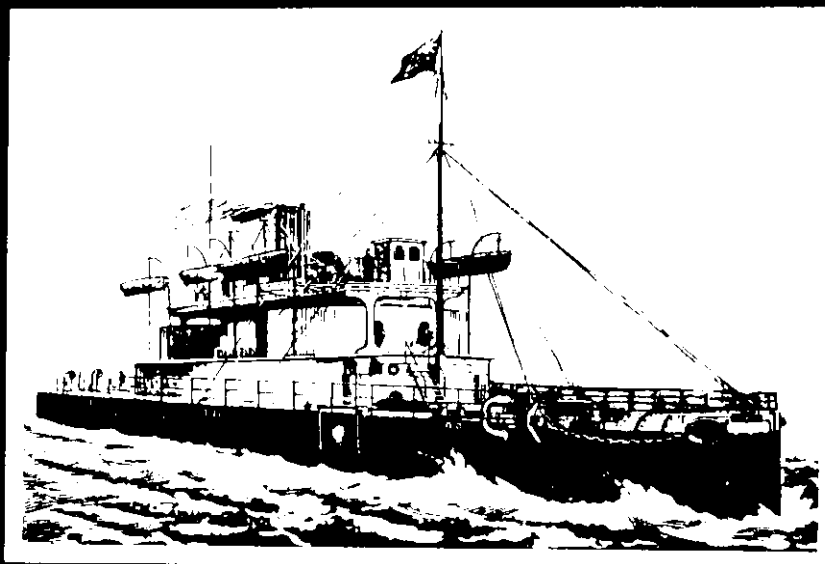


THE SANDRINGHAM HISTORICAL SERIES

No. 3

HMVS CERBERUS BATTLESHIP TO BREAKWATER

**Historic Iron Monitor
Warship of the Victorian Navy**



by R. J. Herd, B.Sc., F.R.I.N.A., M.I.E., Aust

ABOUT THE SANDRINGHAM HISTORICAL SERIES:

The previous booklets in the Series are:

No. 1: The first people of Black Rock
— The Bunurong Tribe of Aborigines, 1982.

No. 2: Black Rock House, 1983.

It is intended that there will be further publications in this series dealing with other aspects of Sandringham's history. The series is published by the City of Sandringham, Municipal Offices, Royal Avenue, Sandringham, 3191, Victoria, Australia, telephone (03) 598 8111.

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HMVS 'CERBERUS' — BATTLESHIP TO BREAKWATER

1. INTRODUCTION

This volume in the Sandringham Environment Series deals with the 'Cerberus', the iron-clad man-of-war and former flagship of the Victorian Navy that now lies rusting as a breakwater for small craft in Half Moon Bay, Black Rock.

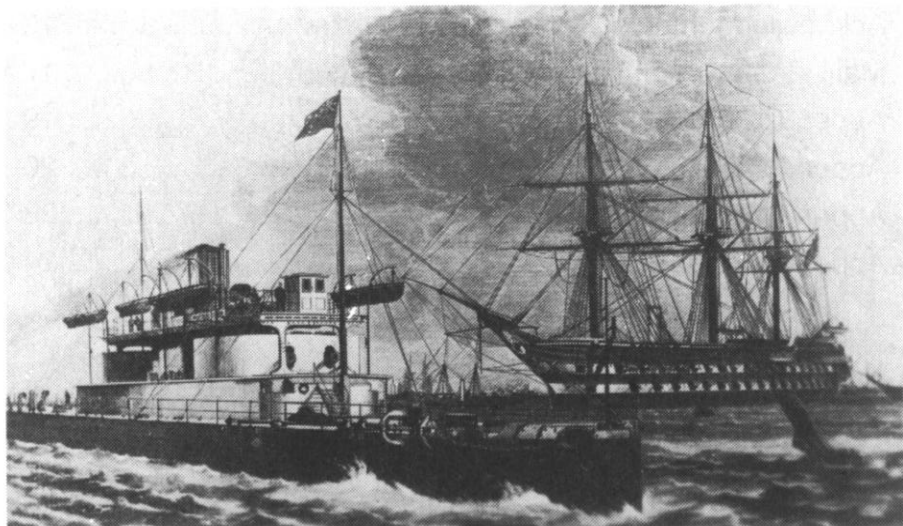
The 'Cerberus' is one of the most historically important naval vessels in existence.

Firstly, the ship has world wide significance in the history of naval architecture.

The first built of a type, a breastwork monitor, which commenced the true line of development of the ironclad battleship, she is now the only surviving vessel of her type in the world.

Secondly, the ship is a colourful part of the heritage of people living around the shores of Port Phillip Bay. The 'Cerberus' was ordered on behalf of the people of Melbourne in 1866 and has always served within Port Phillip Bay. The ship has closer ties with the history of Melbourne than any other vessel.

Thirdly, age alone makes the ship significant. By comparison, the sailing ship 'Polly Woodside', now restored by the National Trust was launched seventeen years after the launching of the 'Cerberus'. In 1926 the usefulness of the 'Cerberus' as a defence vessel and as a transport vessel was over and there was danger that she would be scrapped completely. However, the Black Rock Yacht Club initiated a move by Sandringham Council to purchase the ship, thereby saving her from this fate. The 'Cerberus' has now become an integral part of the seascape near the Red Bluff Cliffs.



'Cerberus' and 'Nelson.'

(Photo — La Trobe Collection — State Library of Victoria)

Given the growing recognition of the importance of this vessel in the history of naval architecture, the Sandringham council is hopeful that restoration of the vessel will be undertaken before it is broken down beyond reclamation.

2. EARLY MELBOURNE

European settlement commenced at the mouth of the Yarra in 1835. Growth was rapid and by the time Victoria became an independent colony in 1851, 77,000 people lived in the Melbourne district. Gold discoveries at Bendigo and Ballarat in the mid 1850's further accelerated growth and Melbourne became the most populous and the wealthiest city in Australia.

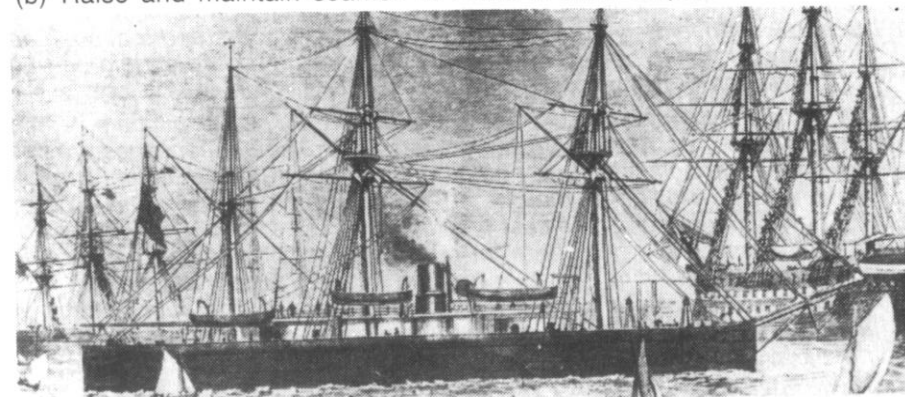
Melbourne was a busy port, with ships bringing in a wide range of supplies and taking away valuable cargoes of gold and wool. In 1863 the Russian warship H.I.M.R.S. 'Bogatyr' visited Melbourne peacefully. As Britain and Russia had recently been at war in the Crimea, Russia was considered a potential attacker upon the merchant ships calling at Melbourne. These ships were vulnerable to attack, as Melbourne had only occasional visits by Royal Navy warships stationed at Sydney.

In January 1865, the commerce raider 'Shenandoah' of the Confederate States of America entered the port despite the proclamation of neutrality published in the Victoria Government Gazette on 15th August, 1861. During her stay she was slipped and repaired. The visit was to have unfavourable international consequences. An International Tribunal in Geneva in 1872 found that Great Britain was responsible for all acts committed by the vessel after departure from Hobson's Bay on 18th February, 1865.

3. PROTECTION FOR PORT PHILLIP

It was the tradition of the Imperial Navy to keep shipping lanes to Britain open and so the Imperial Government was willing to assist in naval defence. The Colonial Navy Defence Act of 1865 empowered British colonies to:

- (a) Provide, maintain and use their own vessels of war under such conditions and for such purposes as Her Majesty in Council from time to time approves, and to place these vessels at Her Majesty's disposal when any such vessel would become to all intents a vessel of Her Majesty's regular Navy.
- (b) Raise and maintain seamen to serve in such ships.



'Cerberus' with temporary barque rig and built-up sides arriving in Hobson's Bay, 9th April, 1871.

