

MARITIME HERITAGE ASSOCIATION JOURNAL

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Maritime Heritage Association, Inc.*

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Ross Shardlow and Ray Miller inspecting the 32' ex-naval cutter Albatross at Wooden Boat Works



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 with Ross Shardlow who may be contacted on 9361 0170, and are available to members on loan. Please note that to access the videos, journals, library books, etc it is necessary to phone ahead.

(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 have an apology to make. Readers will have noticed that the instalments of Ray Miller's autobiography lacked a little continuity. This is entirely my fault (with a great deal of help from my computer). I had published the March journal and had the June edition started on my computer, including Ray's story of his time spent up north and his work on the *Watt Leggatt*. Then my computer broke down just before I went on holidays for five weeks. On my return I had to get a new computer. I presumed everything on the old computer was lost. On the new computer I did a new June journal but accidentally missed out on Ray's northern episode. My son has recently managed to retrieve files off the old hard drive, and I realised that this vital episode in Ray's life had not been included in the new journal. It will appear as an article in its own right in the December edition. (God willing and the creeks don't rise!).

I have had disputes with computers in the past, but that is all behind me now. The following poem explains why everything will be perfect from here on:

Spelling Chequer!

I have a spelling chequer,
It came with my pea sea.
It plainly marques four my revue
Miss steaks eye cannot sea.

When eye strike a quay, right a word,
I weight four it two say
Weather eye am wrung oar wright
It shows me strait a weigh.

As soon as a mist ache is maid
I nose bee fore two late
And eye can put the error rite –
It's rarely, rarely grate.

I've run this poem threw it,
I'm shore your pleased two no.
Its letter perfect in it's weigh,
My chequer tolled me sew.





Presidential Tidings

Tidings: from the Old English Tidung meaning news and information. (Ed.)

Greetings to all,
How time flies, I have now been on the beach for two years and still have no regrets for the decision to walk down the gangway for the last time. I still manage to keep in touch with the old comrades through the magic of the internet and if I was really keen to know their whereabouts I could always check WWW.sailwx.info This site is great for tracking vessels on a six hourly basis, wherever in the world they are, also tornadoes, cyclones and other severe weather patterns. Another part of the site tracks the tall ships and has links to other sites to do with maritime history. Unfortunately the LEEUWIN is not a part of the project so she is not being tracked.

For those that are really interested a great site is Mystic Seaport, Massachussetts, U.S.A. This mu-

seum's library is busy putting hundreds and hundreds of historical books on line by digitally photographing them page by page. Everything from ship's logs, American Shipping Registers, Ship Masters Medical Guides; charts; and other books that can keep one interested for hours and all free to read and download.

As for myself, nothing much is happening as usual, I have finished the research on the whaling books and they are at the publishers being fine tuned, or whatever. Another project is slowly taking shape, however, there is no rush and so I am just taking it easy, researching here and there when the mood takes me.

Rod Dickson.

Missing Person

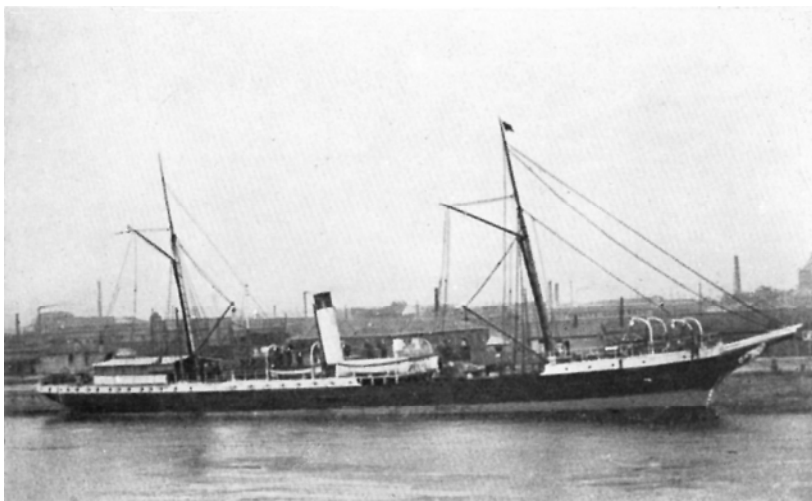
Does anyone know who the Julia Percy was after whom at least two vessels were named?

Julia Percy: A 101-ton brig, owned by Thacker & Co. of Sydney in 1849. Ownership shown as Robert Towns (of R. Towns & Co., Sydney) in 1850-55, then owned by Captain James Paddon, also of Sydney. The *Julia Percy* was used in the sandalwood trade between various Pacific islands, Sydney and China. There appears to have been considerable business rivalry between these

owners.

Julia Percy: A 496-ton, iron steamer, built in Glasgow in 1876 for the Warnambool Steam Packet Co. Ltd. Sold to Western Steam Navigation Co. Ltd. of Melbourne in 1886. At this time a rebuild resulted in an increase in tonnage to 580. Sold to Howard Smith Ltd. of Melbourne in 1896 then to J.T. Bell & Co. in 1903. The latter company used the vessel for the Fremantle to Geraldton mail run. In 1906 she was sold to the Melbourne Steamship Co. Ltd. who renamed her *Leeuwin* and used her on the Fremantle to Esperance run. Hulked in 1910 she was finally scuttled off Port Phillip Heads in 1934.

Who was Julia Percy after whom these vessels were named?



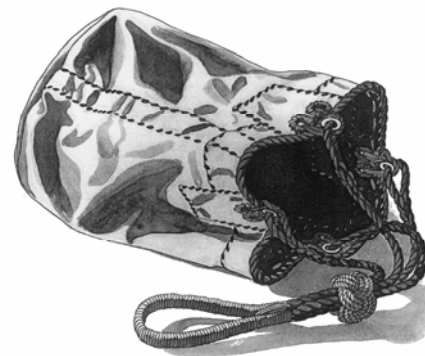
The 496-ton , iron steamer Julia



The Ditty Bag

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

(The inspiration could take the form of contributions to this page!)



The *Amity*, which brought the first settlers to Albany in 1826, was wrecked in 1845 when she struck a sand spit near Flinders Island in Bass Strait. The ten crew were all saved. The brig had been built in Canada in 1816, and came to Australia in 1823 after regularly trading across the Atlantic to Britain.

The first successful shipment of frozen meat from Australia to England was landed from the SS *Strathleven* at London on 2 February 1880. The shipping firm was McIlwraith McEacharn & Co. Besides beef, mutton and lamb, the 40 tons of frozen food also included butter.

Gromet or Grummet. A word commonly used now in the surfing scene for younger, and possibly less experienced, surfers. The original meaning was a youth or servant in the Royal Navy, ranking above ship's boys but below ordinary seamen. They formed a regular part of a ship's company until the 18th century. After that they were rated as 2nd class volunteers.

Grommet. A ring formed by a single strand of rope laid up three times round its own part. It had many different uses including fastening a sail to a stay, forming strops on blocks and holding oars to thole pins.

The only successful mutiny on board a convict ship was that on the *Lady Shore* in 1797. Bound from Gravesend for New South Wales she was seized by her military guard who sailed her to South America. Some of the soldiers of the New South Wales Corps who mutinied were French, from a captured French corvette, and Irish deserters. Trouble had broken out even before the vessel left English shores.

