

NEWS magazine

The night the Ballina was lost

On the morning of Thursday, February 13, 1879, the 290 ton paddle wheeler, "Ballina", pulled out from the wharf at the end of Horton Street, Port Macquarie, to begin her return trip to Sydney with a load of wool from the New England, maize from the Macleay and oysters and potatoes from the Hastings as well as some assorted produce.

She was on her regular run, plying the North Coast from Sydney to Port Macquarie and the Macleay, carrying both freight and passengers both ways.

Seventeen passengers were aboard — seven of whom embarked at Kempsey, the remainder at Port Macquarie.

Well-known names connected with the business community of the Macleay and Hastings — such as O.O. Dangar, Secombe, Lancaster, Verge and McNaught from the Macleay and Bryant, Cummins, Turnham from Port Macquarie, appeared frequently on the ship's manifest and were listed in the shipping notes of the Sydney Morning Herald, by reason of the fact that they were affluent enough to afford a cabin.

The other souls who made up the rest of the passengers were just grouped together in the shipping notes as 'steerage'.

It was at the time the only form of transportation between the North Coast and Sydney was the shipping service which had a hey-day of more than 50 years.

Once road communication was extended and improved between the New England and the coast and the railway was pushed through to Wauchope in 1915, the death knell was sounded for the shipping service.

Only the amalgamation of rival companies and the lure of fat contracts kept the service afloat until the 1950s.

North Coast run

The "Ballina" was launched at the shipyards of Low Walker on Tyne in February 1866.

The Clarence and Richmond River Steam Navigation Company bought the vessel from the original owner, J. Alexander, and placed her on the North Coast run.

The company then dominated the waterway between Newcastle and the Tweed.

The C & R.R.S.N. Co. was the outcome of an amalgamation of the Clarence River Steam Navigation Co. and the Richmond Steam Navigation Co.

Later the name was changed to the Clarence and Richmond and Macleay River Steam Navigation Co.

In 1891 there was another name change after an amalgamation with John See and Co. (formerly Nipper and See).

To avoid an extended mouthful, the name was again changed to become the North Coast Steam Navigation Co., which was retained until the company went into liquidation in 1954.

A Sydney businessman, Maurice Bern bought two vessels for a song from the defunct N.C.S.N. Co. and continued the North Coast service as well as running to New Guinea.

The company, Bern Shipping Service, held the contract from the Nestles Company to ship Lactogen and Sunshine powdered milk from the company's wharf at Smithtown to Sydney.

But it was obvious that more business was needed from the North Coast to keep Bern's ships busy.

At a public meeting held in the RSL Memorial Hall in Kempsey, he made a plea for support from Kempsey businessmen in using his freight service, to no avail.

After about less than two years operation to the Macleay, Bern was forced to terminate his shipping service after the Department of Railways made a bulk freight deal with Nestles.

The Bern owned ship, S.S. "Uki", made her last voyage to Smithtown in 1959.

Foul weather

And now back to 1879 as the anxious master of "Ballina" Captain J. H. Bedford, moved his

ship into the deeper waters of mid-stream and pointed her nose towards the river entrance.

Heavy seas had been running for days along the north and south coast of New South Wales and some heavy falls of rain had been reported.

Aware of the weather reports, Captain Bedford took every precaution to ensure that he would clear the bar, starting with depth soundings taken with the assistance of the pilot, before leaving the wharf and then continuing them all the way as "Ballina" moved towards the bar.

The freight was well fastened into position — and so were the passengers, who showed no concern for the heavy seas ahead of them.

Anxious to give the spit a wide berth, Captain Bedford kept his ship well clear of the black marker buoy as he steamed past and then changed course slightly to the north, to swing "Ballina" into deeper water, but the manoeuvre was not successful. Heavy seas had caused the sand spit to shift slightly placing it in the path of the vessel.

"Ballina" struck the sand and remained fast while Bedford tried to pull her off with engines in reverse.

A wave hit the ship broadside on and made her settle deeper in the sand.

Bedford decided there was only one thing for it. He had the crew fasten a hawser to the ship and take it to the beach on the North Shore where it was secured.

Both Bedford and the pilot were confident the high tide that night would float his ship off the spit.

Meanwhile, all passengers had been taken safely ashore.

By 9 o'clock that night, the weather had deteriorated.

Waves were now breaking over the stricken vessel.

Bedford ordered the engineer to keep the engine running, ready for the moment she would break free as the tide rose. But this was not to be.

The engine broke down. Moments later, a huge wave almost engulfed her, sending a huge volume of water down into the engine room.

It looked as if the "Ballina" was doomed.

In a last ditch stand, Captain Bedford ordered all deck cargo to be thrown overboard, including several hundred bales of wool, which were to litter the beach of North Shore for many weeks.

It was now early in the morning of the 14th. Water was pouring down through the hatches and into the sponsor-house (the covering over the paddle wheels), down into the very bowels of the ship.

There was now little hope for the "Ballina."

With a heavy heart, Captain Bedford went



A model of the paddle wheeler Ballina made up by the Hastings Valley Maritime Archaeology Association, Mr Phil Bowman, and on the left Mr Jeff Jepson, a local designer who drew up the plans for the proposed maritime museum.

ashore with his crew and composed a telegram to his principals advising them of the catastrophe.

Unlucky streak

It was a week of uncertainty for the safety of several of the company's ships during the heavy weather conditions prevailing at the time.

Prior to receiving notification of the "Ballina" disaster the manager of the C & R.R.S.N. Co. had received a telegraphed message about the "Platypus," which seemingly would be a total loss after going onto spit on the North Shore of the Richmond River and springing a leak, after almost completing her voyage from Sydney.

Luckily for the ailing fortunes of the company, she was refloated and lived on to be broken up in Sydney in 1898.

Concern was also being held for the "City Of Grafton," which was due to leave the Clarence River on the morning of February 14, at the time the "Ballina" had been abandoned.

However, a timely telegram from the ship's master, Captain Bracegirdle, informed the manager that the seas were too heavy to put to sea and she was being held in the river until the poor weather conditions abated somewhat.

On the night of February 14, the "Ballina" passengers called a meeting at the Royal Hotel in Port Macquarie and invited Captain Bedford to address them.

After hearing him out, a vote of confidence of the gallant master was passed and conveyed to readers of the Sydney Morning Herald in the form of an advertisement.

This was the advertisement they inserted:

Port Macquarie, 14th February, 1879.
To Captain Bedford

Sir — We, the undersigned storekeepers and residents of the town of Port Macquarie, desire to

express our deep sympathy with you under trying circumstances of the wreck of the Ballina in your charge, and to express our unreserved confidence in your skill and ability and general courtesy while in command of the said vessel, and have to sincerely regret that unfortunate circumstance which has deprived us of steam communication for the present, the more so as we can testify to the energy and tact displayed by you in working up the trade to what may be considered, and no doubt is, remunerative to your employers, and beneficial to the residents of this district, and regret exceedingly that, after having achieved so much, and when all was in fair working order, this lamentable catastrophe should have occurred.

But we trust ere long, to find you again in command of another vessel trading to this place, so that you may see your labours to establish this trade an entire success.

We are,

Yours Sincerely

(Here follow signatures)

On that day Captain Bedford telegraphed another communication to his Sussex Street-based company, which read:

"Wool coming ashore on North Beach. No hope of saving out of the ship at present; cannot get alongside; am sending all hands over to save what they can; no hope of leaving here at present; too much sea."

At this stage the weather was still thick and it was raining. The schooner "Brilliant", which had been anchored off the port for the past five days, left that morning bound for destination north.

Within the port, the ketches "Victor," "The Sisters" and the "Erlie" were bar bound.

As for the "Ballina", she was now breaking up. It was a dismal day for Captain Bedford — and the R & R.R.S.N. Co.

Blameless

The subsequent Marine Board of Inquiry came to the conclusion that "no evidence had been adduced upon which to found a charge of default against John Bedford, the Master."

Shipping accidents and the complete loss of ships and lives was such a frequent occurrence in these years that the news hardly warranted headlines in newspapers.

Such incidents were usually included in the Shipping News in the Sydney Morning Herald in small type.

In another court of inquiry conducted a few months later over the loss of the 349 ton paddle wheeler "Agnes Irving", which was wrecked in December 1879 at the mouth of the Macleay River, the master didn't get off so lightly.

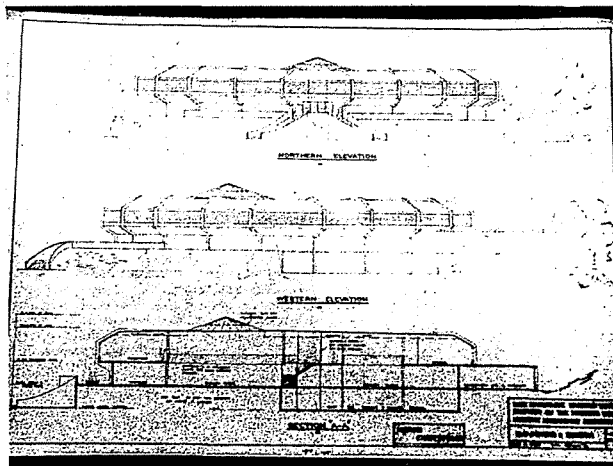
His certificate was suspended for three months.

"Agnes Irving" was driven onto the southern spit at the old entrance to the river, just below Grassy Head.

Since then "Agnes Irving", like "Ballina", has rested half buried in sand, until re-discovered recently.

Over the years, "Ballina" settled into her grave and remained mostly covered in sand until January 1908, when a diver, engaged by the Department of Navigation arrived from Sydney

(Continued from Page 14)



How the museum will look from the north (top) and west (centre).

Entertaining at Easter with Cinzano

Easter this year falls at the beginning of April with the Easter Weekend starting on Friday, April 1, and finishing on Easter Monday, April 4.

Easter is traditionally a time for families and children, for Easter Bunnies, chocolate eggs and Easter picnics.

Cinzano has prepared some mouthwatering recipes for Easter desserts and drinks using Cinzano Coffee and Jamaican Supreme.

SPONGE DESSERT WITH COFFEE SUPREME

1 cup of Cinzano Coffee Supreme
2-3 packets small sponge fingers
2-3 cups egg custard
1 cup chopped dessert prunes
1 cup cream, whipped and slightly sweetened
Toasted almond slivers
Extra prunes for decoration
Line a 25cm spring form pan with aluminium foil and grease well. Arrange sponge fingers around sides and base of pan cutting as required.
Spoon about 1/2 of custard over base of sponge fingers and scatter over some chopped prunes. Continue with the layers of sponge fingers, custard and prunes until all are used. Cover and chill well.
To serve, carefully remove from pan and peel away foil. Slide onto dessert plate.
Pour Cinzano Coffee Supreme over dessert and spread with whipped cream. Decorate with prunes and slivered almonds.

SUPREME TRIFLE

1 wineglass Jamaican Supreme
8 sponge cakes
3/4 pint chilled zabaglione
1oz blanched almonds
1/2 pint cream
3-4 tbsp strawberry jam
Split the sponge cakes in half. Sandwich with strawberry jam, cut in three. Line bottom on trifle dish. Sprinkle with Jamaican Supreme, adding enough to moisten cakes thoroughly. Stand for half an hour. Cover with zabaglione, then with a layer of lightly whipped cream, flavored to taste and slightly sweetened. Decorate with almonds.

COFFEE SAVARIN

1/2 cup Cinzano Coffee Supreme
1/2lb flour
1/2oz yeast
1/2oz castor sugar
4 or 5 eggs
1/2lb butter
1/2 cup milk
Sift flour into basin. Heat milk till lukewarm. Turn into basin. Add yeast and stir until dissolved. Make well in the centre of flour and stir in yeast mixture. Add beaten eggs. Stir in with right hand for 3 or 4 minutes.
Place butter in a kitchen cloth and dredge with flour. Wring at each end to extract all moisture and make it pliable. Dab over pastry in small pieces. Cover. Stand in hot place until twice its size. With floured hands, knead down paste, adding salt until it has absorbed butter and become elastic. You will need about 1 teaspoon of salt.
Lastly, stir in sugar and knead until well blended. Butter a round mould. Sprinkle with castor sugar or chopped blanched almonds. Fill until half full. Cover and stand in a warm place until paste doubles its size.
Bake in hot oven. Meanwhile dissolve 1 cup of castor sugar in 1/2 cup water. Stir in Cinzano Coffee Supreme. When savarin is cooked, turn out on hot dish. Pour over the syrup. Fill centre with steamed apricots or leave until cold and fill with any mixture of cold fruit you like. Serves 6.