(Photo — Science Museum of Victoria)

(c) Raise and maintain volunteers entered on terms of being bound to general service in the Royal Navy. Emergency volunteers so raised were to form part of the Royal Naval Reserve.

A Navy Act passed by the Government of Victoria in 1860, to provide for discipline and to indemnify the complement of H.M.V.S. 'Victoria' had been declared null and void by the Imperial Government as ultra vires the Constitution of Victoria.

Thus, after some years of negotiations, the Victorian Treasurer, The Honourable George Verdon, went to London in 1866 and secured 2 major ships for Victoria — the 'Nelson' on permanent loan and a new warship for Harbour defence to be specially constructed. The agreement between the two Governments is recorded in the letter despatched to the Treasurer on behalf of Lord Carnarvon.

"Downing Street, 15th November, 1866.

Lord Carnarvon directs me to inform you, that if you, on behalf of the colony, are prepared to accede to the following arrangements, which is based on the terms of your application, and to other papers to which I have referred, Her Majesty's Government will be ready to propose to Parliament the pecuniary appropriations necessary to give it effect.

The Controller of the Navy will arrange with you the details of an armour-plated monitor or turret ship, to be constructed in a private yard, but under Admiralty superintendence, and to be capable of carrying 22-ton guns.

The cost of the ship is not to exceed 125,000 pounds of which the colony will furnish 25,000 pounds. The cost of armament is to be borne by the colony. The maintenance, manning, and command of the ship is to be undertaken by the Colonial Government, receiving such occasional aid theretofore in the selection of such officers and men from home as may be asked for.

It is clearly understood that this ship is maintained for the protection of the important British as well as Colonial interests that require naval defence in the waters of the colony. She will, therefore in time of war, be under the command of the Senior Naval Officer on the station, who, in the event of any serious emergency, will not be precluded from withdrawing her for a time from the immediate waters of the Colony, in case the general safety should, in his judgement, make such a temporary withdrawal absolutely necessary. It is of course, understood that such an emergency should be a serious one, and that due regard should be had to the wishes of the colony.

Further, a wooden line of battleship, with steam power will be selected and given to the Colony, with such masts, yards, and necessary stores as have been specially appropriated to her; and such additional stores, work, and c., provide as may be needed, to be paid for by the Colony.

The Colony will bear the cost of fitting out this vessel, of conveying her to Melbourne and when there, of manning and maintaining her, and in time of peace of using her as a training ship for a local naval force.

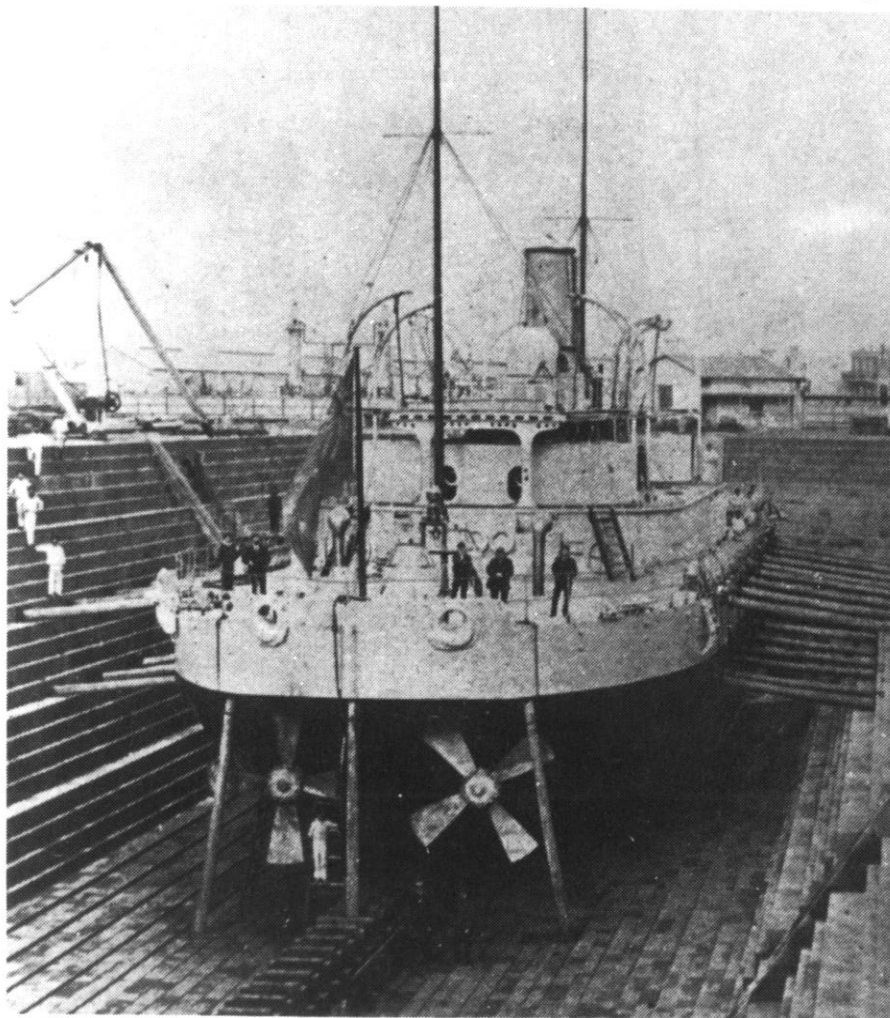
Steps will be at once taken by the Colony for raising such a force. If either of these vessels shall cease to be maintained and used for the purposes for which it is given, the property in it will revert to Her Majesty's Government, discharged of all the above stipulations.

The graving dock, now in progress of construction at Melbourne, will be completed to the necessary depth, and with the necessary approaches, so as to receive the largest vessels of war now built, and will be at the

command of Her Majesty's ship that may require repair; and with this object Lord Carnarvon understands that the colony will be ready, on the requisition of the Naval officer in command, to move any other ship out in order to allow Her Majesty's ships to go into the dock. In the event of this dock, which is now a government work, being leased to any private company, provisions to this effect should be introduced into the lease.

Understanding that you are desirous of leaving the country shortly, Lord Carnarvon loses no time in communicating to you these proposal on the part of Her Majesty's Government, and he will be glad to learn from you as soon as possible, whether you are prepared to close with them on behalf of the Colony in Victoria.

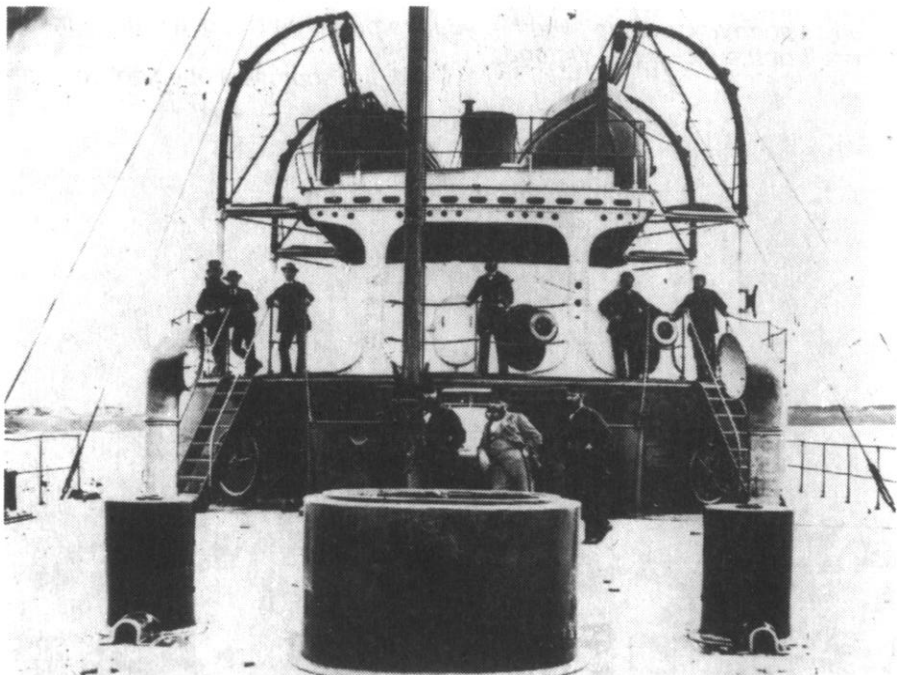
*our most obedient servant
C. B. Adderley."*



'Cerberus' in dry dock.

