

Welsh Wreck Web Research Project
(North Cardigan Bay)
On-line research into the wreck of the:
AMETHYST

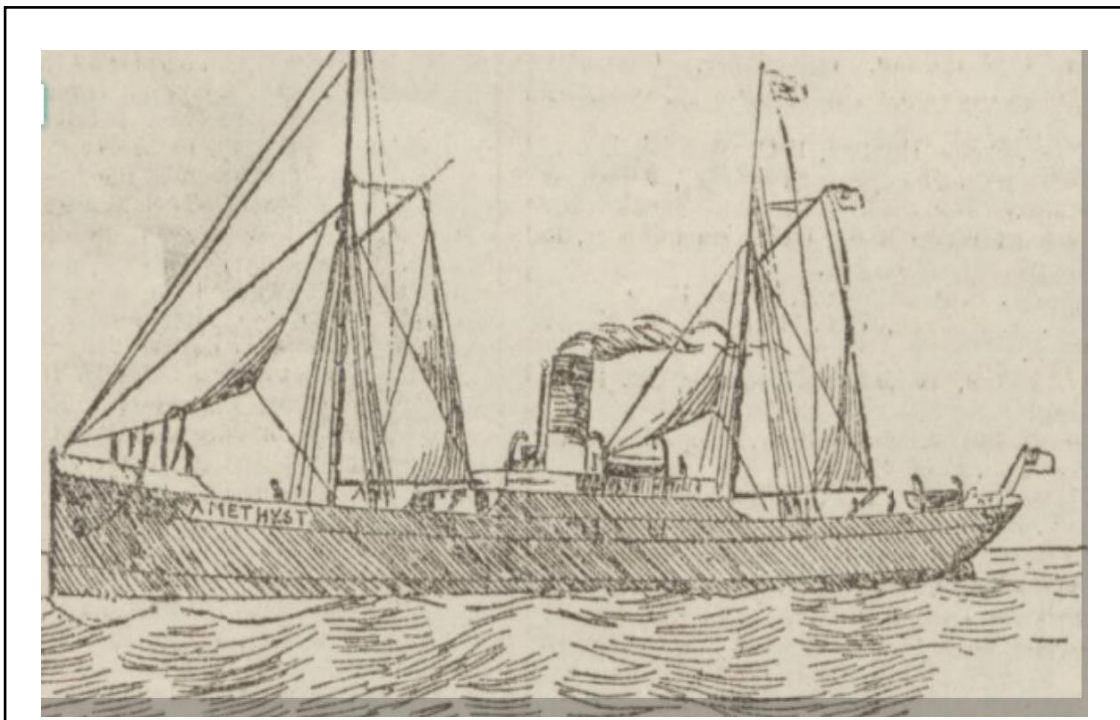


Photo from the "Dundee Advertiser" newspaper dated 23 March 1897

Report compiled by
Lynn Jones

Report Title:

**Welsh Wreck Web Research Project
(North Cardigan Bay)
On-line research into the wreck of the:
*Amethyst***

Compiled by:

Lynn Jones
18 City View Apts.
Chancery Street
Bristol
BS5 0AA
lyndianajones@hotmail.com
07713465864

On behalf of:

Nautical Archaeology Society
Fort Cumberland
Fort Cumberland Road
Portsmouth
PO4 9LD
Tel: +44 (0)23 9281 8419
E-mail: nas@nauticalarchaeologysociety.org
Web Site: www.nauticalarchaeologysociety.org

Managed by:

Malvern Archaeological Diving Unit
17 Hornyold Road
Malvern
Worcestershire
WR14 1QQ
Tel: +44 (0)1684 574774
E-mail: MADUdiving@gmail.com
Web Site: www.madu.org.uk

Date:

7 November 2020

Report Ref: 321

1.0 Abstract

The Malvern Archaeological Diving Unit (MADU) currently have a database of 453 shipwrecks in the north end of Cardigan Bay. These wrecks date from 1590 to 1993, however very few have been researched in any depth. With the current pandemic affecting all field activities and restrictions on movement around the UK, online research is a safe and accessible way to conduct research into these forgotten wrecks. This report describes the historical aspect of the incident.

2.0 Index

2.1 Table of Contents	Page No.
1.0 Abstract -----	3
2.0 Index -----	4
2.1 Table of Contents	4
2.2 List of Tables	4
2.3 List of Pictures	5
2.4 Contributors	5
2.5 Abbreviations	5
3.0 Introduction -----	6
4.0 Background -----	7
5.0 Research Methodology -----	10
6.0 Results -----	11
7.0 Analysis -----	18
8.0 Conclusions & Recommendations -----	19
9.0 References -----	20

2.2 List of Tables	Page No.
Table 1. Description of Vessel and Incident	8
Table 2. First-hand account of the incident	12
Table 3. Newspaper reports	14

2.3 List of Pictures

Page No.

