

# MARITIME HERITAGE ASSOCIATION JOURNAL

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*Model of the Eendracht by Adriaan De Jong  
See article page 14*

*Photo: Patrick Baker*



**The Maritime Heritage Association Journal is the official newsletter of the Maritime Heritage Association of Western Australia, Incorporated.**

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## EDITORIAL

I am happy to be able to advise that MHA has received a number of proposals for the publications committee to consider. These are not only proposals for A5 booklets, but also two major works are possibilities. Please consider writing on any maritime subject for the consideration of the publishing committee. Also, please write articles of any length for inclusion in the journal. This is your journal, and you should contribute something. I need contributions, short or long, from the readers!

The following came in an email from MHA member Tony Duvollet in Darwin:

*Your interesting article about HMS Plym reminded me of the time I visited the Montebello Islands in 1991. Studying the chart, which had not been updated since the 1950s, on the approaches to Trimouille Island I noticed two letters after the symbol of a wreck 'ED'. What could that possibly mean? On checking the Symbols and Abbreviations Used on Admiralty Charts, 'ED' indicates 'Existence Doubtful'. Not surprising*

*really if it was Point Zero of an Atomic Bomb! The other wreck is me, I'm depressed! I have always been quite proud of my skill at traditional caulking using traditional tools, methods and oakum. Part of the job required a perusal of the seams to be caulked and then pick, tease and roll the oakum to the required thickness. As an apprentice shipwright I used to enjoy this activity as it was a time for the tradesmen and myself to sit around in a circle and yarn away about ships and boats and the characters of the Sydney Waterfront, much the same atmosphere as sitting around a campfire in the bush. The stories they told are of a bygone era, and I still feel privileged to have heard them. But now I find it was a form of punishment! Oh! Woe is me! According to Breverton's Nautical Curiosities picking oakum was a regular punishment for minor misdemeanours. In the Royal Navy, each man in the ship's cells had to unpick a pound of oakum every day. Now I'm in the depths of despair!!*

Have any other readers contributions for the journal?

## Did You Know?

The spinnaker was invented in 1855 by R.T. McMullen:

*...wanting more sail for running before a light wind, I invented a sail which for want of a better name I called a studding-sail, but which was known about twelve years later as a spinnaker, when it came into use amongst the larger yachts for match-sailing. It is made of very light material in the form of a jib, and sets from the topmast head to the deck where it is boomed out like a squaresail. As it is a sail that endangers the topmast, except in the lightest winds, I discarded it in 1865.*

*Down Channel, R.T. McMullen, 1869*

The sail was subsequently named after the yacht *Sphinx*, when the crew called it a 'spinxer', later changed to spinnaker.



# 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!)



Dacron, as used in many yacht sails, was originally known as Terylene in the UK. This name comes from polyethylene terephthalate.

When the *Diadème*, a French warship with captured British troops on board, ran aground in the West Indies, Admiral Sir George Pocock stated that:

*At this very time the French seamen behaved in so disorderly and mutinous manner that their officers put arms into the hands of the English prisoners to keep the Frenchmen in obedience.*

The World War I battle-cruiser HMS *New Zealand* was paid for by the New Zealand Government. The crew was mainly British, with very few New Zealanders on board. However, she was the pride of New Zealand, and the captain had been presented with a Maori costume which he was expected to wear when the ship went into battle!

**Lump:** A stout heavy lighter used in dockyards for carrying anchors, chains or heavy stores to or from vessels. The word lumpers is more familiar to us, being labourers employed on the wharves.

When HMS *Beagle* arrived at Fremantle on 15 November 1837 it was carrying five passengers. These were Lt Grey, Lt Lushington, Surgeon Walker and Cpls Coles and Auger of the Royal Sappers and Miners.

In April 1916 HMAS *Australia* and its sister-ship HMS *New Zealand* collided in a fog in the North Sea. Because of the damage done to HMAS *Australia* it missed out on participating in the Battle of Jutland. HMS *New Zealand* was repaired in time, and fired 420 12-inch shells during the battle, more than any other ship. It was only hit once.

Because of more exact knowledge scientists have of the earth the Greenwich meridian no longer runs through the Greenwich Observatory. It is now 336ft (102.4 m) east of its previous position.

The world's largest offshore wind farm, known as the London Array, is in the Thames Estuary.

There are 175 towers generating 630 MW of power. The towers stand in water about 25 m deep.

During one week in 1900 the new dredge *Governor* removed 29,763 cubic yards of spoil during the construction of Fremantle Harbour. The cost of this, including depreciation and interest on the dredge, was 2<sup>3</sup>/<sub>4</sub> per cubic yard.

At 2.00am on 30 March 1893 four men were sailing towards the Canning Bridge when the saw it was on fire. It took the men nearly an hour to put the fire out using the boat's bailer. The *Daily News* reported that 'it is considered to be the work of an incendiary'.

During the Napoleonic War of 1793–1815 about 100,000 British seamen died. Only about 12% died from enemy action, shipwreck and similar disasters. A further 20% from accidents while 65% died from diseases, mainly scurvy, typhus and yellow fever.

**Hoppus foot:** A unit of volume equal to 1.27 cubic feet, applied to timber in the round, the cross-sectional area being taken as the square of one quarter of the circumference.

The modern metric system of distance measurement started in 1793 when the French Academy of Science proposed that a metre should be one ten-millionth of the distance from the equator to the North Pole.

The first British vessel sunk in World War II was the Donaldson Atlantic Line's 13,581-ton *Athenia* (Captain James Cook) en route to Canada. It was torpedoed by *U-30* (Oberleutnant Fritz-Julius Lemp) on 3 September 1939, less than nine hours after Britain's declaration of war. The *Athenia* had a crew of 315 and 1,103 passengers, 112 of whom were killed.

Until recently the flagpole at Kew Gardens, the tallest in the world, was a single pole of Douglas Fir (*Pseudotsuga menziesii*) 225 ft (68.58 m) high and weighing 15 tons.



# The Saga of the *Johanna*

The German three-masted topsail schooner *Johanna* under the command of Captain H. Meinders departed Port Louis, Mauritius, on 3 April 1890 bound for Melbourne with a cargo of 320 tons of sugar. On board Captain Meinders (40 years of age) had a crew of eight men plus his wife, Margaretha (28) and their three year old daughter Susanna. The schooner was insured, but the cargo, valued at £8,130, was only insured for £6,150. When only two days out of Mauritius, one of the crew, Herman Reuters, came down with a severe fever. On 9 April the 53 year-old mate, Herman Heijen, also succumbed to the fever, referred to in the various newspaper reports as Mauritius fever, yellow fever or malarial fever. Whatever the fever's name, it resulted in the complete inability of the sufferers to work the *Johanna*. The following day four more sailors, including the cook, were struck by the disease. This left the schooner drastically short-handed, but after a few days the mate recovered sufficiently to return to work. On 23 April able-seaman H. Hahns died, another, Louis Klot, died on 29 April, the cook, Hefel, died the following day, and nine days later another of the seamen, Karl Hilgardorf, also died. Captain Meinders took sick on 1 June, leaving only the mate and Mrs Meinders capable of sailing the schooner. The mate was still suffering the effects of the fever, but he held a master's certificate, so was able to navigate. A heavy westerly gale had struck near the end of April, so sail had been shortened to two topsails, foretopmast stay-sail and close reefed main.

Like most wooden vessels the *Johanna* leaked a little. However, with no crew capable of pumping it took on a considerable amount of water, and to add to their woes the leak worsened. It became necessary to lighten the schooner, so the mate and the captain's wife managed to open the hatch of the aft hold, rig a tackle, and hoist out and throw overboard 520 bags of sugar. This task required the efforts of both of them, so the wheel had to be lashed during this work. While the hatch was open a number of seas broke over the deck, and part of the remaining cargo was damaged.

During this time Mrs Meinders assisted the mate to hoist or lower the fore-and-aft sails (the square sails on the foremast were beyond their ability),

cooked the food, tended the sick including dosing them with quinine from the medicine chest, comforted her daughter and helped with the pumping and steering. At times she was at the helm for up to 12 hours. The weak and ill mate navigated, and worked the sails, steered and pumped with Mrs Meinders. He also sewed the dead in canvas and dragged them to the rail where, after a brief prayer from his prayer book, they were rolled into the sea.