(Photographer — Andrew Rider. 11th May, 1874. Photo — La Trobe Collection — State Library of Victoria)

The 'Nelson', the wooden line of battle ship referred to above, when originally launched in 1814 had 3 gun decks and 126 guns and was the largest ship of its type built in England. By 1866, it had been reduced to 2 decks and 46 guns. The guns were placed in a broadside arrangement, that is, along the side of the ship and protruding through portholes below the top deck. The high timber sides of the ship made it a large target and although converted to steam in 1854, the conversion was not successful. It still relied on sails and therefore was subject to the vagaries of the weather.



'Cerberus' in Geelong in early 1870's. Captain Panter fourth from left.

(Photo — D. Davies)

By contrast, the new ship was a revolutionary experiment resulting from the new thoughts on ship design that were evolving at that time. The cost of the ship was to be no more than 125,000 pounds, of which the British Government would pay 100,000 pounds and the Victorian Government, the balance. The Victorian Government would also bear all costs to bring the ship to Melbourne. The final total cost was around 140,000 pounds. It was the first warship to be built to the order of the Colony.

4. THE NAME

The new ship was called the 'Cerberus' after the three headed dog in Greek mythology. 'Cerberus' guarded the entrance to the mysterious lower world. Three heads, three serpent tails and a body bristling with vipers made it a fearsome creature. It was chained in a way that the souls of the dead could enter, but could not leave. Hercules was given the task of bringing the monster back from the lower world, but when he did no one could decide what to do with it. The ship was aptly named, especially considering the uncertain future of the ship at the present time.

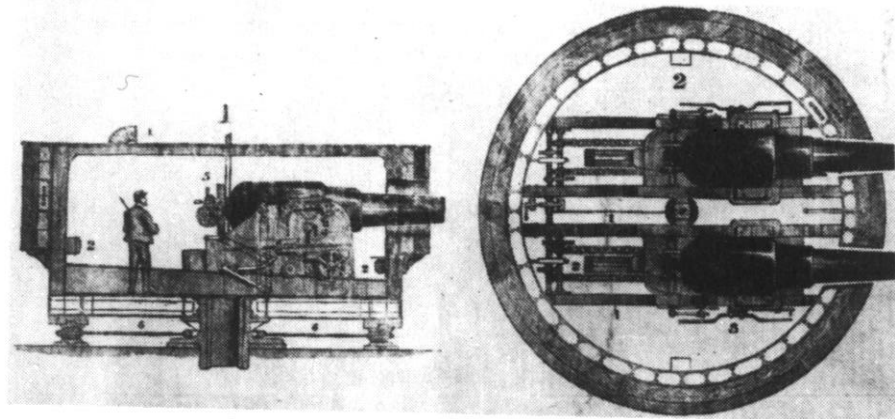
5. THE DESIGN

The 1860's saw great changes in both naval strategy and the design of ships of war.

At the beginning of the decade the British fleet consisted entirely of wooden sailing ships designed for fighting at close range. For this purpose up to 130 guns were ranged on three decks, firing through gun-ports along the sides of the ships.

Two events in addition to the advent of steam propulsion, were to change this pattern of naval warfare, the development of the explosive shell and the use of iron plating to resist gunfire.

During the Crimean War the deep draughted and armourplated British ships-of-the-line could not approach Russian forts sufficiently closely for effective attack. The effectiveness of the iron cladding on the wooden vessels in resisting the Russian shells was however, clearly demonstrated. In order to effectively attack the Russian forts, a British naval officer, Captain Cowper Coles constructed a raft on which was mounted a long 32-pounder gun. This craft was so effective that Coles developed his concept of a raft as a stable gun platform into that of a low profile seagoing ship with shielded guns mounted on turntables, each to cover a wide range of fire.



Section of the 'Cerberus' Gun Turrets.

(The Illustrated Australian News, Melbourne, 20th April, 1871. Photo — Science Museum of Victoria)

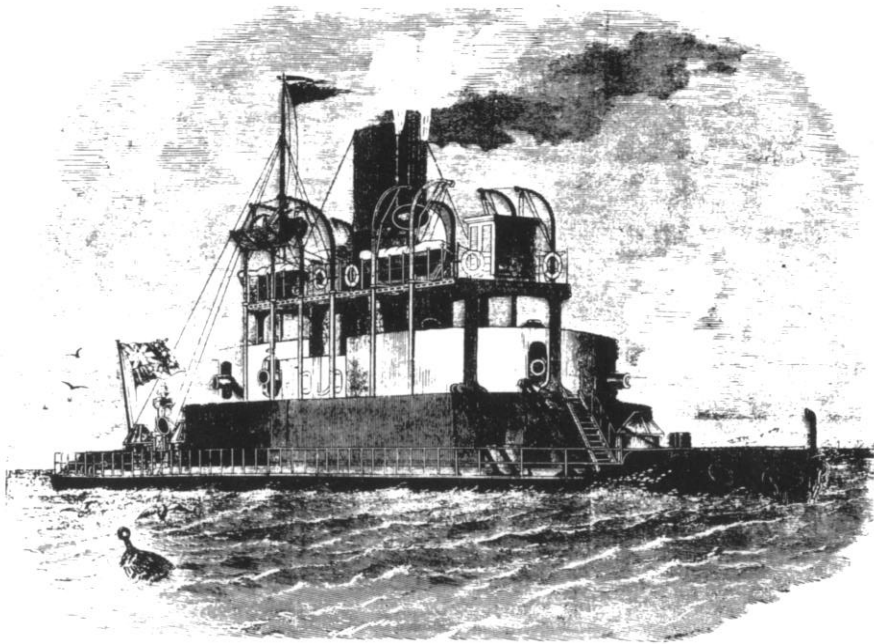
This concept was given positive support in the American Civil War. A confederate sailing ship, the 'Merrimac' was cut down and reconstructed as an iron clad. The U.S. Navy responded with the 'Monitor' conceived by John Ericsson a Swedish-born engineer and investor. The 'Monitor' was deeply submerged, having only its deck and two 11-inch guns mounted in a rotating cylindrical armoured turret, above the water. The battle between the 'Merrimac' and the 'Monitor' lent great support to Coles' proposals.

The concept of placing guns in a revolving turret located on the deck together with low freeboard to reduce a vessel's profile was strongly advocated by Coles. The question of achieving an arc of fire forward and aft while maintaining the masts, sails and rigging of a sailing vessel in order to minimise steaming time was bitterly debated, particularly between Coles and E. J. Reed who became Chief Constructor at the Admiralty in 1863.

Two rigged Monitor type vessels were built as a result of the dispute between Coles and the Naval Constructors, One 'Captain', a low freeboard vessel was built to Coles' design, the other 'Monarch', to Reed's design.

'Captain' was laid down on 30th January, 1867 and completed in January, 1870, while 'Monarch' laid down on 1st June, 1866 was completed on 12th June, 1869. In the meantime, following the request of the Government of Victoria, a design for an unmasted ship with low freeboard was prepared for "the defence of Melbourne Harbour" by E. J. Reed and approved by the Lords Commissioners of the Admiralty in July 1867 and subsequently by Colonel Pasley on behalf of Victoria.

It was recognised that while powerful armament, thick armour, speed and light draught are all desirable features they cannot be combined in one ship. In preparing a design for vessels of coastal defence therefore, regard was had to the type of vessels which would attempt the destruction of large commercial and manufacturing towns situated on a coast and to the absence of need for great steaming range. Serious attack could only be made by light vessels, possibly both armoured and unarmoured. 'Cerberus' was therefore designed without masting. This enabled the two turrets to be located on deck at each end of a central armoured breastwork which occupied the greater part of the width of the vessel after allowing for a fore and aft gangway on each side and which extended for half the length of the vessel amid ships. Recognising that the freeboard would lead to wet conditions on deck at sea, the funnel uptakes, turret bases and air shafts were all protected by the breastwork and the air shafts and hatchways taken to the breastwork deck, a comparatively safe height above the water.



'Cerberus' An Australian Man-of-War.

(The Scientific American 4th March, 1876.)

Provision was made for building a superstructure to extend the breastwork to the ends of the ship, for rigging and sails for making the voyage out and for the removal of these additions when the vessel reached her destination.

'Cerberus' was laid down on 1st September, 1867 and completed in September, 1870. At the same time two breastwork monitors were built for service in India. 'Magdala' a sister vessel to 'Cerberus' was laid down on 6th October, 1868 and completed in November, 1870. 'Abyssinia' which was of similar size and type but designed by Messrs. Dudgeon and built at Poplar was laid down on 23rd July, 1868 and completed in October, 1870.

'Cerberus' and 'Magdala' had four special features in that they were:

- the first British ships to have low freeboard
- the first to have breastwork protection
- the first to have a central superstructure
- the first to have a central superstructure with fore and aft turrets
- the first in which sail power was dispensed with.