Front Cover: Sketch of the Amethyst	1
Fig.1 Admiralty chart 1971-Cardigan Bay northern part	6
Fig.2 Cardigan Bay Northern part: Marine chart	7
Fig.3 Map showing St George's channel	8
Fig.4 Map showing route from Liverpool to Bardsey Island	9
Fig. 5 Bardsey Island lighthouse guarding St George's channel	9
Fig.6 Wreck locations in the Merioneth and Caernarvnshire sections of Cardigan Bay	20

2.4 Contributors

MADU
Chris Holden

2.5 Abbreviations

A list of any abbreviations used in this report:

GAT	Gwynedd Archaeology Trust
IJNA	International Journal of Nautical Archaeology
MADU	Malvern Archaeological Diving Unit
NAS	Nautical Archaeology Society
NPRN	National Primary Resource Number
RCAHMW	Royal Commission on the Ancient & Historical Monuments of Wales
URL	Uniform Resource Locator

3.0 Introduction

The author of this report has been a diver since 2000 and has dived all over the world, extensively around the UK and regularly around the Welsh coast. She has been a member of NAS since that time and her particular interest is in shipbuilding and maritime archaeology.

I became aware of this wreck through the Welsh Wreck Research Project and selected it due to the fact it was in collision with another similar ship during thick fog. I was interested to investigate how this could have happened and what happened to the wreck after it sank. Also to see if anyone had dived it since the sinking and carried out any survey or recording of the wreckage. I wanted to find out what historical information is available relating to the wreck.

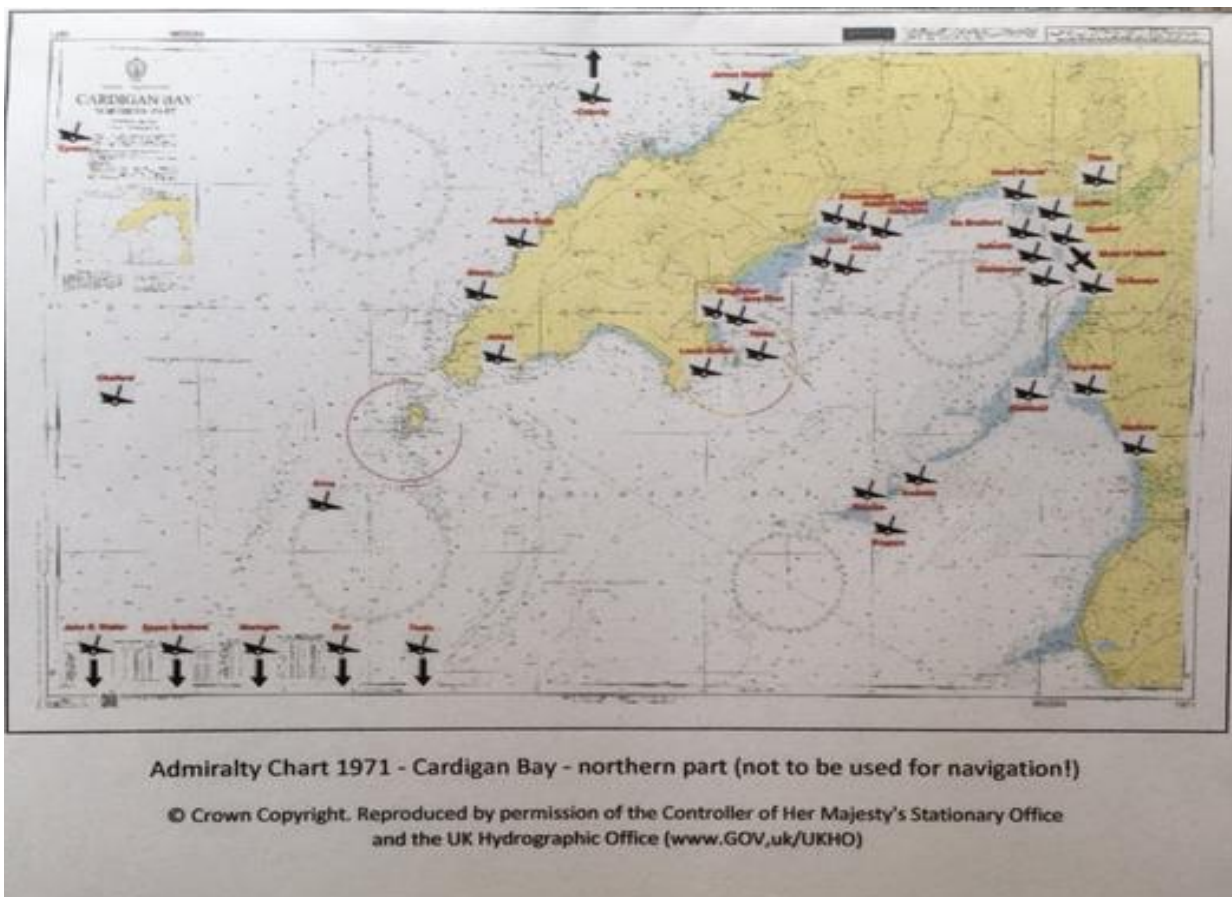


Fig. 1

3.0 Background



Fig.2 North Cardigan Bay showing Bardsey Island.