During the evening of 9 June the *Johanna* reached Rottnest Island, and the pilot, George Butcher, boarded. When he saw the situation he took one of his crew from the pilot boat to assist him to get the *Johanna*'s anchor chain on deck and the anchor dropped. The schooner was successfully anchored at 9.00pm that night, but, because of the fever, it was placed some four miles from Fremantle. All the remaining crew and the captain's family were taken in their ship's boat towed by the *Maid of Lincoln* to the Woodman's Point Quarantine Station. The *Johanna* was fumigated while the survivors received medical attention on shore.

By 26 June the survivors had all seemingly recovered, and two days later, after taking on four replacement crewmen, the *Johanna* resumed her voyage to Melbourne. However, late in the evening of 2 July Captain Meinders suddenly became ill again, and died the following day. He was buried at sea off the southern coast of Western Australia. The *Johanna* arrived at the Heads, Melbourne, on 22 July under command of the mate, Heijen, and was immediately placed in quarantine. Again the schooner was fumigated and the bilges washed out.

The Merchant Shipping and Underwriters' Association gratefully acknowledged the efforts of Mrs Meinders, now a widow with a young child, and the mate in bringing the *Johanna* and its cargo safely to Melbourne. They were both presented with purses. The mate's contained 25 gold sovereigns while the widow's had 50 gold sovereigns and a gold watch. The mate was still too ill to attend the ceremony.

Peter Worsley



## HMS *Oriole* at Dunkirk

At dawn on 29 May 1940 the requisitioned Clyde-built 215-foot paddle steamer HMS *Oriole* (ex-*Eagle III*) arrived to help rescue troops from Dunkirk. Her commander, Lt. Davies, noted the problems being encountered by the small boats, and so deliberately ran his vessel aground. This enabled troops to wade out to the *Oriole*, cross the length of her deck and then be taken off in deep water at the aft end by other vessels. HMS *Oriole* had dropped two kedge anchors before grounding, and subsequently hauled herself off at the end of that day. That evening she returned to Margate with 700 troops on board. Lt. Davies sent a signal to the Admiralty on this voyage back:

*Deliberately grounded HMS Oriole Belgian coast dawn on May 29<sup>th</sup> on own initiative, objective speedy evacuation of troops. Refloated dusk same day, no apparent damage. Will complete S.232 when operations permit—meantime am again proceeding Belgian coast and will run aground again if such course seems desirable.*

The Admiralty's reply was a classic of brevity and simplicity – *Your action fully approved.*

HMS *Oriole* returned to Dunkirk two days later and Lt Davies did run her aground again. After those two, she made three more crossings. She was officially credited with carrying 2,587 soldiers altogether, but unofficially the figure was reckoned closer to 5,000. These figures do not include the multitude that had crossed her decks on two occasions.

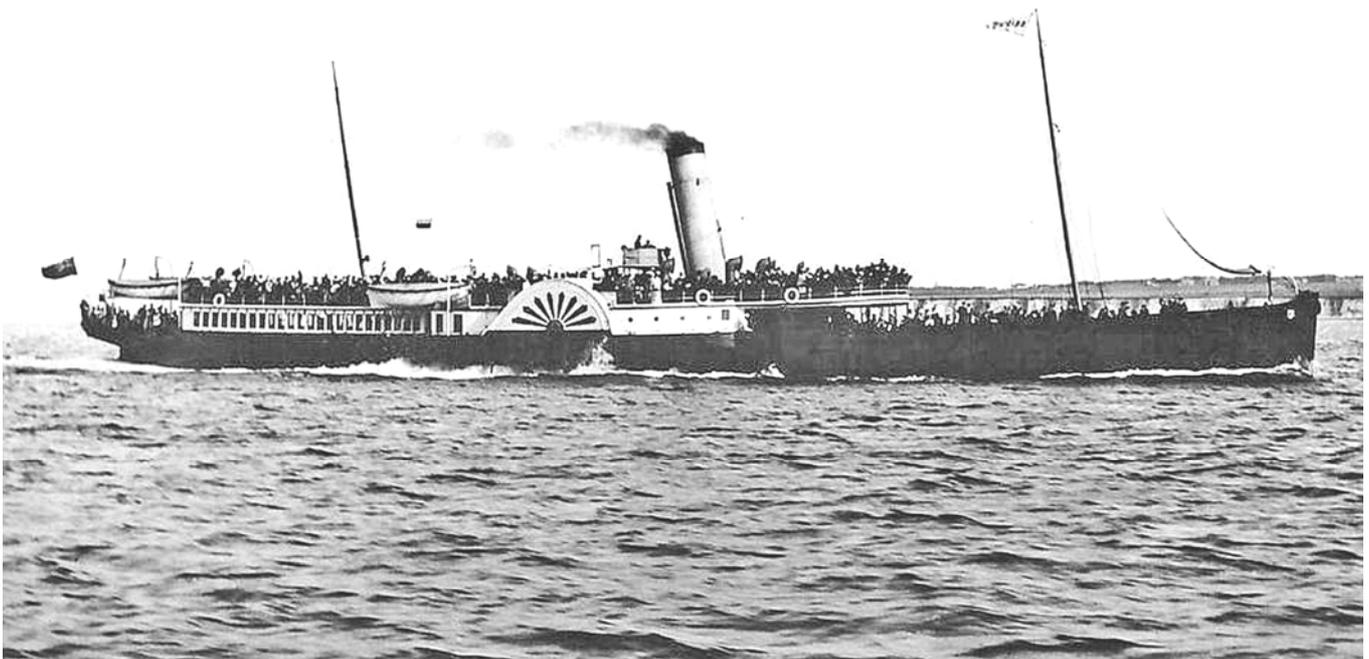
### Note:

A Royal Navy form S.232 is a Report on Collision or Grounding. The need to complete such a form would normally place a very large black mark on an officer's Service Record!

*Eagle III* was built in 1910, length 215 ft, beam 25.1 ft, 441 gross tons. She had a very flat bottom and a relatively shallow draft. She was broken up in 1946.

Peter Worsley

*HMS Oriole in happier times as the paddle steamer Eagle III*





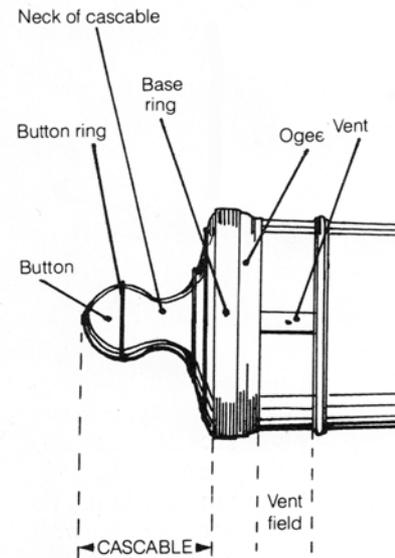
# QUIZ

## Answers to June

1. The cascable is the concave part at the rear of a canon, including the button to which the breech rope is fastened (see illustration).
2. The ship *City of York* was wrecked on 12 July 1899.
3. The photo is of baleen from a humpback whale.

## Quiz

1. What in the Royal Navy were widow's men?
2. Where in the Swan River is Lewis Point?
3. What was the name of the first ship to carry convicts to Western Australia and on what date did it arrive at Fremantle?





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*The Perth Gazette and Western Australian Journal, 28 January 1837: 840c.*



# Why Was Dirk Hartog So Far East?

Nick Burningham, Adriaan de Jong and Jennifer Rodrigues

Why was Hartog far enough east to sight Australia? Why did he follow the coast northwards to Northwest Cape? And what happened to Hartog and *Eendracht* in the year before they got to Bantam, where his plate says he was headed. Also what Hartog's course might tell us about the "longitude problem" and the accuracy of dead reckoning in the early 17th century.

Dirk Hartog, in command of the ship *Eendracht* departed the Netherlands on 23rd January 1616, as part of a fleet of five VOC ships bound for the East Indies. The fleet was together at Maio, Cape Verde islands, from 21st February till 4th March, they then sailed to Cape Lopez Gonsalves, now in Gabon, arriving on 27th March. They were at Annobon (now in Equatorial Guinea). In all these places they were buying provisions including many thousands of citrus as anti-scorbutics. The ships sailed separately to the Cape. *Eendracht* arrived at the Cape of Good Hope on 5th August, and after three weeks there departed, still unaccompanied, for the Indies.

All the ships took the Brouwer route from the Cape, running down their easting in approximately 40°S before turning north to find the southeast trades which would carry them to the Indies. This route had been pioneered by Hendrick Brouwer six years previous, and would be stipulated as the proper route for all VOC ships sailing to the Indies, but it had not been formally adopted when Hartog departed the Netherlands.