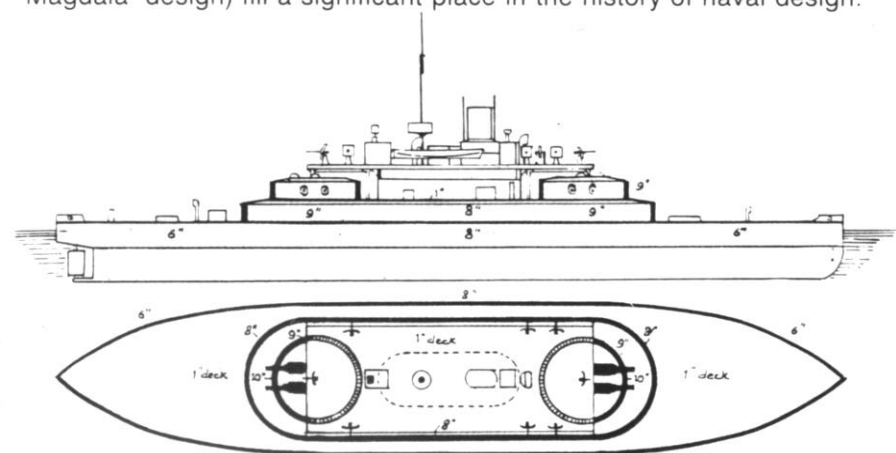
Following on from this design, in 1869 E. J. Reed designed 'Devastation' the first of the low freeboard mastless vessels designed for European warfare. In order to make it possible for the 'Devastation' to take part in an engagement in the Channel or in the Mediterranean, she had to be prepared to encounter bad weather on the Atlantic and to fight there if necessary.

Reed explained his philosophy as:

"My clear and strong conviction at the moment of writing these lines is that no satisfactory designed turret ship with rigging has yet been built or even laid down . . . The middle of the upper deck of a full-rigged ship is not a very eligible position for fighting large guns. Anyone who has stood upon the deck of a frigate, amid the maze of ropes of all kinds and sizes that surrounds him, must feel that to bring guns of a moderate size away from the port holes to place them in the midst of these ropes and discharge them there is utterly out of the question . . ."

The line of development of the battleship was followed by Britain and other nations up to 1905.

'Cerberus' and 'Magdala', 'Abyssinia' and the four 'Cyclops' class coastal defence vessels (amended slightly from the 'Cerberus' and 'Magdala' design) fill a significant place in the history of naval design.



'Cerberus'

(Drawing from British Battleships by Dr Oscar Parkes)

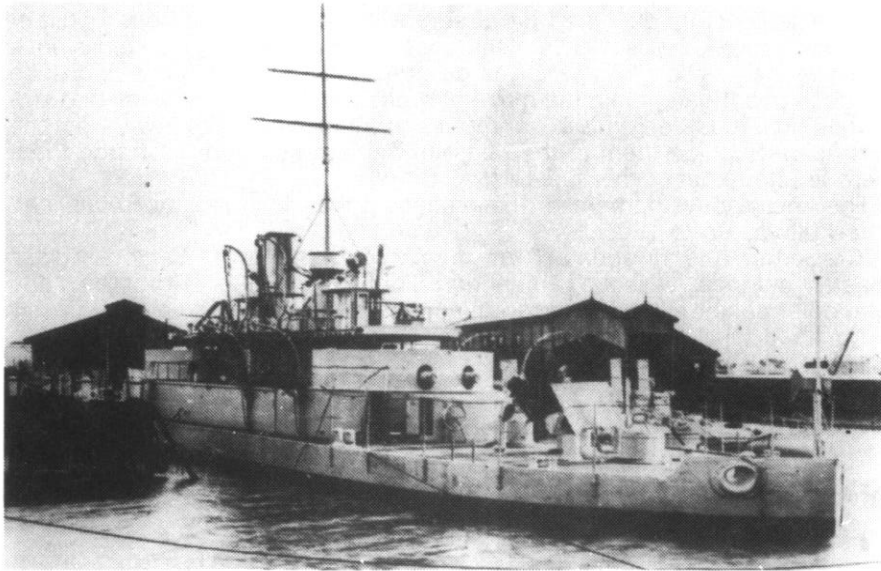
They form the link between the 'Sultan' and 'Monarch' the last of the vessels of the first phase of ironclad design and 'Devastation' the first vessel of the second phase.

'Cerberus' had a length between perpendiculars of 225 feet, an extreme breadth of 45 feet, a maximum draught of 15 feet 6 inches and a displacement at this draught of 3413 tons. This shallow draught was ideal for use in Port Phillip Bay.

The main armament consisted of two pairs of 10 inch muzzle loading rifled cannons, each weighing 18 tons, mounted in two revolving turrets, one at each end of the breastwork. The guns were 15 feet long and had a range of 4 miles. The choice of guns was unadventurous for a ship that was so radical in other ways. Muzzle loading guns, i.e. guns loaded by inserting the shot down the barrel were clumsy, inaccurate and dangerous when constructed to such a large size. In later years, breech loading guns were proved to be superior.

An official description published at the time she was built is described in Appendix 1.

Following the loss of the 'Captain' with its large loss of life, the First Lord of the Admiralty, the Honourable H. E. C. Childers, on 15th December, 1870, announced the appointment of a Committee On Designs For Ships of War to examine certain designs for ships of war.



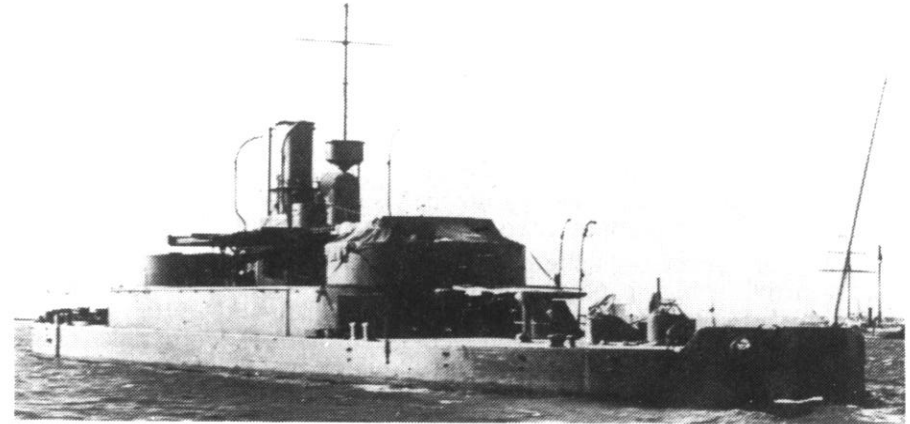
'Cerberus' of Williamstown.

(Photo — The Herald, Melbourne)

The Committee reported on 27th March, 1871 regarding the 'Captain' and 'Monarch' and on 27th July, 1871, on six classes of vessel including the 'Cyclops' class, of which 'Cerberus' was the forerunner.

Four ships which were "almost exact reproductions of the 'Cerberus' and 'Magdala'" were for the defence of the coasts and harbours of the United Kingdom. Soon after the Committee commenced work it was called upon to give an early opinion on these ships, since construction had already commenced.

This necessitated a review of aspects of the design of 'Cerberus'. Among the Committee's recommendations for amendments to the design was one for strengthening of the bottom structure for use in shallow waters where grounding was likely. It was considered that the construction of 'Cerberus' which had been designed for Melbourne was adequate for the service expected in that port.



'Cerberus'

(Photo — The Herald, Melbourne)

6. THE VOYAGE FROM ENGLAND

The voyage from England was incident-filled, as the 'Cerberus' was not designed to be an ocean going vessel. Extreme difficulties were encountered in obtaining a crew as the stability of the ship was in question in consequence of the capsize of the turret ship, H.M.S. 'Captain', with the loss of 482 lives some days before 'Cerberus' was delivered. Men chose to



Captain Panter, Commander of Cerberus.

(The Illustrated Sydney News, 15.5.71 Photo — Mitchell Library, State Library of New South Wales)

go to gaol rather than sail to Melbourne in the 'Cerberus'. 'Cerberus', 'Magdala' and 'Abyssinia' all travelled on their delivery voyages as private vessels, not as men of war.

