

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

Section number _____ Page _____

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 01000532

Date Listed: 05/31/01

SS Copenhagen (shipwreck)
Property Name

Broward
County

FL
State

N/A
Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

Erika Martin Seibert

Signature of the Keeper

5/31/01
Date of Action

=====
Amended Items in Nomination:

- *The nomination is amended to remove Criterion A.
- *This amendment was discussed with the Deputy State Historic Preservation Officer, Ms. Barbara Mattick on 5/31/01.

DISTRIBUTION:
National Register property file
Nominating Authority (without nomination attachment)

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

532

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name SS Copenhagen

other names/site number SS Copenhagen State Underwater Archaeological Preserve/BD2567

2. Location

street & number Pompano Drop-Off south of Hillsboro Inlet n/a not for publication

city or town Pompano Beach vicinity

state FLORIDA code FL county Broward code 011 zip code n/a

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Jane Snyder Matthews 4/10/2001
Signature of certifying official/Title Date

Florida State Historic Preservation Officer, Division of Historical Resources
State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

- entered in the National Register See continuation sheet
- determined eligible for the National Register See continuation sheet.
- determined not eligible for the National Register See continuation sheet.
- removed from the National Register.
- other, (explain) _____

Signature of the Keeper

Date of Action

Erika Marm Seibert

5/31/01

5. Classification

Ownership of Property
(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

Category of Property
(Check only one box)

- buildings
- district
- site
- structure
- object

Number of Resources within Property

(Do not include any previously listed resources in the count)

Contributing	Noncontributing	
0	0	buildings
1	0	sites
0	0	structures
0	3	objects
1	3	total

Name of related multiple property listings

(Enter "N/A" if property is not part of a multiple property listing.)

n/a

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions

(Enter categories from instructions)

Transportation: Water-related: ship

Current Functions

(Enter categories from instructions)

Transportation: Water-related (shipwreck)
Landscape: Underwater (underwater site)

7. Description

Architectural Classification

(Enter categories from instructions)

19th-century schooner-rigged Steamship

Materials

(Enter categories from instructions)

foundation Metal: Steel (hull)
walls
roof
other Metal: Steel

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- A** owned by a religious institution or used for religious purposes.
- B** removed from its original location.
- C** a birthplace or grave.
- D** a cemetery.
- E** a reconstructed building, object, or structure.
- F** a commemorative property.
- G** less than 50 years of age or achieved significance within the past 50 years

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 36) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey

- recorded by Historic American Engineering Record

Areas of Significance

(Enter categories from instructions)

Maritime History

Transportation

Architecture

Archaeology: Historic-Non-Aboriginal

Period of Significance

1898-1900

Significant Dates

February 22, 1898

May 26, 1900

Significant Person

n/a

Cultural Affiliation

American Period (1821-)

Architect/Builder

John Priestman & Co. of Sunderland, England

Primary location of additional data:

- State Historic Preservation Office
- Other State Agency
- Federal agency
- Local government
- University
- Other

Name of Repository

SS Copenhagen
Name of Property

Broward Co., FL
County and State

10. Geographical Data

Acreage of Property Less than 1 acre

UTM References

(Place additional references on a continuation sheet.)

1	1	7	5	9	1	4	0	1	2	8	9	8	6	3	5
	Zone		Easting						Northing						
2															

3															
	Zone		Easting						Northing						
4															

See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Della Scott-Ireton/Archaeologist II & Barbara E. Mattick/Deputy SHPO for Survey & Registration

organization Bureau of Historic Preservation date March 2001

street & number R.A. Gray Building, 500 S. Bronough Street telephone (850) 487-2333

city or town Tallahassee state Florida zip code 32399-0250

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

- A USGS map (7.5 or 15 minute series) indicating the property's location.
- A Sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative black and white photographs of the property.

Additional items

(check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of SHPO or FPO.)

name State of Florida

street & number _____ telephone (850) 487-2333

city or town _____ state _____ zip code _____

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and amend listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20503.

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National Park Service**

**NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET**

Section number 7 Page 1 SS COPENHAGEN
Broward County, Florida

SUMMARY

The SS *Copenhagen* (8BD02567) is the site of a steel-hulled schooner-rigged screw steamship that was carrying cargo from Philadelphia to Havana when she ran hard aground on the Pompano Ledge. The wrecksite is in the Atlantic Ocean $\frac{1}{4}$ of a mile offshore of Pompano Beach south of Hillsboro Inlet, Broward County, in 16 to 31 feet of water on submerged lands belonging to the State of Florida. The site includes the remains of the 325 foot-long vessel, except for the bow section which recently was located 200 yards southeast of the main wreck. Non-contributing resources include two mooring buoys and a cement monument with inset bronze plaque that designates the shipwreck an Underwater Archaeological Preserve.