RAISIN WALNUT MOULD

1/4 cup Jamaican Supreme
1/4 cup hot strong coffee
1/4 cup hot water
1 tsp gelatine
1/4 cup brown sugar
1 cup chopped raisins
1 cup quartered marshmallows
1 tspn grated orange rind
1 cup cream — whipped
Extra cream, chocolate and walnuts
Dissolve the gelatine in hot water, add the coffee, Jamaican Supreme, grated chocolate and brown sugar, stir over hot water to blend. Cool until the mixture is a thickened 'egg white' consistency, whisk until light and fluffy, fold in the raisins, marshmallows, orange rind and cream and turn into a lightly oiled mould.
Chill until firm, unmould and decorate with cream, chocolate and walnuts as desired.

EASTER EGG NOG

1/2oz Cinzano Coffee Supreme
1oz Metaxa Brandy
1oz orange juice
1oz single cream
1 egg
Separate the egg yolk and mix with the other ingredients. Shake vigorously with ice for at least 20 seconds to thoroughly mix the egg or use a blender.
For a short drink, strain ingredients into 5oz champagne glass and garnish with nutmeg. For a long drink, fill a highball glass with mixture and top with lemonade.

The night the Ballina went aground

Continued from Page 12.

with instructions to blow up her remains, so removing another shipping hazard.

As the Port Macquarie News reported at the time, "several attempts were made with large charges of gelignite and columns of water 50 or 60 feet high were raised by each explosion."

"The fish naturally suffered with concussion and some residents made good hauls."

Exposed

According to the report, the diver returned to Sydney contented that he had completely removed the wreck, but it seems this was not so.

Now and again the remains of the old paddle wheeler made the news, but there was no further attempt made over the years to remove this hazard as sand moved across and took possession.

In 1978, divers employed by the Department of Public Works on the construction of a new breakwall on the North Shore came across the wreck after swirling currents around the newly established rock formation had gouged out some of the sand.

Part of one paddle wheel and some of the hull could be viewed underwater.

Local divers, members of the Hastings sub-branch of the Marine Archaeology Association, decided to take a closer look after souvenir hunters had been seen removing some of the relics.

Through the efforts of the association, led by Laurie Dickenson, Geoff Tame and others equally concerned at the rape of the relic, the NSW Premier had it declared an historic wreck which was the signal for "hands off."

President Dickenson said that his association would undertake a survey to catalogue all the features of the wreck with the view to having it raised and preserved and then placed on display, if not in Port Macquarie, at the Maritime Museum in Sydney.

The association was given encouragement from the Museum of Applied Science in Sydney.

In 1979, the federal government introduced legislation to amend the Historic Shipwrecks Act of 1976, to embrace wrecks along the coastline.

As the Federal Minister for Home Affairs, Mr Ellicott, said at the time: "the 'Ballina' would now be protected under this Act and so was likely to be a source of artefacts from the late 19th century and more importantly, a study of its paddle wheels and engine would provide valuable information on the marine technology of the period."

Big project

Last week, Mr Phil Bowman, representing the re-formed Hastings Marine Archaeology Association, displayed a model of the "Ballina" at the regular meeting of the Hastings Municipal Council in Wauchope and sought the council's approval in principle to a scheme, almost

breath-taking, which would involve the setting up of a maritime museum in Port Macquarie near Town Beach, alongside King Neptune Park.

Without hesitation, the council gave Mr Bowman's association its blessing.

The centrepiece of the exhibition will be the remains of the "Ballina" — assuming plans afoot for the Royal Australian Navy to bring her remains to the surface and then despatch them to Newcastle for preservative treatment, can be accomplished.

What is left of the old ship, will be given a final resting place on dry land, at Port Macquarie.

Mr Bowman told the council that if the project could attract sufficient government grants, both state and federal, and sufficient interest is shown locally in raising the balance of the money required, the Port Macquarie Maritime Museum should be functioning in time for the Australian Bi-Centenary Celebrations to be held in 1988.

A total figure of about \$2 million was mentioned.

The museum, which would be Port Macquarie's contribution to the year long celebrations, would be of the calibre of Timber-town.

Meanwhile, as plans are being laid to get the project off the ground, the shifting sand is now moving across to shroud the old wreck, as if in a bid to keep her remains where they have rested for 104 years — albeit disturbed occasionally, at 'the mouth of the river', which aborigines called 'Balluna' and white men chose to call 'Ballina'.

LEISURE CRAFTS

by BARBARA HEMMINGS

STAINED GLASS

The 11th century craft of stained glass is finding new popularity. If you love the effect of light filtering through colored designs, why not gain that effect with cardboard and cellophane

This simple craft is ideal placed in windows that don't need curtains, to brighten a child's room or add interest to a highlight.

All you need: Measure the window and get sufficient stiff black cardboard to cover; an assortment of colored cellophane; clear paper glue; scissors; ruler; craft knife.

Method: Flowers, birds and butterflies are all delightful topics for stained-glass. Draw your design (or copy mine) full size. Make sure each line is drawn double yet no thinner than 5 mm, sufficient to hold cellophane in each area. Work a wide black border and don't use over large areas without some structure through them to support cellophane.

With a colored or dressmaker's pencil, draw the design onto cardboard. For a neater finish draw on the back but remember this will reverse the design. Using a sharp craft knife cut each line. The areas to be cellophaned will fall out, leaving the black lines.

Lay a piece of cellophane over the area to be filled. With a biro, mark the area onto the cellophane allowing sufficient room for gluing without the cellophane overlapping another area. Glue each piece of cellophane in position. Check each step to make sure the effect is as desired. Cellophane can be glued on in layers to intensify or change colors e.g. two layers of red produce a



deeper color, while blue over yellow creates green. Experiment by holding the colors up to the light before actually gluing.

Once the design is complete and touch dry lay it flat, place a board over it, add some weights books and press overnight. Attach to the window with generous application of doubled-over sticky tape.

© Barbara Hemmings 1982.

BOOK REVIEW

Two books about current TV series

The ABC has just completed a version of the siege of Masada, but here is a book supplementing it and revealing the intimate details of the lives of people behind the violence and drama.

"The Glory of Masada", compiled by Raphael Posner and A. Van der Heyden, is a book of truly glorious photos accompanied by most interesting, mind-broadening informa-

tion about the geography, history and significance of a great rock in a weary land.

"Masada", the book tells us, "is a rock in the desert, a luxurious fortress built by a paranoid king. It is 960 patriots holding out against the might of the Roman empire. It is mass suicide when hope is gone. It is archaeological expedition of unprecedented poignancy. But still more, it is a silent monument to heroism and a symbol to a reborn nation."

The restoration of Masada was undertaken after the establishment of the state of Israel, and revealed an archeological treasure trove of household utensils and all the accessories of everyday life. Fragments were discovered of the books of Psalms, Ezekiel and Deuteronomy and have been dated as prior to AD 70. Text and divisions are said to be very similar to the traditional Jewish version. Indeed, to the regathered Jewish nation, Masada is an inspiring symbol of its indestructibility. This is "The Glory of Masada".

"The Sunburnt Soul", shown again on ABC in four sessions commencing March 3, will be reviewed next week.

Reviewed by Phyllis Donaldson Port Christian Book Centre

COIN COLUMN

by GREG McDONALD

New Italian releases

Italy will soon release two commemoratives to mark anniversaries for two of their famous sons.

A 500 lira coin will honour Galilei (1632-1982) and Garibaldi which will also be dated 1982. Cannot help thinking that the coins would have had more impact if they were released last year. It's a bit like going to the Melbourne Cup this year and presenting the cup to last year's winner!

Another royal offering

If it wasn't for the Royal Family, a lot of countries' financial statements would look a lot worse. Revenue from wedding souvenirs and assorted birthdays and births have all helped to swell the coffers of government and individual alike.

Over 40 different coins were issued worldwide to celebrate that wedding. Tuvalu has come up with another to mark a recent Royal Visit.

The crown sized coin has a face value of \$10 and features a portrait of the Duke and the Queen on the reverse.

The visit was a highlight of the year for the small country formerly known as the Ellice Islands.

Sell your rare coin at auction

Spink and Son is preparing for their mid-year auction already, even though their March auction has yet to be held.

The company is inviting people with rare or choice material for sale to include it in the auction.

For more details contact Spink in Sydney on 27 5571 or in Melbourne on 61 2799.

A pig of a year

The Chinese calendar this year honors the pig and the Hong Kong Mint recently announced details of its \$1000 gold coin.

Struck at the Royal Mint in London, the coin will be issued in both proof and uncirculated version.

Only 22,000 of the proof and 33,000 of the uncirculated coins will be struck for world-wide distribution.

Each coin contains 15.98 grams of gold (compared to our own \$200 gold coins with 10 grams) and is in 22 carat.

Price of the proof is \$725 with the uncirculated coin selling for \$475. M. R. Roberts of Sydney is handling orders at present.

Afghanistan problems

As if Afghanistan didn't have enough problems. News is that the strife-torn country has started printing new banknotes without bullion backing. It seems that rampant can be added to the country's list of woes.

Dud fivers

Counterfeit English five pound notes have surfaced in Dublin, Ireland.

Quality is said to be very good and so far about 100 notes have been discovered.

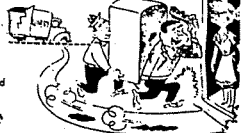
SHOP LOCALLY — IT'S YOUR TOWN

SOME OF THE BENEFITS OF SHOPPING LOCALLY

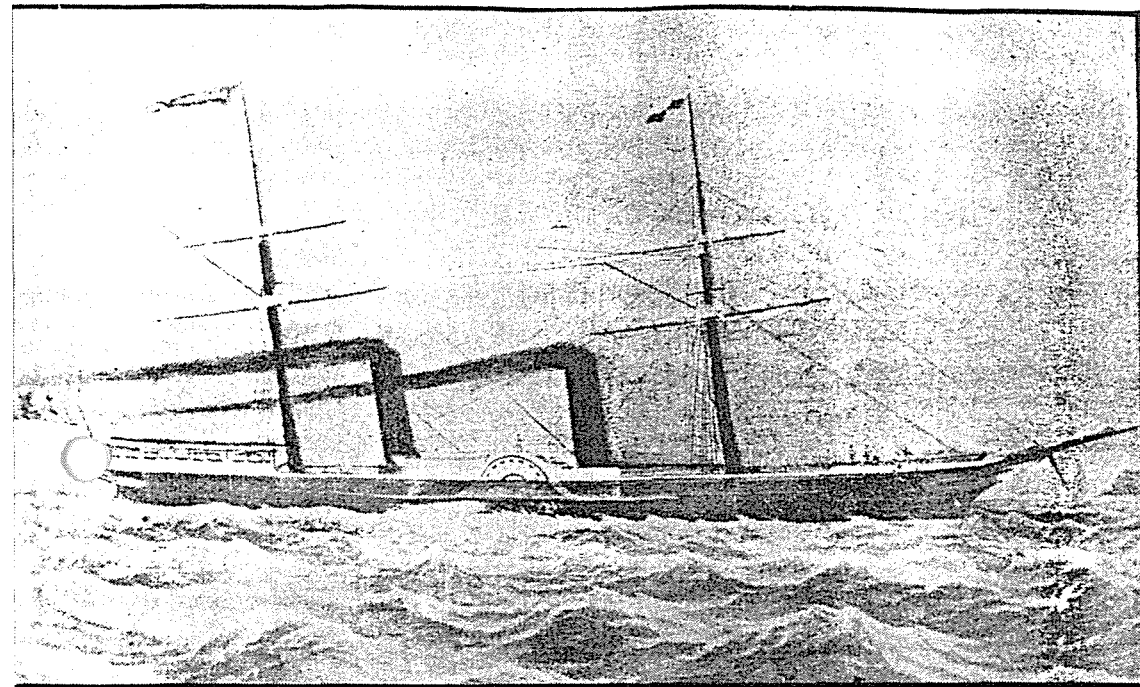


1. You deal with someone you know
2. Quick service and adjustments
3. More personal and friendly service
4. Time saved
5. No costly travel
6. Spending locally helps the district to prosper and provides more employment

This message is presented as a community service by the Port Macquarie News



NEWS



The Ballina leaves Tyne for Australia exactly 102 years and one week ago - July 3, 1865.

