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THE SHIP THAT STROLLED THROUGH TOWN! The Duyfken passing along South Terrace, Fremantle, on Thursday 21 January 1999. See article by Nick Burningham on page 3. The Maritime Heritage Association Journal is the official newsletter of the Maritime Heritage Association of Western Australia, Incorporated.

All of the Association's incoming journals, newsletters, etc. are now archived at *Wooden Boat Works*, Slip Street, Fremantle Harbour, and are available to members on loan Please note that to access the videos, journals, library books, etc it is necessary to phone ahead on 9335 9477.

(If you have an unwanted collection of magazines of a maritime nature, then perhaps its time to let others enjoy reading it. Contact the Association; we may be interested in archiving the collection.)

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# EDITORIAL

I would like to refer members back to the articles on the cutter Mermaid in the March 1994 and June 1995 editions of this Journal. H.M. Cutter Mermaid was an extremely important vessel in Australian and Western Australian maritime history and was a prominent candidate for the building of a replica prior to the choosing of the Duyfken. The Duyfken was launched on 24 January 1999 and, although the work of construction is by no means finished, should another project be under consideration? The retention of the expertise and experience that went into the building of the Endeavour and which was kept alive by the Duyfken project is a very worthwhile consideration. Fremantle now has an international profile as a place of excellence with regard to historical sailing ship replicas. As the Duyfken project moves into its second stage, it is time for those of us interested in maritime heritage to give thought as to how the talents of the ship-building team could be employed in the future to maintain the fine reputation Western Australia currently enjoys.

Once again I am appealing for items for publication in the journal. As previously stated, this is *your* journal and it is meant to keep you informed but also for you to inform other members, to ask for information or even just to entertain with a story. The point has been reached where, unless I receive material from members, I will have to reduce the journal from twenty to sixteen pages.

In December last year the Abrolhos Islands Management Committee in conjunction with Fisheries WA published Fisheries Management Paper No. 117 – Management Of The Houtman Abrolhos System and Paper No. 120 – Management Plan For Sustainable Tourism At The Houtman Abrolhos Islands – Draft For Public Comment. Both these papers are available free from Fisheries WA and I would recommend that members obtain copies, read them and consider writing a submission. The Abrolhos Islands are part of this State's, and Australia/s, earliest European history. They are one of our most important maritime heritage sites and what happens to them in the future should be the concern of all who are interested in maritime history. Submissions close on 10 March 1999.

Ross Shardlow has written an article in response to my item on Captain James Cook's ships in the previous Journal. As Ross points out it seems as though my source of information was incorrect when Edward Cooke's engraving was identified as Captain James Cook's *Discovery*. It is very pleasing that our Association has members with such a high level of expertise that Ross has displayed and that the Journal can stimulate such debate.

Ross has also given us further information regarding visits by the American whaler *Charles W. Morgan* to these shores and of Nelson Cole Haley, the author of the book "Whale Hunt" reviewed in that Journal.

I am delighted to welcome responses from any members who can add further information to articles previously published.

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# **DUYFKEN'S LAUNCH AND RIVER PAGEANT**

#### DUYFKEN is floating proudly in Fremantle's Fishing Boat Harbour, open to visitors and undergoing fitting-out in preparation for sailing trials scheduled to start in May.

The Launching on 24th January was one of the high-points of more than a week of celebrations which opened on 18th January with public lectures at the University of Notre Dame delivered by Professor Geoffrey Bolton AO, Marit van Huystee and Nick Burningham.

In some ways the most spectacular event was the parade through the centre of Fremantle. DUYFKEN, accompanied by dancers, percussionists, a pipe band, mounted policeman, a *papier mache* sea dragon and thousands of people, was towed right through the centre of the city. She is not a large ship but she certainly **looked** big when she filled the "Cappuccino Strip" and towered over the crowds.

DUYFKEN halted in the middle of South Terrace where Fremantle City Mayor, Richard Utting, presented Michael Kailis, chairman of the DUYFKEN 1606 Replica Foundation, with the Fremantle Coat of Arms, carved from oak and brightly painted. (The coat of arms was carved by DUYFKEN's master carver Jenny Scrayen and painted by DUYFKEN artist, draftsman and co-designer Adriaan de Jong.)

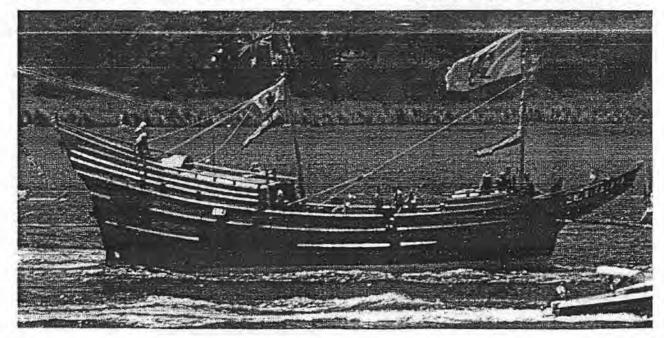
In return Michael Kailis presented to Mayor Utting a large glass container with turned oak top and base containing oak and maritime pine shavings from the ship's construction. This reflects a Southeast Asian custom in which shaving s from the ship's symbolic navel are kept at the owners home so that ship will know where to return to. The DUYFKEN shavings will be kept and displayed at Fremantle Town Hall.

DUYFKEN master shipwright, Bill Leonard, Michael Kailis and Richard utting all went up in a scissor lift to attach the coat of arms to the ship's stern. The mayor appeared nervous although no one had told him that Bill had never driven a scissor lift before.

The actual launching of DUYFKEN took place early on the morning of Sunday 24th January, scheduled so that it could go live-to-air around the country on Channel 7 before the Australian Open Tennis started over east. The ship had been under wraps in a large shed at Fremantle Boat Lifters. Giant orange curtains had been hand sewn for the portal of the shed to enhance the drama of the ceremony.

As the RAAF Roulettes formation flying team ended their display of mid-air collisions, to the amplified sound of a didgeridoo, played by James Webb, the curtains were drawn back revealing DUYFKEN hanging in the slings of a 250 tonne "TAMI Lifter". Slowly the TAMI lifter edged forward pushing the curtains aside. One of the bolt ropes sewn to strengthen the edges of the curtains caught in the hydraulic piping of the lifter and pulled a valve away. As the lifter manoeuvred towards the harbour a fantastic jet of hydraulic fluid sprayed out over the assembled VIPs including Premier Richard Court and his charming wife Jo.

Because of the loss of fluid pressure DUYFKEN slowly began to sink towards the concrete apron of the Boat Lifters yard. Shaun, the highly skilled lifter driver, tried desperately to get the ship to the water before she sagged to the ground and in his hurry mis-



DUYFKEN towing up the Swan river, Australia day 1999



judged the approach to the finger jetties. The TAMI lifter crashed into the harbour, holing and sinking the Michael Kailis's vintage motor-yacht MANATOBA, but fortunately DUYFKEN was largely unharmed and bobbed insouciantly on the fishing boat harbour while survivors were rescued and resuscitated.