SETTING

The site of SS *Copenhagen* is located on the edge of the second reef from shore, known as the Pompano Ledge, where relatively shallow water of 15 feet drops off sharply to 30-35 feet along a precipice formed of fractured limestone blocks divided by cracks and crevasses, as well as natural reef structure. The 325 foot-long ship came to rest along the Ledge with her bow pointing south. The ship listed to the port side and her starboard hull eventually collapsed onto the rocks and into crevasses, while the port side slumped onto the deeper sand bottom. Over the years, wave and storm activity caused the hull to disarticulate and settle over this uneven terrain. Superstructures, such as cargo booms and boat davits, have spilled into deeper water. Some pieces have migrated southward along the reef with the prevailing ocean currents. Although much of the wreckage has been flattened over time, the lower hull remains articulated, especially in the stern, where distinctive construction features of the vessel can easily be discerned. Water over the wreck averages 20 feet and generally is extremely clear due to the presence of the Gulf Stream. Over the years the shipwreck has become integrated into the reef and provides a home for many tropical marine species.

DESCRIPTION

The wreck of SS *Copenhagen* is approximately 300 feet long by 60 feet wide; the stern is to the north. The starboard side has collapsed into crevasses of the limestone blocks that make up the Pompano Ledge while the port side rests on the deeper sand bottom below the Ledge. Two mooring buoys are anchored into the limestone ledge to the west of the wreck (along the starboard side). A bronze plaque designating the shipwreck an Underwater Archaeological Preserve is set into a cement monument placed just to the south of the main wreckage where the vessel's bow used to be. The buoys and the plaque, as non-contributing resources, do not adversely affect the site's historical or archaeological integrity as they are placed away from the shipwreck itself and do not interfere with the wreck in any way. Furthermore, the plaque may easily be removed if necessary.

Although the old steamship has been stripped of its engine, boilers, propeller, and other machinery, many of its feature are recognizable. The pillow block that supported the propeller shaft as it ran from engine room to rudder protrudes from the stern area, and empty beds for the ship's two boilers are readily apparent amidships. A "donkey" or auxiliary boiler used to power winches for cargo booms is located on the lower hull near the main boiler beds. The boom that served the forward cargo hatches lies with its rigging partially buried in the sand, perpendicular to the ship off the port side. A relatively intact expanse of stern hull frames, which

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were an integral part of the ship's hull strength, are spaced at regular intervals with alternating "deep" or heavier frames. Anthracite coal from the ship's bunkers litters the bottom, often camouflaged by marine growth. The bow section was pulled off the wreck during salvage attempts shortly after the ship sank in 1900 and now rests 200 yards to the southeast in 27 feet of water with the stem pointing nearly straight up.

Many steamships plied the east coast of Florida and some of them were wrecked on the treacherous reefs that stretch along the shore. Most of these ships immediately were salvaged for their cargo and, often, the vessels themselves were refloated or were broken up for scrap. *SS Copenhagen* is one of the best preserved of these early 20th century marine tragedies that occurred in Florida; the vessel, if left undisturbed, has reached a state of equilibrium with its environment and has stabilized.

SITE INVESTIGATIONS

In early 1993 the Florida Bureau of Archaeological Research distributed solicitations via mail-out for candidates to become Underwater Archaeological Preserves. A similar mailing in 1990 resulted in the nomination and subsequent establishment of two Preserves, *City of Hawkinsville* in the Suwannee River and *USS Massachusetts* (BB-2) off Pensacola. Responses to the second mail-out included a nomination from a Broward County charter boat captain for the wrecked steamship *SS Copenhagen* off Pompano Beach. The nomination was supported by the Marine Archaeological Council (MAC) of Broward County, a private group which conducts research on local sunken ships, including *Copenhagen*. Upon receipt of the nomination, personnel from the Bureau of Archaeological Research conducted a reconnaissance survey of the wrecksite to determine if it met criteria to become a Preserve, including safe diving conditions, recognizable structure, abundant marine life, and public accessibility. The wreck of *Copenhagen* proved to be admirably suited to become an Underwater Archaeological Preserve and a larger Bureau research team was dispatched to Broward County to conduct thorough site recording and historical research.

In coordination with MAC, which had previously produced a photomosaic of *Copenhagen*, and a local dive shop, the wreck of *Copenhagen* was mapped and recorded and the ship's history was researched and verified. The steamship was mapped by placing a baseline along the longitudinal axis of the wreck and taking 90° offsets and triangulations to accurately record the position of hull structure, construction elements, and machinery. No excavation was performed and no portable artifacts were encountered. The shipwreck also was photographically recorded.