Emigrants to Western Australia in the early years of the colony were able to obtain grants of land in proportion to the amount of capital which they had

invested. Until December 1830 this was 40 acres for every £3 of capital invested. After that date the amount of land was halved to 20 acres for the same investment. In 1832 this system was abandoned in favour of the land being sold to settlers at a fixed price, initially 5/- per acre.

The census of Western Australia taken on 1 July 1832 showed approximately 1500 people in the colony. Aborigines were not counted. The first death is noted as John Parsons, a seaman from HMS *Challenger*, who died on Garden Island through "the falling of a tree" in June 1829.

The first book on sports diving appeared in 1938. Written by Guy Gilpatric it was called *The Compleat Goggler*, published by Dodd, Mead & Co., Inc., New York.

The oceans hold about 317 million cubic miles of water. This is 97.2% of all the water on earth.

The Battle of Trafalgar on 21 October 1805 resulted in the deaths of 448 British and 4,408 French and Spanish seamen, and the wounding of 1,241 British and 2,545 French and Spanish.

In 1917 a British destroyer was built from the bow section of HMS *Zulu* (her stern was blown off by a mine) and the stern section of HMS *Nubian* (her bows had been severely damaged by a torpedo). This composite vessel was named HMS *Zubian*.

Lancelin Island was named by Thomas Nicolas Baudin in 1801 in honour of P.F. Lancelin, a scientific writer and author of the *World Map of Sciences*.

Partners. The framework which strengthens the the deck around the hole through which the mast or capstan spindle passes.



Award Winning Model

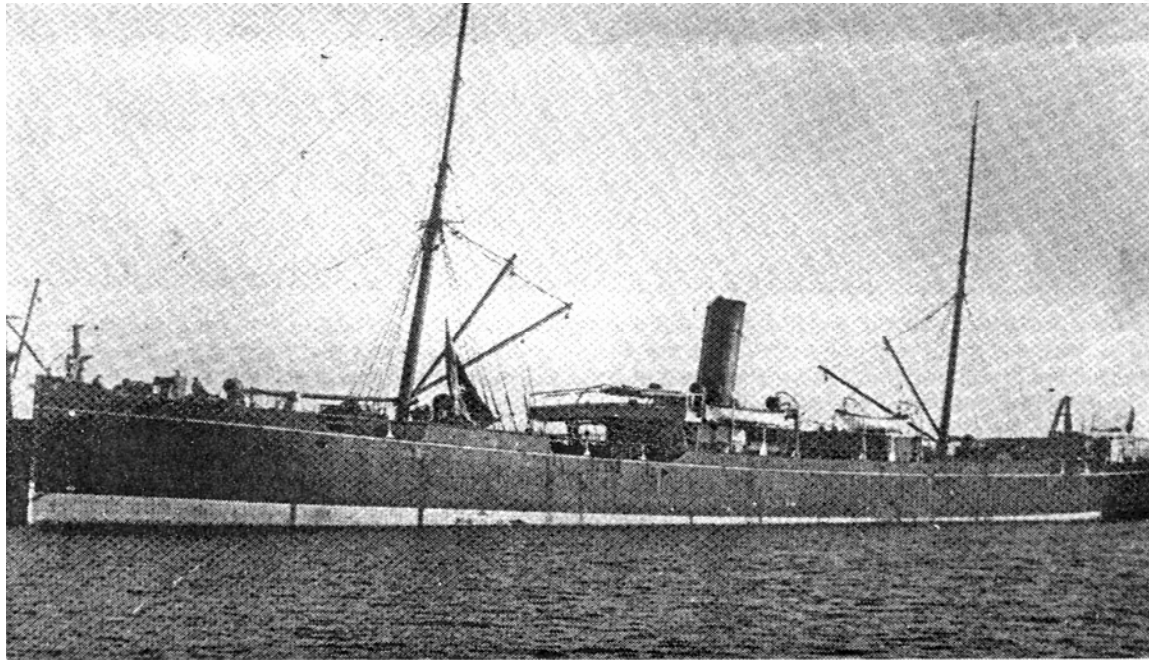
Brian Lemon sent these photographs of one of his early models.



I made this model of a 46' (46") Cray Boat in 1976. It is of course radio-controlled. It was modelled on a boat that worked out of Two Rocks at the time. In 1977 the Australian Model Power Boat Championships were held at Lake Leschenaultia over three days. I won the Australian Championships for Scale Model Sailing with this model.

Brian Lemon

Well done Brian!



*The State Ship
Kwinana*

Cutter *Albatross* Inspection

On 7 July 2005 a team of MHA members gathered at Wooden Boat Works to inspect the cutter *Albatross*. The members included Ray Miller, Mike and Mary Igglesden, Ross and Barbara Shardlow, Brian and Irene Lemon, Rod Dickson, Barry Hicks, and Peter and Jill Worsley.

It is believed that this is the only cutter of its type in Australia, and as such it has considerable historical significance here. Mike Revely believes there are some examples left in the UK.

The cutter is an ex-Royal Australian Navy 32' cutter, owned at one period by the Sea Scouts. After they no longer required it the Navy stored it on Garden Island. Later it was transferred to Wooden Boat Works for possible restoration, but has now lain idle and neglected for some considerable time. Wooden Boat Works now require the space, so the Maritime Heritage Association was asked if it would like to have the craft for conservation and/or restoration. The alternative appeared to be that *Albatross* would be destroyed to clear the floor space required by Wooden Boat Works.

The *Albatross* was examined by Ray Miller, assisted by various "experts", who agreed that the work involved (as well as the cost) to bring the cutter either to land-based museum exhibition standard or to the level required for sailing would be prohibitive in both time and money for such a small organisation. Most of the ribs would need replacing, there was rot in many places including keel, stem and transom, and most thwarts and their knees were missing. Many of the planks were split. The condition of the washstrake and gunwhale could not be ascertained due to a covering of plywood fastened over them. The cutter weighs well over 2 tons and would require a considerable amount of undercover space to protect it from further deterioration while work was being carried out.

Barry Hicks felt that *Albatross* should be saved and has offered, along with his son Robin, to take it away and place it under cover. His intention is to preserve it with cosmetic repairs and painting. In this form the vessel will retain a fair degree of integrity and so make a presentable, static display instead of meeting the ignominious fate of being broken up and burnt.



Ships of the State Shipping Service

Number four in the series by Jeff Thompson of the Fremantle Branch of the World Ship Society. The article is reprinted with their permission.

No. 4 *Kwinana* Official Number: 101707

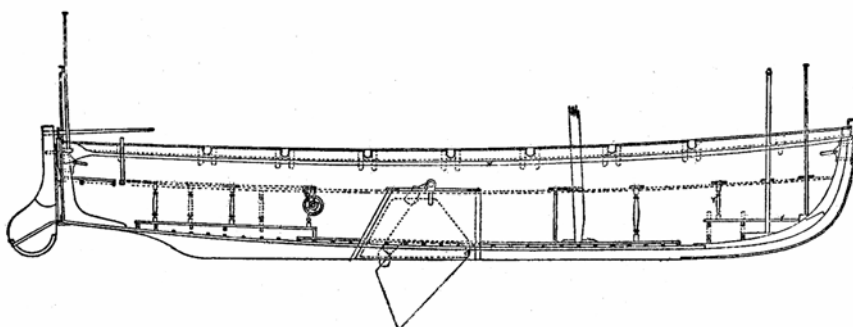
A fourth and final acquisition in 1912 was made for The State Steamship Service in the purchase of the vessel *Darius* for service to North West ports. It became their first ship to enter the northern ports as the *Western Australia* had not arrived yet from overseas to commence trade. The vessel was especially designed for the overseas trade of the Melbourne based Currie Line and in particular the carrying of horses and general cargo between Australia and Calcutta. After enquiries were made in early 1912 regarding the purchase of ships for local Western Australian service the *Darius* was offered by the owners. The ship was duly inspected by the S. S. S. and then purchased for the sum of nineteen thousand pounds, with delivery from Newcastle with a full cargo of coal for the Western Australian Government Railways. It had been intended to rename vessel *Kimberley* but as this name was already listed on Lloyds Register it was changed to *Kwinana*.