NPRN 271535

Map Reference SG82SW

Grid Reference SG8342120100

Unitary (Local) Authority Maritime

Old County Maritime

Community Maritime

Type of Site WRECK

Broad Class MARITIME

Period Post Medieval

Site Description- The wreck is reported to be intact, lying with its keel orientated 909/270 degrees and to have a height of 4m above the general level of the seabed.

Site Location - Caernarfonshire, Llyn Peninsula, Bardsey Island. The longitude is 5.12.30W. latitude is 52.44N

Event and Historical Information:

The AMETHYST was an iron-hulled steamship built by Gourlay Bros & Co, Dundee, in 1879. Technical and configuration specifications are given as 934gt, 601nt; 218ft length x 29ft breadth x 15.9ft depth; 1 deck (weather deck), 5 bulkheads, quarterdeck 66ft, boat deck 83ft. The vessel was built for the Dundee Gem Steam Shipping Company Ltd. The company was created by P M Duncan who began as a clerk for John Brown, coal merchant and shipowner, in Dundee in the 1840s. In 1850, Duncan became his own shipping agent with an office at 13 Dock Street and proceeded to buy a small fleet of sailing ships. He acquired his first steamship, the HARVEST QUEEN, in 1861, and was joined by his son, James, in the enterprise. By 1882, the company's fleet of steamships were not only busily engaged in flax trade between the Baltic ports and Dundee, but were also undertaking trading voyages to Spain, Greece and the Middle East. The fleet comprised AMETHYST, BERYL, DIAMOND, GARNET, JASPER, OPAL, RUBY and SAPPHIRE. At time of loss on 21 March 1897, the AMETHYST was on passage from Liverpool to Barcelona with a cargo of seed under the command of master A S Edwards. It was in collision with the steamship ANNBIS and subsequently foundered 15 miles west of Bardsey. The wreck was located by the salvage company, Rizdon Beazley, in 1976. At which time, the builder's plate marked 'GOURLAY BROTHERS & CO, ENGINEERS AND SHIPBUILDERS, DUNDEE 1879' was recovered, confirming the wreck's identity. The wreck was relocated by HMS FAWN in May 1981.

Sources include:

Board of Trade Wreck Return 1897 Appendix C Table 1 pg153 (591)

Larn and Larn Shipwreck Database 2002

Lloyds Casualty Return 1897 pg6 (d)

Lloyds Register of British and Foreign Shipping, 1 July 1896 - 30 June 1897, number 545 in A

UK Hydrographic Office Wrecks and Obstructions Database. © Crown Copyright and database rights. Reproduced by permission of the Controller of Her Majesty's Stationery Office and the UK Hydrographic Office (www.ukho.gov.uk)



Fig.3

Fig.4 Map showing route from Liverpool to Bardsey Island



Fig.5 Bardsey Island Lighthouse

Bardsey Lighthouse stands on the south end of the island and guides vessels passing through St George's Channel and the Irish Sea.

5.0 Research Methodology

Equipment Used:

HP Laptop with Windows 10
High speed broadband
Microsoft Office
Google Search engine
Admiralty Chart- Cardigan Bay Northern part 1984 edition

1. I have a good library of reference books on maritime history including the classic books on shipwrecks of the Welsh coast. I started my research from here.
2. I checked in the Lloyds Register database to see if there is an entry to obtain building date and dimensions. The master's name is given which is useful for correlating the vessel details in the register with newspaper and other accounts as there is more than one ship with the same name.
3. Check for entry in Larn and Larn shipwreck Index Vol 5 to see if the wreck is included.
4. Online check of COFLEIN website to see if this ship appears.
5. A general search with GOOGLE ensuing the type of ship and date of sinking are listed to ensure the correct ship is identified.
6. The National Library of Wales newspaper collection of Welsh newspapers 1800-1919 is invaluable <https://newspapers.library.wales/> (free access). Tried using the name of the ship and local community name with the name of the ship and date of incident. Tried searching for information on the ship she collided with – the Anubis. Also tried different spellings of Anubis as it is shown differently in several newspaper reports eg Annubis, Anibis, Annbis.
7. The British Newspaper Archive online is a valuable source of information. (Subscription required) <https://www.britishnewspapersarchive.co.uk/>
8. Many newspapers had a section on shipping movements and intelligence. In the search field always enter the ship's name followed by the master's name. Unfortunately the cargo carried is not often mentioned.
9. Wrecksite.eu is another good website. This site sometimes has the Board of Trade Inquiry Report.
10. Lloyd's Register Casualty returns 1890-2000 <https://hec.lrfoundation.org.uk/archive-library/casualty-returns/>
11. Crewlists official ship number is 8757