Hartog left the Cape on either 25th or 27th August. It is well known that on 25th October 1616 he sighted and investigated the island now called Dirk Hartog Island off Australia's western coast. A pewter plate, inscribed with the date, brief details of the ship, the senior officers, their departure on 27th October and their destination was left as a record of their exploration of the island. Hartog then followed the Australian coast northwards as far as Northwest Cape where the coast trends away to the east.

On the plate, *Eendracht*'s destination is given as Bantum (i.e. Bantam, now Banteng) which is near the western end of Java, and prior to the

establishment of Batavia was the site of the VOC's main factory on Java. Hartog and *Eendracht* did reach Bantam, but not until November 1617, more than a year after leaving the plate on Dirk Hartog Island. Hartog's intention when he left the Australian coast was apparently to sail to the Moluccas (Maluku) of Eastern Indonesia. Ambon, in the Moluccas, was then the VOC's headquarters in the Indies. *Eendracht* made a reasonably swift passage to Sape Strait between the islands of Sumbawa and Flores and there entered the Flores Sea. She was sighted on 7th November trying to work eastwards to the Moluccas but drifting to leeward in the light easterlies and calms that predominate in that month. Hartog eventually gave up the effort and headed for Macassar which was closer.

*Eendracht* anchored to the south of Macassar on 10th December 1616. Hartog's intention was to call at the Dutch factory there for water and provisions and to engage a pilot to help them navigate the archipelagic waters. According to the journal of *Eendracht*'s under-merchant Jan Steijns ("ONDER COEPMAN JAN STINS" on the pewter plate which Hartog left at Cape Inscription) and to IJzerman's introduction to Steijns' journal, *Eendracht* had come to the "west-end of Macassar" in the channels and shoals there. The ship's council had deemed it wise to send a



Cape Inscription

Photo: Patrick Baker



message to their factory at Macassar asking for one or two people who were familiar with the local waters to pilot them, and also to get some provisions and water. Initially they handed a letter to that effect to local fishermen, but after a couple of days with no response it was decided on 14th December to send ashore Jan Steijns and Jan Willemsz, the bosun, in a small *schuit* (ship's boat) to visit the factory.

On the morning of the 15th they hailed some fishermen to ask where the Dutch factory was and were told that it was just around the headland where there were also two Dutch ships at anchor. These turned out to be English ships and Steijns passed by them on his way to landing at Macassar. Soon after Steijns and his companions had gone ashore they were approached by a seven or eight armed Englishmen. One of them, the upper-merchant of the English factory, asked who they were. On stating that they were Dutch they were told that they were very daring to set foot ashore. Steijns, not knowing of any problems, was then told that the Dutch factory had been abandoned about one and half years before.

IJzerman explained in his introduction that the Dutch factory at Macassar had been established in 1607 but it had not been a great success and it was considered more profitable to abandon the factory in order to have the freedom to plunder Macassarese vessels trading with Malacca and elsewhere. By April 1615 the factory was abandoned but in that month a Dutch ship, *Enkhuizen*, had stayed anchored in the roadstead of Macassar hoping to recover debts owed by the Raja of Macassar. An official party of high-ranking Macassarese had come on board, presumably to discuss this matter, when the Dutch unexpectedly took them hostage. In the skirmish that followed most of the Macassarese escaped by jumping overboard, but lost their lives. One of them was the 'Raja Muda', the crown-prince son of the Raja. Since then the Raja of Macassar had sought revenge. Jan Steijns had gone ashore unaware of all this.

Steijns relates with much detail what happened on the beach. The gist of it is that the English upper-merchant somehow convinced the Raja Macassar, who had come to the beach with some 2,000 soldiers, to let Steijns and Williamsz go.

They went in an English boat to one of the two English ships. The English ships were the *Swan* and the *Defence* under command of Nathaniel Courthope. The upper-merchant on board the

*Swan*, Thomas Spurway, later wrote a letter to the English E.I. company with some details about the assistance given to Steijns and Williamsz.

In the early hours of the morning of the 16th, under the cover of darkness, Steijns made his way back to the *Eendracht*. It seems the Raja of Macassar had changed his mind about letting Steijns leave and he was in danger of being caught by the Raja's fleet of 'frigates', but he managed to get back to his ship.

Hartog had been wondering what had kept Steijns so long and sent another boat with 16 sailors to enquire. When they landed there was no mercy. They were all beheaded.

After these unfortunate events the *Eendracht* departed Macassar in company of the two English ships. On the 25th December they had the island of Bouton (Buton or Butung) in sight and from that point *Eendracht* took a different course, separating from the English ship.

On the morning of the 30th, with the wind north by west and the course north-east by east, they passed Amboina, and in the evening set course for Banda. During the next eleven months Hartog commanded the ship on several intra-Asian voyages, going to Java, Sumatera, Thailand and back to the Moluccas. In November 1617 *Eendracht* arrived at Bantam, Java, carrying cloves as a major part of her cargo. On 17th December *Eendracht* departed Bantam for the voyage home, arriving in Zeeland on 16 October 1618.

IJzerman provides a brief biography of Jan Steijns. Apparently he was born in Antwerp and was employed by the VOC on 22 October 1615. On the 16th of November he appointed under-merchant on the ship *Trouw* but this was changed and on the 23rd of January 1616 he sailed in that position on board the *Eendracht*.

Shortly after Steijns' departure, the VOC Board of Directors received information about him which was such that he would not have been allowed to sail as under-merchant with the *Eendracht*.

In a letter from the Directors to Batavia, dated 5 March 1616 they wrote that: "Jan Steijns would be a totally debauched fellow and useless to our service, who not only let down several female persons with marriage promises and engagements otherwise, but also stayed with the enemy, or on



the other side, yes, even would have lived in Jesuits' cloisters."

The letter did not seem to have much impact. According to IJzerman, Steijns was an educated person (he based this assessment on the style of Steijns' journal) and there was shortage of personnel. On the 20th March 1620 he was appointed the Bailiff of Batavia but sacked after three months "as being incapable to service this office with the necessary respect."

Later he was involved in the unlawful killing of the crew of a *perahu* from Palembang who had valid passports, which almost brought the death penalty on him following complaints.

In December 1622, Steijns was allowed to set himself up as a 'Freeman' (Yeoman) in Banda where the inhabitants had been massacred and most of the survivors had fled. This coincided with the intention of Governor of Amboina Herman van Speult to send two *jachten*, the *Pera* and *Arnhem*, on a voyage of discovery to the Southland, and Steijns would have been given command of this expedition according to IJzerman.

However on the 5th June 1623 Van Speult reported to the Governor General De Carpentier that because of the passing away of Steijns the honourable Jan Carstensz would be commander of the expedition.

**Hartog's Navigation** *Eendracht's* log is lost. We know of events on the Australian coast from

the plate and from a letter written by merchant Cornelis Buysero at Bantam in 1618. We know how Hartog navigated from Northwest Cape to Macassar from a letter written by Stephen van der Haghen, Governor of Amboyna (Ambon) written 26 May, 1617. The letter translated states: "That in the month of December 1616, the ship *Eendracht* entered the narrows between Bima and the land of Endea near Guno Api in the south of Java". Bima is part of the island now called Sumbawa, and Endea is Ende on the south coast Flores, close to which is a volcano called Gunung Iya (Gunung Api means volcano).

After clearing Northwest Cape Hartog must have made a course of north-north-east ( $22.5^\circ$ ) to reach Sape Strait. A significantly different course would have brought him to a different strait. This suggests that he was sailing north-north-east before he sighted Dirk Hartog Island and resumed his course for Sape Strait after clearing Northwest Cape. He certainly did sail from Northwest Cape to Sape Strait and he was evidently heading to Eastern Indonesia whatever he had inscribed on the pewter plate.

Hartog experimented with the southern route across the Indian Ocean and then sailed north, not towards Sunda Strait, but towards Sape Strait, about 900 nautical miles farther east. Had he sailed to Sunda Strait he would probably not have been able to make the passage eastwards from Bantam to Ambon and Banda until the northwest monsoon had set in. Hartog seems to have been confident about his longitude reckoning. He seems to have sailed east until Sape Strait bore north-north-east and then changed to that course. That brought him to Dirk Hartog Island without sighting any other part of the west Australian coast. Had he been heading due north, he might have seen coast to the south of Dirk Hartog Island and he would have reached east Java after departing the Australian coast.

It is often said that prior to the invention of the chronometer longitude could not be determined, and that was why Dutch ships blundered onto the





west coast of Australia. In fact Dutch ships hardly ever blundered onto the western Australian coast. There are only four VOC ships known to have been wrecked on the west Australian coast during nearly two centuries of very regular voyaging. In the case of *Zeewijk* it was recklessness, not miscalculated longitude, that led to disaster.