Two days later, on Australia Day, DUYFKEN was towed up the Swan River to Perth Water for the annual Skyshow (Fireworks). The RAN's HMAS GERALDTON accompanied DUYFKEN to the first of the bridges and then requested permission to withdraw. There is less that half a metre clearance between DUYFKEN's stern and the highest span of the Old Fremantle Road Bridge — we had measured it several times but our hearts beat quickly as the stern approached the span.

On the tow up river many vintage yachts sailed in company. Army gunners were on board to fire salutes at regular intervals. During the Skyshow DUYFKEN was anchored right under the fireworks. Once again luck was with the ship and she escaped catching fire despite the hail of firework debris. On the return to Fremantle, with a following breeze DUYFKEN sailed past her tow approaching the old Fremantle Road Bridge.

While DUYFKEN is alongside in the Fishing Boat Harbour volunteer shipkeepers are required to keep watch on board over night. Shipkeepers keep an eye on chaffing gear and fenders, dissuade people from coming on board without permission and contact the police of any problem occurs. They are not expected to stay awake all night. Conditions on board are fairly simple, there is electrical power and camping matresses are provided. Shipkeeping provides a great opportunity to get to know DUYFKEN. If you are interested in volunteering as a shipkeeper, contact Nick Burningham on 9336 1606, 9430 6457 A/H.

# NIT-PICKING CURMUDGEON SPOILS A GOOD STORY

# by N.P. Curmudgeon

ONE OF EDITOR PETER WORSLEY'S contributions to the last Journal was an interesting piece which proposed that the first concrete-hulled vessels was built by the crew of a wrecked American ship SANTA ANNA castaway on Hog island in the Crozet island group in 1886.

It's not a good idea to quibble with the editor, but a number of things about the story made me suspect that it's not entirely true, although, as me old dad used to say "There's nowt stranger than truth".

It's not actually true that my father ever said that, but is there any truth on the Hog island concrete boat story? I sent a query to the excellent Maritime History Mailing List MARHST-L (an internet mailing list with very lively and informed correspondence on a wide range of topics).

Here follow some of the responses:

Sorry, but that's nearly 40 years too late. In 1849, Joseph Louis Lambot of France built a cement boat reinforced with wire mesh, patenting the work in 1855. Info dug up from a number of sources about 15 years ago when I wrote a series of articles on the history of reinforced concrete.

> John Snyder Sacramento, California

The probable source of the story is the autobiographical "Fourteen Years a Sailor" by John Kenlon (New York; George H. Doran Co. 1923) The author sailed in vessels he identifies as IRON CROSS, LADY DOWNSHIRE, and SANTA ANNA, and one unidentified four-masted ship. He says they wanted to take the concrete boat to Australia, but the ship that rescued them was not able to and it was abandoned to sink in the roaring forties. I do not know of any other witness to the event who left behind an account. Kenlon gave up the sea and became an official with either the police or fire department in New York City. (I have a copy of the book, but not at hand at the moment.)

Norman Brouwer

The names of the ships which Kenlon says he sailed on are the names of real ships that appear in Lloyds Register of Shipping, but some of the details are inconsistent with details of his book.

Iron Cross: built 1854, Scott, Greenock. Ship 1552 gross register tons

Lady Downshire: a steamer, 131 nett register tons. Santa Anna: 649 nett, registered in Naples

The ship Lough E which Kenlon says picked up the crew of the concrete vessel does not appear in the register. Perhaps Kenlon "Irishised" the name of the Scottish wool clipperLochee. But the Lochee doesn't seem to have come to Fremantle in 1886-7.

Aside from all that, my original concern was that a cement boat made of cement that was made by burning limesone would not be successful. For ferro-cement boat building you need Portland Cement which contains not only CaCO3 (calcium carbonate) but also alumino-silicates: ie clay. It might be that the limestone of Hog island contains the right admixture of alumino-silicates, as does the travertine limestone in the area of Rome — that's why the non-reinforced concrete structures of Rome, such as the Pantheon, have remained standing if they haven't been purposely destroyed. Cement made with just CaCO3 is relatively soft and soluble in water.

The Ditty Bag

An occasional collection of nautical trivia to inform, astound, amuse and inspire.



In 1832 the first export of wool from Western Australia was sent to Hobart on the schooner This- to this day and constitute possibly the oldest war tle. From there it was transhipped to England. The first direct shipment was 3 tonnes on the brig Hero owned by Mangles of London in 1835.

Apron: the sheet of lead which covered the vent of a gun when not in use. In 1813 the sizes were as follows:

Large - 1 ft x 10 inches, 8 lb 4 oz weight. Small - 6 inches x 41/2 inches, 1 lb 12 oz weight.

Cascabel or Cascable: originally the knob or 'button' at the rear end of a cannon, but later the whole part behind the base ring. In 1705 it was the knob only but by 1779 it was the whole rear.

One normally associates the term 'wooden walls' with the fighting ships of the times of Nelson or a little earlier. However the earliest use of the phrase I know of dates back to 480 BC. The Persians under the leadership of Xerxes attacked the Greeks and after beating the Spartans at the battle of Thermopylae advanced towards Athens. The Athenians consulted the oracle at Delphi. The response was that they should not defend their city, but to "forsake the land and rely on wooden walls." The entire population was shipped to the island of Salamis just offshore and the Persians burned and pillaged Athens. The subsequent sea battle of Salamis on 20 September 480 BC is one of the most famous sea battles of history. The Greeks in their "wooden walls" were victorious although they were outnumbered three to one.

An interesting side note is that when Athens was rebuilt and a new Parthenon erected some of the burnt stones from the old temple were set in the

wall facing the city for all to see. They are there memorial in the world.

## Royal Navy Shot Sizes, mid Eighteenth Century

1 lb. shot	1.923 in. diameter
2 lb. shot	2.423 in. diameter
3 lb. shot	2.793 in. diameter
4 lb. shot	3.053 in. diameter
6 lb. shot	3.494 in. diameter
9 lb. shot	4.000 in. diameter
12 lb. shot	4.403 in. diameter
18 lb. shot	5.040 in. diameter
24 lb. shot	5.546 in. diameter
32 lb. shot	6.106 in. diameter
36 lb. shot	6.350 in. diameter
42 lb. shot	6.684 in. diameter

The earth's oceans contain about 317 million cubic miles of water, 97.2% of all the water. The movement of this mass of water caused by the pull of the moon's gravity and known as tides actually slows down the rate that the earth spins on its axis.

Did you know that the fastest boat in the world, Australian Ken Warby's Spirit of Australia, is a wooden boat? Built of oregon and spruce framing with marine plywood planking she set a world water speed record of 511.11 km/h (317.68 mph) on Blowering Dam, NSW, in 1978. The hull planking is only 6.5 mm (1/4 inch), the deck 5 mm (3/16 inch) and the sponsons on which she rides are 16 mm (5/8 inch), all marine plywood. The engine is an RAAF surplus jet from a Lockheed Neptune that cost \$65! Her record still stands.