The *Darius* was purchased from Archibald Currie & Co (Currie Line) of Melbourne on 14th June 1912 having been built by William Doxford and Sons Ltd, Sunderland, England in 1892. She was 3,295 gross registered tons, 2,873 deadweight tons, 103.7 metres overall, 13.1 metres breadth, with a coal fired triple expansion engine with a single screw. She was constructed with a steel hull and was schooner rigged.

After a special christening ceremony held on board on the 15th July 1912 the *Kwinana* left Fremantle the next day on her maiden voyage to North-West ports. She proved very successful in

service and made several overseas voyages to New Zealand, South Africa and China. On a voyage north on the 25th December 1920 it was reported that a coal bunker were smouldering. It was attended to immediately and was thought to be extinguished when the ship arrived at Denham there was a further outbreak. The *Kwinana* then proceeded to Carnarvon where shore assistance was sought to quell the fire. The fire was not completely extinguished until the 5th January 1921. Temporary repairs were then made to allow the ship to return to Fremantle under her own steam later that month. However an industrial dispute arose with the crew and these were signed off and a new crew was sent by rail from Fremantle to Geraldton and then by sea to Carnarvon. On the 25th March the *Kwinana* left Carnarvon with the *Kurnalpi* as escort arriving at Fremantle on 28th March where she then collided with the *Port Stephens* and had to be berthed. After being at No. 9 North Wharf for several months being dismantled of all fittings not destroyed by fire she was towed to Careening Bay, Garden Island on 9th December 1921. During a storm on 29th May 1922 the deregistered ship broke her moorings and ran aground 3 miles north of Rockingham on the mainland. There the wreck remained deteriorating until blown up on 2nd May 1941 with some of the hull remaining for many years later.

Upon development the surrounding area became known as Kwinana in honour of this early State ship.



32' naval cutter



Scurvy

A few notes to add to previous items on this disease, which was so dreaded by sailors for many hundreds of years

The benefits of the juice of citrus fruits against the dreaded sickness of scurvy had been known for nearly two hundred years before James Cook made his celebrated voyage to view the transit of Venus. Francis Drake and Richard Hawkins in the 16th century were aware of the antiscorbutic properties of lemon and orange juice. Sir James Lancaster at the beginning of the 17th century also recognised the importance of these juices. Leading a flotilla of East India Company ships to the Spice Islands in 1601 the crew of his own ship did not succumb to scurvy, while those of the accompanying vessels were hard hit. Cook's voyage is renowned for not only the claiming of the east coast of Australia for England, but also for the fact that he also did not lose a sailor to scurvy. While Lancaster recognised that the juice of the lemon was the best antiscorbutic, Cook favoured wort of malt. Wort has, at best, only a trace of vitamin C and is virtually worthless in either preventing or curing scurvy. The juice of citrus fruits became the main preventative against scurvy – but how was it preserved and carried aboard vessels two hundred years ago? The fruit by itself will not last the months or years required on some of the voyages.

One of the earliest methods was 'rob of lemon'. This was a concentrated juice made by placing it in a jar that was then placed in to a container of water and slowly heated. This concentrated the juice until it was the 'consistency of oil'. What James Lind called in 1753 'inspissated' juice or 'rob' was then bottled and corked and would keep

for several years. It was in fact similar to present day bottling practices. The important point that Lind made was that the temperature of the juice must not be allowed to boil. Boiling of course destroys the vitamin C. Although high in vitamin C when first made, the 'rob' lost some of this goodness when stored. During the *Endeavour's* voyage from Tahiti towards Australia in 1769 Joseph Banks used his own small quantity of 'rob' when he began, as did the rest of the crew, to feel the early effects of scurvy. The crew were mainly issued sauerkraut, a very mediocre source of vitamin C.

Another method of preservation introduced around 1795 was placing the juice in a barrel then overlaying it with a layer of olive oil. While not a perfect preservative it did allow the vitamin C content to remain high enough to be beneficial. Lemons could also be preserved by salting them then wrapping in paper, or by pickling in sea water or olive oil. It was in 1795 that Gilbert Blane convinced the Royal Navy to issue a daily ration of lemon juice. Although initially supplied on demand the daily issue became standard on all ships in 1799. During the years 1795-1814 over 1.6 million gallons of lemon juice was issued to Royal Navy ships, most of it coming from Malta. From 30% of Royal Navy sailors hospitalised by scurvy in 1782 the figure had dropped to 2% by 1799.

The Revenge of the Junior Officer

The port of Moudros on the Greek island of Lemnos (or Limnos) has four uniquely named hills on the headland on the western side of the entrance to the bay. Royal Navy Lieutenant Lockyer was busy surveying this area in 1883 and urgently wanted a particular weekend off. However his senior officer, Captain Alvin Coote Corry, refused his request and made him complete the harbour survey that weekend. Captain Corry was a stern disciplinarian, noted for the number of courts martial that he held. However Lieutenant Lockyer had revenge – a very long lasting revenge. He named the four hills Yam, Yrroc, Eb and Denmad. The key to the revenge is to read the words backwards.



Spar Gauges

Readers will remember the article by Tony Duvollet on Shipwrighting Tools in the March 2005 journal where Tony could not remember the measurements for setting out the marking gauge pins. Tony has now found an illustration that shows such a gauge and the measurements for the pins. In fact this gauge has two pairs of pins, one pair for eight siding and the other for sixteen siding. The accompanying text states:

It has two sets of sharply pointed nails – a long outer pair and a shorter inner pair – and two angled, inward-facing cuts, one at each end. Push it along a square spar, and the long nails automatically scribe the lines for eight-siding. Repeat the process after you've eight-sided your spar, and the two shorter nails will scribe it for sixteen-siding.

The measurements are: 6" between the 'jaws', $1\frac{3}{4}$ " from 'jaw' to long nail and $2\frac{13}{32}$ " from 'jaw' to smaller, inner nail. Tony has converted these measurements to metric as follows: 152.4mm, 44.5mm and 61.1mm respectively. The origin of the drawing is a book entitled *Small Boat Building* by Dave Gannaway, Nautical Publishing Co. (UK) 1976.

My copy of *Boatbuilding* by Howard I Chapelle states:

Old-time spar makers used a folding (one-joint) two-foot rule. This was opened, and, with both ends tangent to the outside edges of the timber, and the rule along the station line, dots were made at the 7" and 17" divisions. This, repeated around the stick, divided the section there into an octagon.

His alternative is to draw an octagon on the butt of the timber and use the measurements obtained to

construct a gauge.