SS Ballina's greatest claim to fame is her watery Hastings grave

About 30 metres in from the outer end of the north break wall of the Hastings River, lie the rusting remains of what was once a proud ocean-going paddle steamer.

This ship, the Ballina, is the feature in our historical photograph series this week.

The Ballina was a frequent and well liked visitor to Port Macquarie in the 1870's, carrying passengers and freight to and from Sydney and other ports up and down the NSW north coast.

The ship started her career in Low/Walkers shipyard on the River Tyne in northern England. She was 179.4 feet long, 24 feet wide and 9.6 feet deep, weighing 253 tons gross and driven by an 80 horse power two-cylinder steam engine assisted by sail.

She left the Tyne in 1865 on her delivery voyage to Australia which took 67 days.

During her eight years of service she was involved in a number of

incidents once she rammed and sank the sailing ship 'Sulphide' and on another occasion there is mention of her picking up survivors from the ketch 'Will Watch' which had capsized.

Of course her most famous claim to fame occurred the afternoon of February 14 1897 as she was leaving Port Macquarie.

Almost clear of the channel she ran aground and broke her back, becoming a total wreck, so ending a 14-year career.

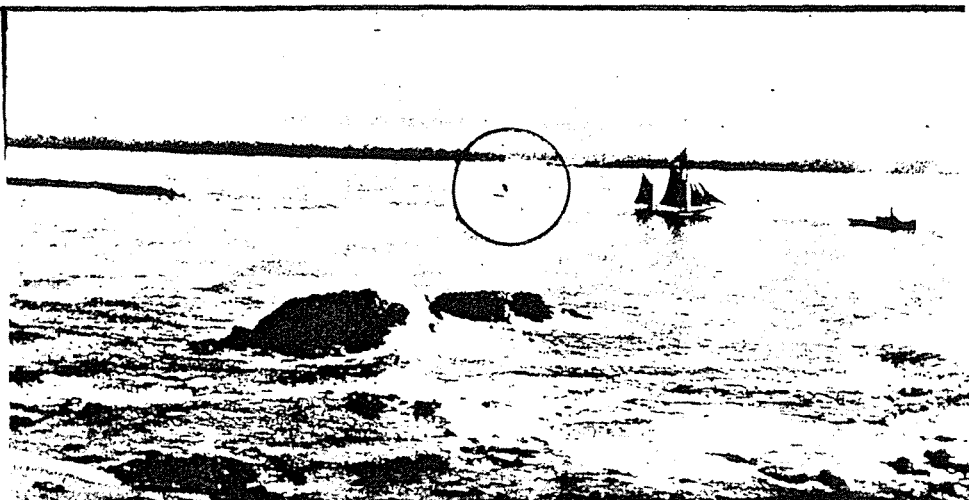
P.S. Ballina

About 30 metres in from the outer end of the North Break Wall of the Hastings River, lie the rusting remains of what was once a proud oceangoing paddle steamer. She was a frequent and well liked visitor to Port Macquarie in the 1870's, carrying passengers and freight to and from Sydney and other ports up and down the New South Wales North Coast.

This ship started her career in Low/Walkers shipyard on the River Tyne in Northern England with a length of 179.4 Ft. 24 Ft. wide and 9.6 Ft. Deep weighing 253 tons gross and driven by 80 HP. 2 cylinder steam engine and assisted by sail. She left the Tyne in 1865 on her delivery voyage to Australia it is said she took 67 days.

On her arrival in Sydney she was docked at Morts Dock where the forward boiler & funnel were removed, she then went into service for her owners The Clarence and Richmond River Steam Navigation Co.

During her years of service she was involved in a number of incidents one was when she rammed and sank the Sailing Ship "Sulphide" and on another occasion there is mention of her picking up survivors from the ketch "Will Watch" which had capsized then on the afternoon of February 14th 1897 as she was leaving Port Macquarie and almost clear of the channel she ran aground and broke her back, became a total wreck so ended the 14 year career of the PS "Ballina".



ATTEMPT TO REMOVE BAR HAZARD

Dangerous wreckage at the harbour entrance to Port Macquarie will be removed by explosives this week.

The wreckage, situated in the channel outlet on "Ballina Spit", has been causing great concern to fishermen over the past months, who have been using the channel to navigate a safe passage over the bar.

The wreckage consists of heavy metal plating and stakes, part of which protrude from the surface of the water at low tide.

Officials from the Public Works Department inspected the wreckage three weeks ago, but were then of the opinion that it would be dangerous to explode it.

However, they now believe it will be possible to blast the part which juts out of the sand.

Mr. Jenkins, Coffs Harbour Public Works officer, said today that he did not know whether the blasting would be successful or not.

"All being well the operation will take two days to complete, and only 100lbs. of explosives will be used — it's not really a very big job, providing conditions are good," he said.

Mr. Manuel, a Public Works diver, who has already had a great deal of experience in underwater demolition work, will carry out the operation.

He will be accompanied by Pilot officer, Mr. Max Morgán.

● The "News is indebted to Dr. McLaren for the loan of this "early day" picture — a tug taking a sailing vessel to sea and a portion of a bar wreck protruding, circled. It is believed to be part of the wreck which is to be removed this week.

WRECK IS OF HISTORICAL SIGNIFICANCE

The Premier of NSW, Mr. Wran, will be urged to invoke the provisions of the Historic Shipwrecks Act to protect the 99-year-old wreck of a paddle-steamer uncovered off the mouth of the Hastings River.

At the recent Premiers' conference, the Prime Minister, Mr. Fraser, approached the States to take over the administration of the Act, which protects shipwrecks deemed to be historically important.

However, only Western Australia has so far agreed to take responsibility for such wrecks within the three-mile limit.

A curator of Sydney's Museum of Applied Arts, Mr. N. Harwood, told the "News" on Friday that until the same provisions are invoked for wrecks off NSW, authorities and historians are powerless to stop professional and amateur divers stripping the wreck of the paddle steamer.

Intact

"We have no teeth," Mr. Harwood, curator of the museum's transport and engineering section, said by telephone from his office in inner-city Broadway.

"The wreck, believed to be that of the 299-ton paddle-steamer, the Ballina, is fairly intact and considered of historical importance. But whether or

not NSW takes on the Act is up to the Premier.

"If he does and the Ballina is declared a historic shipwreck, the Act's provisions can be applied."

Excitement at the news of the discovery has been tempered by the fears that scuba divers will "rip off" the Ballina's antique fittings, and anything else of value.

Government agencies and historians are trying to keep the Ballina's location a secret and on Friday appealed to the "News" not to publish details of its resting place.

But, they can only forestall the inevitable.

As well as being historically important, the Ballina poses a hazard to navigation.

Soon the only divers who have seen the wreck and want to save it for posterity will be forced to advertise its position.

The Ballina will be

marked with a buoy, warning large vessels that parts of her stern are only 2.7m (9 ft.) below the surface at low tide.

Above the seabed

Extensions to the Hastings River's northern breakwall caused sand bars to shift and partly uncover the wreck.

The Ballina is lying in 7.6m (25 ft.) of water and sits 4.5m (15 ft.) above the seabed.

Previously the 113-year-old vessel was buried under several metres of sand.

Those facts were inadvertently released in a report on the Ballina's discovery in Friday's edition of the "News."

Unfortunately the clues could be enough to tip off divers as to the wreck's general location.

While hopes of saving parts of the wreck have been pinned on the Premier and the Act, a newly-formed group of maritime archeologists has been asked to do what it can.

Mr. Harwood said the Maritime Archeological As-

sociation of NSW aims to ensure that important wrecks are preserved.

"Today I have been trying to contact the head of the Association, Dr. Bark, to see if he can instigate some action."

"The association is a professional body which intends to educate divers to try to preserve relics such as the Ballina."

Museum display

It is hoped that anything that can be salvaged from the partly submerged vessel will be placed on display in the Hastings District Historical Society Museum, in Port Macquarie. A section of the museum is devoted to the maritime history of the Mid North Coast, particularly its many wrecks.

But, removing the wreck would be a major undertaking, according to Mr. Allan Griffin, one of the Department of Public Works divers who surveyed it on Thursday.

"I don't think charges could be used to remove it," Mr. Griffin said.

"Shock waves from the blast could damage either of the breakwalls. They travel a considerable distance through water."

"It could be removed, but probably at a great cost."

Continued on Page 2

Historical wreck

Continued from Page 1.

Anything can be moved at a price."

News of the find sent historians in Canberra, Sydney and Port Macquarie scurrying to their files for clues as to the vessel's identity.

PWD district engineer, Mr. Ron Collie, contacted staff of the Museum of Applied Arts on Friday, for help in identifying the wreck.

The Department of Home Affairs, a Federal Government agency based in Canberra, is responsible for shipwrecks and was also notified of the discovery.

The vessel was first discovered by accident early this year.

Local Maritime Services Board officer, Mr. Max Morgan, told the "News" he was acting as chauffeur to a PWD diver doing survey work in conjunction with the breakwall.

"He went down to see what had fouled the anchor of the boat," Mr. Morgan said.

"He said he'd freed it from the ribs of an old wreck."

Mr. Morgan said the Hastings River Fishermen's Co-operative expressed concern about possible danger the wreck posed.

This concern that the wreck constituted a navigational hazard prompted the check by the three department divers—Mr. Griffin, Mr. Dick Manuel and Mr. Brad Allen—on Thursday.



Fittings like lanterns and portholes are among the "treasures" authorities want to save for posterity from "Ballina."



The steam whistle and porthole Port Macquarie diver, Eric Toms, is holding, is destined for the local museum, but other relics, taken off the Ballina wreck are not. This photo was taken during a dive on the wreck.

UNDERWATER ON THE 'BALLINA'

"I couldn't believe it. It's like one of those ancient cities dug out of the sand."

That's how experienced Kempsey scuba diver Bob Sands described his first view of the wreck of the paddle steamer, Ballina.

Using a \$400 underwater flashlight and sophisticated camera equipment, Mr. Sands dived on the 99-year-old wreck last week and took this photograph.

"It is remarkably intact. About two-thirds of the hull is exposed and unlike most wrecks it is not covered with soft coral and seaweed.

"It is the best century-old wreck I've ever seen." But, while Mr. Sands' photographs are the first ones published of the exciting discovery, he is not the first to dive out.

Other local divers have already "plundered" the wreck, considered historically important.

He said only a few of the divers intend to hand over what they have taken to the Hastings District Historical Society.

Fixtures, such as a porthole, have been "ripped off" and Mr. Sands warns that Port Macquarie's divers must consolidate efforts already made to save wreck's relics for posterity.

"They are going to have to get motivated and do something about it soon," Mr. Sands said.

"Otherwise it is going to be picked over like a chicken bone and the relics will be scattered from

DIVER SNAPS WRECK PHOTOS

"Besides diving on it will be difficult after August when the northerlies start and there is a danger a good flood early next year will break it up."

The warning that the easily accessible Ballina could be ravished or lost, came as moves were being made to instigate a controlled archaeological survey.

About 35 scuba divers and others were told that a Ballina Project Committee, consisting of local divers and other experts should be formed.

The advice came from Professor John Bach, Professor of History, at Newcastle University, and president of the newly-form-

time Archaeological Association.

He said the committee, consisting of the divers and experts such as metallurgists and radiographers had a fair chance of making an "archaeologically-acceptable" survey.

A hobby diver, Mr. Geoff Thame, of Port Macquarie, has agreed to take on the job of contacting all the people needed for the time-consuming survey.

He will then announce a date for a meeting to form the committee, which, as well as guidance and expertise, will need a source of finance for its work.

Support of divers

Professor Bach told the meeting of divers that their full support was essential because the Historical Shipwrecks Act of 1976 had not been proclaimed in NSW by the State Government.

"Advice and instruction on both survey and conservation is available from authorities within Australia," Professor Bach told the divers. There are several cases overseas where local diving groups, with proper instruction and occasional inspection from expert authorities, have set up their own adequate conservation facilities.