# **THE 'FLYING P-LINE'**

One of the famous sailing ship lines of the last 150 years was the Laeisz Line started by Ferdinand B Laeisz and then later run by his son Ferdinand Carl Laeisz. The names of their ships all started with the letter P. Because of the reliability and, particularly, the speed of these vessels the shipping firm was known by the sobriquet of the Flying P-Line.

The Laeisz business started in 1825 by selling silk hats in Hamburg and later expanded to other merchandise. The firm's shipping business commenced in 1856. Much of their market was overseas, particularly South America. Initially they purchased a 22 year old wooden schooner, the Sophie and Frederick. However in 1856 the first of their specially built ships was launched. She was the 140 foot barque Sophie, named after Ferdinand Carl Laeisz's new wife. Because of her mass of curly hair she was affectionately known as 'Pudel' (the German for poodle) and this nickname became attached to the ship. This was the start of the use of P for all their subsequent ships. This sort of practice is common among ship owners where all the ships' names may contain all or part of the owner's name, a particular word such as star or loch, etc. The Laeisz Line's house flag was white with the letters FL in red.

The P-Line concentrated initially on the vital nitrate trade between the various ports of the west coast of Chile and ports in Europe. The nitrate was required for both fertiliser for the expanding farming in Europe and also for the equally expanding munitions factories. The greatest hazard to the cargo was that of fire. The loose powder in 200 lb bags settled and packed down quite hard so there was very little chance of shifting cargo if the bags were stacked correctly in the first instance.

The ships of the P-Line were not clippers. They were built to carry the most cargo with the least crew in the fastest time consistent with safety. This type is now commonly referred to as a windjammer. Most of Laeisz's vessels were iron built with iron masts and iron or steel standing rigging. The majority were barques. The strength of iron enabled them to keep up maximum sail when the winds increased and thus maintain consistent high speeds. Although slower than the smaller and sleeker clippers the windjammers never the less set times between ports



Ferdinand B Laeisz

that rivalled those of the clippers. The ability of the ships, and particularly their rigging, to stand up to extreme winds went far in cancelling the difference in speed. Most were fitted with brace winches and steam powered capstans and winches to cut down as much as possible on the size of the crew required to operate the ships at the maximum efficiency.

Laeisz expected a great deal from his ships, their captains and the crews. His ships were required to make three round trips to the west coast of Chile every two years. It was not unusual for them to make four trips in two years. He kept a "black book" in which the points, good and bad, of all the officers were recorded. Officers were down graded or up graded depending on their performance and conduct. Any employee found drunk onboard ship was instantly dismissed. All orders to captains were in writing and were expected to be obeyed implicitly. Any repairs or replacements of equipment had to wait until the ship returned to Hamburg so that the costings could be personally supervised by Laeisz.

Many of the ships from the Laeisz Line have become well known over the years. These include the Pamir, Parma, Passat, Preussen, Padua and Peking. The Preussen is famous for being the only five-masted fully rigged ship ever built. She was a giant of a ship with a length of 433 feet on deck, a beam of 53 feet 6 inches and a loaded draught of 27 feet. The Preussen was built by Johann C Tecklenborg of Geestemunde and launched in 1902. Her displacement was 11,150 tons and she could carry 8,000 tons of cargo. She had a crew of 48. To assist the crew there were two steam boilers in a forward deck house. These powered the anchor windlass, cargo winches and power assistance to the steering system as well as bilge pumps capable of discharging 700 tons of water per hour. Her 59,000 square feet of canvas in 46 sails has been estimated to produce 6,000 horsepower driving the ship and her cargo at speeds up to 17 knots.

She was, however, sunk in the English Channel in November 1910 when she ran down the cross channel ferry, Brighton. Brighton had underestimated the speed of the Preussen and tried to cross in front of the ship. The resulting collision left the Preussen sinking and tugs were called. Despite valiant efforts the ship was dashed onto the cliffs at Dover and became a total wreck. She was Laeisz's sixty second vessel and her name was taken from a 1,761 ton ship he already owned which was then re-named Posen. This latter vessel became a total loss in 1909 when her crew abandoned the ship in mid-Atlantic after she caught fire. Her cargo included 500 crates of dynamite so the crew wisely decided not to stay and attempt to fight the fire !

Another large vessel owned by Laeisz Line was the *Potosi*. Launched in 1895 she was the biggest sailing ship ever built to that date and proved to be the line's most successful. She was also built by Tecklenborg but was a little smaller than the *Preussen* (4026 gross tons compared to *Preussen's* 5081) and was a 5 masted barque, the first 5master owned by the P-Line. Laeisz lost her to the

French in 1918 as part of Germany's war reparations but she was not actually re-commissioned until 1923 under the new name of *Flora*. Her greatest run over 24 hours was 378 nautical miles in 1900 and she once averaged 11.2 knots for 11 consecutive days.

Following the loss of the *Preussen F M* Laeisz & Co ordered two new vessels from Blohm and Voss. These were the *Peking* and the *Passat*. They were smaller than the *Preussen* being fourmasted barques of 3,180 tons with a length of 322 feet. The *Passat* was launched on 20 September 1911. She was also acquired by the French as was reparations, but because they did not want her, Laeisz was permitted to buy her back in January 1922.

The Pamir was launched on 29 July 1905 having also been built by Blohm and Voss. She was 316 feet long and of 2796 gross tons, 6565 tons displacement. With a beam of 46 feet she drew 23 feet 51/2 inches fully laden. The total sail area of her 31 sails was 36,853 square feet Like many of Laeisz's vessels she was a four-masted barque. The fore, main and mizzen masts were all 196 feet keel to truck At the conclusion of World War I she was assigned to Italy as reparation. Laeisz bought her back when the Italians decided they did not want her and she remained with that firm until 1931. In that year she was bought by Gustaf Erikson In 1941 she sailed from the Seychelles to New Zealand with 4380 tons of guano. She was seized in Wellington on 3 August 1941 as Finland was technically an enemy state. She served under the New Zealand flag from then until November 1948 when she was returned to her Finnish owners. She sailed to Europe but was not used and eventually sold to the ship breakers in March 1951.

The *Passat* was sold to the famous sailing ship owner Gustaf Erikson in 1932. When he died in 1947 she was charted for two years by the British Government. However when they announced their intention to convert her and the *Pamir* to steam it was pointed out that a clause in Erikson's will would not allow this. It was decided to send them to the breakers.



by the German shipowner Heinz Schleiwen. They were both laid up in 1953 but again a group of 40 German shipowners formed a consortium to keep the vessels in use. They remained in service until 1957 when great gales experienced by both vessels in almost identical positions caused the loss of the Pamir together with 80 of her 86 crew and almost sunk the Passat a few weeks later. The Passat is preserved at Travemunde in Germany as a museum Although most of the vessels owned by the Flying piece, a reminder of the great days of sail.