6.0 Results

Vessel	Name/s	Amethyst	
	Type	Steamship	
Built	Date	1879	
		Launched May 1879	
	Builder	Gourlay Brothers & co	
		Dundee	
Construction	Materials	Iron	
	Decks	1x deck/w.deck/q.deck 66ft/b.deck 83ft/classed at Lloyds 100A1	
	Bulkheads	5	
Propulsion	Type	Engine	
	Details	Steam	
Engine	Details	98HP	
		Screw, 2 cylinder comp	
	Boilers		
Drive	Type		
	Number		
Dimensions	Length	218ft	ins
	Beam	29ft	ins
	Draught	15ft	9 ins
Tonnage	Gross	934	
	Net	601	
Owner	First	Dundee Gem Steam Shipping Co.	
		Dundee	
	Last	Same	
	Others		
Registry	Port	Dundee	
	Flag	Scotland	
	Number		
History	Routes	From Liverpool to Barcelona and routes between Spain, Greece & Middle East	
	Cargo	Flax, Seed	
Final Voyage	From	Liverpool	
	To	Barcelona	
	Captain	A.S. Edwards	
	Crew	16	
	Passengers	0	
	Cargo	Seed	
Wrecking	Date	21 March 1897	
	Location	15 miles west of Bardsey	
	Cause	Foundered in wind conditions WSW force 2 following collision with Liverpool registered Anubis	
	Loss of life	None, crew picked up by Anubis & taken to Liverpool	
	Outcome	Located by salvage company, Rizdon Beazley, in 1976	

"Shipwrecks around Rhiw Aberdaron & Bardsey" by Chris Holden

21 March 1897

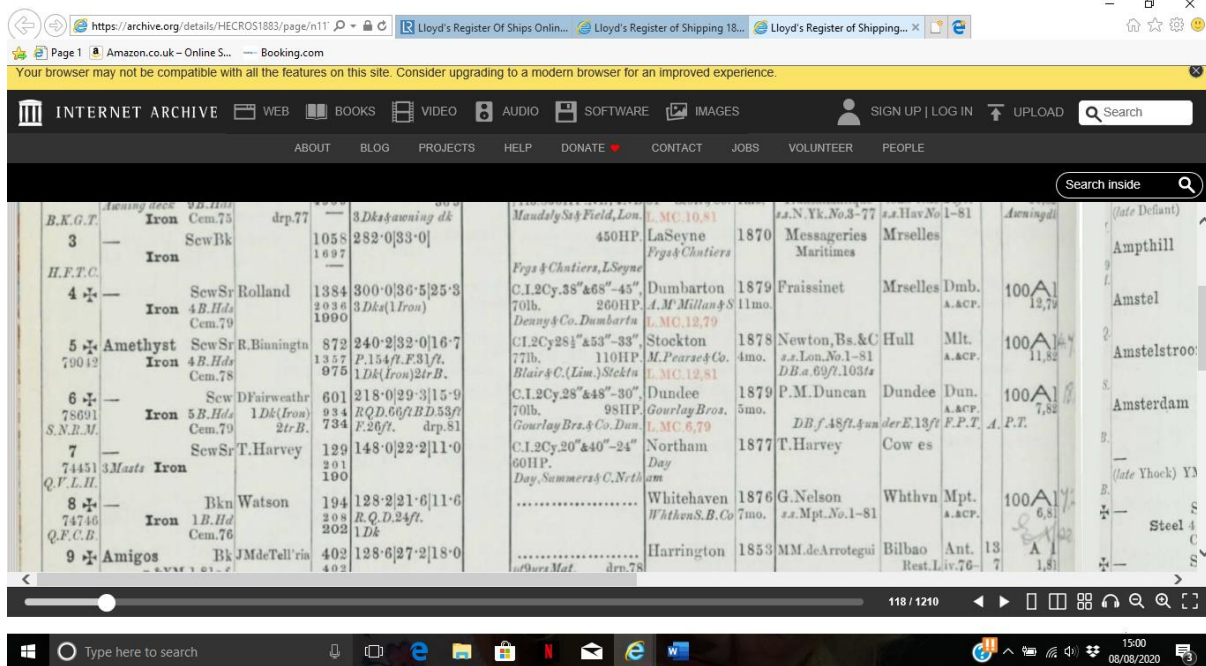
Two steamers the "Amethyst" and the "Anubis" collided off Bardsey. The Dublin registered 'Amethyst' sank but the crew were rescued by the other vessel and taken to Liverpool.

https://www.rhiw.com/y_mor/shipwrecks/shipwrecks_II.htm

Carnarvon and Denbigh Herald 26th March 1897

Shipping Casualties. The Moss Line steamer 'Anubis' which arrived at Liverpool on Monday from Alexandria, reported having been in collision on Sunday with the Dundee steamer 'Amethyst' for Barcelona, off Bardsey Island. The weather was very thick at the time. The 'Amethyst' was struck by the stem of the 'Anubis' which sank shortly afterwards. The crew managed to get on board the 'Anubis', though they have lost all their effects. They were brought to Liverpool. The 'Anubis' has her stem twisted.