"These procedures, how-

ON THE 'BALLINA'

Continued from page 1

ever, require the full co-operation of local divers if the archaeological activities of our group are not to be burdened by interference from others not previously interested in archaeology.

"Without legislative help such co-operation must be generated locally by publicity and pressure put so that the occasional pure souvenir hunter feels obliged by public opinion, to keep out of the way."

"The NSW Government has been asked by the Federal Government to administer the Historical Shipwrecks Act, which would place responsibility for historic wrecks like the Ballina with the State.

Moves for the States to take over the administration of the Act were made at the recent Premiers' Conference, but despite pressure from authorities concerned about the vulnerable Ballina, only WA has agreed to do so.

"As well as the legal problems, the professor of history also outlined technical problems encountered in maritime archaeology, in Western Australia.

The Rake is the forerunner in that work being carried out in Australia.

Since 1970 the Dutch and Australian governments have worked together on archaeological projects involving the W.A. coast.

Prof. Bach showed early Dutch wrecks off slides of the work on two of the Dutch East-Indiamen, the Batavia and the Zeewyk and described the objectives of the Maritime Archaeological Association.

Basic rules

He stressed that amateur archaeologists should follow certain basic rules.

"The first of these is that no material, whether iron, bronze, brass, copper or wood, should be lifted from the sea until adequate facilities for conserving relics are at hand.

"It is equally important that later scholars who might be interested in particular wrecks should have available a meticulously accurate record of all work done on them in the past.

"This means in practice that the location of the vessel should be fixed by a proper survey, that its precise altitude on the bottom, its exact measurements and the exact location of each part relative to every other part be plotted."

"This normally would need a careful gridding over, ideally a photo-mosaic.

"Every artifact removed from the wreck should be plotted precisely on the master plan."

Port Macquarie News 31st July, 1978.

Police step in — moves to stop divers looting wreck

The State Government has taken emergency action to save the historic wreck lying off the mouth of the Hastings River from looters.

Port Macquarie police have been told to guard the largely-intact wreck of the Ballina, which until earlier this year was shrouded by sand at the river entrance.

A police spokesman said yesterday that checks on the easily-accessible wreck site would be made during regular police patrols.

He said unauthorised divers found there would face possible prosecution. Residents of townsore homes overlooking the river mouth have been asked the report any activity at the wreck site to police.

In an exclusive release to the "News", a press officer from the Premier's Department said concern over the vulnerable 99-year-old wreck had reached ministerial level.

"Police are watching the wreck to ensure it is investigated in a proper and constructive manner in the best interests of the community," Mr Phillip Short said.

"There could be artefacts and fixtures of historical interest and the Premier wishes to ensure the remains of the ship are not disturbed until they have been appraised by the appropriate experts."

Souvenir hunters

Authorities fear parts of the wreck may already be in the hands of souvenir-hunting divers.

Until now, police, local government officials and others concerned about the fate of the wreck have been powerless to stop looters diving on the wreck.

They have been hampered because NSW has not yet been proclaimed the Historic Shipwrecks Act in its coastal waters.

Administration of the protective Act was handed over to the States by the Federal Government at

the Premier's Conference, but as yet only Western Australia agreed to adopt it.

The ban on unauthorised diving opens the way for a controlled archaeological survey and recovery of artefacts from the wreck, which maritime archeologists rate a rare and historic find.

Technical experts

A team of local divers and technical experts is being formed to start the urgent task.

The team organiser, Mr Geoff Thame, said it was hoped to begin work as soon as possible before northerly summer winds make diving even more difficult, in the strong currents at the river entrance.

He said there are also fears that heavy logs carried through the entrance during seasonal floods early next year, could smash the Ballina's rotting superstructure.

The sandbar, which shifted with the extensions to the northern breakwall, uncovered the wreck and a Pandora's Box of problems for authorities.

Although parts of its superstructure have been sighted during the years, the Ballina was almost completely covered with sand until recently.

Sandy grave

A Department of Public Works diver doing survey work for the wall extensions discovered the Ballina, which had literally dug itself from its sandy grave with changing water currents.

About 15ft. (4.5m) of the Ballina sits upright

above the bottom and about 125ft. (37m) of its original 175ft. (53m) remains to be seen.

At low tide parts of the wreck's rigging and stern are only a few metres below the surface.

Further investigation by the PWD divers revealed that the bow of the paddle steamer was perilously close to the northern breakwall.

The department has agreed with local fishermen that the Ballina constitutes a hazard to some shipping. But blasting it out of the water would be impossible they claim.

Shock waves travel a considerable distance underwater, and blasting is likely to damage the nearby breakwalls.

Shipping hazard

However, because the wreck is recognised as a hazard, the department must mark the wreck site with a buoy to warn large vessels.

Marking the site would be like inviting divers to strip the wreck of its relics, and the PWD's regional office in Coff's Harbour was in a quandary about how to protect the wreck.

A letter outlining the situation and asking for advice on the legal position, was sent to the Minister for Public Works, Ports and Housing, Mr Ferguson.

Mr Ferguson contacted the Premier's Department informing Mr Wran of the problem wreck and suggested that a ban be placed on unauthorised diving until the proper study could be carried out.

Local police received word that the Premier had agreed to the ban on Monday.

It ended a period of frustration for them and other local authorities

who up until now have had no power to prevent divers from removing relics.

Kept watch

They have kept a watch on several local divers who have taken fixtures such as portholes from the Ballina, built in 1865 and used to carry cargo between Sydney and North Coast ports.

All the local divers have agreed to hand over the fittings they removed from the Ballina.

The fittings and anything else recovered from the wreck will be handed over to the team organised by Mr Thame and eventually to the local historical society.

Moves to form a local team to undertake the archaeological study made at a meeting of about 35 divers and others in Port Macquarie last week.

Fair chance

It was called by the Professor of History at Newcastle University and president of the newly-formed Maritime Archaeological Association of NSW, Professor John Bach.

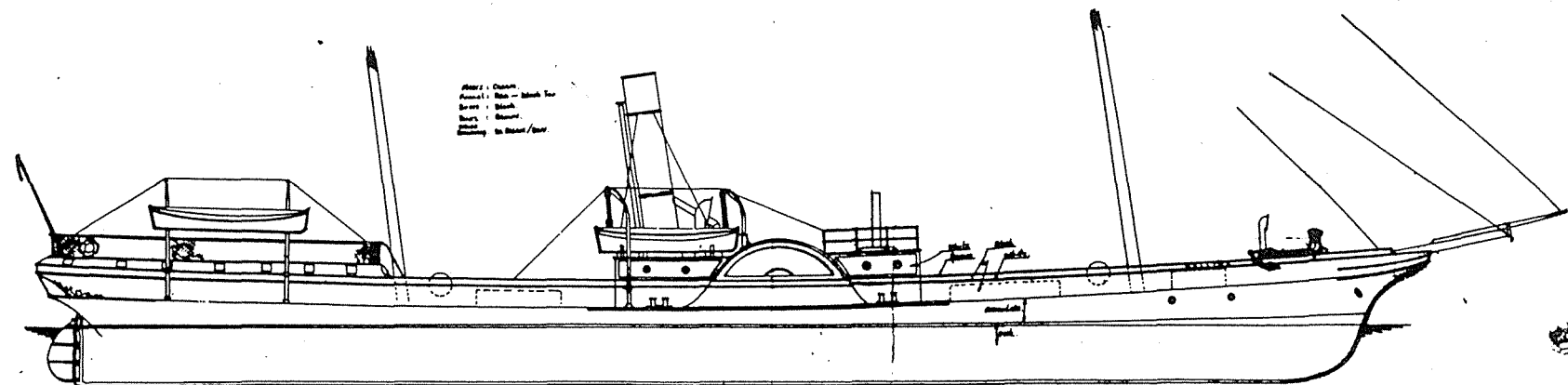
He said a local team of amateur archaeologists had a fair chance of making an "archaeological acceptable" study, which would be of value in Australia and overseas.

He said the team must follow basic rules if this is to be achieved.

Mr Thame said the local team members have applied to join the association, which has offered to direct and supervise the operation.

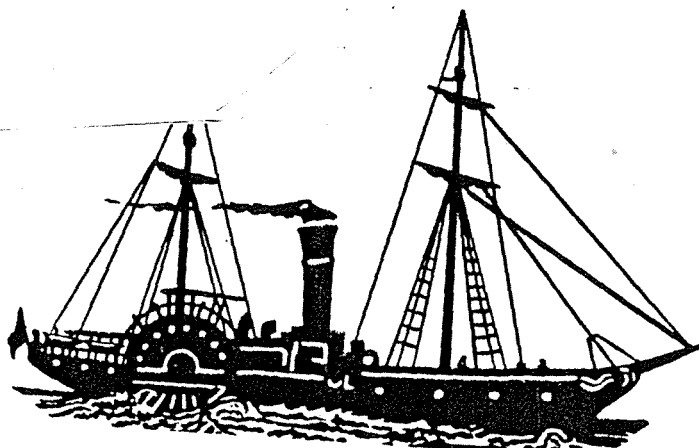
Advice also will be given on setting up tanks to treat and restore the corroded iron

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Hull : Oak
 Funnel : Red - Black top
 Deck : Black
 Mast : Black
 Rigging : Black
 Machinery : In Black / Grey

An artist's sketch of the Ballina made from an original painting of the vessel.



Artist impression of the "Angus Irving," a paddle-wheeler in the mould of the "Ballina."

SAND COVERS PORT'S WRECK

A tremendous shift of sand caused by recent nor'-easters has robbed a local team of amateur marine archaeologists of the chance to carry out a study on the "Ballina."

The sand shift has again covered the 100-year-old paddle-steamer wreck, lying at the entrance to the Hastings River.

The team was waiting on State Government approval to begin diving on the paddle-steamer, rated a rare and important find by the president of the NSW Marine Archaeological Association, Professor John Bach.

Premier Wran banned unauthorised diving on the "Ballina" three months ago.

At the time he said a group would be nominated to save relics from the wreck for posterity, but no decision has yet been announced.

The "News" was informed of the latest development in the saga of the Ballina, by Mr. Max Morgan, the Maritime Services Board officer based in Port Macquarie.

No outline

"A fellow taking a close interest in the wreck said he was flying over it last week and noticed the outline was no longer visible," Mr. Morgan said.

"On clear mornings it could

be seen quite plainly from the air.

"The shift of the sand is due to the continued nor'-easters we have had recently.

"They can cause quite massive movements of sand," he said.

Situation altered

When news of the discovery was made in July, the wreck was lying largely uncovered in about 25 feet of water at the river entrance.

The nor'-east winds have altered the situation drastically.

"A depth sounding I made on Thursday revealed that there is now only about 11 feet of water at the spot," Mr. Morgan said.

Few feet showing

"That would mean that only a few feet of the rigging and perhaps part of the boiler are now showing above the sand," he added.

Previously most of the wreck could be seen, and divers were even able to swim through the engine room.

Mr. Morgan said the nor'-easters are a feature of the

weather conditions at Port Macquarie around this time of the year.

He said the sand may shift within days or alternatively it was possible we might not see the wreck again for years.

"The sand could shift away as quick as a flash," Mr. Morgan said.

Floods early in the New Year could open up the river mouth and wash away the sand.

"But we may not see it again for years."

Mr. Morgan said the wreck did not constitute a danger to most of the vessels leaving Port Macquarie.

The MSB officer has been closely involved with the saga of the wreck, from its discovery to the recent wrangles between local divers over who should be allowed to dive on it.

The irony of the latest development has not escaped him.

"The best laid plans eh?" he said, during a brief interview on Friday.

Remarkable

The Ballina is remarkable in that it is largely intact.

It sank after running aground

STUDY TEAM LOSES BATTLE

on a sand bar off the river entrance, on February 14, 1879.

The sand which has shrouded it has kept it free of barnacles and other marine life which normally encrust wrecks.

To the marine archaeologists, the Ballina is a treasure trove of seafaring relics from a bygone age, when ships were the main mode of transport between the North Coast and Sydney.

What makes it even more important to the archaeological association, under whose direction the local team would have worked, was the fact that there were only a relative handful of paddle-steamers in Australia before ships gave way to rail and road.

Now the plans to carry out a study of the Ballina will have to be shelved indefinitely, because time and tide wait for no man.