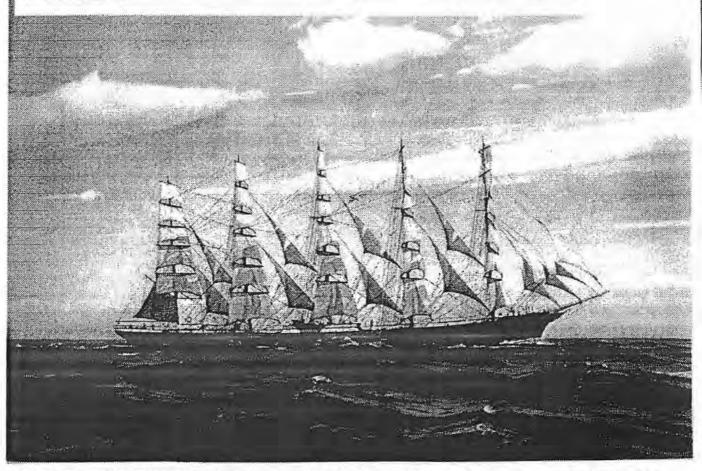
Another well known P Line vessel, the Padua, has the distinction of being the last steel four-masted barque built for commercial purposes. Designed and built by J C Tecklenborg at Wesermunde in Germany, she was launched on 24 June 1926 and 'cost considerably more to build than a steam vessel of comparable cargo capacity.' She was 342 feet long, 46.1 feet beam, 22.3 feet draught and of 3545 gross tons. Her displacement was 5725 tons and she caried 36,000 square feet of sail. At the end of World War II she became a war reparation from Germany to the Soviet Union who had seized her in Flensberg.

The ships were reprieved and put back into service The USSR renamed her Kruzenshtern and she was used by the USSR Fisheries Board as a training vessel originally based at Riga. She had a compliment of 236 which included 160 cadets. The barque was fitted with an 800 bhp 4 cylinder 2 stroke diesel engine. The Kruzenshtern was the winner of the first 'Cutty Sark Trophy which she won in the Tall Ships' Race of 1974.

> P Line are long gone many of their names are still remembered. There were some very famous ships in that fleet.

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The five-masted sailing ship Preussen owned by the Laeisz Shipping Line known as the Flying P Line. (From a painting by Cornelis de Vries)

# KIRKI



#### Monday 12.8.91

Beaut N.W. winter day, 20 knot easterly winds in the morning which ease to a light breeze by afternoon. The other tanker is here now, about 5 miles away, waiting for his big moment in a few days time when they are ready for him to attempt to berth alongside the Kirki. We run two surveyors over to the Flying Clipper and bring back an air winch for the Kirki deck crew to use to lift the submersible pumps in and out of the oil tanks. We run it over to the Kirki on our R5 rescue boat, it's very heavy but six of them manage to haul it up to their deck. We resume our patrol.

## Tuesday 13.8.91

Alongside the Kirki at first light. We give them 80 tonnes of pot water via our water discharge pump, plus they borrow a 50 tonne pelican hook, and more of our shackles. I have a long list of gear they have borrowed so far, we can't say no to them using our gear, the job must get priority. The Flying Clipper will make an attempt to berth alongside the Kirki today. At less than 4.5 knots the Flying Clipper looses steering, this is always a problem with large tankers and as the Lady Elizabeth only tows at 4.5 knots, even with all four of her engines going at full power, its not going to be at all easy to berth the two vessels. The wind is a good 25 knots from the South East when the Flying Clipper starts its long run in. Captain Brian Jones of the Clipper sounds confident he can do the job. "No worries" he says; we shall see. The trick is to get the two vessels on parallel headings and exactly matched speed wise. Then Captain Jones will manoeuvre his tanker close enough to the Kirki that lines can be thrown across from ship to ship and the two vessels secured while still going at 4.5 knots. Then when the two ships are finally secure the Flying Clipper will stop engines and hopefully the two tankers will then be under tow by the Lady Elizabeth and they can start to transfer some of the oil cargo. Least that's the plan. However by the time speeds were matched and the two ships were only 100 metres apart it was getting near dusk so for safety's sake it was decided to abort the mooring until the next day. To separate the two vessels at this late stage took some fine big ship handling by Captain Jones. He first had to steer towards the Kirki, much to their consternation. As soon as his stern was moving away from the Kirki, he reversed his helm and then got his bow to move away too, then he could slowly pull away from near the Kirki and allow his blood pressure to return to normal!! We continue through the night in our rescue role with the R5 rescue craft swung out for instant use. One of the big fenders tried to get away during the evening. We go in close to shine our spotlight on the scene as it is secured again by the Kirki's deck crew. The Lady Elizabeth tows the Kirki to the West overnight so as to have the maximum run towards the East in the morning for the next berthing attempt.

#### Wednesday 14.8.91

Ship berthing day. The easterly wind is blowing at 10 to 15 knots at sun-up, this usually means 25 to 30 knot easterlies by midday, its clear and sunny though. The Flying Clipper makes a shorter run in at dawn. By 1130 the two tankers are 100 meters apart and finally their speeds are matched, the Flying Clipper having to drop speed by one revolution of her shaft at a time to produce the necessary slight reduction of speed. The wind is gusting 25 to 30 knots which is not helping at all.

The giant fenders are leaping up out of the water like corks threatening to leap up on the Kirki's deck at any moment in the short seas rushing down the ships side. At 1230 hrs the first heaving lines are thrown



across, its an all hands on deck job for the two tankers. By 1245 hrs the first of many mooring lines are pulled across. The chafe factor will be critical for the next few days so time spent now getting the ropes in the right places will save heaps of strife later on. With so much difference between the tanker in sea ballast and the loaded vessel in the way they heave to the seas, its not long before the cry goes up 'lines carried away'. More lines are passed plus a few heavy wires to try to beef up the mooring. Eventually they have 20 lines 'criss-crossing' between the two tankers. That's as many as they can safely tie on their bollards. Then the decision is made to slowly stop the engines on the Clipper. A few more lines part but finally the two tankers are both under slow tow by the Lady Elizabeth. One of the large fenders breaks loose while all this was going on. It was swept down between the two hulls but a freak wave lifted it right out of the water and landed it on the Kirki's deck. Luckily no one was underneath it when it landed! Things do not look good for a safe oil transfer operation, at least until the wind moderates. Its politically unacceptable to go closer to land for more shelter from the easterlies but at one stage it looked like that was the only option remaining. When I came up on watch at 2400 hrs the good news was that oil was flowing into the Flying Clippers oil cargo tanks at 1000m<sup>3</sup> an hour. We continue our patrol of the two mile safety circle. The smoking light is out while we are close to the tankers. During oil transfer operations no helicopters can hover over the Kirki either so it looks like they will have to use our back deck to lower passengers and freight down tomorrow.