It is true that longitude could not be easily or regularly determined at sea until the technique of lunar distances was developed in the mid-17th century, and that technique was not easy. Yet early-17th century maps of the world and distant regions of the world generally show longitudes more or less correctly. There was not a universally agreed prime meridian, for which reason Dutch charts often do not number lines of a longitude, but a longitude scale is usually provided and one may ascribe a prime meridian. There were circumstances in which longitude could be calculated, and skilled Dutch navigators knew how it could be done. Willem Barentsz and Jacob van Heemskerck with nothing better to do on Nova Zembla used a conjunction of the moon and jupiter on 24th January 1597 to calculate their longitude using an “Ephemerides made by Iosephus Schala, printed in Venice, for the yeeres of our Lord 1589 till a 1600”. The result was not accurate but the underlying principle was obviously understood. However, in normal navigation longitude had to be estimated by dead reckoning – keeping a cumulative tally of distance run east or west and converting to longitudinal easting or westing by dividing the meridional conversion of the distances to angular distance by the cosine of the latitude.

The expert navigators employed by the VOC were generally reasonably accurate in the estimation of longitude. The other four VOC ships which had departed the Netherlands in January 1616 found Sunda Strait without significant delay

or diversion. The VOC must have expected that their navigators would dead reckon accurately enough to correctly decide when to turn north for Sunda Strait when they stipulated that ships bound for Java should use the Brouwer route in August 1616.

If Hartog genuinely believed that he had turned north at a position to run a course of north-north-east to Sunda Strait, he was about 15° of longitude in error which is a huge error and would involve under-estimating the distance run per watch, day, etc., by nearly 20%. This seems unlikely – *Eendracht* was not making impressive daily runs. She was about sixty days from the Cape to Dirk Hartog Island which means she was averaging less than 100 nautical miles per day even when running east in brisk southern spring conditions. Had Hartog intended to go to Sunda Strait, and deliberately run farther east than necessary motivated by a desire to explore, he would probably have sailed away from Dirk Hartog Island on a north-westerly course and would not have followed the coast all the way to Northwest Cape. If he was actually much further east than he had calculated, the discovery of land should have alerted him to the problem and he would not have resumed the course of north-north-east.

Why does the plate say that *Eendracht* sailed for Bantam? Perhaps Hartog was reluctant to erect a monument proclaiming that he was not following instructions when he did not know whether his venture was going to be successful.

It seems that Dirk Hartog was a rather bold and independent navigator who experimented with a new and more direct route to Eastern Indonesia, and in doing so he happened upon Australia’s western coast. On his return to the Netherlands in 1618 Hartog left the employment of the VOC.

## SLOOPS

**S** In the Royal Navy of the 18<sup>th</sup> and early 19<sup>th</sup> centuries the term sloop had a quite different meaning to that which we now use. A sloop is now considered to be a fore-and-aft rigged sailing vessel with a single mast and single headsail, although in the US a sloop can have two headsails. However, 200 years ago the Royal Navy sloop was of no specific rig. There were brig-sloops and ship-sloops, the former having two masts and the latter three, in both cases all masts were square-rigged. What differentiated sloops from the other naval ships was that a sloop, whatever the rig, was under the command of a commander (one rank less than a captain) and had only a single deck carrying guns. Rated warships were commanded by captains or higher and carried guns on more than one deck. This type of vessel disappeared around the late 1880s, although a few were used as boys’ training ships until the early years of the 20<sup>th</sup> century. In more recent times a naval sloop was a small anti-submarine escort vessel used during World War II.



# The Sun Valve

By Bob Johnson

As Maritime Heritage Association Treasurer, I rarely contribute to the Journal but I felt like sharing my enthusiasm for a Sun Valve. The Guilderton Country Club proudly displays the old triple bullseye Fresnel lens from the Moore River lighthouse and I decided to research details on this beautiful piece of engineering.



Thomas Edison, initially doubted that the device could work. The patent office demanded a special demonstration before approving the patent application!

The valve formed part of the Dalén Light that was used in lighthouses and buoys from the 1900s through to the 1960s by which time electric lighting came to dominate. The Dalén light is a produced from burning of carbide gas (acetylene), combined with a solar sensor which automatically operates the light only during darkness.

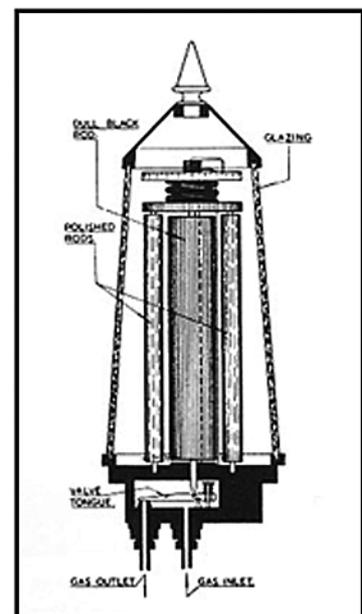
### Design

The valve is controlled by four metal rods enclosed in a glass tube. The central rod that is blackened is surrounded by the three polished rods. As sunlight falls onto all of the rods, the absorbed heat of the sun allows the unequally expanding dark rod to cut the gas supply. After sunset, the central rod cools down, becoming the same length as the polished rods and opening the gas supply. The gas is lit by the small, always-burning pilot light.

It was recognised in the late 1800s that acetylene (produced when calcium carbide and water are mixed) was a cleaner, brighter and more reliable fuel than oil or kerosene for lighthouse lamps, but it was dangerous to transport and burning it 24 hours a day wasted too much fuel. Dalen overcame these difficulties by:

Originally the lens had been manufactured by AGA (the cooker people) in Sweden and sent to Hamelin Island Lighthouse in 1936. On the photograph of the lens and mantel there can be seen a small attachment on the right hand side that is the Sun Valve.

A sun valve is a form of flow control valve, notable because it earned its inventor Gustaf Dalén the 1912 Nobel Prize in Physics. Many prominent contemporary engineers, including





Developing a method for storing acetylene so that it could be transported safely. This was achieved by dissolving the acetylene in acetone and then putting it in a cylinder that contained a porous mass of asbestos and diatomaceous earth.

Inventing, in 1906, the 'Dalen Flasher' which was a device that only took gas during the flash of the light although a small pilot light was constantly burning. This reduced gas consumption by more than 80%.

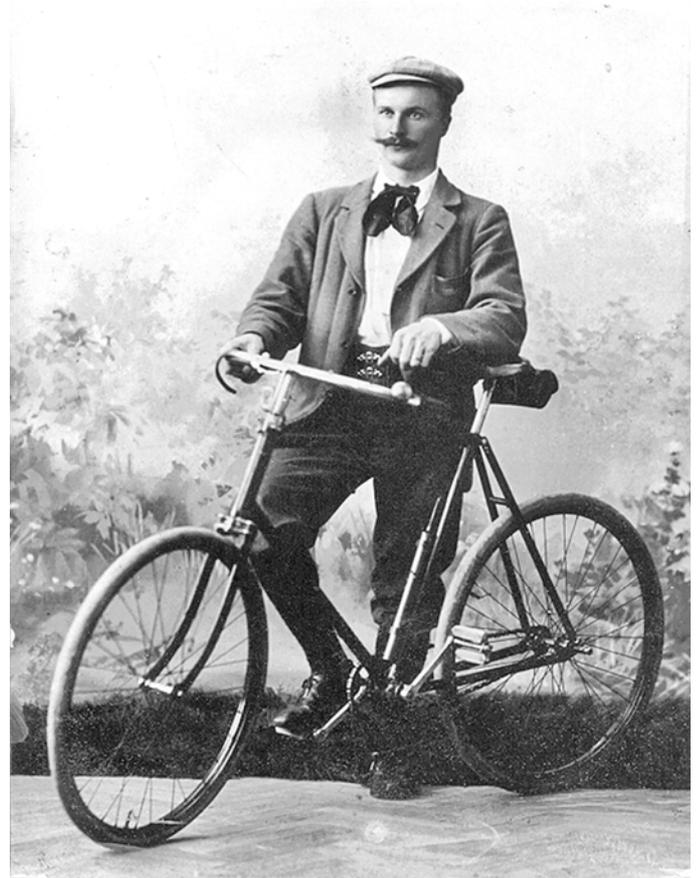
Inventing, in 1907, the Sun Valve, which turned off the flash portion of the cycle during daylight hours, thus reducing gas usage by a further 50%. These three developments meant that lights only needed to be serviced once or twice a year with the result that lightships and many lighthouses could be de-manned and that lit buoys could be deployed.