Lloyds register 1883



Dundee Advertiser, Tuesday March 23, 1897.

LOSS OF DUNDEE STEAMER. A COLLISION IN A FOG.SUNK OFF HOLYHEAD.GRAPHIC PERSONAL NARRATIVE. The Amethyst, of the Gem Line, belonging to Messrs PM Duncan & son, Dundee, was, early on Sunday morning in collision with the Harrison Liner Annbis. The Amethyst (Captain Edwards) left Liverpool at eleven o'clock Saturday and all proceeded well till she was at a point near Bardsey Island. The weather was very foggy and good look-out was kept at the time. The foghorn being regularly sounded. Nothing was known of the Harrison Liner until the amethyst was struck a terrible blow the starboard side. A big hole was knocked in her, and the crew clambered to the Anubis. All were fortunately saved. The Annbis, which was inward bound from Alexandria, was also damaged. She arrived in the Mersey yesterday with the crew of the Amethyst. Mr Pearson and Mr alexander Mair, both of whom belong to Dundee, arrived at the Sailor's Home during the afternoon, where they were kindly entertained and provided for by the Shipwrecked Mariner's Society. Several other members who do

not belong to Dundee also arrived at the Sailor's Home. The second mate said that he did not see much of the collision owing to his watch being down below. Mr Mair however gave the following graphic account of the disaster. He said the collision occurred about 4 O'clock in the morning. *I was in bed at the time and was just dozing when I heard a sudden terrific crash. I knew what it all meant .I jumped out of my bunk and dressed myself as quickly as I could, which I need not say, did not take very long to do. I then made a rush for the deck and immediately I got there I saw a large steamer right alongside. It was very foggy and dark but there she was and no mistake, towering above us through the gloom. She was on the starboard side, where she had struck us, knocking a big hole in our bows. At this time the men forward were rushing aft from their forward position to see what was the matter. It was a lively and exciting scene, and fearing the worst, everyone tried to make good his escape over the bow of the Anubis. Though then our ship was going down! Though we did not exactly understand at the time what damage she had received. The Anubis was still hugging the Amethyst and we all got safely on board, waited for some time to find out whether the Amethyst was really sinking, and the officers on board the Anubis gave every assistance they could to ascertain the damage.*

As the Amethyst appeared after a lapse of some time not to be in immediate danger of sinking, we left the Anubis and returned on board the Amethyst. Meantime a hawser was attached to the bows of the Amethyst so the Anubis could lend assistance in towing our ship if she still kept afloat. Captain Edwards of the Amethyst, was very active and cool in superintending the operation. We had not, however, been long on the Amethyst before we saw that she was shaping and going to settle down. Then again we clambered onboard the Anubis where we remained. The Captain was the last to leave the ship. The Amethyst did not go down straight away and the Anubis started towing her with the object of getting to Holyhead, and proceeded considerable distance and the Amethyst kept her head fairly well up, though it was evident she was fast filling with water. An officer of the Anubis stood by with the hawser axe in hand by the rope in case the Amethyst should suddenly settle down. It was an exciting scene, especially for the passengers who were on board the Anubis. After going a good many knots in this manner a cry was raised that the Amethyst was going down and this proved only too true. The officer of the Anubis immediately dealt the hawser some terrific blows, shearing it right through and the Amethyst immediately the rope was cut, went down by the head. This was about 9.50am and was in full view of all aboard. Some who were down below having breakfast came rushing to see the last of the ship. She went down like a seabird taking a dive. The crew all told numbered 16. All those who were forward lost everything belonging to them, but those who were aft were able to save some portion of their effects. One of the passengers aboard the Anubis brought out a camera, and made endeavour to take a snapshot of the sinking vessel just the moment it was disappearing, but was not successful. We came back to Liverpool with the Anubis and myself and Peatson are proceeding shortly to Dundee. Captain Edwards has gone to London and with him have also gone the look-out, the man at the wheel, the chief engineer and one or two more.

UNSUCCESSFUL ATTEMPT TOW:VESSEL.CREW RESCUED AND LANDED LIVERPOOL.

Saturday eleven O'clock and little thought then that should ourselves here now. The Amethyst which belonged to the Dundee Gem Line, was built by Messrs Gourlay Brothers & Co. Dundee, and was launched in May 1879. Her length was 218 feet, breadth 29 feet, and depth 15 feet 9 inches. She was 601 tons net register, and had engines of 98 horse power. It may be added that the Amethyst was fully insured.

Some examples of inaccurate reporting:

Globe - Monday 22 March 1897

Image © THE BRITISH LIBRARY BOARD. ALL RIGHTS RESERVED.

COLLISION OFF BARDSEY ISLAND

The steamer Anubis from Alexandria for Liverpool and the steamer Amethyst of Dundee from Barcelona collided yesterday in a dense fog off Bardsey Island on the Caernarvonshire coast. The Anubis sank & the crew were rescued and landed at Liverpool today.