I have a copy of *Boatbuilding Guide* by Arthur N. Swinfield. This 1962 book is published by the South Pacific Commission and the two volumes (one of text and one of drawings) was intended to be a guide to trainees attending the boatbuilding course run at Malaita in the Solomon Islands. The course was conducted by the South Pacific Commission and the Bureau of Technical Operations of the United Nations. It states:

At any convenient position measure twelve inches diagonally across the square spare. Then along this line measure $3\frac{1}{2}$ inches from each end of the line. These points represent the edges of a chamfer, or flat, which if planed truly on each of the four edges will produce an eight-sided or octagonal spar.

See the drawing Fig 125.

Jack Gardiner settled the matter by giving me three spar gauges of differing sizes which he had made. The one thing in common with all of them is that the distance between the 'jaws' is 12" and the distance in from each 'jaw' to the nail is $3\frac{1}{2}$ ", or any measurements which are proportional to these e.g. 6" and $1\frac{3}{4}$ ", etc. As you can see these are the measurements stated by the article from Tony and the Chapelle and Swinfield books.

Anybody who wishes to contribute more to this discussion, please send your thoughts to me for inclusion in a future journal.





Test Your Knowledge

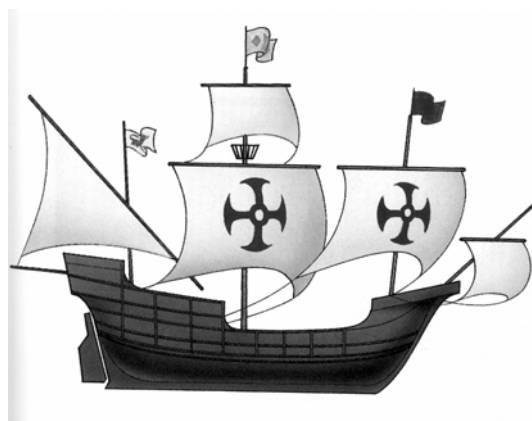
Can you recognise these typical and/or famous vessels, and give them an approximate date?

Really clever people will be able to give the actual names of seven of them.

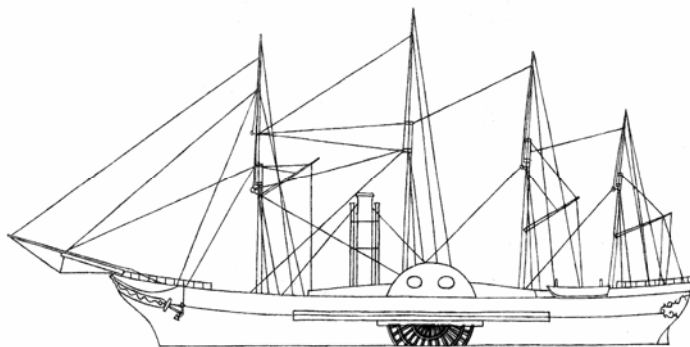
(Answers on back page – but don't cheat!)



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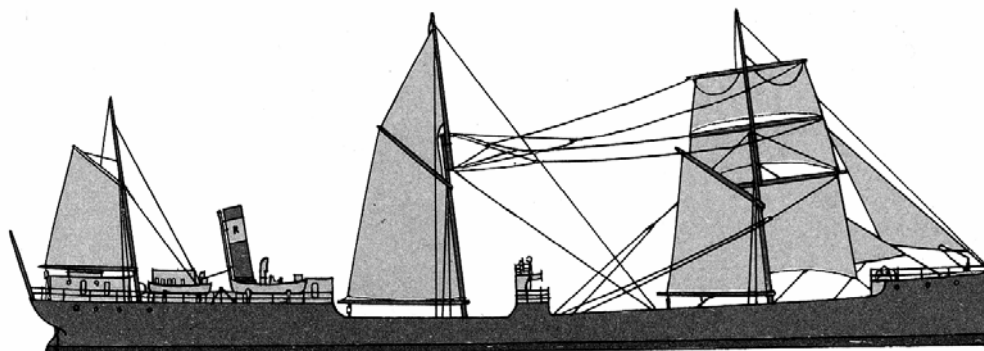
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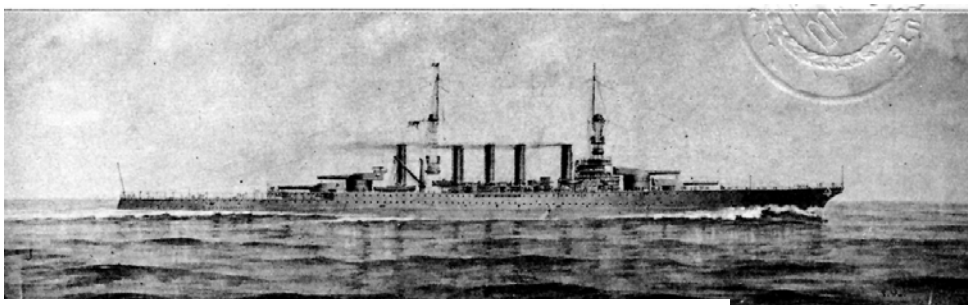
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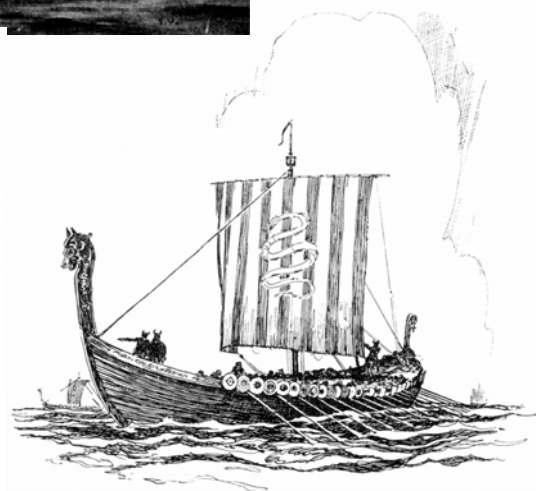
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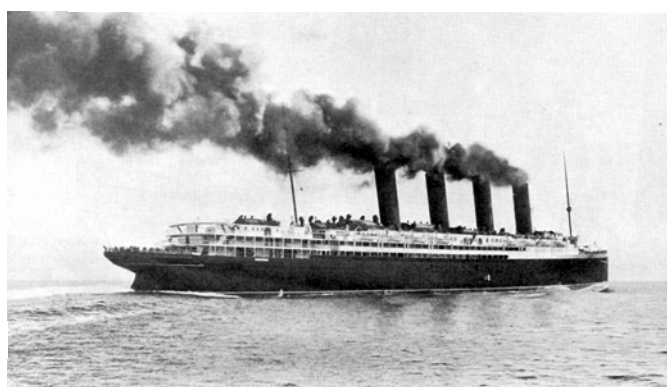
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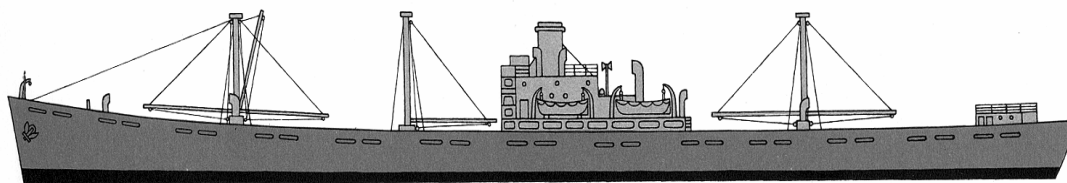
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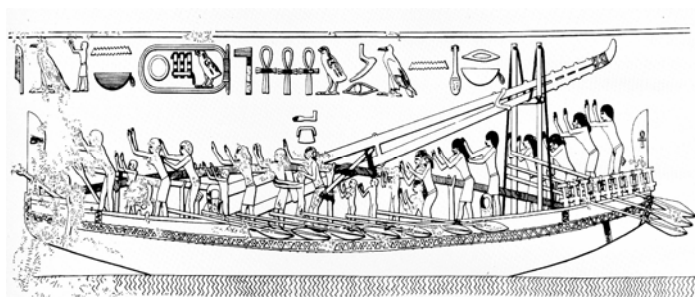
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12.....