### Accident in early 1912

Gustaf Dalén was sadly blinded in an acetylene explosion during a test of maximum pressure for the accumulators. Later the same year he was awarded the Nobel Prize for Physics. Too ill to attend the presentation, Dalén had his brother, ophthalmologist Professor Albin Dalén, stand in his place.

The presentation speech praised the quality of sacrificing personal safety in scientific experimentation, a compliment that compared Dalén with Nobel him-

self, the inventor of dynamite. Despite his blindness, Dalén controlled AGA until his death in 1937. He received over 100 patents during his lifetime.



## M.V. *Cape Don*

The former lighthouse tender *Cape Don* was built at the State Dockyards in Newcastle, NSW, and launched in January 1963. The vessel had a length overall of 243ft 7in, a length between perpendiculars of 220ft, an extreme breadth of 42ft 1¾in and a gross tonnage of 2106.24. The ship was fitted with an Australian made 5-cylinder Polar M65T diesel engine developing 2,000bhp at 250rpm driving a variable pitch 4-bladed propeller which weighed 5 tons. This propeller was 9.2ft in

diameter, and gave the *Cape Don* a service speed of 12.5 knots.

*Cape Don* was equipped with an electric crane with a safe working load of 12.5 tons, a LARC amphibian, two two-ton capacity work boats and a dinghy. The LARC, which weighed 10 tons, could carry 5 tons of cargo at eight knots when waterborne and twenty five knots on land. The ship is currently owned by the M.V. *Cape Don* Society, and is the largest privately owned vessel in Australia.





## Whisky Galore!

### When the liquor-laden SS *Politician* ran aground in the Outer Hebrides.

Based on an article from the MAAWA Newsletter, July 2016

One of the most well-known events in the recent history of the Scottish Hebrides was the wreck of the whisky-laden SS *Politician* on 5 February 1941.

The *Politician* was an 8,000-tonne cargo ship which had left Liverpool bound for Jamaica, laden with a cargo of linen, shoes... and 260,000 bottles of whisky. It was for the American market, and no duty had been paid. She sailed up past the Isle of Man towards the Hebrides, where the winds increased to gale force.



The *Politician* ran aground in the storm onto sandbanks off the Isle of Eriskay near the islet of Calvay, where she flooded, and later broke in two. Local islanders set forth in a sailing boat to offer assistance to the crew, who were all rescued, and stayed with locals in their homes for a time.

When the island-people learned from the crew exactly what the ship was carrying, a series of illegal salvage operations took place at night, before Customs officials arrived. The island's supplies of whisky had dried up due to war-time rationing, so the islanders helped themselves to as many of the hundreds of thousands of bottles of whisky as they could before winter weather broke up the ship. Boats came from as far away as Lewis as the news of the whisky travelled across the Outer Hebrides. No islander regarded it as stealing, they believed that the rules of salvage meant that once the bounty was in the sea, it was theirs to rescue.

This of course was not the view of the local authorities. Customs officer Charles McColl was incensed at the blatant thievery. McColl whipped up a furore, and made an official complaint to the

police. Villages were raided and crofts were turned upside down. Bottles were hidden, secreted, or sometimes drunk in order to hide the evidence.

On 26 April at the Loch Maddy Sheriff's Court, a group of men from Barra pleaded guilty to theft and were charged between three and five pounds. McColl was furious at the leniency of the men's sentences, but the police, being mainly locals themselves, were tired of the bothering of the locals who had not, in their minds, done such a bad thing. However, McColl continued his crusade against these illegal salvagers and some of the men were sentenced to up to six weeks in prison in Inverness and Peterhead.

Back at sea, the official salvage attempts were not going too well, and it was eventually decided to let the *Politician* remain where she was. McColl, who had already estimated that the islanders had stolen 24,000 bottles of whisky, ensured that there would be no more temptation. He applied for, and was granted, permission to explode her hull. One islander, Angus John Campbell, famously commented: "Dynamiting whisky! You wouldn't think there'd be men in the world so crazy as that!"

In 1987 Donald MacPhee, a local South Uist man, found eight bottles of whisky in the wreck. He sold them at auction for £4,000.

The wreck of the SS *Politician* still lies off the coast of Eriskay, although it is below the waterline as winter gales have destroyed the deck and cabins. In 1988 the island finally got its own legitimate pub, named 'Am Politician'. Compton Mackenzie wrote about the story in his book *Whisky Galore*, and later Ealing Studios made a comedy film by the same name. Relics and images can be seen at the Am Politician pub on Eriskay Island.





# Raider Scare off Rottnest Island

by Wesley Olson

The primary purpose of the coastal defence guns which were installed on Rottnest Island just prior to the Second World War was to protect the port of Fremantle and its shipping from enemy vessels.

Despite its apparent remoteness, Fremantle was at threat in the early war years. Part of Germany's war strategy involved the disruption of the British mercantile trade and its navy was tasked with sinking Allied merchant ships in all corners of the globe.

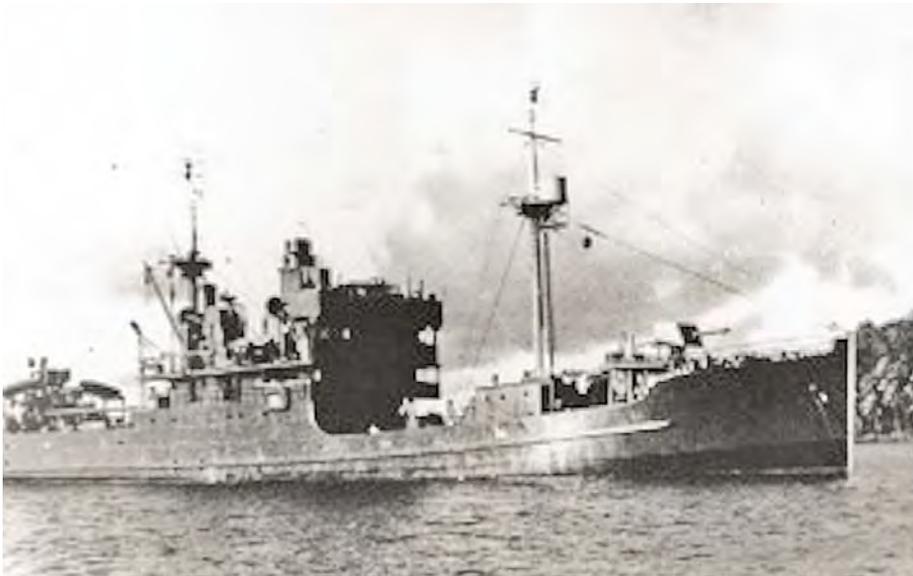
As the German navy had insufficient warships and U-boats for this enormous task, a number of merchant ships were converted into auxiliary warships by fitting concealed guns and torpedo tubes, and being made able to lay mines.

The captains of these armed merchant raiders were instructed to sink or capture enemy merchant ships by the use of camouflage and concealment. Prior to sailing from their home ports they were also given instructions as to which enemy harbours they were to mine.

The first raider to reach Western Australian waters was *Pinguin*, which captured a Norwegian

*The auxiliary patrol vessel HMAS Yandra played a prominent part in the search for survivors after the loss of HMAS Sydney. Sadly, she found only survivors from HSK Kormoran.*

Photo: Sea Power Centre



vessel, *Storstad*, off North West Cape on 7 October 1940. *Storstad* was converted into an auxiliary mine layer and together with *Pinguin* steamed east to mine the approaches to Sydney, Melbourne, Hobart and Adelaide. The two vessels avoided detection, laid their mines and escaped. In the following weeks their mines sank three ships and severely damaged a fourth.

The following year the infamous *Kormoran*, under the command of Theodor Detmers, reached Western Australian waters. His orders included laying mines at the entrance of Australian and New Zealand ports, in particular, Adelaide, Auckland, Brisbane, Hobart, Melbourne, Wellington, and Fremantle. Fortunately, *Kormoran* was sunk on the afternoon of 19 November 1941 by the Australian light cruiser HMAS *Sydney* before she laid any of her mines.

As we know *Sydney* was also lost off the Gascoyne coast with her entire complement of 645 officers and men while a large percentage of *Kormoran's* crew survived.

In the preceding month before the *Sydney-Kormoran* action, the defences at Rottnest had been placed on alert when it appeared that an unidentified ship had attempted to approach Fremantle harbour.