North Devon Gazette - Tuesday 30 March 1897

Image © THE BRITISH LIBRARY BOARD. ALL RIGHTS RESERVED

The Moss Line steamer Anubis from Alexandria for Liverpool and the steamer Amethyst, of Dundee for Barcelona collided on Sunday in dense fog off Bardsey Island on the Caernarvonshire coast. The Anubis sank. The crew were rescued and landed at Liverpool today.

WRECK OFF HOLYHEAD

... were all well. The Moss Line steamer **Anubis**. from Alexandria for Liverpool, and the steamer **Amethyst**, of Dundee for Barcelona, collided Sunday in a dense fog off **Bardsey Island**, on the Carnarvonshire coast. The **Anubis** sank. The crew were ...

Published: Saturday 27 March 1897
Newspaper: [Knaresborough Post](#)
County: Yorkshire, England

STEAMER SUNK BY COLLISION

... STEAMER SUNK BY **COLLISION**. The Moss Line steamer **Anubis**, which arrived Liverpool to-day, from Alexandria, reported having been in **collision** yesterday with the Dundee steamer **Amethyst**, for Barcelona, off **Bardsey** ...

Published: Monday 22 March 1897
Newspaper: [Manchester Evening News](#)
County: Lancashire, England
none

Lloyd's List - Thursday 08 April 1897

Image © THE BRITISH LIBRARY BOARD. ALL RIGHTS RESERVED.

Collision in Fog.—Improper Navigation.—The Amethyst (s) v. the Anubis (s).

(Before Mr. Justice Barnes and Trinity Masters, April 6.)

This action arose out of a collision in the St. George's Channel between the steamships Amethyst and Anubis. According to the statement of claim, the Amethyst (Alex. S. Edwards, master), was a steamship belonging to the Gem Line Steamship Company, of Dundee, of 601 tone net and 934 tons gross register, with engines of 98-horse power nominal, and at the time in question was about 15 miles west of Bardsey Island, in the course of a voyage from Liverpool to Barcelona, with a cargo of seed. Shortly before 3:40 am. on March 21 last, the Amethyst was on a course of N.N W. magnetic, and was making about 2 knots an hour, with her engines working at dead slow. There was a light breeze from about W.S.W., the weather was a thick fog, and the tide was ebb, running about a knot or a knot and a half an hour. The ship's whistle was being duly sounded at proper intervals. In these circumstances those on board the Amethyst heard on the starboard bow the whistle of a steamship, which proved to be the Anubis, apparently a long way off, and the whistle of the Amethyst was sounded a long blast in reply. Shortly afterwards another blast was heard from the Anubis, still at a considerable distance and the whistle of the Amethyst was again sounded a long blast in reply, the signal being repeated after a short interval and the helm put to starboard, in order to give the Anubis more room. Soon afterwards the masthead and red lights of the Anubis came into sight about two ship's lengths from the Amethyst and bearing about four points on her starboard bow. Thereupon the engines of the latter were stopped and put full speed astern, and as the Anubis sounded her whistle one short blast to indicate that she was under port helm, two short blasts were sounded on the whistle of the Amethyst, and her helm was kept a-starboard, it being impossible to avoid a collision by porting. The Anubis, however, coming on at great speed almost immediately afterwards with her stem struck the starboard bow of the Amethyst, at the break of the forecastle, such a violent blow that the latter vessel afterwards sank with everything on board her, notwithstanding that the Anubis attempted to tow her into safety. The plaintiffs alleged that the Anubis was proceeding at an immoderate rate of speed, that her engines were not in due time eased, stopped, or reversed, and that her helm was improperly ported. The Anubis (Charles O'Hagan master), according to the defence and counter-claim, is a screw steamship of 1,523 tons register, belonging to the port of Liverpool, and is fitted with triple-expansion engines of 1,200-horse power indicated. At the time in question she was on a voyage from Alexandria to Liverpool, via Southampton, with a general cargo and a few passengers. She called at Southampton, and left that port for Liverpool on March 19, and on the afternoon of the 20th the weather set in foggy, and continued so during the following night. The Anubis was therefore navigated with great caution, her engines going ahead sometimes slow and at other times at half speed. At 340 a.m. on March 21, when she was about 25 miles S.W. of