—Laurie Sullivan

'WRECK STUDY CAN BEGIN', —says diver

One of the first scuba divers to see the wreck of the paddle-steamer, *Ballina*, claims the proposed maritime archeological study can go ahead.

This is despite a report from the Port Macquarie Maritime Service Board officer, Mr. Max Morgan, that persistent nor-east winds have caused the century-old wreck to be almost covered by sand.

Mr. Morgan said that there was now only 11 feet of water at the wreck site, leaving only a small portion of the boiler and rigging visible.

The Maritime Services Board officer spoke to the "News" after making a depth sounding of the site, which was 25 feet below the surface when the wreck was discovered by Department of Public Works divers earlier this year.

The report in Wednesday's "News" said that the archeological study team—which will map and survey the *Ballina* and restore its relics—may not be able to begin the work.

The diver is Mr. Eric Toms, a former professional scuba diver, who has dived on and photographed a number of wrecks during 12 years of diving.

Mr. Toms said it would be possible for the sand to be 'sucked' from above and around the wreck, which sunk in the river entrance after running aground on February 14, 1879.

"The process is called an air lift and it is just like a river dredge, but on a smaller scale," Mr. Toms said.

"It can remove tonnes of sand in a matter of hours.

"The sand is brought to the surface through a hose and filtered so that any big objects are trapped while sand is pumped away."

'Plenty to be seen'

Mr. Toms said he had seen the *Ballina* from the surface through a diver's facemask a few days ago and there was "plenty" of it to be seen.

He said: "I don't think the situation has changed that dramatically in a few days."

"Mr Morgan's depth sounder may have picked the top of the boiler instead of the river bottom."

Mr. Toms said he did not want to see the momentum already created by the amateur archeologists prematurely stopped.

"I would like to take part in the study," Mr. Toms said.

"I was one of the first divers to dive on the *Ballina*, before the ban was placed, by the Premier's Department.

"The local museum has a steam whistle and a port hole which I removed from it and restored.

"I have been keeping an eye on it since then and I would like to see anything taken from it stay in Port Macquarie. It's Port's wreck."

Premier Wran banned unauthorised diving on the wreck three months ago until a 'responsible group' was nominated to carry out a study.

The "News" was told the Premier's Department would hand over the decision of choosing the group to the Museum of Applied Arts and Sciences in Sydney.

However, since that time there has been no word from either the department or the museum on the future of the wreck, which the NSW Maritime Archeological Association rates an important find.

Much of the *Ballina* is as it was when she sank after only 14 years' service with the Richmond River Steam Navigation Company.

She is largely intact—right down to retaining one of the two giant wooden paddle-wheels that propelled her up and down the coast between Sydney and North Coast ports.

The sand that has shrouded the paddle-steamer for many of her 99 years on the bottom of the river entrance is again being moved back by the nor-easters that are a feature of Port Macquarie's weather at this time of year.

"It is probably true that the nor-easters are moving sand into the channel," Mr. Toms said.

"But the fact that the wreck was uncovered proves that normally sand is being moved out through the channel.

Sand only temporary

"The sand is only temporary during the nor-easters.

"A southerly will have the opposite effect."

Eric Toms' experience with wrecks stretches from the



Mr. Eric Toms

Barrier Reef to the South Coast of the State and spans almost a decade.

He has visited the grave site of Sydney's well-known wreck, the *Barrenjoey*, as well as ships lost off the Queensland coast, including Taiwanese trawlers, and a vessel which went down in Jervis Bay.

"I have dived on quite a few wrecks, but I don't like removing things from them unless I know where the items are going," Mr. Toms said.

"I would like to be part of the maritime archeological team which has been organised here because I want to see the salvage done right.

"My main concern is that things off the *Ballina* stay in Port."

"Mr. Toms said allegations that relics were being 'ripped off' made soon after the secret of the *Ballina*'s discovery was made public, were untrue.

Mr. Toms said he was able to get a good look at the wreck from the surface, through a diver's face-mask yesterday.

"Between 40-50 feet of the wreck is clear of sand," Mr. Toms said.

At the rear, which is sitting on a rock, it is about four to six feet above the bottom.

"From there it slopes down towards a hollow where the engine room is located, and sand has collected there."

The hollow was created when the "*Ballina*" was dynamited, not long after it sank in shallow water on the sand bar.

The charges broke its "Back" and moved it into deeper water.

3rd November, 1978 Port Macquarie News.

AFTER NINETY-NINE YEARS

Originally 53 m (175 ft.) long, about 15 m (50 ft.) of the Ballina has been swept away during its 99 years on the bottom of the Hastings river mouth.

Historians believe the wreck discovered last week, after being uncovered by currents from the new breakwall, to be that of the paddle-wheeler Ballina.

Although no positive identification has yet been made of the wreck, records both here and in Sydney point to it being the Ballina.

Most of the wreck is still half-buried in sand, but the stern's superstructure and parts of the interior can be seen.

"The bow section is showing signs of age from the action of the waves," Mr Allan Griffin, a scuba diver with the Public Works Department and one of the first men to examine the wreck said.

"Really only the shell of the bottom remains.

"From there we went along the wreck to find the stern—about 15 feet that a substantial part of (4.5m)—is showing above the seabed.

"One of the paddle-wheels is still intact and there is evidence of the starboard side one in the seabed.

Cut about

"The hull is all cut about from the waves but there is more there than we were led to believe.

"One can see evidence of islways, port holes, boilers and things."

Built in 1865, the Ballina was acquired in 1866 by the Clarence and Richmond River Steam Navigation Company.

Just 14 years old, the Ballina would probably have been one of the

company's finest vessels, when she ran aground on February 14, 1879, while trying to leave Port Macquarie and the Hastings River.

The 299-ton Ballina was named after the port at the mouth of the Richmond River, where timber, especially cedar, sugar cane and other merchandise was loaded for shipment to Sydney. The company's vessels were the equivalent of today's rail system.

First wreck

It is the first wreck Mr Griffin and Mr Allen have encountered in the region, which is quite literally littered with wrecks.

At Easter, two divers attempting to recover a prawn net, which had become tangled on the sea floor off the old entrance to the Macleay River, found the wreck of the Angus Irving.

The vessel — also a paddle steamer — was lying in about 10m (32 feet) of water near Grassy Head.

A Kempsey newspaper, the Macleay Argus, is backing an attempt to salvage the Argus Irving's anchor.

It will be placed in a maritime museum which the Trial Bay Trust plans to establish in the Trial Bay Gaol at a cost of \$40,000.

There should be no shortage of material to fill the museum, as the entrance to the Macleay is possibly the most notorious danger spot for the ships of yesteryear on the Mid-North Coast.

Port Macquarie too has had more than its share.

The list at the town's museum reads like a roll call of war dead.

The first recorded maritime disaster off Port Macquarie was the loss of the Black Joke in 1823, just two years after the penal colony was founded.

Those aboard, who went to the bottom must have seen the irony of the schooner's name.

Shipwreck's occurred regularly after that, including the total disappearance of a vessel which was 'hijacked' by a band of convicts.

The vessel's crew apparently was overcome, and the convicts sailed towards the open sea and oblivion.

Burial ground

The vessels lost included ketches, cutters, steam ships, schooners and paddle steamers.

One of the favourite 'burial grounds' locally is Tacking Point, where at least six of the 32 (at least) ships lost off Port Macquarie went down.

As well as the name of the vessel, the date it went down and its description, the historical society's list sometimes includes cryptic details of the vessel's 'demise.'

Things like... 'stranded close to shore and prematurely abandoned'... 'sailed out and never sighted again'... 'believed lost in a gale.'

The wrecks had such exotic names as the Candidate (ominous), the Fly and the Woodpecker.

Of course, many bore female names like the Jessie Sinclair, the Lizzie Davis, the Sally, the Queen and the Minnie Lowe.

The masculine names included the Johnny, Our Jack and Our Boys.

Many of the vessels carried the names of rivers along the North Coast and from which they pled their trade, such as the Macleay, the Hastings and the Richmond.

Although there have been a spate of boating accidents on the bar in recent years, the history of shipwrecks on or near the Hastings is as old as Port Macquarie itself.

Before the breakwalls were constructed, navigators relied on their seamanship—and good luck, according to a booklet

describing the town's history.

An extract reads: "Such was the case of the Elizabeth Henrietta when bearing Governor Macquarie on his return from Port Macquarie, in 1821.

"At one time Port Macquarie was a busy port with as many as 27 vessels in the harbour at the one time. Following the construction of North Coast Railway and the establishment in 1915 of a rail head at Wauchope, 13 miles away, shipping as a mode of transport diminished in importance.

Some of the most famous shipwrecks on the river bar is described in the booklet compiled by the historical society and the "Port Macquarie News."

Extracts

"On November 14, 1851, a trim, rakish-looking yacht hove to under Flagstaff Hill, its heavy artillery much in evidence, causing alarm to the inhabitants of the town.

"The vessel was the 'Wanderer,' owned by Benjamin Boyd—founder of Boyd Town, near Eden, and it was returning to Australia after the mysterious disappearance of her owner on an island in the Solomons.

"While attempting to cross the bar at Port Macquarie the yacht was totally wrecked.

"Before she broke up much material was salvaged by Sam Cohen, storekeeper, who bought the wreck and sold items in the town. Several pieces can be seen in the Museum.

On April 29, 1943, the s.s. 'Wollongbar' was torpedoed by the Japanese off Crescent Heads with a loss of 32 lives, including the skipper, Captain Benson.

"One of the local fishing boats, manned by Mr C. Radley and his crew, played a gallant part in the rescue operations but only five survivors were brought into Port Macquarie.

One very badly burnt man was towed in on a raft and nursed back to health at the local hospital.

8th December, 1978.



Among the last items to be removed from the "Ballina" before a ban was placed on diving to the wreck were a porthole and a steamwhistle. The diver is Port Macquarie's Eric Toms.

Wreck declared "protected"

The "Ballina", Port Macquarie's most famous and controversial underwater wreck, has finally been declared a protected vessel after almost exactly 100 years at the mouth of the Hastings River.

The State Government declared the official protection for the "Ballina" late last week when it adopted the federal government's Historic Shipwreck Act.

However, police should have had to enforce the act for some time.

According to Public Works Department engineers the iron steamship is now completely covered by sand.

Regenerated

Interest in the "Ballina" was rekindled last year when the

department uncovered the wreck while carrying out extensions to the northern breakwall.

Port Macquarie divers, in a bid to retrieve parts of the wreck for archaeological purposes, banded together and formed a committee with the hope of winning approval to inspect the "Ballina".

However, approval was not

given by the government.

A committee member, Mr Sid Murphy, said that now the "Ballina" was protected he would be seeking permission from the government to dive on the wreck.

"Some of us have joined the Maritime Archaeological Association and this should help us in our bid for a licence to dive on the wreck," he said.

Mr Murphy, had previously retrieved some parts of the wreck including parts of a paddle wheel, a spoon and an old whisky bottle.

sand to reform over the wreck once the offshore bar began to stabilise.

Under the new act divers can actually be prosecuted if they dive on the wreck without government approval.

One of many

The "Ballina" is just one of many wrecks scattered around Port Macquarie.

It ran aground in February, 1879 while leaving the Hastings River with a cargo of maize, cedar, wool and several other items.

A large part of the cargo was saved before the "Ballina" sunk.

Display

One diver, Mr Eric Toms, had also previously dived on the wreck and retrieved a porthole and steamwhistle.

These are now on display in the Hasting District Historical Museum in Clarence Street.

Police, local government officials and Port Macquarie residents became concerned over reports that several divers had begun to remove parts of the "Ballina" for their own purposes last year.

After several appeals to the State Government a ban was finally imposed on diving to the "Ballina" and police were instructed to keep divers away from the wreck.

It is believed that it would take a major storm to remove the sand that has silted over the wreck.

A Public Works Department spokesman said engineers had expected the

Port Macquarie News. 18.4.1979.



The diving crew prepares the outboard motor-powered dinghy in which they travelled to the point above the wreck of the Ballina on Friday. They are (from left) Jane Daddo, John Riley, Bill Barnes, Mike Richards and Karl Stoegger.

SURVEY TEAM DIVE ON THE 'BALLINA'

A survey crew from the NSW Museum of Applied Arts and the NSW Archaeological Association commenced a sea bed survey of the 100 year old wreck of the 'Ballina' last Friday, to sketch a plan of what is left of the ship as it lies half buried in sand at the mouth of the Hastings River.