#### Thursday 15.8.91

Transfer of oil continues at a slightly reduced rate, 950 m3 an hour. 21000 m3 transferred by 1500 hours. Three passengers lifted off our deck by a hovering helicopter. One feels very exposed standing under the hovering chopper while we fit people in to the lifting harness. Seven Fijian seamen come down from the chopper, later we transfer them to the Kirki in our R5 rescue launch. A much needed infusion of fresh blood for the Kirki's deck crew. Seas and swell still 2 metres from the east but the wind only got to 20 knots so maybe the high pressure system responsible for the east winds is slowly moving away to the east. We are released to town at midnight, arriving off the M.O.F. wharf Dampier at 0430 to drop the anchor and wait for berthing at 0800.

#### Friday 16.8.91

Berth alongside M.O.F. wharf at 0800 hours. The new crew arrive at 0830 having got up to go to the airport at 0400 hours. I know the feeling. Hans Skidzun is back as master and the infamous Harry Ford is extra mate. We may be back on the tow shortly, that's why the extra mate is here. We load more drinking water, some soft drinks for the Kirki, a spreader bar to back load the flexible hose pipes and 50 more sacks of Kitty Litter. They must think we run a cats home up here or something! Two more surveyors come with us at 1400 when we depart. They will go to the Kirki tomorrow after breakfast. Another beaut sunset as we make our way out to the tankers. Apparently there is a lot of upper atmosphere dust about at the moment from that volcano in the Philippines. It certainly makes for spectacular evening light shows.

#### Saturday 17.8.91

Out at the ship to ship transfer site at dawn the Kirki's broken forward end is now well out of the water. We go in close in our rescue boat to show the surveyors the gaping holes in the bulkhead. The interior of No 1 centre tank can be seen, rusty but spotlessly clean after three weeks of salt water washing in and out. No sign of fire damage from sea level. It must have been burning like a giant blow torch, no blistered paint work or melted steel. After we passed 28 more 25 kilo sacks of Kitty Litter up to the Kirki's deck three of the divers came down into the rescue boat. They wanted to do a dive at the bow of the Kirki to try and shut two valves which had been left open by the Greeks. We tied up between the two tankers where it was relatively calm and Paul the senior diver went over the side with a Hookah air line to attempt the closure. The mood was sombre in the boat as we had heard that morning of the sinking of the D.B. 29 Crane Barge off Hong Kong in a typhoon. Four divers had been in a de-compression chamber when she went down. One of them was from W.A. and known to us. Unless they can recover the chamber today the four divers will asphyxiate, a terrible tragedy. After 30 minutes Paul climbed back Into the boat having successfully shut the valves.

Oil cargo continues round the clock with delays while sea water ballast is taken in to maintain the trim of the two ships. The two hulls are about level now but soon the Flying Clipper will be lower in the water than the Kirki as the oil transfer reaches its climax. More stress cracks have been discovered in the Kirki's hull just forward of amidships. The surveyors are fixing ladders and stageing down the hull side so a closer inspection can be made. Apparently a lot of bulk carriers develop these cracks over time. They are just welded up at the next convenient time, maybe not soon enough in the case of the Kirki's bow! No news yet who has the major tow to Singapore. A.O.S. Smit towage and Total Marine have all put in bids.

A

## Sunday 18.8.91

Oil transfer continues in light S.E. winds. We continue in our safety rescue mode, transferring materials and personnel as required. Our rescue boat gets a badly needed service, the radio and electrics generally have taken a soaking. They are really not up to the kind of treatment they have been getting out in the bad weather. Some improvements could be made in the area of general watertightness. Another beaut sunset only spoilt for me by the long plume of smoke haze coming from the direction of the Harriet gas platform away to the south. This area used to have the clearest skies before the coming of the oil boom around Barrow Island. At night it seemed like the whole heavens were literally full of stars. Hopefully the Environmental Protection Authority will keep a close eye on levels of atmospheric pollution in this region.

#### Monday 19.8.91

0500 hours 'Cargo Transfer Completed'. That's 67000m3 of oil, 2000m3 of heavy bunker oil and the slops from the partial emptying of the Kirki's slop tanks. All worth a conservative 11 million dollars Australian. The salvagers lawyers must be rubbing their hands in anticipation of long and expensive litigation when the final claim for salvage money goes before the court. Who gets what will not be known for two or three years!

When the hoses were disconnected the Flying Clipper was ready to let go. All lines were singled up. The Pacific Chieftain connected up a tow line to the Kirki's starboard bow. We took some weight on the tow, then all the lines connecting the two tankers were let go and the Flying Clipper slowly moved ahead and out to starboard. Just at the moment when the two bridges were abeam of each other, the Kirki's safety valve on her steam boilers lifted. Clouds of smoke issued from her smoke stack and her Engineers had an exciting 5 minutes down in her engine room. Much to everyone's surprise, the valve reseated itself too, thus a systems shut down was avoided. It was only a coincidence that it happened at that moment but it was certainly a spectacular farewell to the Flying Clipper as she departed for the Kwinana oil terminal South of Perth. The Lady Elizabeth was finally to be released from the tow to go and crew change.

We backed up to her stern and they pulled our tow wire up on their deck. They disconnected their tow wire from the main tow wire and connected the Pacific Chieftain's tow wire in its place. She then pulled away leaving us to continue the steady patrol along the boundary line until she returns in a couple of days. It would seem that A.O.S. (our business rival) has got the contract for the tow to Singapore after all. Best of luck to them, after all a lot can happen on a two week tow, especially with the Kirki in her present condition. The Kirki continues to yaw from side to side even at only 3 knots but there seems to be no extra strain on the tow wire.

### Tuesday 20.8.91

The second perfect winters day in a row. Now we don't really need it the weather has turned perfect. Light winds, clear sky, smooth seas, what more can one ask for! The Lady Elizabeth comes alongside us for a change, we pass the last of our deck cargo to her, mostly the divers' gear. Then she ties up to the port side of the Kirki to start backloading all the salvage gear for return to Dampier. At least when we brought it out all the equipment was clean! I don't envy the Lady Liz this cargo at all. Most of it is now covered in oil and grease. Plus she has to pull the fenders up over her stern roller with all that cargo already on deck. She's in for a very busy day one way or another.



Pacific Chieftain continues on tow altering course as required to give the Lady Elizabeth the best lee possible while she is backlaoding. At 1100 hours salvors on Kirki report Lloyds form number 9 now complete and vessel is secure and retuned to the Greek owners. This means the salvage of the Kirki has been successfully carried out, a mighty effort by all concerned. The Lady Elizabeth departs at 2400 hours with a fully laden deck. Even the giant fenders have been hauled on board. She heads for Dampier to offload, crew change and replace her 3000 feet of tow wire which she damaged while manoeuvring with the Kirki on the tow. We continue four hour watches on the bridge though with only one vessel on the tow we set our own courses, which is much more relaxing. The weather remains fine and clear.