Emerald and Zephyr

This article by Martin Navarro appeared in the World Ship Society, Fremantle Branch, newsletter of April 2003 and is reprinted here with thanks to the editor of that newsletter.

The following article records what material I have been able to find about two pleasure steamers *Emerald* and *Zephyr* that practically became household names in Western Australia, particularly during the period 1926 to 1956. Even though they were both imports. To this I owe my thanks to Captain G. Tilley, who has supplied me with and verified some of the information available.

The *Emerald* was built for the Humpybong Steamship Company, founded in 1890 by five Brisbane Merchants. W.G. Hayes; M. McLennon; A. Hobbs; C. Knight; and A. Borgeson, who purchased the 1883 built, former Sydney ferry *Garnet*, 50 grt from the Brisbane Steamship Co. Ltd. The *Garnet* ran a service to Humpybong on the Redcliffe Peninsular (Deception Bay area) four days a week, farm produce was back-loaded for Brisbane markets. The remainder of the week she operated a bunkering and general ferry service within the port of Brisbane. (The name Humpybong has long since disappeared from maps, with the arrival of the fashionable people, who built holiday homes in the area and preferred the name Redcliffe). God knows what they would make of Innaloo, the suburb I live in.

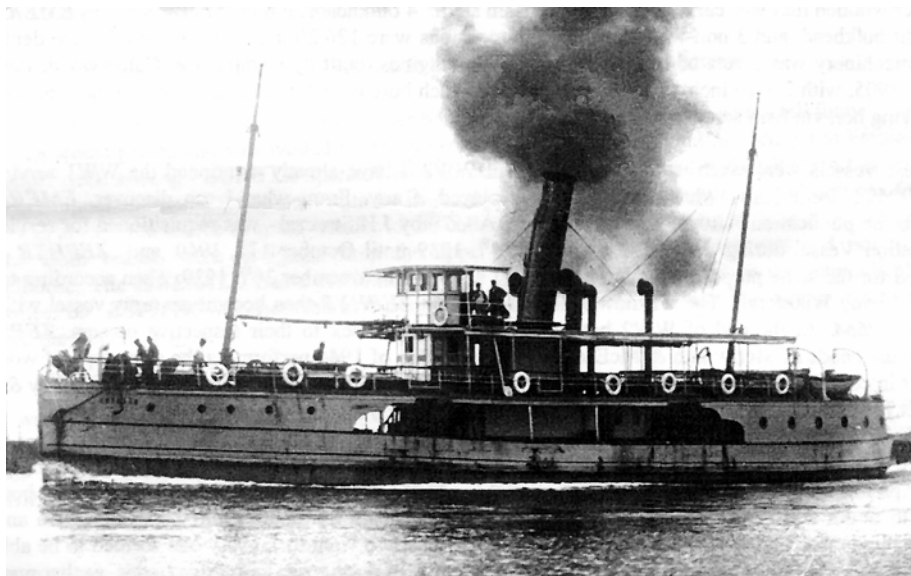
The traffic soon became too much for the *Garnet* and Mr Walter Reeks of Pitt St, Sydney was approached to design and build a larger ship for the service. The newly constructed, wooden hulled steamer, *Emerald*, from the Reeks yard at Rozelle, Sydney duly arrived in Brisbane at a cost of £14,000 early in 1900. A vessel of 135.92grt; 92.43 tn, carvel built; with counter stern, 1 watertight bulkhead, and 3 non-watertight bulkheads. Her dimensions were 124ft x 25.2ft x 8.15 ft moulded depth and 7.45 depth of hold, no masts or rigging. Her machinery was 2 compound surface condensing steam engines built in 1899 by John Downey, Liverpool, UK, with 2 x 11 inch and 2 x 22 inch bore cylinders and a 16 inch stroke, producing 300ihp, driving her, via twin screws at 11 knots.

A peculiarity of her design, was the tunnel under her stem where her propeller shafts were set. Due to the restricted width in the tunnel, and because of the overlap of the blades, one shaft was about 16 inches ahead of the other so that they could both turn freely. *Emerald* was an immediate success, a beamy comfortable ship, licensed to carry in excess of 200 passengers. The saloon bars and other features were considered as being of the best quality. Both the captain and chief engineer were experienced deep-water men. She also carried a steward and a crew of four, who worked as deckhands, firemen, cargo handlers, catering attendants and whatever else was required. On the arrival of *Emerald* at Brisbane, *Garnet* was sold to a Clarence River Shipping Co.

In 1911 following the arrival from Scotland of the larger 16 knot steamer *Koopa* 679/1911, with a passenger carrying capacity of 1,153. *Emerald* was offered for sale. At the same time the Humpybong Steamship Company ceased to exist and henceforth became known as the Brisbane Tug and Steamship Company Ltd. *Emerald* was purchased by the Commonwealth Government in 1912 and sent to Western Australia as a work vessel in the construction of the proposed Henderson Naval Base in Cockburn Sound.

She steamed to Western Australia as indeed did *Zephyr*. I have no idea of the daily coal consumption of these two early steamers, nor of the availability of bunkers on the long voyage west apart from Albany. I imagine they carried bagged coal in all of the empty areas that could be utilised. I have been told, but have no verification, that *Zephyr* who had larger hp engines ran into difficulties due to lack of coal before reaching Albany and had to burn her timber furnishings and fittings.

The Henderson Base project was halted by the advent of WW1. *Emerald* was purchased by the R.A.N on June 9th, 1916 and joined the Navy as an examination vessel and minesweeper operating from Fremantle. In 1917 she was released and was designated as DNW tug No. 2 by the Director of



*This was how Emerald looked when she first appeared at Fremantle.
Photo by Malcolm Dippy. Navarro collection*

Naval Works, as the Henderson Base project was on again. But it was subsequently abandoned in 1922 under terms of the Washington Treaty and the British Admiralty shifted their interest to Singapore.