Bardsey Island, the weather was still foggy, with a light breeze from about W.8.W., and the ship's engines were going at half speed, having been altered from slow a few minutes previously. The Anubis was making about five knots through the water, on her course of N.E. N. magnetic. In these circumstances those on board perceived a steamer's masthead light about a point on the port bow, some 150 yards off. Her green light was seen very shortly afterwards, and two short blasts were heard from her whistle. Immediately upon observing her the engines of the Anubis were reversed and put full speed astern, her helm was hard a-ported, and three short blasts were blown on the whistle. The other steamer, however, which proved to be the Amethyst, came on at considerable speed, and under a starboard helm, and with the bluff of her starboard bow struck the port bow of the Anubis near the stem, doing her a great deal of damage. The defendants alleged that the Amethyst neglected to sound her whistle, and that she improperly came on at an excessive rate of speed, and under a starboard helm. Sir Walter Phillimore and Mr. Butler Aspinall appeared for the plaintiffs; Mr. Aspinall, Q.C., and Mr. T. G. Carver for the defendants. The COURT pronounced both vessels to blame. Mr. Justice in giving judgment, said: After hearing the evidence in this case I bare very little doubt as to what ought to be the decision. My opinion is, and the Elder Brethren are entirely in accordance with it, that both these vessels are to blame for this collision. With regard to the plaintiffs' ship, it is admitted that her helm was starboarded before the Anubis was seen, and I think it is quite clear, and this is the view taken by the Elder Brethren, that the indications which were given before this vessel starboarded were not in the least indications which were sufficient to justify her in altering her helm at that time. It is all very well to say that whistles were heard on the starboard bow, but whistles in a fog cannot be located with any certainty. Case after case in this court shows that unless the indications are clear as to what is passing on one side or the other, a man is not justified in altering his helm, and he is not entitled to do it because it may produce danger, exactly as it did in this case. Probably if the helm had never been altered at all—in fact, almost certainly, I think—there would have been no collision. I believe those whistles were nearly ahead, or possibly, if anything, on the port bow. Experience in this court shows that in case after case it is absolutely impossible for those in charge of a ship to rely with certainty, in a fog, as to where the whistles are, unless they are heard at a long distance. The proper course would have been to have stopped, certainly not to starboard the helm and put herself into collision with this other ship. With regard to the defendants' vessel, according to the case presented in the pleadings, nothing was seen or heard of the Amethyst until she was 150 yards or thereabouts from the Anubis, and a little on the port bow of that vessel, but when the evidence comes to be given it seems perfectly clear that upon the evidence of the officer of the watch and the evidence of the look-out man, the whistles of the Amethyst, which her witnesses say were being sounded, were in fact heard, drawing nearer on the port bow, and a very little on the port bow, of the Anubis. That WAS obviously a position of considerable danger. First one whistle, according to the look-out man, and then another. and I think he said

he heard it two or three times. The Anubis ought to have stopped her engines and slackened her speed until she was certain where this other ship was. I have no doubt in this case that that was the proper course to have taken, but instead of this, according to the evidence, she continued. The statement of the witnesses end in the logbook of the Anubis is that her engines were set half-speed ahead four or five minutes before the collision took place. I am of opinion that the Anubis was to blame for not paying attention to those whistles, and for not stopping and slackening her speed for them; and further, that by setting her engines ahead in that state of the weather she was going too fast at the time this collision took place. That is the opinion of the Elder Brethren, and upon those two grounds she must be held to blame.

I think that the evidence of the damage which was caused to the Amethyst, by the Anubis penetrating, we are told, some 9 or 10 feet into the Amethyst, after the Anubis had been reversing her engines, shows she had a speed which was improper under the circumstances. It is stated at half speed she made 6 knots. If they couldn't see further than they say they could, upon this occasion it is too fast. In my opinion both these vessels must be held to blame.

7.0 Analysis

The newspaper reports recording the incident did vary in some key aspects, notably which of the two vessels actually sank. There were also errors in the reporting of which route they were taking at the time. It was also necessary to search for more than one spelling of the name- Anubis.

It would seem that some reporters merely copied the text they had read in a different newspaper without checking the facts first. The most accurate details of the incident appear to be in the report of the court case, which was investigating who was to blame. The resulting conclusion offered by Mr. Justice Barnes and Trinity Masters, April 6 would appear to be correct in that both vessels were to blame for the collision.

8.0 Conclusions & Recommendations

1. The majority of this research has been carried out online. Much of the information is from newspaper archives which are an excellent source. However, one must be aware that some of the reported details may be inaccurate and one needs to cross-reference them to ensure the facts are certified by more than one source.
2. The announcements that are reproduced from Lloyd's List or official Lloyd's agents are usually accurate but the journalists are not mariners and sometime elaborate on eye witness accounts and are sometimes in flowery language or in a sensational style.
3. The conflicting newspaper reports and often incorrect spelling of Anubis made it more difficult to find all relevant information.
4. The approximate position of the wreck site has been absolutely confirmed in 1981 by HMS Fawn. I have been able to approximate the depth of the wreck at 70-80 metres and it is reported as sitting almost intact and upright 4 metres above the seabed. It is unlikely this wreck has been dived due to the depth.
5. The wreck does not appear to have been visited since the salvage work was carried out in 1976.
6. It is worth noting that this wreck does not appear on the wreck locations map in Fig.6
7. I have spent approximately 32 hours researching this incident, most of which was carried out online.