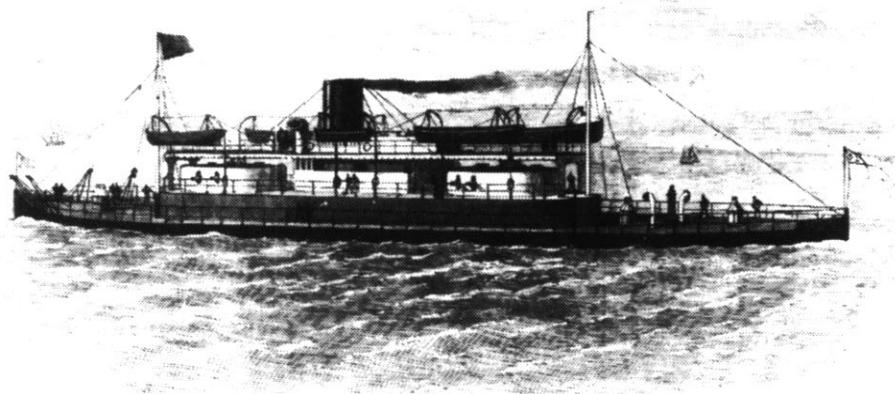
'Magdala' was rigged but did not have the built up structure fitted to 'Cerberus', while 'Abyssinia' had neither built up structure nor sails, proceeding as a monitor under convoy.

The length of the voyage exceeded five months, from 29th October, 1870 to 9th April, 1871. More danger was present during this period than in the subsequent years of service.

Fortunately, the Suez Canal opened in 1869, saving the 'Cerberus' the long journey around Africa.

The Argus, on 10th April 1871, gave a graphic account of the events which is not without some exaggeration. The report was long and detailed, and is reproduced in abbreviated form in Appendix 2.

The above account illustrates a human tendency to over estimate the angle of roll of a ship at sea. In the condition under which she sailed, 'Cerberus' was calculated to have positive stability only up to about 39° under a roll to greater angles she would not return to the upright. Oscar Parkes in his book "British Battleships" when describing the voyage to Australia reports a roll of only 15° in heavy weather.



'Cerberus'

(The Illustrated London News, London, 10.7.1869. Photo — Baillieu Library, University of Melbourne)

7. FIFTY-THREE YEARS OF SERVICE

In 1871, the 'Cerberus' commenced a period of 53 years service which must rate as the longest and most uneventful of any naval vessel in the world. The years were spent within the confines of Port Phillip Bay, and she never engaged an enemy in battle. Training runs from Williamstown to Sorrento and Queenscliffe were undertaken and mock battles were held with these forts and her attendant torpedo boats, 'Countess of Hopetoun', 'Childers', 'Nepean' and 'Lonsdale'. The only casualties suffered were in 1878 when a mine accidentally exploded during exercises, killing one officer and three seamen.

The guns were too powerful to be fired close to shore. On one occasion when this was done, the public protests and general damage to windows were such that there was not a repeat firing. Notwithstanding their power, they became obsolete compared with breech loading guns and torpedo tubes.

During her years of service, a number of changes were made to the 'Cerberus'.

On arrival in Port Phillip the colour scheme was white with a yellow funnel. This was later changed to Navy patterns, a black hull with red boot top, white upperwork, a broad royal blue band at the top of the breastwork and a buff funnel and mast.

The two small pole masts were replaced in 1878-9 with a single mast with fighting top situated abaft the funnel. In 1883 the square box pattern boilers were removed and replaced by cylindrical boilers. Steam steering gear had been installed in 1877.

In 1887 torpedo netting and spars were fitted these being tested in exercises in July of that year. In 1890 they were modified for easier operation.

A proposal to replace the muzzle loading guns with breech loading guns was not proceeded with because of the expense involved. In 1884, one of the muzzle loading guns had split into three pieces during firing practice. In 1892, 'Cerberus' was modernised.



Guns on the 'Cerberus,' July, 1984.

(Photo — Pauline Reynolds, Sandringham)

The searchlights on the ship created interest for many years as they brought electricity to Victoria for the first time.

From 1871 to 1901 she served in the Victorian Navy as the H.M.V.S. 'Cerberus' and was flagship of the Victorian Navy from 1896 to 1901. Then the Australian States adopted a Federated structure, and the Victorian navy disbanded and became the nucleus of the Australian navy. The 'Cerberus' remained in commission until 1911. She was used as a port guard ship and as a floating store for explosives during the First World War and in 1921 was renamed H.M.A.S. 'Platypus II' and was utilized as a submarine depot ship for six 'J' class submarines, one of which being later sunk in 1929 to form a breakwater for the Sandringham Yacht club. The Naval Base at Flinders was named after the 'Cerberus'.

8. ACQUISITION BY SANDRINGHAM COUNCIL

By 1924, there seemed to be no practical use for the 'Cerberus', and like the monster in Greek Mythology, no-one could decide what to do with the ship. Eventually, she was sold as scrap for 409 pounds to the Melbourne Salvage Co. Pty. Ltd. The Victorian Railways purchased some of the iron breastwork plates. The engines, boilers and light superstructure and other items of value were removed. The mast was saved and re-erected on the front lawn of the private home in Kew of Lieutenant H. Syme. This house, 'Rockingham', was later bought by the Red Cross, who, in October 1977, presented the mast to the Maritime Trust of Australia, for display by the Trust at Williamstown.

In 1926, the Black Rock Yacht Club became interested in the hull for use as a breakwater in Half Moon Bay. The hull, together with the turrets, guns, and anchors were purchased by the Club for 150 pounds by the issue of fifteen 10 pound debentures to members. However, as the vessel was berthed at Williamstown and a condition of the sale being that the vessel had to be removed within a given time, difficulties both financial and physical resulted in an approach to the council of the city of Sandringham.



'Cerberus,' 1986.
(Photo — City of Sandringham)

At the Council Meeting of 22nd July, 1926, it was successfully moved that the Council contribute the sum of 150 pounds, to be equally apportioned between three wards, for the acquisition of the 'Cerberus'. The debenture holders were reimbursed and the council, as the new owners, made arrangements with the Ports and Harbours Department to sink the 'Cerberus' at its present location.

On the 2nd September, 1926, the ship towed by the tugs 'Agnes' and 'Minah' and drawing 14 feet of water, was scuttled at high tide on a sandbank where the water was 15 feet deep.

In 1964 the anchor that lay on the forward deck was removed and placed at the entrance to the Sandringham Yacht Club. The anchor measures 9 feet long and 5 feet wide.

9. THE FUTURE

The hull still serves as a breakwater, the role asked of it, and for which it was purchased, but after 60 years of battering from the waves there has been deterioration that is of concern to Naval historians.

In 1969, the National Trust received from the Self-Contained Divers' Federation of Victoria, a report that recommended that to preserve the structural integrity of the vessel, supports were required under the turrets to prevent them from falling through the deck, and, further, that the hull needed concreting to above the waterline.

These recommendations developed into a far more ambitious and controversial restoration project to refloat the ship and restore her at Duke's and Orr's Dry Dock in the Yarra River near Spencer Street. The Council of that time supported the project, although local Clubs expressed opposition against shifting the ship from its present position. A public appeal was launched in 1972 to raise \$250,000, the amount estimated that would be required to salvage and tow the vessel to the new site. The appeal, in fact, resulted in a nett loss, and the scheme did not proceed. The intended site has since been closed by the construction of the Johnson Street Bridge.

In 1984 the Sandringham Council took up the proposal for restoration of the vessel. Detailed feasibility studies and estimates were undertaken and a submission for restoration and relocation of the vessel to a dock area within the Melbourne Maritime Museum (Polly Woodside) was prepared.

The Council together with the National Trust of Australia presented the submission to the Victorian and Australian Governments in 1985 in whose realm the future of this historic vessel now lies.

11. RECOLLECTIONS OF COMMANDER R. S. VEALE (RETIRED)

See Appendix 3 for the recollections of Commander R. S. Veale (Retired), as published in 'The Age' on 24th January, 1986.

12. LIST OF RELICS

See Appendix 4 for list of Relics.

13. FURTHER READING

(a) Press cuttings and journal papers at the La Trobe Library and the library of the Royal Historical Society of Victoria.