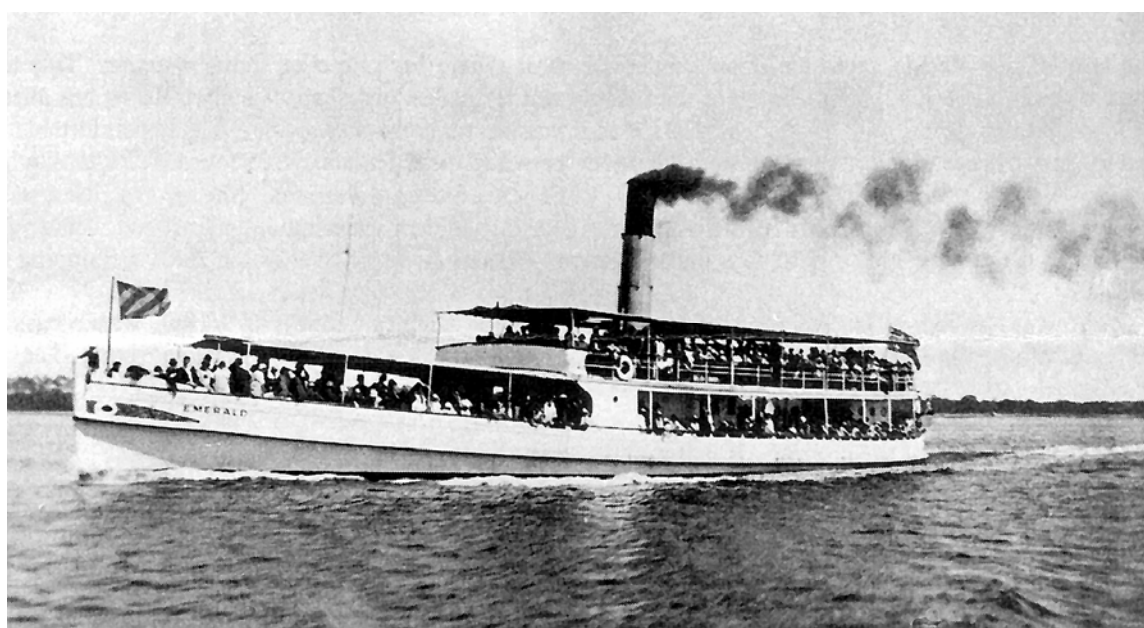
Emerald was sold in 1923 to the local firm of A.E Tilley, and under their ownership she began a complete conversion for the Rottnest Island and Swan River pleasure boat service. At a later date, the upperdeck was extended forward as far as the fore part of the awning over the main deck seen in the photo below.

Zephyr was also designed by Walter Reeks, and built in 1906 by Mr R.Davis, Blackwall, Brisbane Water, NSW, for McIlwraith & McEacharn

& Co Prop. Ltd, 467 Collins Street, Melbourne, Victoria, for service as an excursion vessel in Western Australia and first registered at Fremantle on June 8th, 1906. A similar vessel in appearance to *Emerald*, but with a very broad flat transom stern. Her registered tonnage was 177.83grt; 41.97 tn; her wooden hull was carvel built; with transom stern, 4 bulkheads, possibly of the same as *Emerald* (1 watertight bulkhead, and 3 non-watertight). Her dimensions were 126.2ft x 25.5ft x 8.2 ft moulded

depth; 1 mast. Her machinery was 2 sets of triple expansion steam engines, built by Campbell & Calderwood, Paisley, Glasgow in 1905, with 2 x 10 inch, 2 x 16 inch and 2 x 26 inch bore cylinders and an 18 inch stroke, producing 500ihp, driving her, via twin screws at 13 knots

Both of these vessels were taken up for war service in WW II. I have already mentioned the WW I service of *Emerald*, but don't know what part *Zephyr* played if any. From what I can discover, *Emerald* according to the publication "Royal Australian Navy A-Z" by J.H.Straczek was requisitioned for service as an Examination Vessel during the period September 4th, 1939 until October 17th, 1940. and *Zephyr* was requisitioned for the same purpose from September 2nd,





1939 until November 30th, 1939. Then according to the publication "Army Watercraft: The Unknown Fleet" I find that *Zephyr* then became an army vessel with the designation AV6G4. At the end of WW II both these vessels went back to their respective owners. *Zephyr* remained in the hands of McIlwraith & McEacharn, until October of 1946 performing the same type of work as *Emerald* in commercial service. Then on October 11th, 1946 she passed into the hands of Alf E Tilley & Co, Beach Street, Fremantle, being duly registered as such.

The pleasure activities that were carried out via these two vessels, both pre and post war, were far ranging, such as school trips to Point Walter on the river. The annual lumpers picnic, and also the butcher's picnic, both of these were to South Perth from Fremantle, with ultimate venue being

memory South Beach was not a favourite destination of ferry crews, as the jetty ran direct east and west and was very open to large swells. It is difficult to explain the nastiness of mooring alongside a jetty where this is happening, except to say that it is a place where broken lines become a reality and should be avoided for peace of mind.

Then of course there were the evening river trips and dances, and also charter parties. I have recently been told that the major business houses of both Fremantle and Perth also contracted these vessels to run a cost free annual outing on the river, which was paid for and manned by staff members, for the benefit of Patients of the Claremont Mental Hospital. Possibly the most outstanding voyage made by *Zephyr*, that is apart from her positioning voyage was the one she made in September 1908, when she made a 74



Zephyr Fremantle harbour 1925.
Navarro collection

the South Perth Zoo. (These two annual events were things that I seem to remember all the kids in Fremantle went to). Every one seemed to be able to lay claim to a father or grandfather that was in one or apparently in most cases both these trades, whether pretend or otherwise. Excursions to Rottnest Island, Garden Island, Rockingham even South Beach on occasion, although from

hour voyage to Albany for excursion trips both within and outside the harbour during the visit of 16 ships of the American Fleet who were doing a world-wide voyage. She arrived Albany Sept 4th and remained there until 19th and then returned to Fremantle.

As Emerald relied on natural draught for her



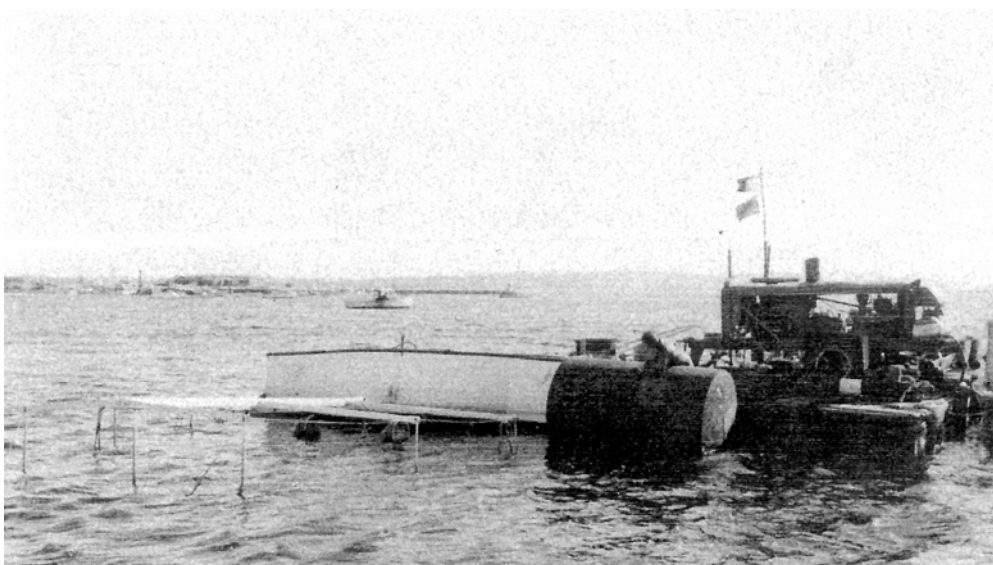
boiler fires, she was fitted with a very tall funnel, constructed in three telescopic pieces and was wound up and down for clearing the road and rail bridges at Fremantle, as was the upper deck awning. *Zephyr* operated on a forced draught system so her funnel wasn't as tall, however, both her funnel and awning also needed to be lowered as well by the same system for clearance of the bridges. This was always the source of great wonder to the children particularly in trying to fathom out where the funnel went. Both vessels were navigated from the upper deck, open to the passengers and not in a separate wheelhouse. The *Emerald* had a conventional style wheel that was mounted on the perpendicular, whereas the wheel on *Zephyr* was mounted in a horizontal position on top of a box like arrangement that I believe housed the steering engine.