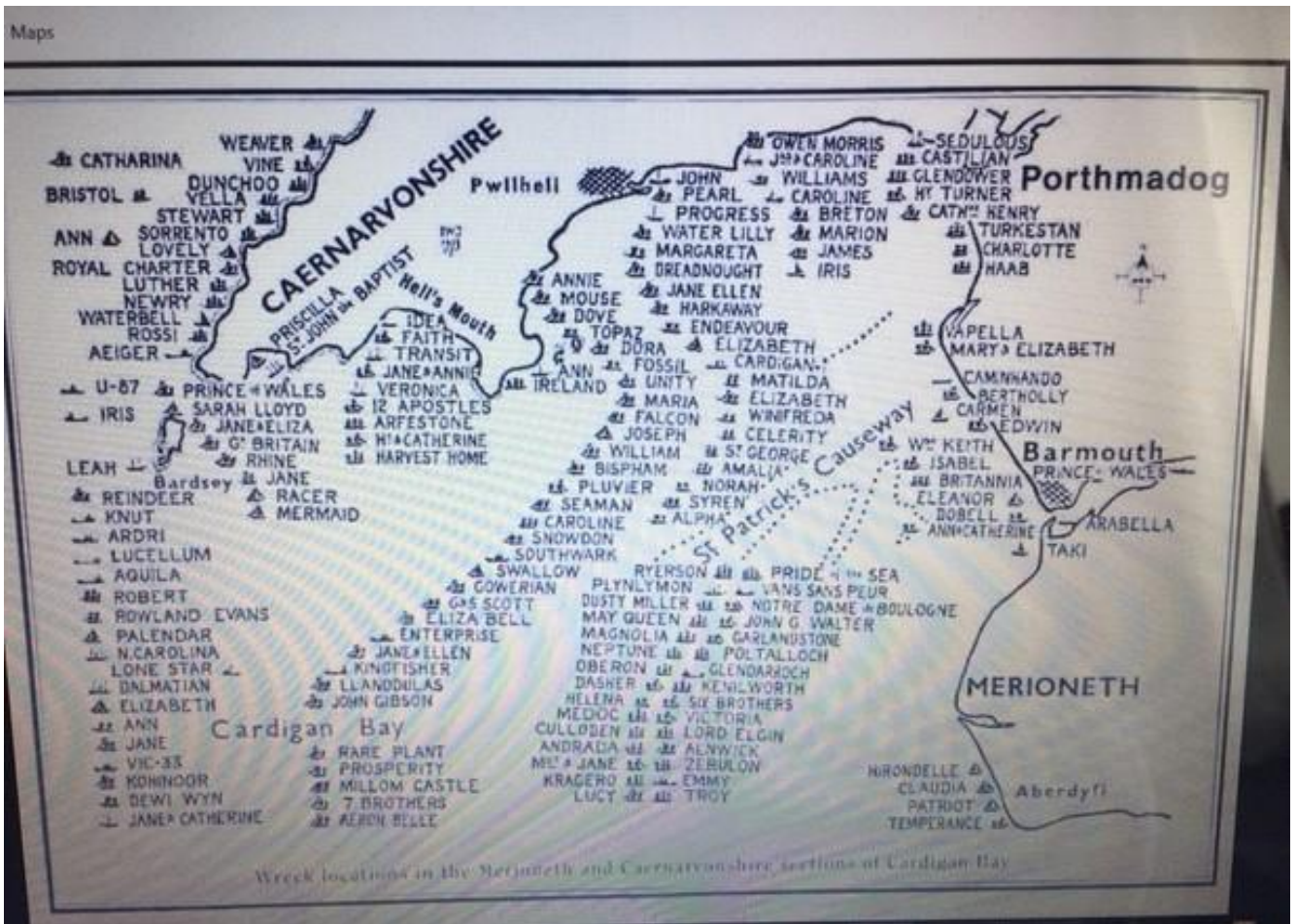


Fig.6 Wreck locations in the Merioneth and Caernarvonshire sections of Cardigan Bay

9.0 References

Sources include:

WWW resources:

<http://www.nationalarchives.gov.uk/nra/searches/subjectView.asp?ID=B16168>

<http://photopolis.dundee.gov.uk/wc0144.htm>

<http://www.dmcsoft.com/tamh/history.php?tamhid=419>

Maritime Officer, RCAHMW, May 2011.

Lloyd's Register 1894-1899 <https://archive.org/details/@lrfhec>

Wreck and Rescue on the Coast of Wales by Henry Parry (1969)

Shipwrecks of North Wales by Ivor Wynne Jones (4th edition 2001)

RCAHMW Coflein <https://coflein.gov.uk>

Wrecksite website <https://www.wrecksite.eu/wrecksite.aspx>

National Library of Wales Welsh newspapers online <https://newspapers.library.wales/>

The British Newspaper Archive (online) <https://www.britishnewspaperarchive.co.uk/>

Lloyd's Casualty Returns 1890-2000 <https://hec.lrfoundation.org.uk/archive-library/casualty-returns/>

Larn & Larn Shipwreck Index of the British Isles - Volume 5 'Wales & the West Coast'
Lloyd's Register of Shipping. 2000

Larn & Larn Shipwrecks of Great Britain & Ireland (David & Charles) 1981

www.maritimearchives.co.uk/

www.nmm.ac.uk/

www.crewlist.org.uk/

www.navionics.com