800, aged 85 years, also of his brother David Steele, who died February 1, 1808, aged 26 years, and of his brother James Steele who died May 16, 1827, aged 52 years, and of Margaret Cameron, wife of James Steele, who died January 15, 1820, aged 35 years, and of John Gray his cousin, who died May 19, 1850, in memory also of his own wife Margaret Elisa Reed, who died April 30 1855, aged 63 years, and of their own daughter Anne Jane Steele, who died November 21, 1834, aged eleven months, all of whom are interred here. Also of his sister Ann Steele, who died February 1, 1864, aged 82 years. Robert Steele, shipbuilder, born November 30th, 1791, died July 4th, 1879, also of Elizabeth Steele, daughter of James Steele and Margaret Cameron, who died March 17th 1898, aged 87 years.***

(There follows a space, and then below :)

***Forbes Glenny Simmons, 2nd daughter of Thomas Charles Simmons and May Pirie Simmons : died at Greenock 3d Feb. 1869, aged 29 years***