- (h) Evans Wilson P., "Deeds not Words — The Victorian Navy" The Hawthorn Press, Melbourne, 1971.
- (c) T. Sheehy "Sandringham — A Sketchbook History" 1972.
- (d) City of Sandringham "Most favoured of Melbourne's Seaside Resorts" 1934.
- (e) Ingleton, G. C., "Watchdogs Infernal and Imperial", Golden Lantern, Adelaide, 1934.
- (f) Hawkey, Arthur, "H.M.S. Captain", G. Bell and Sons, London 1963.
- (g) Padfield, Peter, "The Battleship Era", Pan Books, London 1975.
- (h) Parkes, Oscar, "British Battleships", Seeley Service, London 1966.
- (i) Barnaby, K. C., "Some Ship Disasters and Their Causes", Hutchinson, London 1968.
- (j) Report of The Committee On Design For Ships of War and Attachments, 26th July, 1871, H.M.S.O. London 1872.
- (k) Specification for a twin-screw iron armour-clad turret ship of 2107 tons, with monitor deck and raised breastwork for Melbourne, Admiralty, 1st July, 1867.
- (l) Gillett, Ross; Graham, Colin with Macdougall, Anthony, Warships of Australia, Rigby Limited, Adelaide 1977.
- (m) Maritime Archaeology Association of Victoria, Melbourne, August 1983, The Cerberus.
- (n) Victorian Parliamentary Papers, 1st Session 1867, Volume 4.
- (o) Illustrated Australian News, Melbourne 22nd April, 1871.
- (p) Williamstown Chronicle, 24th February, 1884. 1st March, 1884.
- (q) Bastock, John, Australia's Ships of War, Angus and Robertson, Sydney, 1975.
- (r) Scientific American, 4th March, 1876.

14. ACKNOWLEDGEMENTS

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10. MAIN FEATURES OF H.M.V.S. 'CERBERUS'

Type:	Breastwork Monitor
Displacement:	3,413 tons
Tonnage (builder's old measurement):	2,107-23/94 tons
Length between perpendiculars:	225 feet
Length along keel:	195 feet 7½ inches
Extreme beam:	45 feet
Draught (maximum):	15 feet 6 inches
Freeboard:	3 feet 4 inches
Depth of hold:	16 feet 6 inches
Breastwork:	112 feet 6 inches long, 36 feet wide, 6 feet 5 inches high above deck
Engines:	Two Maudslay, Son and Field horizontal two-cylinder double acting simple steam engines; 43 inches bore, 27 feet stroke; fired by 4 boilers with working pressure 30 psi; twin screws; I.H.P. 1370; N.H.P. 250
Propellers:	Two: 12 feet diameter, 9 feet pitch; 4 blades
Rudder:	Single balanced: 95 square feet
Speed:	9.75 knots maximum; 6 knots economical
Bunkers:	240 tons of coal
Consumption:	50 tons per day at full speed 24 tons per day at economical speed
Guns:	Main armament 4 muzzle loading rifled Armstrong guns mounted in two turrets, one at each end of the breastwork: 10 inch bore; length 15 feet; range 4 miles; charge 60 lbs; shot 400 lbs; weight 18 tons Secondary armament 4 four-barrelled 1 inch Nordenfeldt machine guns 2 six pounder guns (mounted 1892-3)
Armour plate:	Between 6 and 8 inches thick on sides, 8 and 9 inch on breastwork, 9 and 10 inches on turrets, 1½ inches on upper deck, 1 inch on breastwork deck, and 1¼ inches on shell
Designer:	Mr. E. J. Reed, C. B., (Chief Constructor, Admiralty)
Builders:	Palmer Shipbuilding and Iron Co., Jarrow-on-Tyne
Cost:	117,556 pounds
Keel laid:	1st September, 1867
Launched:	2nd December, 1868
Completed:	September, 1870
Arrived Melbourne:	9th April, 1871
Scrapped:	1924, and scuttled as breakwater at Black Rock on 2nd September, 1926.

(Note: Metric conversion — 1 foot = 0.3048 metre, 1 inch = 0.0254 metre)

The turrets, two in number, one at each end of the breastwork, and about 5 ft. 6 in. above it, are each constructed to fight two 18 ton guns, and may be turned either by manual or steam power. These turrets are protected in front by 10 in. and in the rear by 9 in. armour, extending down a short distance within the breastwork; the teak backing is worked horizontally between stringers, which are outside of the two thicknesses of 0.5 in. skin-plating, and the tops of the turrets are protected by 0.5 in. plating upon the beams.

A flying deck, 20 ft. wide, is worked above the turrets, for the whole length of the breastwork, and the communication from the latter to the flying-deck takes place through watertight iron trunks; all openings in this and the other decks are protected from a vertical fire.

The pilot-house is supported from the top of the breastwork, and extends to 4 ft. above the flying-deck; the sides of the pilot-house are protected with 9 in. armour, and its fore and after parts with 8 in. armour, the teak backing being worked as before described, and upon two thickness of 0.5 in. plating without internal frames.

The davits and other outriggers for boats, etc., will admit of being lowered, so as to clear the range of the turret guns.

The fresh air ventilating the vessel will be admitted by mean of the air-shaft, the ash-shoot, and the opening in the decks over stoke-hole. A fan at the botton of air-shaft, and another at the fore-end of boiler-room, will be worked by steam, and will drive the air forward through main pipes under the lower deck, and aft through similar pipes at the upper part of shaft-passage, and from these pipes branches will be led wherever required.

There are seven water-tight transverse bulk-heads continued to the upper deck, and having water-tight doors in them, either at the lower deck or in the hold."

APPENDIX 2

Extract from "The Argus" 10th April, 1871

"The arrival in Hobson's Bay yesterday afternoon of the 'Cerberus' monitor will be generally accepted as extremely welcome news. It is now over four years since we got the first intimation that we should have her for our protection, and at last she lies at anchor in our waters, one of the most powerful vessels for harbour defence in the world. The eminent authorities on the subject in the Imperial Naval Service have unanimously agreed that she represents the latest and best achievements in science as directed to such a subject; and that, even without any other harbour defence whatever, she would be in herself a match for the strongest attacking force which it is reasonable to look for here.

Captain J. A. Panter left Melbourne in order to take his new command and on reaching England, he reported himself to the Admiralty and the Victorian Agent General and then ensued a long series of delays before the 'Cerberus' could be handed over to him, or got ready for her voyage. Red tape achieved quite a series of triumphs in the matter.

Having got possession of his ship, Captain Panter found that both his shell rooms (in which had to be carried 40 tons of shells and 20 tons of powder) were on one side, which gave an over-balance of 20 tons and caused the vessel to list over 6 degree. The admiralty was applied to, and the order in reply was that one of the watertight compartments was to be filled and the ship so got straight. Captain Panter replied, upon this, that the Victorian Government would not be best pleased with a ship all on one side, or

forced to have a watertight compartment constantly filled; but the officials were conveniently deaf to this reasoning till he almost threatened to have the required alterations done in a private dockyard. With a very bad grace, the required alterations were made.

When she was taken down to Sheerness six degrees of deviation in her compasses was discovered. In fact, they did not have movement between N. and E. This had to be shifted and the compass man from the Admiralty had to come down, swing the ship, put in magnets and get the compasses in decent order. This lasted until the 29th October, when the 'Cerberus' got under way at daylight, and left Sheerness for Plymouth. She had a fair start, but when in the Downs, a gale of wind came on, and her lower decks were regularly washed out. The men were up to their knees in water and had to bale, for it was found that there were no pumps, and the ship would not steer. Something was the matter with her boilers — she would not steam; her rudder did not act properly and she proceeded at the mild rate of one and a half knots, in almost every direction but the right one. Under these discouraging circumstances, and with a crew of only 25 men, Captain Panter put into Spithead, in order to stop awhile at Portsmouth. It was lucky he did for the same night the gale increased, and over 60 vessels got into Portsmouth during the night for safety. He remained there three days, and on the day he sailed Admiral Sir Jas. Hope inspected the 'Cerberus' and said how glad he was to see her arrive, never expecting that she should have reached there. Finally, after nearly running into several ships, the 'Cerberus' got to Plymouth alright, and here Captain Panter got his crew recruited. His troubles in getting men to sail in the 'Cerberus' were neither few or small. When he got possession of her he had down on his book a list of men selected for her crew, but the H.M.S. 'Captain' had been lost five days before and not one obeyed the summons for them to come and join. He had to rake the back slums of London before he could get sailors who would go, and he then telegraphed to the Victorian emigration agent at Plymouth to get men ready against his coming to that Port, and in that way he got his crew comparatively alright. Before this he had caused about 50 men to be put in prison, they preferring to go to goal rather than fulfil their engagement and go to sea in a turret vessel.

The 'Cerberus' left Plymouth on November 7th, on the 9th she got into a breeze of wind which lasted to the 12th; during this, being in the Bay of Biscay, she went through a variety of antics. At one time her bottom — and it must be remembered that she cannot be said to have a keel, for her shape is that of a flat-bottomed box — was to be seen, for her bilge piece came right out of the water. At this time she must have rolled 40 degrees and upwards, and her indicators which were set for 35 degrees at the utmost, simply thumped backwards and forwards uselessly. At one time, a man was violently pitched nearly from one side of the Captain's table to the other without even touching the deck. Everything in the cabin that was not secured was capsized and it was impossible for men to stand a moment. While this was going on, the vessel was under close reefed main trysail and fore trysail, with the head hauled down and some part of the fore staysail. She was under steam, of course, but that only sufficed to keep her head to the wind. Everyone on board expected every minute that the 'Cerberus' would turn over; and considering her top weight it is wonderful that she did not do so, for she carried 1,900 tons above her waterline and only 1,800 tons below it, although the latter was almost all at the extreme bottom.