On the night of 5 October 1941 the auxiliary anti-submarine vessel HMAS *Yandra* sighted and challenged a merchant ship which was identified as *Salland*. Shortly after 2210 *Yandra* signalled this information to the Port War Signal Station on Rottnest Island, which in turn passed the sighting report to the District Naval Office in Fremantle. Ten minutes later the signal station asked *Yandra* to repeat the name of the vessel. *Yandra* duly replied with the name *Salland*. *Yandra* was then asked to provide a bearing on the vessel. A few minutes later *Yandra* reported that the vessel was about three miles west of her position but was not burning any lights.



At 2230 *Yandra* was signalled to instruct the vessel to turn on its side lights. Fifteen minutes later the signal station sighted the vessel's lights and took a bearing. On comparing this bearing with another taken from an observation post a range of about ten miles was arrived at. For the next thirty minutes the signal station kept the vessel under observation. It was noted that while the vessel now appeared eight miles distant, the bearings indicated that she was moving slowly westwards, away from Fremantle.

Shortly after 2300 the Duty Plotting Officer at the District Navy Office checked his plot and realised that *Salland* was not expected to reach Fremantle until 8 October. Thinking that the vessel in question might be *Saidja*, which was expected to arrive next morning, he asked the signal station to confirm the vessel's identity. The signal station confirmed that the vessel was *Salland*.

Thirty minutes later, when the signal station was asked for *Salland's* estimated time of arrival, the vessel in question could no longer be seen. *Yandra* was then asked to provide a bearing on, or an ETA for the vessel. *Yandra* replied that *Salland* had not been seen after the change of watch. The signal station immediately asked the army to sweep the area with searchlights but they failed to locate the vessel.

When *Saidja* duly arrived on the morning of 6 October it was assumed that *Yandra* had made a mistake and had sighted and challenged *Saidja* the previous evening. When the local Intelligence Officer boarded *Saidja*, however, it was learned that she had come straight from sea and had not been challenged by *Yandra*. Suspicions about the true identity of the vessel sighted by *Yandra* then began to increase. When *Yandra's* officers were questioned later in the day it began

to appear that an unknown vessel had given a false name before returning to sea.

The troopship *Queen Mary* was expected to arrive during the next morning. Fearing for her safety, a routine air search ahead of the liner was then supplemented by a flight of seven aircraft which were to search for the suspicious vessel. Although several vessels were sighted within the search area, all were on the list of vessels expected and all were correctly identified.

As HMAS *Sydney* was at sea, returning from an escort mission to Sunda Strait, it was decided to inform her commanding officer, Captain Burnett, of the incident. At 1805 Area Combined Headquarters Fremantle signalled the following message to *Sydney*:

*An unidentified vessel was sighted 295 degrees 8 miles from Rottnest Island Light at 1415Z/5 by YANDRA. Vessel signalled her name as SALLAND but did not enter harbour and has not been seen since. SALLAND is due at Fremantle October 8. Air Search given in P1/6 was extended to cover area 230 deg. to 280 deg. from Cape Naturaliste to depth 180 miles.*

At 2116 Burnett advised Area Combined Headquarters that the vessel in question could not have been *Salland* as she had been sighted by *Sydney* on 4 October. Fearing that an unidentified vessel might have been attempting to lay mines, Burnett informed headquarters that *Sydney* was proceeding to arrive at the entrance to the searched channel by 0400 on 7 October.

He advised that his intention was to prevent *Queen Mary* from entering the channel until it had been thoroughly swept and requested that the troopship be ordered not to enter until she re-

*Formerly the 8,736 gross ton merchant ship Steiermark, she was converted to an auxiliary cruiser and renamed HSK Kormoran*

Photo: Wesley Olsen





ceived further orders. Burnett later stated that he had considered proceeding to the westward to carry out a search for the suspected raider but due to the uncertainty of the available information and his fuel situation he had abandoned the idea.

*Sydney* raised Rottnest Island Light at 0330 next morning and five minutes later sighted the guardship HMAS *Wyrallah* with the mine sweeping flotilla. *Queen Mary* arrived an hour later and at 0815 was led through the freshly swept channel.

On arrival at Fremantle Burnett began an investigation into the suspicious sighting by *Yandra*. It was soon realised that a 15 knot raider could have proceeded outside the radius of the air search, and in light of this, Burnett intended to sail again the same afternoon to search for the suspect vessel. After investigating the matter further, however, Burnett considered it extremely doubtful that an unknown vessel was in fact present.

Burnett considered that the vessel in question was possibly the outward bound *Armadale*. A test of the *Yandra*'s signalman and officer of the watch had revealed that they were 'not very successful' at reading the signal lamp, even at the relatively slow rate of eight words a minute. Burnett concluded that they had probably 'guessed' the name of the vessel in question.

Subsequent investigations established that Burnett had been correct in his appreciation. The master of the *Armadale* confirmed that his ship had been challenged as she left Fremantle on the night of 5 October.

Correspondence over the incident continued well into the following year. One senior officer considered that *Yandra*'s commanding officer was to blame, and recommended that Lieutenant Woods incur the Naval Board's 'displeasure'. Another believed that a charge of making a false statement should be levelled against *Yandra*'s signalman and the officer of the watch. It appears that by March 1942 Navy Office had lost interest in the matter and got on with fighting the war.

### **What follows are the recollections of Sergeant Douglas Coates who served with the 7<sup>th</sup> Heavy Brigade on Rottnest Island from June 1940 to November 1944.**

Late in 1941 I was part of the off duty gun crew which had been permitted to attend a film show at Kingstown Barracks. The Barracks were about half a mile from Bickley Fort. Shortly after the

film commenced the alarm bells sounded. This would have been about 2030 hours.

The film was stopped and an officer ordered us back to the fort, saying that an unidentified vessel was standing off the island and had failed to respond to signals to identify itself. We returned to the fort at what our major was prone to describe as a split arse gallop. I took up my station as operator of the Depression Range Finder. The two gunners who laid the line and I had the advantage of continuous observation of the target through telescopes.

The target was indicated as a vessel to our north. I have a hazy recollection that it was on a bearing of 040 degrees. Its range was something over 11,000 yards and well within gun range. It was a cargo ship of a type common in pre-war trade. It was hardly moving and broadside to our view, heading towards Fremantle.

Search lights at Phillip Rock and North Point on Rottnest illuminated the vessel, and at various times mainland lights were brought to bear. The lights were used with deliberate changes to confuse the 'enemy'.

The situation in the Battery Command Post was tense. We were told that the identity of the vessel was unknown. It had been repeatedly challenged to identify itself by the Port War Signal Station on Rottnest. We could see the PWSS lamp from Bickley. The vessel made no response.

The communications in the Command Post kept us abreast of events. The Fire Command and LHQ at Belmont were intercommunicating. LHQ seemed cautious and gave the impression that it believed that the vessel would turn out to be friendly. Navy communications contributed and were obviously working hard to identify or otherwise account for our target.

The target was illuminated by searchlights and followed by rangefinders and gun layers for a considerable time - perhaps approaching an hour. A standing instruction demanded that friendly shipping be not illuminated for longer than necessary in order to protect it from lurking enemy elements. Seemingly following this principle, and in the belief that the vessel must be friendly, the order was given to douse all searchlights.

The troops continued to stand to their posts, but of course, without illumination it was impossible to follow the target's movements by telescope. In



the time that followed the dousing of searchlights, signals kept us informed of LHQ and Navy activity which continued to try to establish the target's identity - without success. After about an hour of darkness it seemed that LHQ accepted the possibility that an enemy vessel was involved. Searchlights were exposed and swept the sea to locate the target. It had gone.

The feeling of the troops was that an enemy vessel had penetrated our defences, had been challenged, and allowed to escape. Morale collapsed as the troops talked of having been let down and prevented from serving the purpose for which they were trained and posted. There was a wave of feeling against our own fire commander. In truth it was likely that he acted according to the directions of LHQ.

In the following week news was released that HMAS *Sydney* had been sunk with all hands when off the Murchison coast. It was stated that she had fallen victim to the German raider *Kormoran*. It seems that the *Kormoran* was also sunk as a group of survivors was later taken prisoner on the coast near to the point of encounter. They had landed in lifeboats from the *Kormoran*.

I, along with many other troops on Rottneest Island, and I imagine, Swanbourne, believe that the intruder on the night I have described, was the *Kormoran*. We believe that we could and should have prevented the events of 19 November 1941. I still feel upset and ashamed that our coastal defences were prevented from doing their duty when the opportunity presented. I believe that history could have been changed and hundreds of Australian sailors saved from a premature death.