A brochure was prepared that describes *Copenhagen*'s history and its role as an Underwater Archaeological Preserve, and an underwater site guide was created to orient divers on a self-guided tour of the shipwreck (see attached). In 1994, *SS Copenhagen* was dedicated as Florida's fifth Underwater Archaeological Preserve and the bronze plaque was placed on site. Bureau staff inspects the Preserve at least annually and a local dive shop has "adopted" the wreck and takes responsibility for keeping the plaque clean and removing debris. In 2000 a local research group, Vóné Research, in conjunction with MAC and Lighthouse Dive Center recorded and mapped the bow section of *Copenhagen* through triangulation from a baseline and produced a site plan of this displaced section of the wreck.

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Broward County, Florida

SUMMARY

The SS *Copenhagen* is significant at the state and local level under **Criterion A** in the areas of **Commerce, Maritime History, and Transportation**; under **Criterion C** in the area of **Architecture**; and under **Criterion D** in the area of **Archaeology: Historic-Non-Aboriginal**. Under **Criterion A** this shipwreck is significant as one of the few remaining examples of the steam vessels that plied the waters of Florida in the early 20th century. *Copenhagen* represents an element of the early steam commerce that skirted, and occasionally wrecked upon, the shores of the state. The shipwreck's place in the maritime history of Florida is based on the transportation of goods and products along the state's coast in vessels which sometimes wrecked on the perilous reefs and shoals.

SS *Copenhagen* is significant under **Criterion C** as it is one of the last remaining examples in Florida of the steam vessels that regularly traversed the state's waters in the early 20th century. Although quite common, relatively few of these vessels remain in the archaeological record due to the effects of salvage immediately after wrecking and subsequent removal of the wreckage for scrap. Additionally, *Copenhagen* was built during the transition of sail power to steam and was schooner-rigged in addition to having steam propulsion.

The *Copenhagen* wrecksite also is significant under **Criterion D** as it has stabilized in the marine environment and can, through future archaeological investigation, provide additional information about early 20th-century merchant ships, the combination of sail and steam propulsion methods in sea-going vessels, and coastal maritime commerce and transportation.

HISTORICAL/ARCHAEOLOGICAL CONTEXT: Advent of the Steamship

For centuries square-rigged sailing ships transported cargo and passengers across oceans and along coastlines. From about 1840, however, steamships vied with sailing vessels in the trans-Atlantic run, although early steam technology initially was unreliable. By the second half of the 19th century, paddlewheel steamships crossed the Atlantic on regularly-scheduled packet voyages and proved to be faster and more dependable in maintaining arrivals and departures than sail-powered vessels since steamship did not rely on the vagaries of the wind. Steamships also were less expensive to operate because a smaller crew was required than for the same size sailing ship. Steam-driven vessels came of age during the American Civil War and some of the fastest Confederate blockade runners were ocean-going paddlewheel steamships. Developed as early as the 1830s, vessels driven by a screw propeller rather than a paddlewheel soon began to make oceanic steamship travel practical and predictable.

In the latter half of the 19th century steamships were used for a variety of tasks, from transporting passengers and immigrants to laying telegraph cable to warfare. As the United States began to turn its interests inland and focus more on developing trans-continental railroads, Great Britain emerged as the world's leader in the production of iron and steel steamships. Although steam technology rapidly advanced and became increasingly sophisticated, problems still existed with the machinery. Blown gaskets, seized pistons, and exploding boilers, among other hazards, were relatively common. At the worst, these dilemmas could cause a vessel to founder and sink; at minimum a ship equipped only for steam travel could be left drifting helplessly with the current, at the mercy of wind and wave. One solution that often was used was to rig steamships with

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masts and auxiliary sails as a precaution against catastrophic machine failure. Additionally, vessels that could utilize sail as well as steam power could save money by sailing when the wind was favorable and only using steam when necessary.

Steamships were used well into the 20th century, particularly for local and regional transport as large ocean-going ships began to switch from coal-fired boilers to liquid fuel powered engines. The humble coastal steam freighter that hauled loads of coal or grain may not be the most romantic maritime image, but these vessels were the marine workhorses of their time, transporting enormous quantities of goods and people along the coasts of the United States. Of the many that plied coastal waters some inevitably ran aground, were wrecked in storms, or foundered on hidden reefs or shifting shoals. Many were refloated to work again, and most others were salvaged for their value as scrap metal. A few, however, still remain off the shores of the United States, home to fish and other marine creatures and an attraction to fishermen and divers.

HISTORICAL SIGNIFICANCE

The steam screw steamer *Copenhagen*, official number 108,711, was built in Sunderland, England, by Messrs. John Priestman and Co., and launched on February 22, 1898. She was registered at Glasgow, Scotland, and owned by the Glasgow Shipowners Company, Ltd., of 107 St. Vincent Street; Lawrence Glen was designated as manager.