"Then, as ever after, when the weather was foul, all the man's cabins were ankle deep in water, which ran through the temporary sides. At last the gale subsided, and the 'Cerberus' passed Cape Finisterre in fine weather, ran down the coast of Portugal and got into Gibraltar on the morning of November 17th, with only five tons of coal in the ship, and she was burning 40 tons per day! At Gibraltar, there was more trouble with the men who were afraid of the ship, but military aid was obtained and one fellow was left behind in gaol.

Having coaled, the 'Cerberus' which excited much attention, and was inspected by the Captain-Superintendent, sailed on November 20th and got to Malta on the 27th, where, as before, she was much visited and among others by the two Admirals and every captain in the fleet. On the afternoon of the day of arrival two-thirds of the ship's company got on shore and set to drinking, the end of which was that 25 men were left behind in prison. These, however, Captain Panter was not sorry to leave behind for he had already found the sails useless and that therefore, he had too many men.

After coaling, cleaning the very weedy bottom of the vessel, and waiting 15 days, while one of the heaviest gales ever known there blew over, the ship left Malta on December 11th and reached Port Said on the 19th. Here, before entering the Suez Canal, he hoisted the Australian Flag which procured for the 'Cerberus' recognition by the Egyptian authorities as a man-of-war and a consequent reduction in her tonnage dues, amounting to about 300 tons.

Having taken 24 hours to coal and drawing 16 ft. of water, or 18 in. beyond her proper draft, she was towed through the canal, doing 30 miles the first day, 20 miles the second and 32 miles the third and last day. This was not accomplished without danger, for the canal is only made for vessels with sharp keels; and in one place the 'Cerberus' had scarcely 3 ft. on each side between her and the bank.

The vessel steamed against head winds down the west coast of Australia, when, coal running short, she had to run into Fremantle on March 16th and get 50 tons. Here the vessel created a great sensation, and every possible civility was offered by the Government. Governor Weld himself came on board and inspected the ship. On March 19th the 'Cerberus' left Fremantle, and arrived at King George's Sound on the 22nd, where she spent some time taking in coal, painting, cleaning, etc. On the 27th March, it blew half a gale, and the 'Cerberus' dragged one of her anchors and nearly touched the shore before another anchor was got out. On March 30th she left the Sound, there being at the time a heavy swell from the S.W. but without much wind. Having 59 tons of coal on her deck, the ship took to rolling and rolled 40 degrees once more.

She was first sighted off Cape Northumberland on Good Friday, but the telegraph offices were closed, and it was not until Saturday that the public heard of a turreted ship being seen off our coast. Later in that afternoon came the welcome news that the 'Cerberus' had signalled the Cape Otway lighthouse, and yesterday morning she entered the Heads and steamed to her anchorage.

The Bay seemed all alive as she entered Hobson's Bay, and she was the centre of observation. The Russian man-of-war the 'Haydamack' dipped ensign to her and Captain Koltovsky hurried on board the 'Cerberus' to pay his compliments to her Commander. The boys of H.M.V.S. 'Nelson' crowded into the rigging of their ship and made the air ring again and peals of boyish

cheers, as the monster steamed past; and nearly every vessel in the Bay hastened to pay the compliment of dipping colours.

Precisely at 1 o'clock the long wished for moment arrived and Captain Panter dropped his "mud-hook" and the event was immediately celebrated with the frothing of champagne by him and the few friends already on board, amongst whom was Captain Payne, Chief Harbour-Master, who had boarded the 'Cerberus' long before. In the meantime, a great multitude of boats crowded with passengers, had put off from shore in hope of their being allowed on board. In this last respect, Captain Panter did not think it right to disappoint the curious public, although the ship was not fit to be seen. He gave the required leave and then started off to pay his respects to the Governor. During the whole of the afternoon, the crowd of visitors increased greatly, and several thousands of persons had come on board and endeavoured to understand her construction and the working of the turrets."

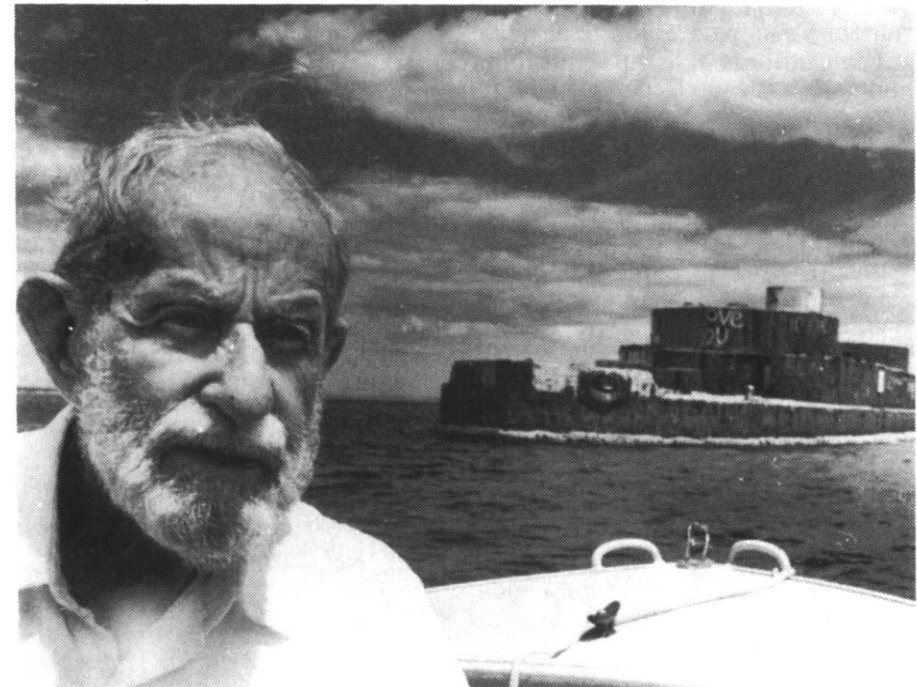
APPENDIX 3

Extract from "The Age" 25th January, 1906

THE SHIP MAY BE RUSTY, BUT NOT THE 'DUKE'

By ANNETTE YOUNG

"The 'Duke of Elwood' was 15 when he joined the navy in 1909 and slept below the decks of the HMVS Cerberus. Commander Richard Stanley Veale can still remember the cold when he slung a hammock between the beams on the ship's lower deck.



Commander R. S. Veale at Half Moon Bay with the 'Cerberus' in the background.

(Photo — The Age, 24.1.86)

"We had hurricane and oil lamps and it was very low, so low below deck that you had to stoop right over," Commander Veale recalled yesterday. "It was cold and miserable. There were no amenities aboard and we had to come ashore for all our meals."

Commander Veale served on the Cerberus — when it was based at Breakwater Pier in Williamstown — as a naval officer cadet from 1909 to 1911 and is the last surviving crew member.

Nearly 115 years after the battleship was built, the Sandringham Council is asking the Federal Government for \$3.5 million to refloat the vessel before returning it to an exhibition site next to the historic barque Polly Woodside, at the Wright and Orr dock on the Yarra River, where it will be restored.

Commander Veale's earliest memory of the vessel was in 1900 when, as a boy of seven while staying with his grandmother in Albert Park, he went to the bayside and watched the Cerberus steam towards Port Melbourne with all sailors in full uniform on the upper deck.

Commander Veale, now 92 and living in Elwood, went on to serve in the naval forces for 44 years. He is expected to lead the Anzac Day march this year.

The commander still retains strong ties with the Cerberus. He and others tried 15 years ago to restore the vessel, but failed to raise the necessary funds.

The defence of Britain's colonial outposts was paramount in the 1860s. In 1866, the British Government commissioned the admiralty's chief naval architect to design the Cerberus. "When it arrived from England in 1871, people were afraid of the Russians. And you know what, they still are," Commander Veale said with a chuckle.

The Cerberus, named after the three-headed dog which guards the entrance to Hades in Greek mythology, is a historic vessel by Australian and world standards since its design was a complete break from the established tradition of naval design.

Older than the Polly Woodside and known as a turret ship, or breastwork monitor, the Cerberus became the prototype for all major warships built from 1885 to 1905. It was also the first armored fighting ship built for service in Australia and the first designed to operate without sails.