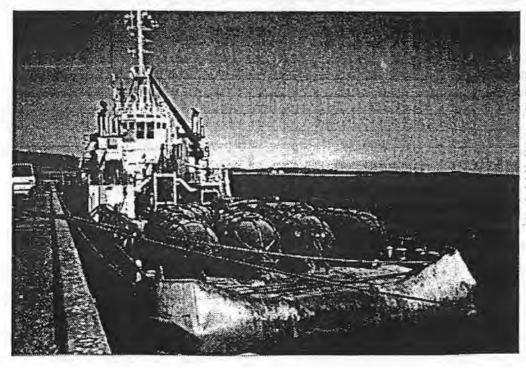
#### Wednesday 21.8.91

Pacific Chieftain continues on towing the Kirki. 18 miles from Bare Rock, just outside Dampier, we can see the top of Rosemary Island. The weather is so good, flat calm almost, we have a small flotilla of runabouts out on a day trip from Dampier. Later on the sail training barquentine S.T.S. Leeuwin comes steaming in for a closer look. Her sails are up but in the light airs she needs her engines on to overtake us, even though we are only steaming at 3 knots. We hear on the radio Lady Elizabeth will be out at 2000 hours tomorrow when we will be released from the tow and she will connect up for the long haul to Singapore. It looks like we will lay up again in Dampier. All the crew will stay on so they must have more work for her soon. Myself and the extra engineer will fly home. For how long no one knows.

#### Thursday 22.8.91

The last day on the Kirki job. During the day the crew continue to clean up the ship after the excitement of the past few weeks. The weather is fine again making up for the lousy spell of heavy seas we had last week. The Lady Elizabeth sails at 1830 hours and arrives on location at 2200. After she passes some final stores up to the Kirki, they gas axe the tow chain up on the Kirki aft deck and we haul in all the wire and the length of tow chain. We strip off the heavy chain and flake the 200 feet of 63mm dia wire on to the back of our deck. Then we go in under the stern of the Kirki and pass the end of the wire up to them. After some minor dramas (the wire socket would not go through their fairlead) they finally managed to pull all the wire off our deck. After giving them a final 40 tonnes of potable water we are released to town with fond farewells from David Hancocks and all the salvors. It will take only three hours to get to Dampier where we will load more water tomorrow and then go out to Parker Point to get covered in Iron Ore dust at the lay up anchorage.

So much for the Singapore Run job and the trip to the U.K.



Aft deck of *Pacific Chieftain* showing large Yokohama fenders weighing 2.5 tonnes each. They cost \$40000 each to fly in from Singapore. The *Pacific Chieftain* is 60 metres in length, has a beam of 13 metres and draught of 5.93 metres. Her two engines produce a total of 6000 bhp giving an economical speed of 11 knots and a full speed of 13 knots.

# A Short History of Diving

## Part 3

This is the third article in the series by Jill Worsley. It was not part of the initial plan because everybody has read The Silent World. Then she realised that perhaps only people of her generation had read this classic account of the development of modern SCUBA diving, and there may be quite a few readers who are of a younger generation not familiar with developments immediately post-war.

have considered priceless.

device that was to revolutionise the exploration of the ble, thus minimising the pressure difference. oceans and open their depths to the individual diver. The Aqua-Lung transformed the old-fashioned diver, Cousteau had obtained from the occupation authoriwith his cumbersome copper helmet and weighted ties a permit to shoot cultural films in the Mediterraboots, into a man-fish who could glide at will beneath nean, and he now used this as a blind for his clandesthe water."

Before the war Cousteau and his friends had initiated of Bandol in June 1943. the new pastime of spear-fishing for pleasure This was a different approach from the dives of previous "As soon as the box arrived, Cousteau rushed it to the centuries, which had been undertaken in order for Villa Barry where Tailliez and Dumas were waiting. men to work underwater. Of course, if one can enjoy "No children ever opened a Christmas present with one's work, so much the better. But diving in the more excitement Than we did when we unpacked the 1930s was becoming a leisure pursuit.

war. He was working for Naval Intelligence against pressed air linked to an air-regulator the size of an the Axis powers occupying France, and in this capac- alarm clock. From the regulator there extended two ity brought together several of his old diving mates to tubes, joining onto a mouthpiece. With this equiptry out equipment designed by engineer Emile Gag- ment harnessed to the back, a watertight glass mask nan. Gagnan had invented a small bakelite demand over the eyes and nose, and rubber foot fins, we invalve to feed cooking gas into the motors of automo- tended to make unencumbered flights in the depths of biles, as petrol was in very short supply. He and the sea.' Cousteau made the first marine dive using Cousteau quickly developed this demand valve into the Aqua-Lung. the first efficient diving regulator. In theory it worked well. In practice it was a failure when tried Over the next few months Tailliez, Dumas and in the Marne River near Paris. Most of the air bub- Cousteau made 500 dives to depths of between 50 bled wastefully from the regulator, and when and 100 feet. By October they were ready to test the Cousteau dived head-first downwards, a normal limits. Dumas was the chosen man. He was to sub-

"In the summer of 1943, at the height of World War method of descent, he could get almost no air at all. II, a man waded into the Mediterranean off the coast Gagnan and Cousteau quickly realised the problem. of France. The cove in which he waded was shel- The exhaust and intake outlets of the experimental tered from the eyes of the occupying Axis troops and regulator were 15 cm apart. When Cousteau was he had chosen it for that reason. Strapped to his back standing or swimming horizontally, the exhaust was was a strange apparatus that the enemy armies would above ot at the same level as the inlet. But when he swam downwards, the exhaust was 15 cm lower than the inlet. The tiny difference in pressure blocked the The man's name was Jacques- Yves Cousteau. The inflow of air. They redesigned the regulator so that equipment on his back was the first Aqua-Lung - a the exhaust and inlet were as close together as possi-

> tine tests of the new equipment. Philippe Tailliez and Frederic "Didi" Dumas joined him at the village

first Aqua-Lung,' says Cousteau, describing the moment in his book The Silent World. 'We found an as-There was not much leisure for Cousteau during the sembly of three moderate-sized cylinders of com-

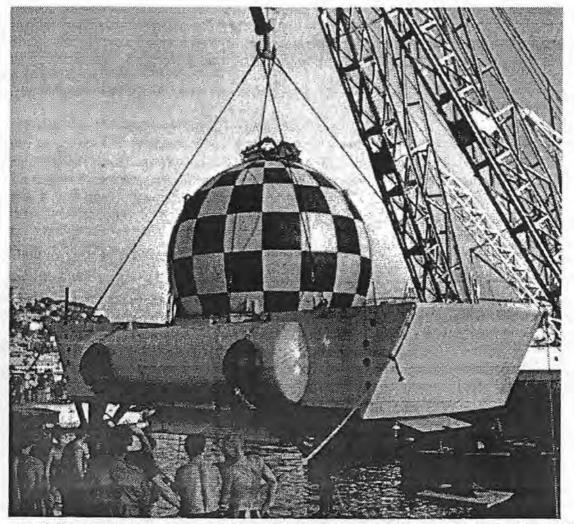
merge, heavily weighted, along a rope knotted at regular intervals which hung to the seabed 240 feet below. At the greatest depth he could achieve, he was to tie off his weights and then ascend.