Constructed of steel, the steamship measured 325 feet in length, 47 feet in breadth, and had a depth of hold of 25.6 feet. She was rigged as a schooner but also was powered by three triple expansion steam engines of 312 nominal horsepower. The ship was rated at 3,279 tons (her registered tonnage, after deducting crew and engine spaces, was 2,115.75 tons). She carried four boats, two of which were lifeboats. SS *Copenhagen* had three sister ships including SS *Ruby* and SS *Ursula Bright*.

On her last voyage, *Copenhagen* embarked on May 20, 1900 from Philadelphia bound for Havana with 4,940 tons of coal. She was under the command of Capt. William S. Jones and a crew of 26 men. Six days later, steaming off the Florida coast, the ship approached Jupiter Light at 0220 hours, and the captain ordered the course altered to S.S.E., reckoning the ship's position to be approximately one-and-three-quarter miles offshore after taking a four-point bearing. The vessel was steaming at full speed, making about eight knots. Capt. Jones retired at 0420, after leaving the chief officer in charge with instructions to maintain the course and to stay one-and-a-half miles offshore. As May 26th dawned over a calm sea, the chief took another bearing that placed the ship two miles from shore.

Copenhagen's captain returned on deck at 0800, and, reckoning the ship to be two-and-a-half to three miles offshore, altered the course to S.S.W. in order to avoid the strong northerly Gulf Stream current. At approximately 0850, *Copenhagen* suddenly ran aground on a reef three-quarters of a mile offshore present-day Pompano Beach.

The ship's engines were stopped, then reversed, but to no avail. A large kedge anchor with 150 fathoms of 9-inch hawser line was deployed from the port side of the stranded vessel and hove taught. Unfortunately the ship would not budge, and word came from below decks that the number one ballast tank and the forepeak were

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taking on water. At 1100 hours, the captain went ashore to telegraph salvage companies in Key West for assistance. The crew was put to work jettisoning the cargo of coal.

On May 28, George Child's salvage steamer arrived at the scene to attempt to free the stricken steamship. More hands from shore were employed to jettison the cargo and three pumps were put on the deck of *Copenhagen* to try to keep water out of the hull. Another anchor was deployed from the port quarter in a vain attempt to pull her off the reef. Merritt and Chapman Wrecking Company, whose local agent Ralph M. Monroe had wired news of the accident to New York, also sent salvage vessels to the scene. Although the ship's cargo was completely unloaded, *Copenhagen* finally was abandoned as a total wreck; the vessel was valued at \$250,000 and her cargo at \$12,500. A Board of Inquiry found Capt. Jones to be at fault for improper navigation, and for not employing a sounding lead to determine the depth of water under the ship. Because of his previously outstanding record, however, his master's certificate was not revoked.

The wreck of *Copenhagen* remained visible above the water for some time. During World War II, the ship's structure was used for target practice by U.S. Navy fighter pilots training at nearby Ft. Lauderdale, which may account for the presence of .50-caliber machine gun bullets around the wrecksite. Today, much of the ship's structure has become part of the reef and is a home for a multitude of marine life. For years, locals referred to this wreck as the *Cumberland*, a U.S. Army Corps of Engineers hopper dredge that wrecked off Ft. Lauderdale in 1931. *Cumberland* also was used as target practice by naval aviators and became confused with *Copenhagen*. The wreck of *Cumberland* lies elsewhere, and that of *Copenhagen* is readily identified by its typical turn-of-the-century steamship architecture and by telltale lumps of coal strewn throughout the wreckage.

Locally and state-wide, *Copenhagen* is significant under **Criterion A** in the areas of **Commerce**, **Maritime History**, and **Transportation** because of its role in the commercial transportation of goods and products along the shores of east Florida. Additionally, *Copenhagen* represents an early 20th century part of the collection of wrecked vessels that accumulated on the shallow reefs of the state's coast. These shipwrecks became targets for the wrecking and salvage industry in southern Florida and today are an important and integral element of extant turn-of-the-century maritime cultural resources.

ARCHAEOLOGICAL SIGNIFICANCE

SS *Copenhagen* is significant under **Criterion D** because of the high potential for new information the site can yield. Although parts of the ship have been removed or have collapsed into the reef structure, much remains of this important example of transitional steamship design and technology. Few, if any, portable artifacts remain on the shipwreck because the hull was thoroughly stripped at the time of its wrecking and salvage. Much architectural information, however, can be learned from the remaining hull structure, including the design of combination screw and sail powered craft, and the early use of double-hulled bottoms.

An additional consideration is that SS *Copenhagen* is one of a family of shipwreck sites that have been determined to be historically and archaeologically significant by the State of Florida. *Copenhagen* was designated a State Underwater Archaeological Preserve based on its integrity and its potential for public education. *Copenhagen* also is featured as part of Florida's Maritime Heritage Trail, a series of coastal and

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Broward County, Florida

maritime sites including Historic Shipwrecks, Coastal Environments, Lighthouses, Coastal Communities, Coastal Forts, and Historic Ports, that are interpreted for public education, recreation, and tourism.