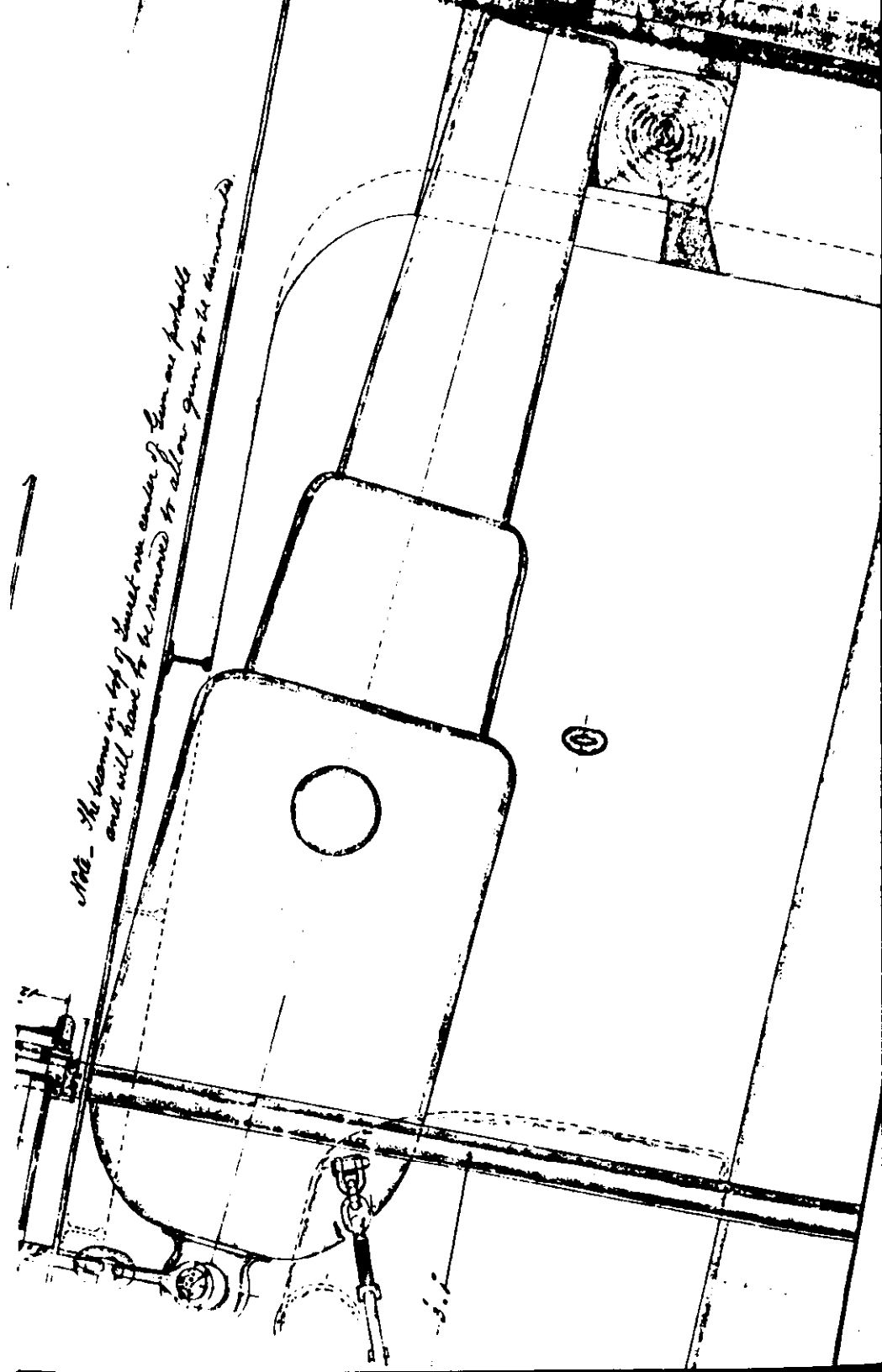
But as a warship, it never fought any battles and was used for mock naval battles and as a floating store for explosives during World War I.

When it appeared to be no longer useful, parts of the Cerberus were sold for scrap and in 1926 the Black Rock Yacht Club became interested in the vessel for use as a breakwater in Half Moon Bay, where it has been since."

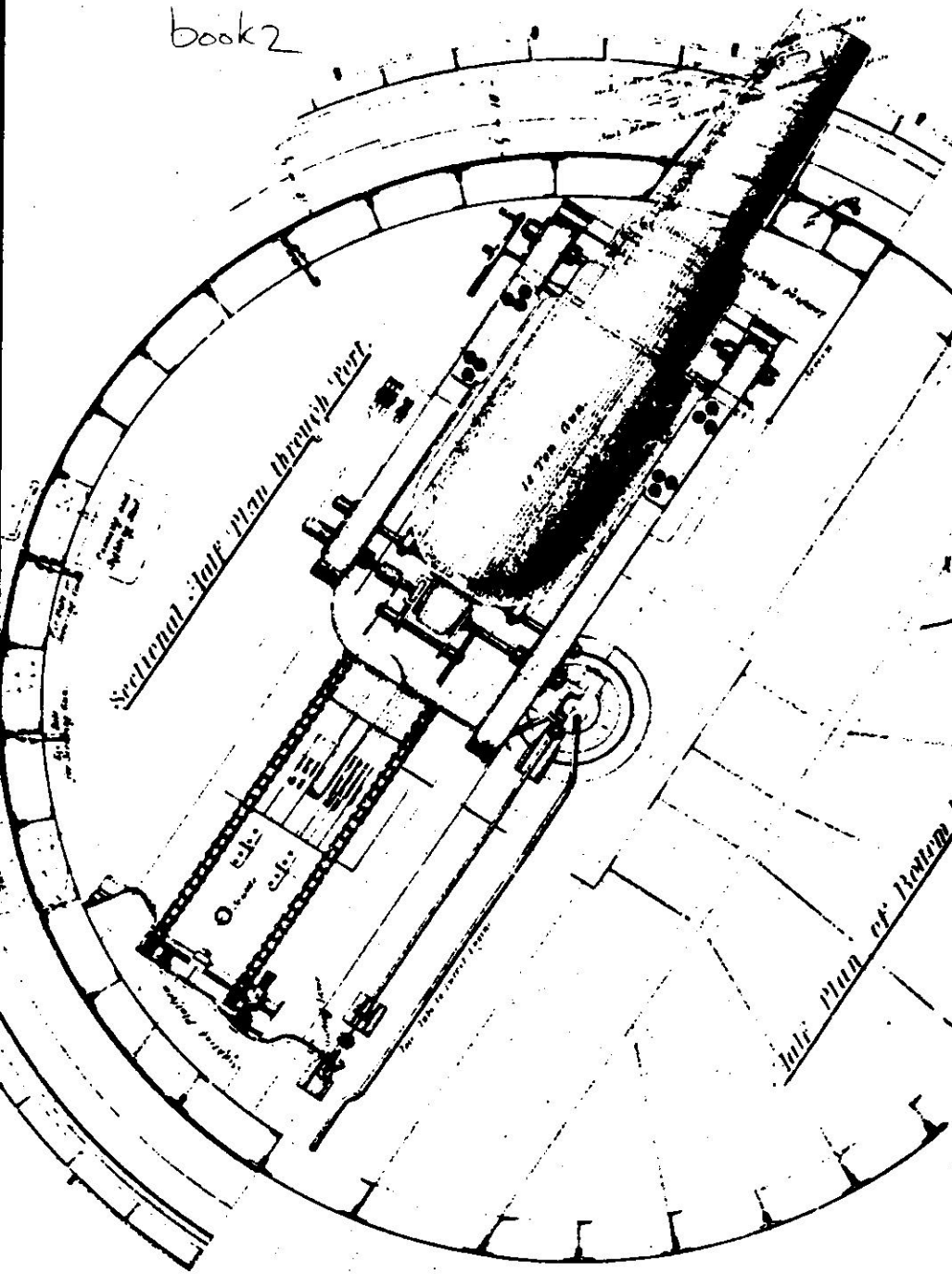
APPENDIX 4

LIST OF RELICS

1. Wheel, binnacle, sword of first Captain, etc. — located at H.M.A.S. 'Cerberus' Naval Museum, Flinders, Vic.
2. Anchor — located at Sandringham Yacht Club, Jetty Road, Sandringham.
3. Mast — located at Castlemaine, Gem Pier, Williamstown.
4. Damaged 10 inch gun — located at Ballarat Gardens.



book 2



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