Post war years, the *Emerald's* offshore work was confined to the waters between Fremantle and Garden Island and *Zephyr* carried on in the Rott-nest Island service. With the inroads of the new post war high speed ferries appearing on the Rott-nest run, and due to the age of the two existing vessels, it was decided that *Emerald* would be retired at the end of the 1952 season and scrapped.

Zephyr who by this time was feeling her age, was placed on the Garden Island run for the 1953 season and remained in this service until her retirement in 1964. She was laid up in the river at Cof-

fee Point under supervision of a caretaker while a decision was made on her disposal. In May, 1965 she was discovered sitting on the river bottom in about 12 feet of water, with her upper deck awash, which really sealed her fate.

She was eventually raised after some 10 weeks and it was discovered that she had six neat holes drilled into her hull just below the water line. *Zephyr* was now considered to be beyond restoration and was sold to Goldfields Metal Traders for demolition. Towed to the Harvest Road jetty at North Fremantle her dismantling was begun. The bare hull was later towed to Careening Bay, Garden Island and she was burnt on the beach for the salvage of her brass and copper fittings.



*Zephyr sitting on river bottom
May 24, 1965.
Navarro collection*



A Coil of Old Rope?

The final instalment of Ray Miller's autobiography for the MHA.

The Mast and Spar shop in O'Connor Industrial Area was an excellent large workshop in which to store the material we were to work with. With our two 2-ton A-frame mobile gantries we could lift and manoeuvre even the biggest sticks anywhere we wanted with a minimum of effort.

The dimensions given in what follows are used because the original *Endeavour* of 1764 was built on imperial measurements, and the Americans who did the laminating were still working with imperial anyway, and were also working with the measurements this Endeavour Replica Project had supplied.

To give some idea of the size and complexity of the job we had before us, the largest single "stick" was the lower mainmast and was a 91 ft long x 2 ft square glue-laminated solid block, built up of 164 individual pieces of beautiful clear top-grade, old growth, Douglas fir (nick-named oregon). Dressed from approximately 5" x 1½" boards, which had first to be scarphed end to end to make up 91 ft lengths (all 164 of them) and then glued and stacked over-lapping by half their width, in a brick-bonded sort of pattern, viewed end-on. Fortunately this work, which would have been completely beyond our capabilities and equipment to do, was already done for us. All the major masts such as the fore, main and mizzen lower masts; the fore, main and mizzen topmasts; the bowsprit and jibboom; and all the lower course and top-sail yards were built up in this way, bonded with resorcinol marine-grade glue. Altogether the best and biggest job of glue-laminating I have ever seen! Furthermore, all these "sticks" were individually wrapped in waterproof tarred paper, with pine battens protecting all corners and edges - a very thorough piece of work; and what was even better, it all arrived in perfect condition.

Not in quite-so-good condition, however, was another part of this large consignment, which was not required to be kiln-dried, glue-laminated, first grade Douglas fir. This part was a quantity of "Shipping Dry" clear (of knots) Douglas fir that was intended for other work. This work included

the cheeks and bibs of the fore and main lower masts and the bowsprit bee-blocks, as well as mizzen gaff and gaff jaws. Then also the fore and main topgallant masts and yards, the spritsail yard and sprit-topsail yard, all the stuns'l booms and yards and the ensign and jack staves. These items ranged in size from 16" right down through 12", 10" and 9" and so on to 4", 3" and 2" for stuns'l booms and yards. The seven masts and spars for the pinnacle were also included in this batch. All up, there were a total of 42 sticks to be rounded.

As I have intimated, much of this material suffered on its day of arrival at Fremantle wharf, in 42 degree heat, during a waterfront stoppage. It virtually exploded and split beyond recovery and had to be re-ordered from America - another long delay and at great expense to the project.

However, our team of four managed to produce all the detailed work required of us, faster than the research and drawing departments could keep ahead of us. We were strictly told we were not to proceed off our own bat, until we had the approved drawings, because this was to be an "exact replica" (if there is such a thing?)

The project as a whole suffered two shutdown stoppages, one of eight months and one of about seven months, due to financial difficulties. The Spar Shop Team managed to keep working. We even managed to design and build 19 board room chairs for the Administration Office out of the pine packaging material salvaged from that which protected the glue-laminated masts and spars already mentioned.

Another, and bigger, job we were able to do during these delays was to build an "exact replica" of the *Endeavour's* pinnacle. This was 23 ft. six-oared, lug-rigged, and the largest of the ship's boats. From full-sized lofting on the workshop floor we were able to make up the back-bone and frames (all 21 of them and transom) and complete the entire replica pinnacle before the lease on the premises at Garling Street, O'Connor ran out.

Before the finished masts, spars and top platforms



were moved from Garling Street, some to the Ship Shed at Mews Road, Fremantle, and the rest to Steve Ward's factory in Henderson, the ore-gon for the ship's decks and topsides, which was also included in the original shipment, had been moved to Fremantle, and built into the ship. This fortunately was before we needed the space to loft and build the pinnacle.

At the closing of the Spar Shop, Brian Phillips and Mike Rowe had been moved onto the building of the ship in Fremantle and Peter Bellingham, having served the twelve months of his loan by his firm to the Endeavour Project, returned to New Zealand with a written commendation of the high quality of his service here.

I went with the masts and spars to Steve's factory to make the bowsprit bee-blocks and to varnish everything with six coats of Werdol over two coats of Everdure. While waiting for varnish to dry!, I had many other jobs - such as making ornamental details on the ship's belfry and building the ship's wheel and its stand, including fitting it to the deck of the ship. Between all these jobs there was always more varnishing!! until launching day arrived on the 9th December 1993 (my wife's birthday).

When the ship was moved round to Victoria Quay, I went with the masts and spars to C-Shed to finish making the stuns'l spars and the varnishing of whatever remained not finished, until the stepping of the lower masts alongside the wharf. After the riggers had taken over the assembling of the spars into the rigging of the ship, there were many small co-ordinating adjustments to make between the brutish mentality of riggers and the profound thoughtfulness of spar-makers who have had to interpret what came out of the drawing office!!? And so work continued until the 16th April, 1994, Commissioning Day, by which time many of us had worked ourselves out of a job. By late October that year the *Endeavour* Replica was heading for Sydney after six years of unrelenting effort on the part of a good many hardworking and loyal people, under the skill and great leadership of our master shipwright, Bill Leonard. For my part, it felt a bit like stepping into a vacuum, suddenly to find I had no urgently demanding work to do. It took a bit of getting used to after almost a life-time under the pressure of work. But it wasn't for long!

It seemed that in the minds of some people planning to build another replica - this time, of a Dutch jacht, an "Age of Discovery" vessel named *Duyfken*, that naturally I would be involved. I don't recall anyone asking me or telling me, would I? It just seemed it was assumed I would. Of course, I would be honoured to think I was wanted on such a project. But you see, I was no longer the same man I had been - I had turned 70 and when I first stepped into the fast-growing *Duyfken*, planked-up but still needing floors and top-timbers, my feet kept slipping from under me on the sloping surfaces!