"....I cannot see clearly. Either the sun is going down quickly or my eyes are weak. I reach the hundred foot knot. My body doesn't feel weak but I keep panting. The damned rope doesn't hang straight. It slants off into the yellow soup..... I am anxious about that line, but I really feel wonderful. I have a queer feeling of beatitude. I am drunk and carefree. My ears buzz and my mouth tastes bitter. The current staggers me as though I had had too many drinks."

"I have forgotten Jacques and the people in the boats. My eyes are tired. I lower myself farther, trying to think about the bottom, but I can't. I am going to sleep, but I can't fall asleep in such dizziness. There is a little light around me. I reach for the next knot and miss it. I reach again and tie my belt on it."

"Coming up is merry as a bubble....The drunken sensation vanishes. I am sober and infuriated to have missed my goal. I pass Jacques and hurry on up. I am told I was down seven minutes."

Dumas thought he had gone down to the 100 foot level, but his belt was tied off at 210 feet. He had been the first man to experience the 'rapture of the deep.' This confused feeling of both elation and lethargy is caused by nitrogen narcosis, and is the reason why modern deep divers use a helium/oxygen mix rather than compressed air, which is primarily a nitrogen/oxygen mix.



Conshelf Three in Nice Harbour ready for its first underwater test off Monaco. The chequered steel sphere rests on a chassis holding 77 tons of ballast. Six people lived inside 328 feet under the sea breathing a helium/ oxygen mixture.



using compressed air but Fargues, another team member, lost his life after descending to 396 feet.

In 1949 Cousteau took command of the research vessel Calypso and began the modern era of oceanographic research. He developed the underwater television camera and later a diving saucer, a two man submarine propelled by water jets and with outside mechanical arms.

By 1962 his team had built and were using Conshelf I, the first underwater habitat. This was a cylinder 17 feet long and 8 feet in diameter anchored at 33 feet. Albert Falco and Claude Wesley lived in it for a week, using it as a home base and going out each day through an open hatchway in the bottom to work on the sea floor. Man could now both live and work underwater.

Six months later, Conshelf II was ready for occupation in the Red Sea. It consisted of five interconnected cylinders set in a starfish shape and anchored at 39 feet. In this five men lived for a month, while supporting a smaller cylinder which housed two men for a week at a depth of 90 feet.

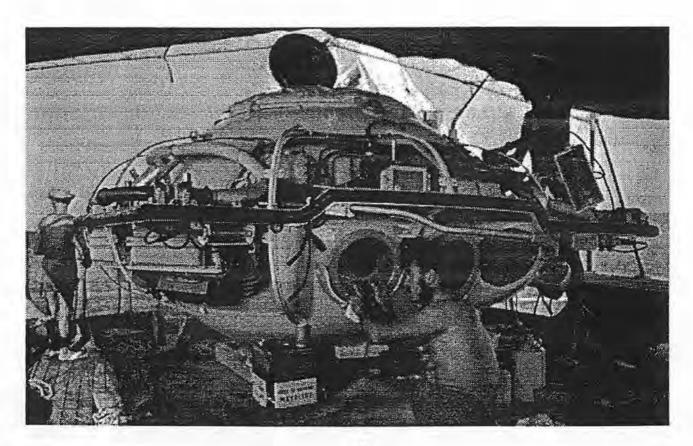
Cousteau felt that the greatest risk to men living and working at depth was through their "umbilical

By 1947, Cousteau had pushed the limit to 297 feet cord," that group of slender cables and pipes that reached from the submerged cylinder to the surface. Conshelf III was therefore designed to be totally self-contained, with help only to be called for in dire emergency. It was a sphere 18 feet in diameter resting on a 28 foot chassis that held 77 tons of ballast. The six divers to live and work from it at a depth of 330 feet were pressurised in a helium/oxygen mix before descent. For three weeks they practised working on deep-water oil rig maintenance, proving that oil could be won from even greater depths.

> The dream of an underwater city is yet to materialise. General Electrics hoped to start construction of such a city in 1980, but cold economics has been a barrier. Perhaps if the station currently under construction in space is a success, it will re-vitalise plans for a living city under the sea.

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# H.M.Sloop DISCOVERY or H.M.Sloop DISCOVERY?

I read with interest Peter Worsley's informative article on "Captain James Cook's Ships" (MHA Journal Vol. 9, N°4, Dec 98). My attention was drawn to the cover illustration of the prison hulk *Discovery*, reputed to being the vessel that accompanied Cook on his third voyage to the South Seas, certainly most authorities credit it as such. However, the illustration is inscribed "Drawn & Etched by Edw. W. Cooke, 1828", yet "Cook's" *Discovery*\* was reported to have been broken up 31 years earlier in 1797! I believe the engraving almost certainly represents a vessel of even greater significance to Western Australians for it is most likely Vancouver's *Discovery*; a different vessel altogether and the one from which Vancouver, in 1791, took formal possession of Western Australia - even if he had no authority to do so at the time!

Let us take a closer look at the two ships:

# H.M.Sloop DISCOVERY (Cook)

1774	Built as the collier Diligence by George and Nathaniel Langborne of Whitby.
	Built for Mr. William Herbert of Scarborough.
	295 tons (other sources give 229, 299).
	Rig: brig
	91'5" x 27'5" x 11'5" DOH.
1775	Purchased by the Admiralty, converted from brig to ship rig, armed with eight 4 pounders plus swivels. The smallest of Cook's four ships and the only one not built by Fishburn.
	Renamed Discovery, complement 70.
1776-80	Captain Charles Clerke.
	Consort to Cook's <i>Resolution</i> for the third voyage of exploration to the South Seas. Clerke died on the voyage in 1779. Command given to Lieut. James King.
	Note. On this voyage one of the midshipman was George Vancouver, previously an AB or Resolution (1772-75).
1700	Resolution (1772-75).

on

- 1780 Naval depot ship.
- 1781 Sold out of service.
- 1797 Broken up.

# H.M.Sloop DISCOVERY (Vancouver)

1789	Built as a merchantman by Randall of Rotherhithe.
	Purchased by the Admiralty while still on the stocks.
	330 65/94 tons, 337 builders measure.
	Rig: ship
	99'2" x 28'10~" x 12'4" DOH.
	Ten 4 pounders and ten swivels.
	Complement 97.
1791-95	Captain George Vancouver.
	With H.M. armed tender Chatham as consort, sailed on
	a voyage of exploration to the North Pacific, South Seas and S.W. Australia.
1799	Converted to a bomb vessel.

\* Captain Clerke was actually in command of Discovery but I shall refer to her as Cook's Discovery for convenience.

1818 Converted to a convoy ship.
- Converted to a prison hulk, Deptford.
1834 February, broken up at Deptford.

With Vancouver's *Discovery* following in the wake of Cook's *Discovery*, both searching for the elusive North West Passage; and with Vancouver serving in both vessels, it was inevitable that there would be confusion.

# Other Evidence

There are paintings of Cook's *Discovery* by J. Webber and W. Ellis though they tend to be rather obscure. The famous marine artist, John Cleveley painted a clearer representation but, unlike the others, did not actually accompany Cook on his third voyage - he worked from sketches given to him by his younger brother James who was a carpenter aboard the *Resolution* and also known to be an artist.