The team is led by Mr. Michael Richards, an historic restorer at the museum, and during the weekend, skin divers inspected the wreck each morning at full tide, taking measurements and photographs as the murky seas cleared.

The results of the survey will be taken back to the museum and compared with the plan of the ship before it went down.

The wreck has no definite outline as it came apart in 1910 when it was dynamited, to ensure a safe passage for ships entering or leaving the river.

However, in spite of the condition of the wreck, the team has been able to pick out the main features, sufficient to enable the piecing together of the ship and its cargo.

Other wrecks

The survey was expected to end on Monday.

Mr. Richards said that there is also evidence of other wrecks alongside the 'Ballina'.

"There's a boiler lying in the wreck, and we believe this is part of another wreck."

Sardinia

One of the survey team, John Riley, reported seeing engines "fairly intact".

This was not Mr. Riley's first experience at diving on wrecks, for before coming to Australia he was a member of the Royal Air Force stationed at Cypress.

When he was there he was in a group diving off Sardinia examining sunken settlements in the Mediterranean, on behalf of the Museum of Archaeology in Sardinia. This led to examining ship wrecks.

He is now a member of the NSW Archaeological Association.

Unauthorised divers

Mr. Richards said that one of the main problems is keeping unauthorised divers away from the wreck.

"If people hoe in and help themselves, without recording first, the information will be lost.

"It's not so much what the item is, but where it was.

"Our object does not include the removal of anything at present. This is purely a survey.

"The outcome could be that we leave the wreck exactly where it is.

"However, it could well be a hazard to navigation as there's only about nine feet of water over it.

"So any vessel drawing nine feet or more could hit the wreck if it came in on that side of the channel.

High penalties

Mr. Richards sounded a note of warning about the

removal of items from protected wrecks when he refers to recently introduced legislation.

"Removing items from underwater wrecks, damaging them or just shifting them, could attract a heavy fine.

"I think it's \$5000 or five years goal, or both.

"Anyone wishing to dive and examine a wreck should first obtain permission from the Department of Home Affairs in Canberra.

Asked what the procedure would be if a skin diver came across an unidentified wreck, Mr. Richards said of all, it must be assumed that it is an historic wreck.

"The Minister for Home Affairs should be immediately notified.

"The penalty for failing to report the finding is rather heavy. It's about \$1000 or six months gaol.

"The law of the Receiver of Wrecks still applies to existing wrecks of no historic value.

"This means that anything salvaged from such wrecks should be handed over to the Receiver who will hold items for a year and a day and then sell them.

"The proceeds would be split between the finder and the owner, if he can be traced."

Mr. Richards said that wrecks along the Australian coastline are controlled by the Department of Shipping and Transport although the Maritime Services Board do have some control in State waters.

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Organisations, although the present survey is miles will eventually be the internationally agreed distance.



A diver leaves the craft to descend to the wreck at the mouth of the Hastings River.



Examining a fixture from the Ballina are, from left, branch member, Mr Geoff Thame, project leader, Mr Mike Richards, maritime archaeologist, Mr Mike Lorimer, and conservator, Mr David Hill. In the background is the river entrance and the resting place of the century-old paddle steamer.

Marine study begins on historic shipwreck

A detailed marine archaeological study now underway on Port Macquarie's historic wreck, the Ballina, is the first on a vessel in NSW waters.

A freelance marine archaeologist, Mr Mike Lorimer, of Sydney, said the results of the long-term study would be published overseas.

Mr Lorimer is one of a team of Sydney experts who joined with local divers, members of the Port Macquarie branch of the NSW Marine Archaeological Association, for a dive on the wreck last weekend.

A team of 18 divers descended on the century-old wreck, lying partly covered in sand and in a few metres of water at the entrance to the Hastings River.

"The principal concern is that the survey of the Ballina is done correctly and in the proper archaeological way," Mr Lorimer said.

"This is the first major project of this kind in NSW waters.

"In fact, it is the first iron wreck to be archaeologically recorded in Australia."

Mr Lorimer said marine archaeology was still very much a developing science, having only been developed since World War 2.

Experimental

"It's all very experimental still," Mr Lorimer said.

"The results of the work here will be published overseas."

The team also consisted of the project leader, Mr Mike Richards, the president of the State association, and Mr David Hill, a conservator at the museum of Applied Arts and Sciences in Sydney.

It has been left to the museum to decide how to best protect the wreck, whose discovery by Department of Public Works divers two years ago during survey work for the breakwall extensions prompted the NSW government to pass the Historic Shipwrecks Act.

Several items were lifted from the wreck at the weekend and now will undergo tests to see how best to preserve them.

In charge of this part of the operation is the museum conservator, Mr Hill.

The artefacts raised to the surface for the first time in 100 years include a brass cover, a short length of pipe, a large plate and valve and pieces of timber.

Also brought up were pieces of marble from the Ballina's galley or bathrooms.

Water bath

"The water acts to permeate the marble and dislodge the salt particles now in the marble.

"Without the water bath, the exposed marble would dry out quickly.

"The crystallised salt particles would cause it to expand and crumble."

The metal items will be lowered into a tank containing a chemical solution.

An electrolytic process is carried out, the action of the electric current through the solution restoring the original structure of the metal.

Tests will be undertaken at the museum to determine the best method for restoring the timber pieces.

The range of tests and restoration processes will take until the end of the year to complete.

Mr Hill also instructed the Port Macquarie branch's restoration officer, Mr Graham Skeen, in some of the methods of treating the items taken from the wreck.

He said other members of the branch, the first one formed from the parent body in NSW, will undertake the major part of the archaeological survey.

Mosaic

It involves making a photographic mosaic of the wreck, drawing detailed maps and marking in the location of artefacts and fixtures on the vessel.

The marine archaeological association organised a dive on the paddle steamer last October to

establish the layout of the wreck and take measurements.

The work was continued last Saturday and Sunday during the two dives, which were preceded by a briefing for the local divers on Friday night.

The Ballina's historical importance lies in the fact that it was one of only a handful of vessels of this type in Australia late last century and no plans are available of the paddle steamers.

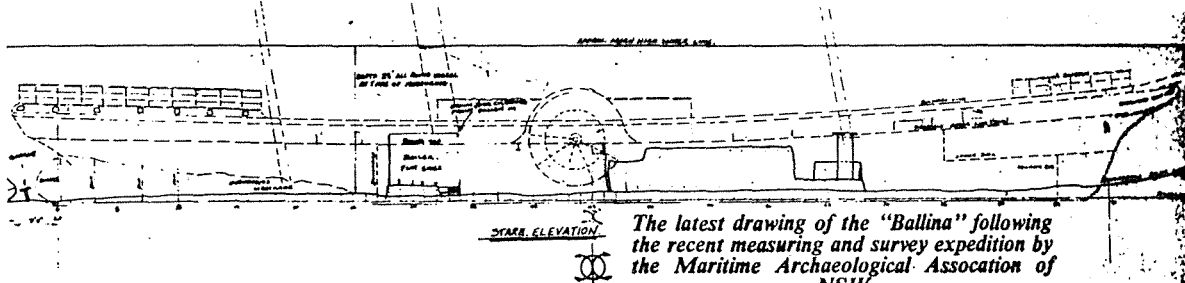
Its location in shallow water, protected by the northern breakwall, and its relatively good condition make it an ideal wreck to study.

There is some structural damage, but the covering of sand has kept it relatively free of growth.

The final authority on the wreck is the Department of Home Affairs in Canberra, which gave permission for the dive on the weekend.

The local branch, with the support of the State body, is pressing for permission to dive on the wreck during an extended period of several months.

The local members, who will be continuing the lengthy survey, need the flexibility of the extended permit to take advantage of the best diving conditions.



The latest drawing of the "Ballina" following the recent measuring and survey expedition by the Maritime Archaeological Association of NSW.

FREER ACCESS SOUGHT

The Maritime Archaeological Association of NSW has recommended to the NSW Government that it allow its divers freer access to the wreck of the "Ballina" at the mouth of the Hastings River.

The request, directed to the Premier, Mr. Wran, is contained in a set of recommendations stemming from the latest survey and recording expedition onto the wreck.

Port Macquarie News
7th December, 1979

The expedition, between October 19 and October 23 and involving seven divers from the Maritime Archaeological Association, recorded a number of new findings concerning the old steam ship which went down on the bar before the turn of the century.

It was headed by Mr. M. P. Richards, a naval architect and historian, and assisted by president of the Maritime Archaeological Association, Mr. J. Sumner and five divers—J. Riley, B. Barnes, K. Stoeger, J. Daddo, A. Croft and G. Thame.

After a familiarisation dive the crew measured the vessel in a 45-minute dive from which they gleaned enough information for the project leader to accurately

mark the hull's position and direction.

Problems

The divers encountered problems on the hull having only a maximum visibility of eight feet with the water clouded by small red weed, which prevented any photos being taken. They also found the wreck badly infested with cunjevoi.

The expedition was joined by Brad and Laurie Dickinson and Graham Skeen, experienced divers and proprietors of the divers shop, in Gordon Street, and who are keen to preserve the "Ballina."

It was Mr. Richard's conclusion that further survey work should be continued by these three divers and a local member and diver of the association, Geoff Thame.

He told Mr. Wran the team was still available to assist with diving, measuring, recording, survey,

recovery and conservation as and when required.

Mr. Richards also told the Government local business houses were "on side" and the project could be successfully completed by the team.

It was his recommendations that the following be adopted—

Recommendations

1. The project be continued. I urge that an open ended clearance be given to Geoff Thame's team to continue recording—this will allow "short notice" dives when conditions are best.

2. Some items excess to requirements of local museum are held by Geoff Thame. He wants to send these to the museum of Applied Arts and Sciences in Sydney for conservation and safe keeping. This should be done.

3. Small items (including a brass engraved plate which was sighted on the wreck) should be recovered and conserved at once—before someone else finds them (there are rumours of illegal diving on the wreck at night).

4. A search in the stern area (with an air lift if required) will probably yield interesting artefacts. These should be plotted on the plan and raised for conservation at once.

5. The wreck is in worse condition now than 12 months ago. The cunjevoi should be removed soon as its weight and increased surface area will pull the wreck completely apart, especially in the currents.

6. The bow should be searched for: about 50 feet is missing, but it is most unlikely that it is under the sea wall. The anchors at least must still exist.

7. The wreck, although extensively dynamited in 1908, is still largely intact, although in large pieces. Much interesting and useful information on her structure, framing, plating and engines can be gleaned and this must be after recommendation 5.

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Paddle steamer remains may be demolished

The Public Works Department is studying methods of removing the remains of the wrecked paddle steamer, Ballina, from the mouth of the Hastings River.

Mr. Alan Griffin, a coastal engineer for the PWD, said this week that the study was being conducted by a PWD diver who was preparing a report on the removal and demolition of the old wreck.

The remains of the Ballina, a 299-tonne iron-hulled steamer, lie in the middle of the port entrance, between the breakwaters, where it sank in February, 1879.