ARCHITECTURAL CONTEXT

By the late 19th century, steamship technology was quite advanced, although sail applications had not yet been deemed totally obsolete, particularly where passenger and merchant vessels were concerned. Totally steam-powered ships, such as the enormous pre-Dreadnaught warships of the time, required extensive support networks of re-coaling stations and dedicated coal ships to ensure they had access to enough fuel to complete their assignments. Because of the unreliable nature of early steam technology and its application to the marine environment on ocean-going vessels, many ships were fitted with both steam-powered paddlewheels or screw propellers and sailing rigging. This enabled ships to continue on their way using wind power if the fractious steam machinery became unusable, or to use sails to cut costs if the wind was favorable. Alternatively, steam-powered ships could complete scheduled voyages even if the wind was contrary or was non-existent. This arrangement, however, also had its drawbacks. Masts, standing rigging, and sails required considerable deck space as well as a larger crew to operate; this extra equipment also tended to get in the way of the complex steam machinery. A harmonious union of sail and steam power was difficult to achieve and yet this arrangement commonly was used for nearly a century. Design of turn-of-the-century steamships also included rather advanced elements that still are used today, including double-bottomed hulls for safety and for ease of adjusting ballast

ARCHITECTURAL SIGNIFICANCE

SS *Copenhagen* is significant under **Criterion C** because of its transitional sail-to-steam design and construction. This type of vessel with both steam-powered and sail-powered methods of propulsion was not uncommon in the late 19th and early 20th centuries, although relatively few examples remain either afloat or in the archaeological record. Additionally, *Copenhagen*, like many steamships of the late 19th century, was built with a double bottom, that is, separate inner and outer hulls that sandwiched the framing skeleton of the ship. In England, by the 1890s, the construction of steamships with double bottoms had become routine, since aside from containing adjustable water ballast tanks to offset various cargo conditions, double bottoms also afforded a safety measure against minor groundings. In the case of *Copenhagen*, the ship's double bottom apparently did not prevent initial flooding of the hull; grounding at full speed on a shallow rocky ledge may have sealed her fate.

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Broward County, Florida

BIBLIOGRAPHY

Board of Trade

1900 Report of the *Copenhagen* incident by the Board of Trade, London, October 1900. Department of Transportation, London, England.

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BOUNDARY DESCRIPTION

The site boundary of the SS *Copenhagen* is defined as a circle of 200 yards radius around the geographic coordinates Latitude 26°12.349' N, Longitude 80°05.108' W, lying offshore and below the mean low water mark of the Atlantic Ocean and encompassing the area of vessel wreckage, plaque, and mooring buoys.

BOUNDARY JUSTIFICATION

The SS *Copenhagen* site boundary is based on the Management Agreement for Sovereignty Submerged Lands between the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida and the Division of Historical Resources. This Management Agreement was entered into upon the designation of SS *Copenhagen* as a State Underwater Archaeological Preserve in 1994. The purpose of the 200 yard radius around the site is to encompass the scatter of material culture relating to the shipwreck that may have dispersed with wave and current action away from the primary area of wreckage.

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PHOTOGRAPHS

- 1.1) *SS Copenhagen*
 - 2) Broward County, Florida
 - 3) Unknown
 - 4) 1900
 - 5) Florida Bureau of Archaeological Research
 - 6) *SS Copenhagen* sunk off Pompano Beach
 - 7) 1 of 5

- 2.1) *SS Copenhagen*
 - 2) Broward County, Florida
 - 3) Florida Bureau of Archaeological Research
 - 4) 1993
 - 5) Florida Bureau of Archaeological Research
 - 6) Underwater photo showing boiler bed
 - 7) 2 of 5

- 3.1) *SS Copenhagen*
 - 2) Broward County, Florida
 - 3) Florida Bureau of Archaeological Research
 - 4) 1993
 - 5) Florida Bureau of Archaeological Research
 - 6) Underwater photo showing pillow block for propeller shaft
 - 7) 3 of 5

- 4.1) *SS Copenhagen*
 - 2) Broward County, Florida
 - 3) Florida Bureau of Archaeological Research
 - 4) 1993
 - 5) Florida Bureau of Archaeological Research
 - 6) Underwater photo showing wreckage amidships
 - 7) 4 of 5

- 5.1) *SS Copenhagen*
 - 2) Broward County, Florida
 - 3) Florida Bureau of Archaeological Research
 - 4) 1994

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- 5) Florida Bureau of Archaeological Research
- 6) Underwater photo showing bronze plaque
- 7) 5 of 5

COPENHAGEN BOW SECTION MEASUREMENTS

(See Preceding Diagrams)

RECORDED PERIMETER MEASUREMENTS:

1. Port Rail Length	5.99m
2. Leading Edge Of Bow	4.97m
3. Starboard Rail Length	9.60m
4. Bowsprit Tip Tp Chain Locker Through-Hull	3.35m
5. Length Of Starboard Porthole Array	8.63m
6. Sand Line At Deck	10.87m
7. Sand Line At Starboard Hull	10.36m
8. Sand Line At Port Hull	6.75m

RECORDED FEATURE DETAIL:

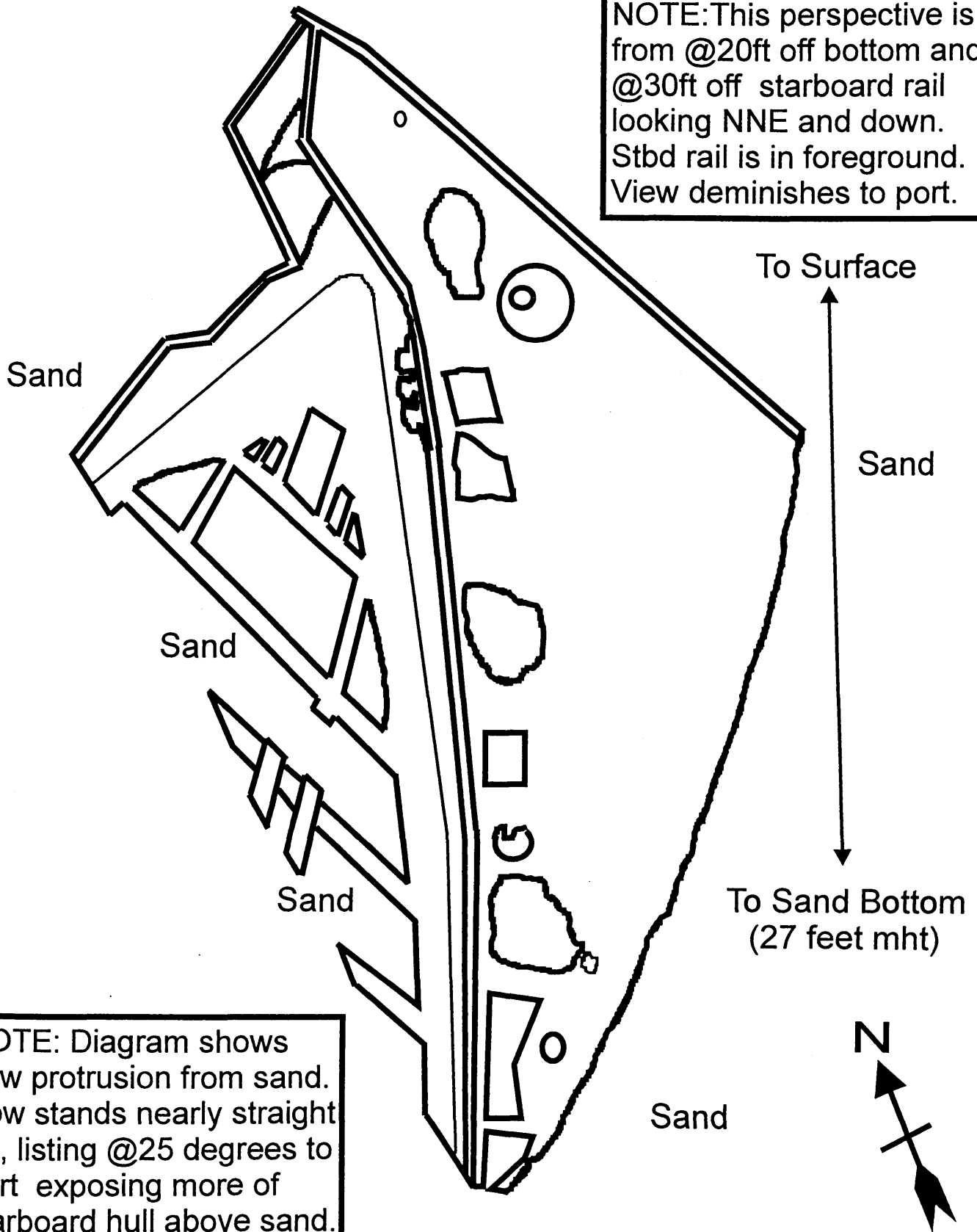
1. Starboard Rail Cleat	.96m
2. Center Forward Square Deck Hatch	1.7m x .85m
3. Small Triangular Fwd Deck Hatches (Port and Stbd)	.9m x .75m x 1.25m
4. Large Triangular Deck Hatches, (Port and Stbd)	1.3m x 1.2m x 1.7m
5. Small Square Deck Hatches Forward (Port and Stbd)	.30m x .46m
6. Large Square Deck Hatch Mid Bow	1.17m x 3.94m
7. Exposed Forward Deck Beam	7.84m
8. Inner Deck Cross Member	1.12m
9. Outer Deck Cross Member	1.3m
10. Exposed Lower Deck Beam Starboard	1.79m
12. Bowsprit Eyelet	.27m Diameter
13. Forward Eliptical Porthole	.61m x 1.22m
14. Chain Locker Through Hull	1.2m Diameter
15. Forward Starboard Square Porthole #1	.76m x .76m
16. Forward Starboard Square Porthole #2	.69m x .61m
17. Eroded Starboard Hole	.71m x .81m
18. Starboard Square Porthole	.76m x .77m
19. Round Starboard Porthole	.46m Diameter
20. Large Eroded Square Hole	.70m x .91m
21. Eroded Hole	.09m Diameter
22. Irregular Rectagular Hole	.61m x 1.16m
23. Round Porthole	.29m Diameter
24. Triangular Hole	.46m x .69m