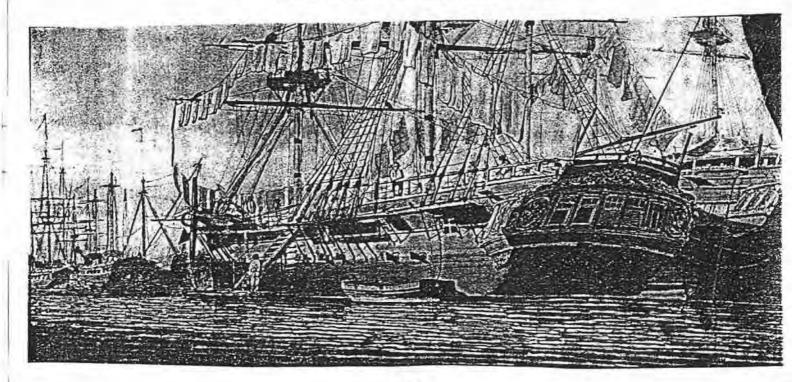
Cleveley clearly shows Cook's *Discovery* with stern windows and a quarter badge (similar to *Endeav-our*) while E.W. Cooke's engraving of the convict hulk shows quarter galleries. If the artwork is accurate, this would suggest two different vessels.

There is, however, another painting titled "Discovery on the Thames", also attributed to J.Cleveley and presumed to represent Cook's Discovery. This also shows quarter galleries as in Cooke's engraving. If the artist is John Cleveley then it would have to be Cook's Discovery for John Cleveley died at the age of 39 in 1786, three years before Vancouver's Discovery was built!

It could, of course, be by James Cleveley, not his brother John, and therefore could be Vancouver's Discovery!

Ross Shardlow February 1999

> The Discovery lying in the Thames. Painting by J. Cleveley. From a photograph given to the Whitby Museum by Mr. Foster.



# **Cook's Ships**

# Here is the second part of Ross Shardlow's informative article on Captain James Cook's ships

In response to Peter Worsley's request for information on *Resolution* and *Adventure*, the following is an account of their fates:

## H.M.Sloop RESOLUTION

1770	Built as the collier Marquis of Granby by Thomas Fishburn of Whitby.
· .	Built for Captain William Hammond of Hull.
÷	462 tons Ship rigged.
	110' 8" x 30' 5½" x 13' 1½"
1771	Purchased by the Admiralty, refitted and renamed Drake, then Resolution.
	Complement 112.
1772-75	Captain James Cook - second voyage in company with Adventure.
1776-80	Captain James Cook - third voyage in company with Discovery,
1781	Fitted out as an armed transport, took troops to the East Indies.
1782	9 June, captured by the French under Admiral Suffren, foundered on capture

(presumably to stop the vessel falling into enemy hands!).

### H.M.Sloop ADVENTURE

1770	Built as the collier Marquis of Rockingham by Thomas Fishburn of Whitby.
	Built for Captain William Hammond of Hull.
	336 tons. Ship rigged.
	97' 3" x 28' 4½" x 12' 8¾" DOH.

- 1771 Purchased by the Admiralty, refitted and renamed *Raleigh*, then *Adventure*. Complement 81.
- 1772-74 Lieut. Tobias Furneaux support vessel on Cook's second voyage. Returned a year before Cook.
- 1783 Sold out of service to Mr Brown of Hull.
- Sold to Messrs. Appleton & Trattles of Whitby.
- 1810 Refitted at Langborne's yard, Whitby. Traded across the Atlantic.
- 1811 May 24, wrecked in the Gulf of St.Lawrence.

We can also add two more vessels to Peter's "Cook's List of Shipping".

Between the *Three Brothers* and *Friendship*, Cook joined the *Mary*, as seaman, on October 5, 1750, for the Baltic run to St.Petersburg. She was built in Whitby in 1747 for John Wilkinson, eventually being lost in 1762-3.

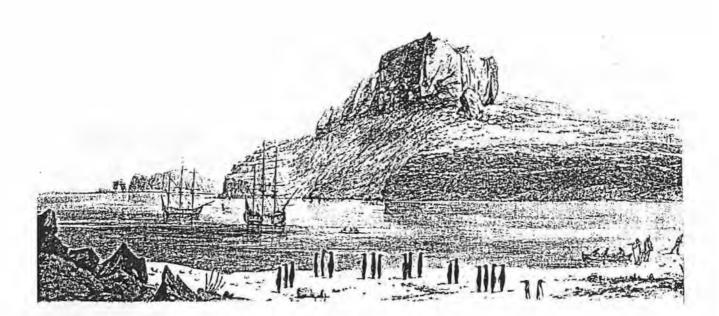
The other vessel was *Solebay* which Cook joined between his time on *Eagle* and *Pembroke*. This was Cook's first appointment as Master in the Navy. Based at Leith, the two month voyage was a patrol off

Scotland, the Shetlands and Orkneys, searching for smugglers and those having "treasonable intercourse" with the French.

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#### Ross Shardlow - 1999



The Resolution and the Discovery at Kerguelen Island in the southern Indian Ocean, December 1776. Does anyone know who painted this picture which hangs in the British Library, London?

### **NELSON COLE HALEY & THE 'CHARLES W. MORGAN' - FURTHER NOTES**

In the MHA Journal Vol. 9, N°4, Dec 98, it was reported that the Charles W. Morgan, Captain Samson, called at Two Peoples Bay in late 1849.

This was, in fact, Morgan's second visit to Two Peoples Bay. On her previous voyage, also under Captain Samson, she called at Two Peoples Bay for wood and water from 10 - 22 November 1845. She was on her way to the South Pacific for a whaling cruise having departed from New Bedford June 10, 1845 and returned December 9, 1848.

She was also known to be whaling off the Rowley Shoals on her first voyage 1841 - 45. There are no records of her over having called at Fremantle.

There is another West Australian link with Nelson Cole Haley, the author of Whale Hunt - albeit a thin one. In 1864, Haley married the daughter of retired whaling captain Robert Milroy Brown. Brown's wife was Charlotte Heppingstone, daughter of Robert and Ann Heppingstone, who had come out to Western Australia in 1830 to settle at Augusta and later moved to the Vasse.

Robert Brown married Charlotte Heppingstone at Groton, Connecticut in 1842. They met on board ship in 1840 when Charlotte was on her way from Western Australia to Scotland to improve her education. Robert, an American whaleman, was second mate on the ship. In 1850, Robert (now captain), Charlotte and their three children, sailed from Connecticut on the whaler North Star calling at the Vasse for two weeks to catch up with the family before sailing on to the Okhotsk Sea (off the Siberian coast), where Charlotte gave birth to their fourth child Mary. They eventually settled in Honolulu in October 1851, and had three more children. It was in Honolulu that Nelson Cole Haley married their daughter (also called Charlotte) on March 17, 1864.

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