But there were plenty of other jobs crying out to be done. The very fact of planking first and making frames to fit was something new to us all. But we all got used to it pretty soon. There was a lot of experiment required to get the moisture content right in the material used for the trunnels - and there were a good few of them required in the whole job! They all had to be machined round to the exact diameter, to make them tight but drivable. Poor Jim Lucas our ex-American Marine, who was our heavy-hitter! He well knew how many thousands of trunnels there were in the whole ship! And of course, for each trunnel driven, there were two jarrah wedges required! They had to be individually made and driven too.

Another time-consuming job I had to deal with was to drill and make the "elm-tree pumps". These were literally two 12" diameter straight, 16 ft. long, elm-tree logs which first had to be drilled centrally to 40 mm bore, for their full length, and then about five feet of this enlarged out to 145 mm bore, in the top section of the pump where the wood, copper and leather buckets and valves were to work. This was a slow, tedious and complex job to make, but which worked very effectively when they were finished. But how long they would last, I have no idea.

I think the last job I did for the *Duyfken* was to make dozens of blocks for various sizes of rope for Igor Bjorksten, the Rigger. Also to turn some belaying pins, as well, as I recall.

Then not long after this another project came my way. A local neighbour of mine, John Scott, the Community Development Officer for the City of



Mandurah, asked me if I would design and supervise the building of a 16 metre high flag pole with one fixed yard, to be built as a Youth and Community Project during the first term High School holidays 1997. This I agreed to do and after doing the drawings for the glue-laminated oregon mast, I gave John the order for the timber, (to come from Queensland;).

Then my son Mark a fully qualified Civil Engineer, agreed to design the concrete footing and steel tabernacle to withstand 160 K.P.H. winds, as is required for this type of unstayed structure in a public forecourt area. Everything was coming together in readiness, when the oregon arrived from Queensland, overland, post-haste, and it was found to be less in quantity than we ordered. A typing error in the order the suppliers had received had virtually cut two metres off our flag pole before we had started! However, there was no time to change things now. We were to start work next week! All we could do was to alter the height and proportions to build a 14 metre mast!

The worksite John had arranged for us was to be the Dwellingup School of Wood. So we commenced work by trucking all our 6 metre lengths of lovely C & B oregon from Mandurah to Dwellingup. They had the machines there to dress all our material before we started. Out of our 6 metre lengths of 10" x 2", we were after 6m x 245 x 48 to give 5 laminations of 48 thick plus epoxy (= 242±). The mast was to finish 240 square for 2 metres, 240 diameter to 4 metres up, tapered to 220 diameter at the hounds (8 metres up), the position of the top of the 6 metre spread of the yard, then taper in the round to 100 mm under the 250 mm diameter truck at 14 m high. The yard arms were to be supported at 1750 from the centreline of the mast by 4' stainless steel rods from a stainless clamp-band set at 2 m up the mast above the top of the yard. Sorry about that, I got carried away a bit, but someone has to determine these details sooner or later!!

As it turned out, this Community Project did not turn out as hoped - not quite planned. Only two High School boys turned up and lasted one week (too hard they said), and two married ladies in their thirties to forties, who stuck out the whole job for twenty nine and a half days! These two were quite remarkable. They had never done

anything like this before, but they learned to saw and plane, flat and round, glue up and clean off, to scrape and sand from coarse to fine, and paint to an excellent finish! They, and I, learned an enormous amount about what willingness and dedication and sheer guts can achieve, given the humility to try.

I think it should be said that the entire job was not completed at Dwellingup, as in a few days it was becoming obvious to us and to Len Kernagan, who managed a joinery shop in Mandurah, and who came to see how we were going, that there was insufficient space at the School of Wood for their students and us. So we hired a semi-trailer truck and carted all that we had done in the way of scarphing and gluing up our five 14m lengths of oregon back to Mandurah, to Len's fully equipped and spacious factory that he very generously offered the use of. Len turned out to be one of the most generous and helpful people I have ever met. His 'knowledge of the ropes' in Mandurah and the people he knew helped us enormously. He even put me up overnight to save me having to drive to and from North Lake to Mandurah each day and leave my wife Jan without a car. A mighty guy is Len and a very valuable citizen of Mandurah.

Since those days a few running repairs have been necessary from time to time, but I still get great satisfaction out of working on useful and challenging projects for a variety of individuals and good causes, not the least of which is work for the *Leeuwin* on maintenance of spars and other parts of the rig. Another thing I quite enjoy is being involved in the work we do with the Maritime Heritage Association - keeping track of vessels that are of historical importance in the work they have done for the Country, State or even smaller Communities; if only we can be notified before it is too late, or the old hulls are beyond saving.

I started off by calling this article "A Coil of Old Rope?" The question mark is there deliberately. I admit it is not everyone's idea of an ideal life's work, and I certainly have not made myself any fortune in monetary terms. But I have accumulated a fair bit of interesting and 'useful to others' experience in a variety of fields; I think I can honestly say. And, of course, there is more than one strand to any old piece of rope, isn't there? There is always more than one strand to anyone's



Masting and rigging on the Endeavour

life story. For me, there is the technical or work side of life, the social and people side of life, and the spiritual or the deep lasting values of life for every one of us looking for a meaningful purpose to our existence. Unless there are more than one or two strands to any rope, it cannot take much strain and it is not of much use to anyone.

“And what more can I say?” said the preacher.
“Amen” came a voice from the back!

Self Inflicted Wound?

The cruiser H.M.S. *Trinidad* was escorting the convoy PQ13 in early 1942 when, on 29 March in Arctic waters, three German destroyers attacked the convoy. During the ensuing battle *Trinidad* fired three torpedoes. Because of the intense cold two torpedoes failed to leave their tubes as they were frozen in. The third fired but, because the oil in the motor and gyroscope was frozen, it malfunctioned. Turning around it ran back along the way it had come and struck the cruiser amidships. *Trinidad* was severely damaged and, with extreme difficulty, managed to limp to Murmansk for repairs.



QUIZ

Answers to June 2005

1. A cranes iron is a cap or ring at the end of a bowsprit, usually made with several eyes around it. The ring prevents the spar from splitting and the eyes take the blocks through which pass the bobstay, topmast forestay and bowsprit shrouds.
2. Belches Foul Ground is near Albany. It consists of a number of rocky patches 1½ miles ENE of Bald Head. The Australian Pilot states: There is a confused and dangerous sea over it during W gales.
3. The *Sea Bird* was wrecked on 16 June 1874.

Questions

1. What is a fife rail?
2. What is a taffrail?
3. Who named Gage Roads and after whom was it named?

Answers to "Test Your Knowledge"

1. Tea clipper 1869 – *Cutty Sark*.
2. Carack 1492 – *Santa Maria*.
3. Paddle steamer 1838 – *Great Western*.
4. Dutch jacht 1606 – *Duyfken* (replica).
5. Screw steamer 1886.
6. Battle cruiser 1916.
7. Grand Banks fishing schooner 1926 – *Bluenose*.
8. Viking long ship 900 AD.
9. Atlantic steamer 1906 – *Lusitania*.
10. Liberty ship 1943.
11. Egyptian sea-going boat 2600 BC.
12. Tudor war ship 1545 – *Mary Rose*.



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