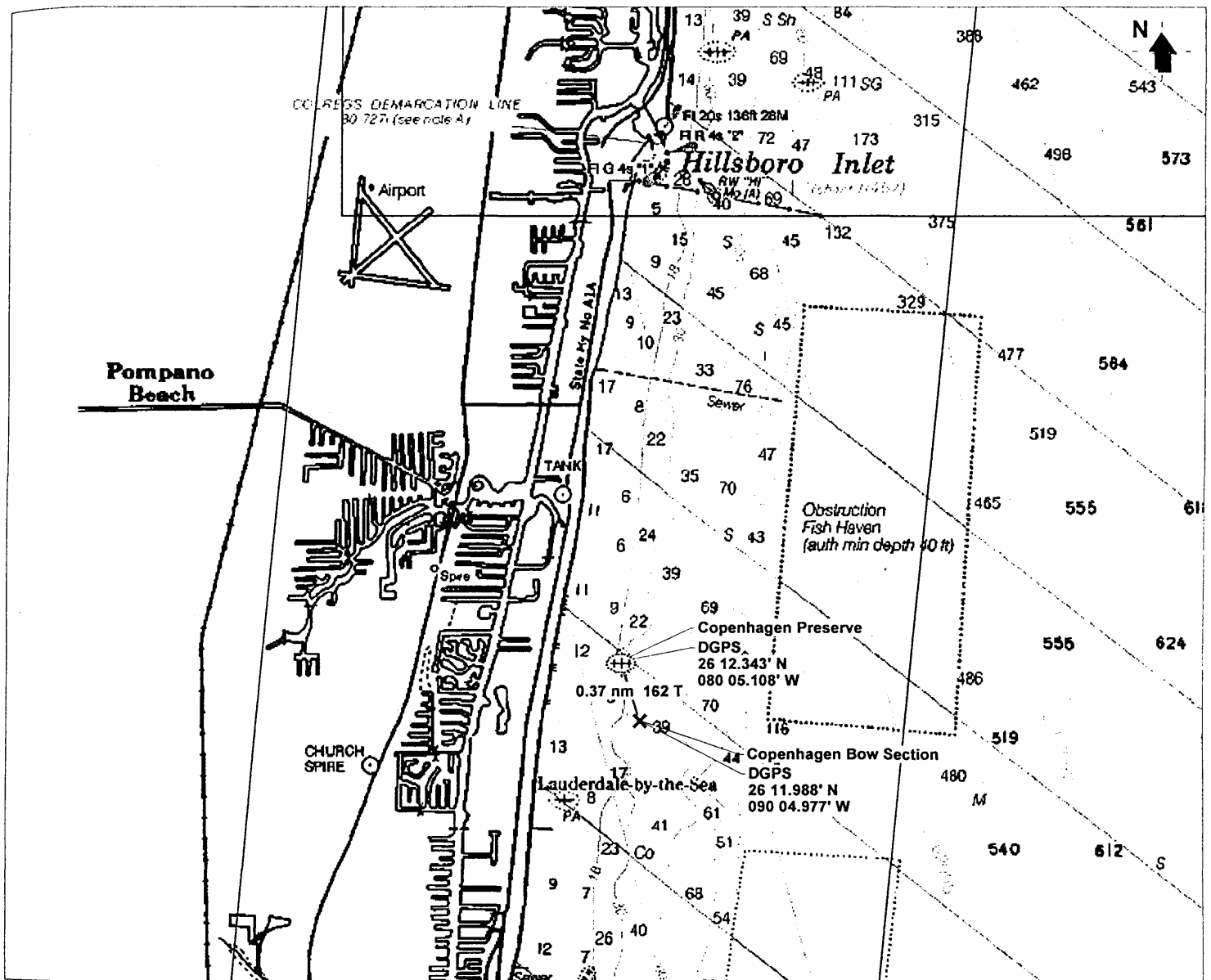
Vone Research Inc.