How do I know it was the *Kormoran*? Well of course I do not, but I have since been shown a picture of the *Kormoran*, and it is the ship of a same type as I observed through the rangefinder telescope and the gun layers saw well within range.

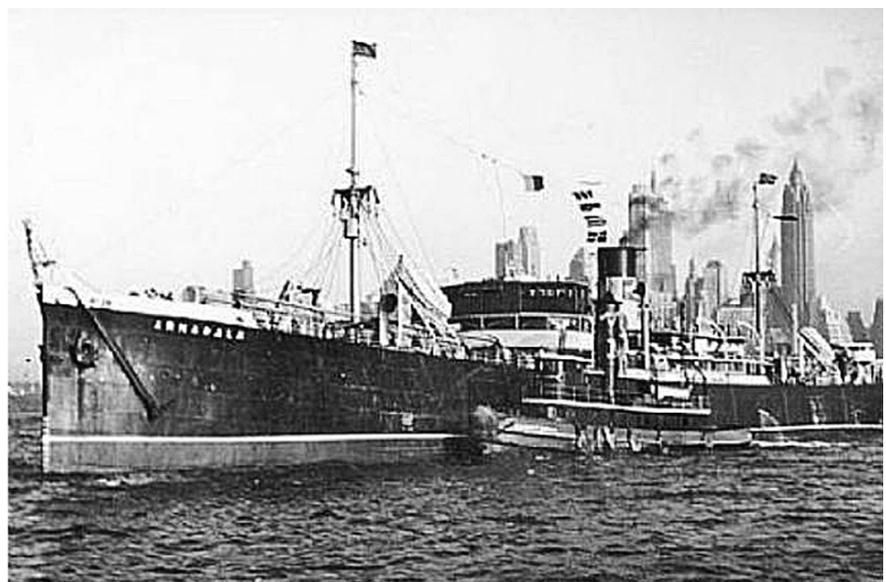
**Footnote:** This recollection dates from the early 1990's. Doug Coates later confirmed that the incident he recalled (and still had a vivid memory of) was not the *Yandra/Salland* incident.

So what do we make of these strange happenings off Rottneest Island in the latter half of 1941? It has been established that *Kormoran* was not off Rottneest on the night of 5 October. The raider was in the middle of the Indian Ocean, steaming towards a rendezvous with her supply ship *Kulmerland*. *Kormoran* and *Kulmerland* met on 16 October, some 1,000 miles west of Fremantle. They parted company eight days later.

Captain Detmers subsequently claimed that after detaching *Kulmerland* his intention was to be off Cape Leeuwin with the new moon on 19 November. He would then sail up the Western Australian coast and perhaps lay mines at Shark Bay if the opportunity presented itself. A subsequent radio report of a westbound convoy escorted by a heavy cruiser, however, altered his plans. Detmers claimed he decided to steam north, out of the path of the convoy.

After the action with *Sydney* Detmers and his surviving crew were captured and questioned. Those that volunteered to talk gave only guarded information about *Kormoran*'s activities prior to being sunk. Nonetheless, naval intelligence officers were able to reconstruct *Kormoran*'s exact movements between 26 October and 19 November and determined that she was not off Rottneest Island on the night in question. They established that Captain Burnett's conclusion was correct.

*Seen here sailing from New York, the 5,066 gross ton Armadale was built as a passenger/cargo ship at Dumbarton in 1929. She was scrapped in 1964, the year after her builder, William Denny and Brothers went into voluntary liquidation*





# Mysterious Disappearance of the USS *Conestoga* Finally Solved After 95 Years

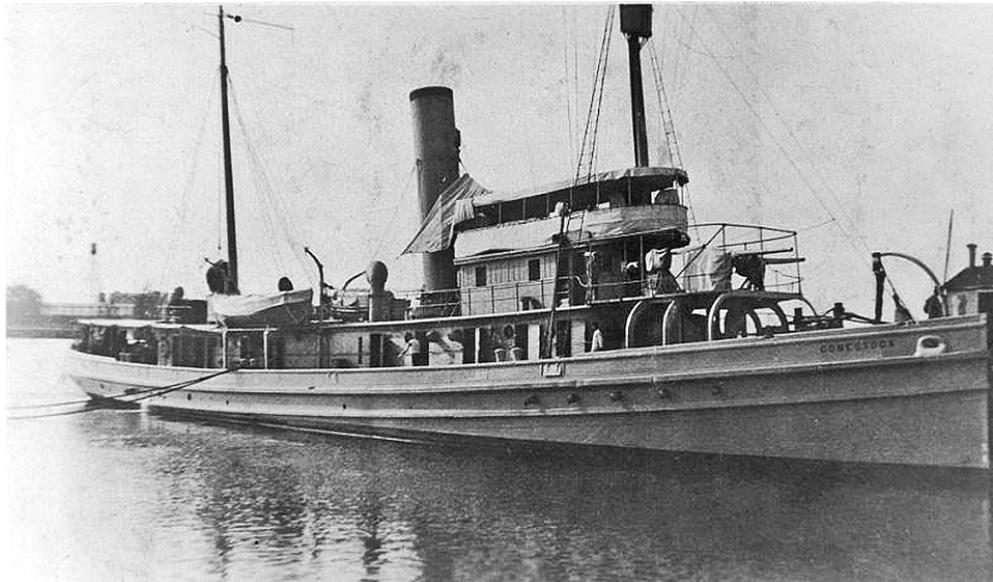
This article by George Dvorskey is from:

[gizmodo.com/mysterious-disappearance-of-the-uss-conestoga-finally-s-1766876364](http://gizmodo.com/mysterious-disappearance-of-the-uss-conestoga-finally-s-1766876364)

On March 25, 1921, the *USS Conestoga* departed San Francisco's Golden Gate en route to Hawaii with 56 officers and sailors aboard. It was never heard from again. Now, after 95 years, the ship has been found at the bottom

of the Pacific, finally ending this enduring maritime mystery.”

No one realized that the ship was missing until more than a month had passed and it failed to show up at Pearl Harbor on its anticipated arrival date. The US Navy dispatched a massive air and sea search around the Hawaiian islands consisting of 60 ships and dozens of planes covering 300,000 square miles. Several weeks later, on May 17,



*The USS Conestoga shortly before its disappearance. Note the 3-inch calibre naval gun.*

*Image: U.S. Naval History and Heritage Command NH 71299*

of the Pacific, finally ending this enduring maritime mystery.

NOAA and the US Navy announced the official discovery of the *USS Conestoga* (AT-54) yesterday. The First World War-era tugboat disappeared without a trace after setting off for Tutuila, American Samoa, by way of Pearl Harbor, Hawaii. Its discovery shows that the ship never made it very far, sinking in stormy weather just 30 miles (48 km) from its departure point. Until now, now one knew where the wreck was located, or what happened.

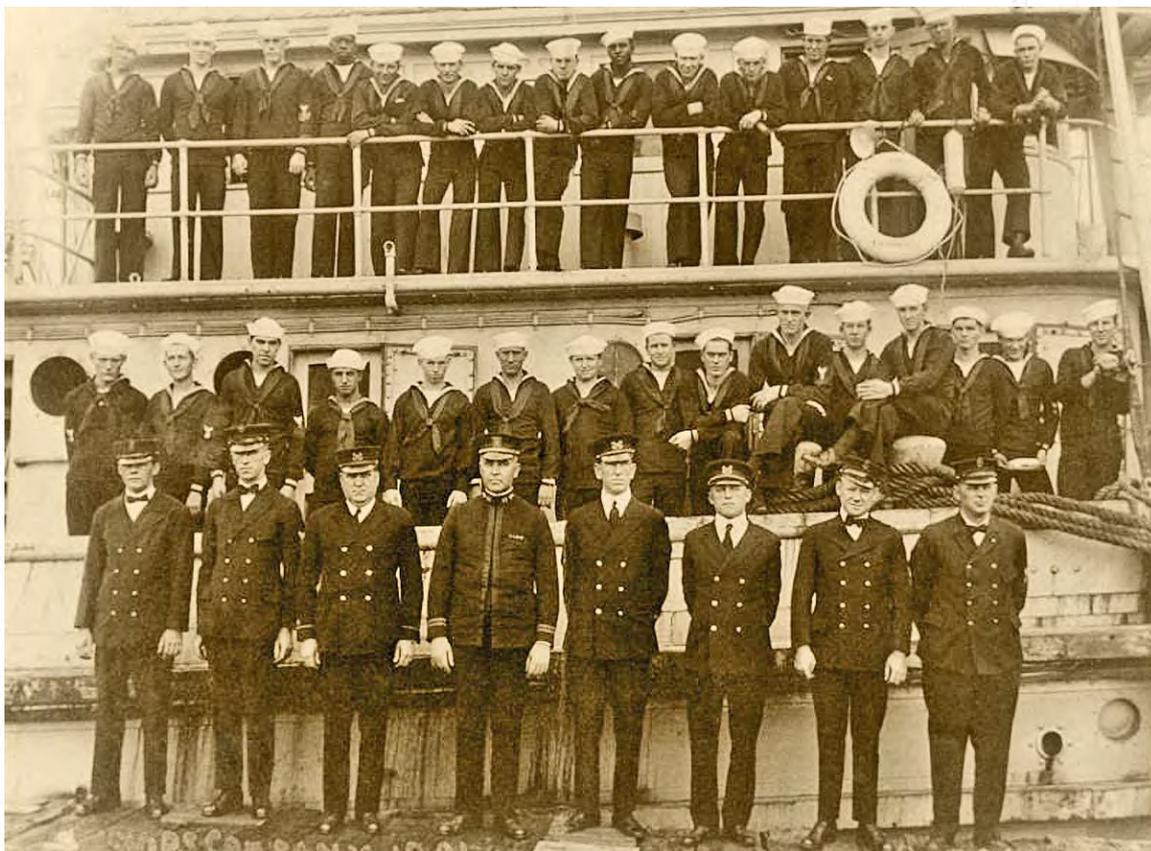
“After nearly a century of ambiguity and a profound sense of loss, the *Conestoga*'s disappearance is no longer is a mystery,” noted deputy NOAA administrator Manson Brown in an emailed statement. “We hope that this discovery brings the families of its lost crew some measure of closure and we look forward to working with the Na-