The wreckage has become a hazard to navigation, although only the boilers,

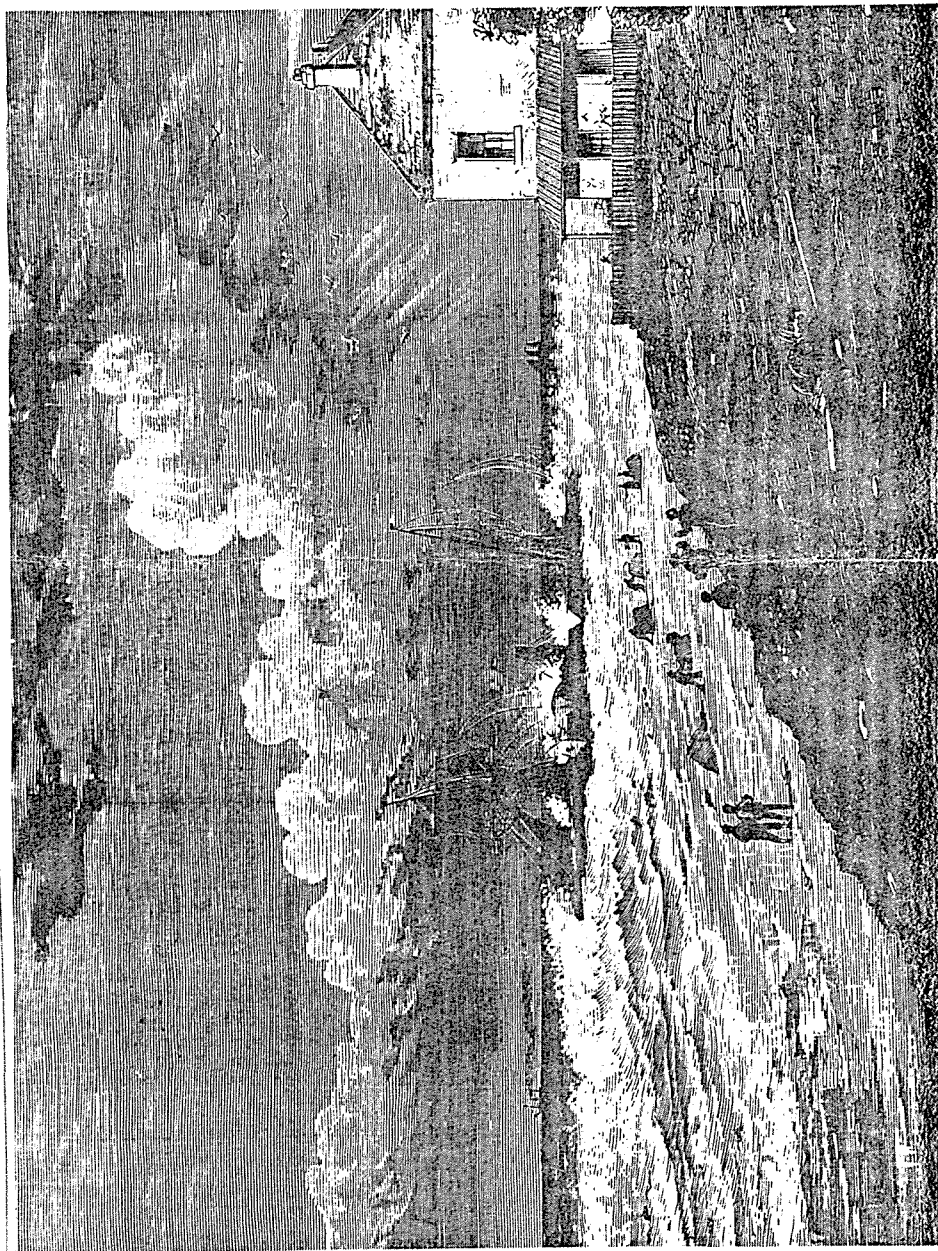
pistons and parts of the engine-room walls remain.

Mr. Griffin said the wreck had been largely covered by sand but swift currents had exposed it in the past year.

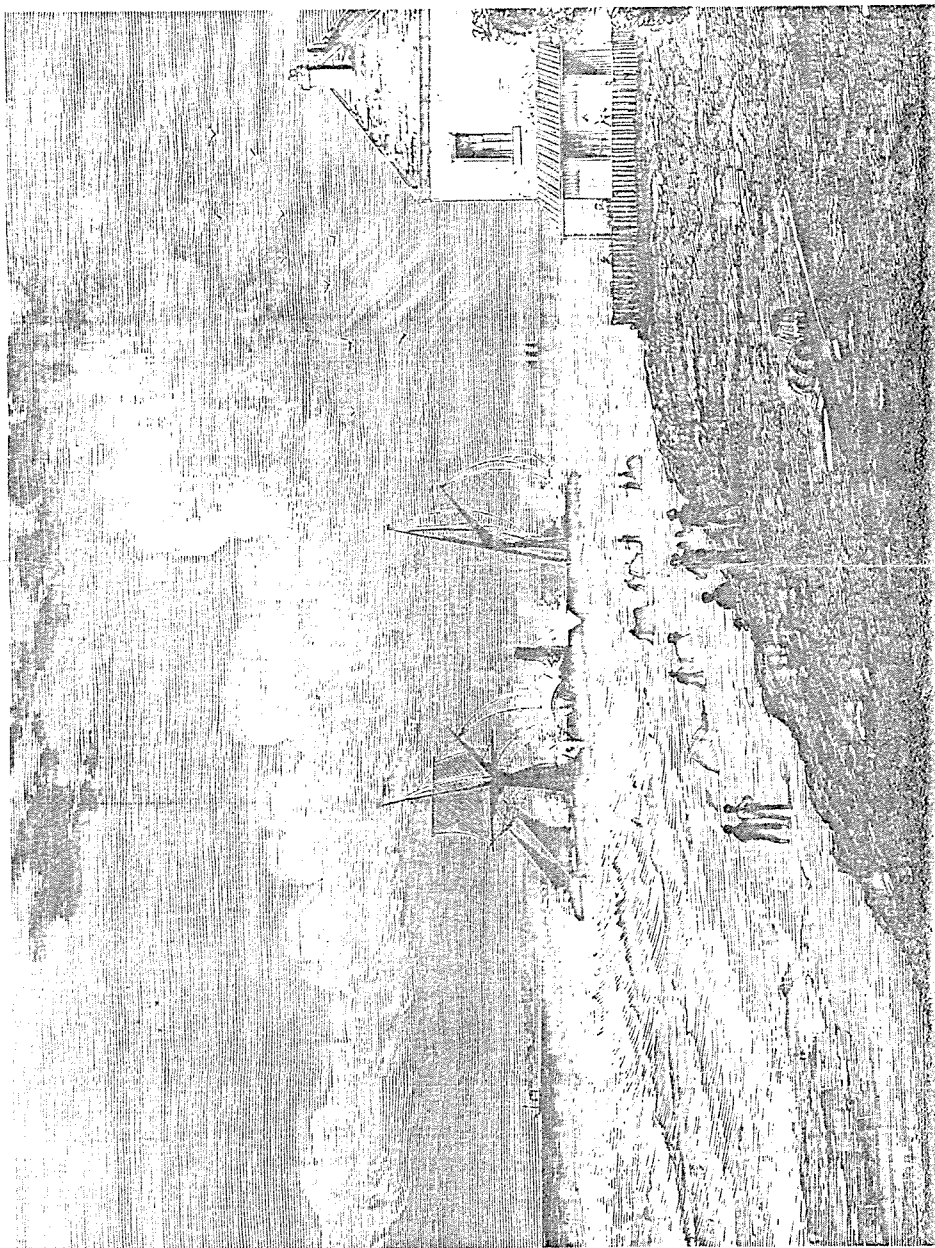
He said the diver had examined the wreck and was looking at ways to salvage the boilers and piston so the rest of the wreck could be demolished.

He said all items of historical interest had been salvaged from the Ballina by Port Macquarie Marine Archaeological Society.

These were now on display in the historical museum.



WRECK OF THE STEAMER "BALCINA."



WRECK OF THE STEAMER "BALFINA."

PS BALLINA

By Phil Bowman

Maritime Archaeology Society, NSW.

The Vessel

The PS *Ballina* was built in 1865 by Mitchell and Co. of Newcastle at Low Walker on Tyne for the Clarence and Richmond River Steam Navigation Co. Ltd. She was registered in London, England by J. Alexander (a possible nominee of Australian owners) - (Parsons, 1973) and registered in Sydney in February 1866 by the C & RRSN Co, her official number was ON 52707.

The PS *Ballina* was 179.4 ft long x 24.0 beam x 9.5 feet depth of hold and drew 6.5 feet when loaded. She was constructed with special regard to light draught and water (to cross river bars) and had a flat bottom with moderately fine ends. She was propelled by two engines giving a total of 80HP constructed on Rowan's Patent principle which allowed an extraordinary saving in the consumption of fuel. This allowed for a very large carrying capacity. There were also steam winches fitted on deck for the rapid discharge of cargo. She had a full poop in which was the principle saloon as well as the accommodation apartment for ladies and enclosed cabins on either side of the saloon which accommodated thirty six passengers. A second-class (steerage) cabin with accommodation for nineteen passengers was in the fore part of the vessel. The PS *Ballina* was 229 tons gross, 190 tons nett and was rigged as a two masted brig. At her sea trials she averaged 10 knots per hour.

The PS *Ballina* was brought out from England on a voyage lasting 126 days, arriving in Sydney on the 25th October 1865.

Colonial Career

The first sailing was advertised in the *Sydney Morning Herald* on the 31st November 1865, and was due to sail on the 2nd December 1865 direct for Grafton at 5 pm. Her return cargo consisted of 167 bags maize, 16 bags wheat, 15 bags potatoes, 76 bags oysters, 15 cases eggs, 18 hides, 5 bales bacon, 6 cases sundries, 4 coops fowls. We will see later that this was to be typical of all her cargoes. She carried 16 passengers, five of whom were housed in steerage.

The PS *Ballina*'s next advertised sailing was at the end of February 1866. The possible reason for such a delay between the first and second sailing is the boiler explosion the PS *Agnes Irving* suffered at Grafton on the 20th October 1865. The PS *Ballina* when built had two boilers and of course two funnels. The forward boiler and funnel were removed and replaced with a Galloway Donkey boiler for the steam winches. This boiler may have been fitted to the PS *Angus Irving* a theory awaiting access to that vessel's boilers which are now submerged in wreckage. At about this time the yards on the main mast of PS *Ballina* were also removed.

The PS *Ballina* continued to serve the C & RRSN Co. over the next thirteen years visiting most ports on the North Coast of N.S.W. at some time or other. During those thirteen years one major accident is recorded, the sinking of the barque *Sylphide* of 296 tons register which was en route from Portland Bay to Sydney in ballast. The collision and subsequent sinking of the barque *Sylphide* took place off Deewhy Head on the 16th June 1877. The Marine Board Office inquiry decided that the PS *Ballina* was in breach of the 15th Article of the Steering and Sailing Rules. The inquiry also condemned the practice on the PS *Ballina* of the look-out going below to help remove the ashes without first informing the officer of the watch.

During 1878 the PS *Ballina* had 41 sailings to the MacLeay River and Port Macquarie, and due to an accident did not sail at all during February 1878.

The most common cargo from the North Coast to Sydney were bags of maize, the largest shipment being 1790 bags and the smallest 76 bags, the average being about 1200 bags. On the average 20-30 hides were carried with some 50 odd pigs, the maximum being 186. Cases of eggs and coops of fowl being the next commonest cargo. Also carried were bags of oysters, bags of bacon, the odd bale of tobacco, casks of tallow, bags of potatoes and onions, bags of wheat, casks and kegs of wine, matts of sugar, bags of antimony, the odd horse and gig, mules, cedar and pine boards and on one occasion 1400 spokes, honey and bales of wool. During the first sailing in January 1879, 226 ounces of gold were brought to Sydney, the only time gold was mentioned.

During 1878-9 the greatest number of passengers in 1st Class was 28 and in 2nd Class (steerage) 19. No passenger or cargo list has been found yet for the sailings from Sydney.

The Wrecking of PS *Ballina*

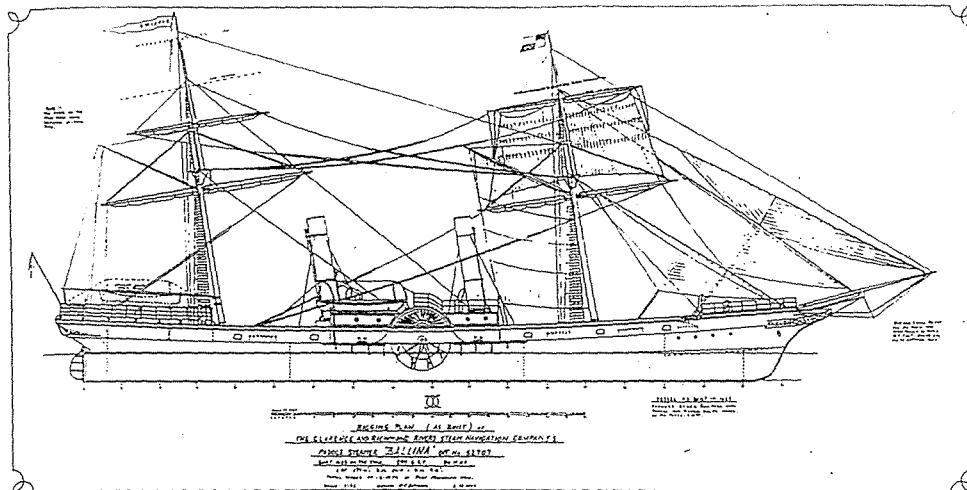
On the morning of February 13th 1879 the Port Macquarie pilot, Mr Kingsford, and Captain Bedford sounded the channel out over the Bar and expected there would be sufficient water. But at noon as Captain Bedford took the PS *Ballina* out past the last black buoy she took the ground and gradually set to the north and remained hard and fast. The passengers were got ashore and the pilot's new 6" hawser was secured to a rock on the south shore and the stern of the PS *Ballina*. The vessel was expected to float off on the evening high tide. At 9 pm the deck cargo was jettisoned but as the sea rose and broke over the ship it filled the engine room thus putting out the fires. By 2 am of the 14th February the Captain, crew and pilot had taken to the rigging to save their lives, and remained there until daylight when they managed to leave the vessel by boat. It was about this time that the PS *Ballina* broke her back some four feet (1200 mm) behind the boiler. By 5 pm

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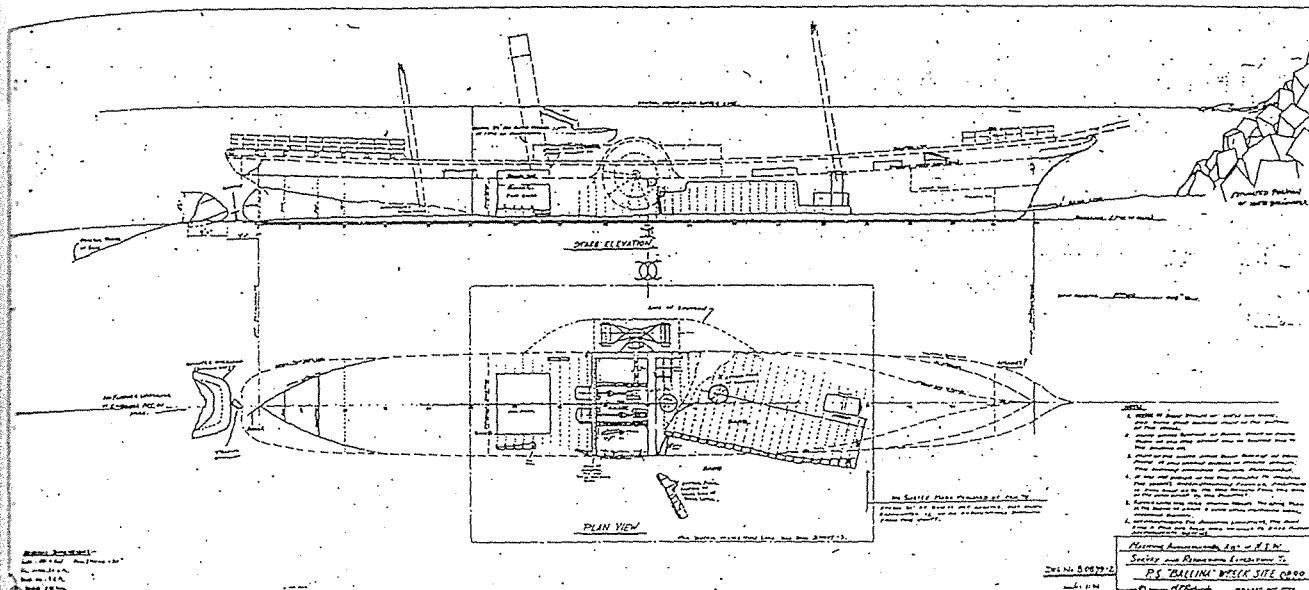
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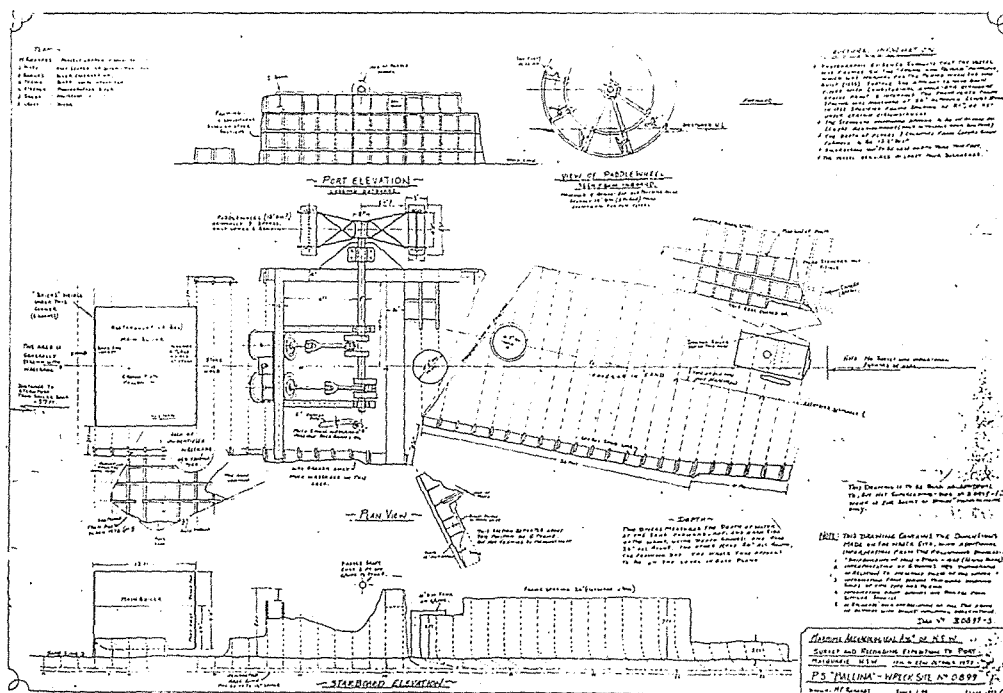
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PS Ballina as built in 1865



PS Ballina wreck site. Showing original position of vessel. (Drawn by: M. Richards)



PS Ballina structural remains at Engine Room. (Drawn by: M. Richards)

that afternoon the sponson-house was full of water and part of the wool cargo was coming ashore. The mails from the MacLeay River and Port Macquarie were lost. At that point nothing was done to salvage or sell the wreck which was partly insured at Metcalfe's Office for £6,500 (the greater part of this was reinsured with other offices). The cargo which was probably not insured consisted of maize, cedar boards and wool (of which some was recovered).

The Marine Board of N.S.W. held an inquiry on the loss of the *PS Ballina* and found that no evidence had been adduced upon which to found a charge of default against John Bedford, the Master.

After the wrecking of the *PS Ballina* she was marked on a chart of 1881 with a note - "top of boiler and starboard paddle wheel above water 4 feet at spring high tide".

After the southern training wall was built at Port Macquarie the wreck became a navigation hazard, so in January 1908 and later in 1910 Captain Baird and diver Reale blew up the wreck, and it is said that diver Reale reported "that none of the wreck was left". He was wrong.

The Rediscovery and Subsequent Actions

In June 1978 the N.S.W. Public Works Coastal Engineering Branch Divers were surveying the entrance to the Hastings River when their boat anchor became foul on the bottom and on diving to release it found to their amazement a wreck that shouldn't have been there, it was the *PS Ballina*. By the 14th July local divers who were concerned about losing brass objects from the wreck to looters had organized themselves to inspect the wreck and collect any objects of interest and to deposit them in the local Museum.

In May 1978 the Maritime Archaeological Association of N.S.W. (MAANSW) had come into being. The Committee (of which the author was a member) immediately started a campaign to get the Historic Shipwrecks Act 1976 declared in NSW. Using the discovery of the *PS Ballina* as a lever the N.S.W. Labor Government was pressured into declaring the Act, on 12th April 1979 at which time the *PS Ballina* was also declared historic. All other declarations in NSW to date have been done by the Federal Governments.

In October 1979 the MAANSW and local divers from Port Macquarie undertook a survey of the wreck from which Mike Richards produced a set of drawings.

During 1980 two surveys were undertaken by the MAANSW and local divers, with some iron objects being taken to Sydney for trial conservation.

In the absence of floods which normally scour out the wreck on an annual basis, by the end of 1980 the wreck had started to silt up and was almost completely covered in mid 1981.

In early 1982 the local Port Macquarie MAANSW Branch had all but ceased to exist and a new separate organization was set up, this went through various name changes and is now known as the Maritime Archaeology Society.

Under the auspices of this Society a submission was made to Federal Government for funds to initiate a survey in 1982 and this was subsequently approved. The grant for a photomosaic was put to use immediately in a trial run, at about the same time the Navy Reserve inspected the site to see if they would get involved in raising parts of the *PS Ballina*. The results of their survey were not given to the Society.

At this point the drought broke producing flooding and the subsequent constant dirty water in the Hastings River halted any more work on the photomosaic. During that time however, we continued our research and put forward several proposals in regards to relocating or recovering parts of the wreck.

During 1984 iron hull samples were taken and tested by Professor Hall at the University of Newcastle, the results were disheartening, with no substantial metal in any of the samples. In other words the *PS Ballina*'s hull is to stay where she is. Just before we got the results a Senator visiting Port Macquarie announced our proposals to the public, this caused all sorts of embarrassment not the least was to have the N.S.W. Division of Inspection Services tell us that we were not to "salvage" (the DIS's definition) the *PS Ballina* as we did not have divers with Class 2 permits and that the work would be notifiable (i.e. large fees) and we could not use SCUBA but only hookah (which would be impractical in the current at the river mouth). The Professional Divers Association of Australia (Divers' Union) also let us know that only their members could work on the "salvage".

Despite this the wreck was re-inspected towards the end of 1984 when we found that 90% of all the sand had moved off the wreck - subsequently sports divers visiting the wreck have been illegally removing artefacts and fittings.

Future Plans

The 25% of the wreck which was photographed in 1982 has been assembled as a mosaic and this is about to be drawn up at a scale of 1:10.

A photo-tower is being constructed to ease the problems of photography in the 3 knot plus current and it is proposed (weather permitting) to complete the mosaic this year. The research being carried out into the vessel's history should also be completed and compiled this year.

Any decision regarding recovery and conservation will have to await results of the *SS Xantho* project, proposals now with the Federal Government and approaches to the N.S.W. Government.

References

- Parsons, R.H., (1973)
Paddle Steamers of Australasia.
 R. Parsons Box 89 Lobethal S.A. 5241
 ISBN 0 9599387 6 1.
 Richards, M., (1980)
North Coast Run.
 Turton & Armstrong Sydney
 ISBN 0 908031 02 5
 N.S.W. State Archives
 Proceedings and Report of Inquiry of the Loss of the PS *Ballina* 1879
 Catalogue Number unknown.
 Letter from Pilot Kingsford to Captain Hixson 1879
 Catalogue Number unknown
 Mitchell Library Sydney, (1877)
Sydney Morning Herald 1865 to 1879
New South Wales Agriculturist And Grazier (1877)
 Thame Geoff, (1979)
 The Wreck of the PS *Ballina*
 AMAA Newsletter No. 1

FROM:

Iron ships & steam shipwrecks: papers from the
 first Australian seminar on the management
 of iron vessels & steam shipwrecks
 by M. McCarthy ed.

Perth, Western Australian Museum [1988] p.134-7
 07030915212.

*Iron ships & steam shipwrecks: papers from the first
 Australian seminar on the management of iron vessels
 & steam shipwrecks M McCarthy (ed) Perth, Western
 Australian Museum, [1988] ISBN 0730915212 p134-137;
 illus.*

The paddle steamer *Ballina* was constructed with a flat
 bottom to facilitate crossing river bars. She served the
 Clarence and Richmond River Steam Navigation Co from
 1865 to 1879, visiting most North Coast New South Wales
 ports. In Feb 1879 she struck the bar at the mouth of the
 Hastings River, was flooded by rising seas and broke up.
 Becoming a navigational hazard, the wreck was reportedly
 blown up and destroyed in 1910, but was rediscovered
 by divers in 1978, and declared historic in 1979. Brief
 accounts of surveys 1979-84 are given during which 25%
 of the wreck was photographed and samples of iron hull
 removed. Future conservation plans depend on the results
 of the *Xantho* project. (BW) [922415]