vally to protect this historic shipwreck and honor the crew who paid the ultimate price for their service to the country.”

a battered lifeboat was discovered with the letter “C” on its bow off the coast of Mexico, dramatically shifting the location of the search. The mysterious disappearance of the *USS Conestoga* gripped the nation for months. Finally, on June 30, 1921, the ship was declared lost, with all 56 crew members presumed dead. It would be the last time a U.S. Navy ship was lost without a trace during peacetime.

Seven year ago, the NOAA Office of Coast Survey discovered a probable, undocumented shipwreck near the Farallon Islands off San Francisco. In September 2014, NOAA launched a two-year investigation. Last October, with the help of an archaeologist from the Naval History and Heritage Command and several senior Navy officers, the *Conestoga*'s identification and location was confirmed. But more work was required to ascertain the conditions under which the ship sank.

The *USS Conestoga* is currently resting largely intact under 189 feet (57 meters) of water, three



*Ship's Company beside and on USS Conestoga, at San Diego, California, circa early 1921.*

*Image: U.S. Naval History and Heritage Command NH 71503*

miles from Southeast Farallon Island. Based on its location and orientation, experts believe it sank as officers and crew desperately tried to reach a protected cove on the island. According to weather logs around the time of the ship's departure, wind in the Golden Gate area had increased from 23 mph (37 km/h) to 40 mph (64 km/h), and the seas were choppy with high waves.



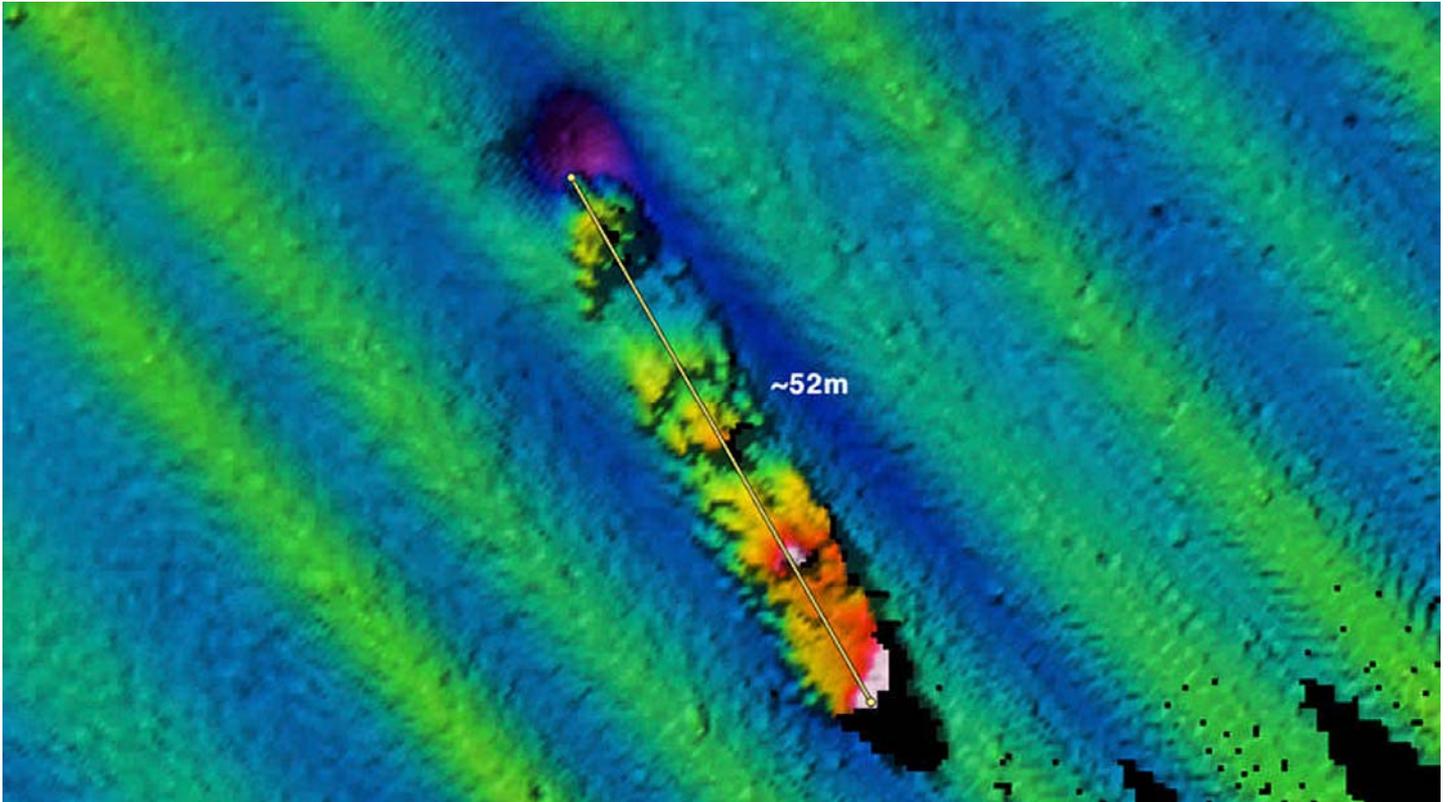
*Top: USS Conestoga gunnery department posing with the tugboat's main battery, a 3-inch 50 calibre naval gun.*

*Bottom: The current position of the gun inside the shipwreck near the forecastle after the gun's support platform had fallen from its original position.*



*Image: Historic photograph, U.S. Naval History and Heritage Command NH 71510. Underwater photograph, NOAA ONMS/Teledyne SeaBotix*

“This would have been a desperate act, as the approach is difficult and the area was the setting for five shipwrecks between 1858 and 1907,” notes NOAA’s



NOAA/Fugro multibeam sonar image of the USS Conestoga.

report. “However, as *Conestoga* was in trouble and filling with water, it seemingly was the only choice to make.”

Cameras mounted on remotely operated vehicles show the wreck lying on the seabed. The tug’s wooden deck and upper features have collapsed into the hull owing to corrosion and age. White plume anemones now drape the hull’s exterior, while wolf eels, ling cod, and rockfish frequent the wreck.

Video evidence displayed features consistent with the *Conestoga*, including the number of portholes, the size of the 170-foot long ship, and the presence of mooring bits, two porcelain marine heads, and a single, 3-inch, 50-caliber gun mounted on the main

deck, among many other clues.

NOAA did not disturb the wreck, nor does it plan to. Under the *Sunken Military Craft Act* of 2004, no one is allowed to perturb sunken military vessels or planes owned by the US government, or foreign sunken military vessels that lie within US waters.

The *USS Conestoga* was originally built to tug coal barges for the railroad, but the US Navy bought the ship in 1917 for service in World War One. During the conflict, the tugboat operated off the Atlantic coast and the Azores, performing convoy and other duties. After the war, it was sent to Norfolk, Virginia, for harbor service, after which time it made its way to the Pacific performing similar duties.

### Maritime Heritage Association Inc.

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