Recorded Positional Observations

NOTE: This perspective is from @20ft off bottom and @30ft off starboard rail looking NNE and down. Stbd rail is in foreground. View deminishes to port.



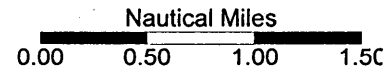
NOTE: Diagram shows bow protrusion from sand. Bow stands nearly straight up, listing @25 degrees to port exposing more of starboard hull above sand.



DO NOT USE FOR NAVIGATION PURPOSES

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Registered Chartview Software Serial # CVP2531985 White/Attis Vone Research



Location Of Copenhagen Bow Section

DGPS COORDINATES: 26 11.988' N 090 04.977' W

1. From Copenhagen Preserve: 670 meters 162T SSE
2. From Red/White Bouy "H", Hillsboro Inlet: 5863 meters 188T S
3. From Anglin Pier: 3521 meters 175T SSE
3. From Beach: 1047 meters from closest MHW



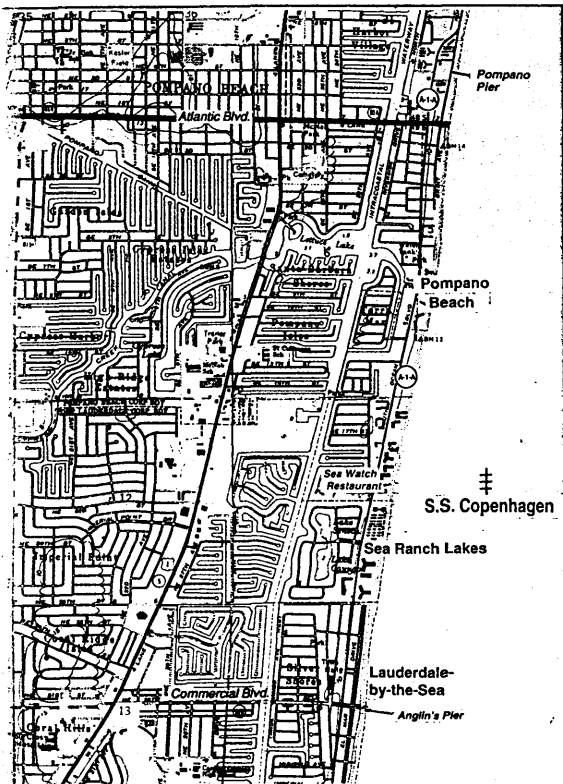
Vone Research Inc.
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Note: GPS coordinates are relative to Cape Canaveral Map Datum

EXPLORING The Copenhagen

STATE UNDERWATER ARCHAEOLOGICAL PRESERVE

The Copenhagen was built in England in 1898 and was one of several single-screw steamships that became the pride of Glasgow's merchant fleet. Constructed for cargo capacity and strength with a double bottom, and powered by triple expansion steam engines, the ship was put into service under contracts across the Atlantic. Her career was cut short, on May 26, 1900, when she ran hard aground on a rocky ledge close to shore just south of Pompano Beach. She was carrying 4,940 tons of coal on a voyage from Philadelphia to Havana. Despite extensive salvage efforts, the ship could not be freed from the reef, although her cargo was saved. The Copenhagen remained visible above the water for years until WWII naval fighter pilots helped her to become part of the reef by using her for target practice.



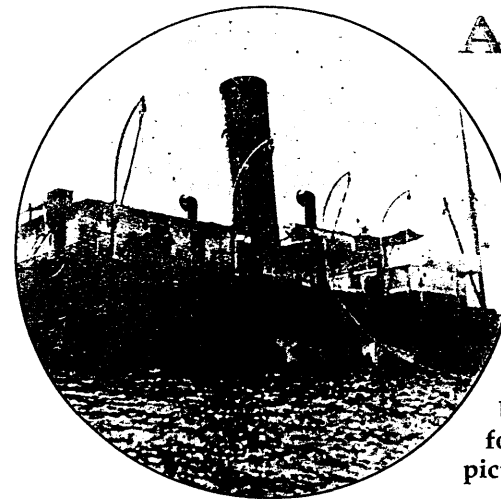
The wreck of the **Copenhagen** is located approximately 3.3 nautical miles south of Hillsboro Inlet just outside the second reef on the "Pompano Drop Off" adjacent to mooring buoys 3 and 4. Wreckage is scattered over an area of approximately 300 feet or more. The wreck lies with her bow pointed to the south and is approximately parallel to the reef. The depth varies from 16 to 31 feet, making it an ideal recreational dive spot.

LOCATION

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LORAN Coordinates:
14269.7, 62103.7

GPS Coordinates:
26°12.349'N, 80°05.108'W



A Window To The Past...

Make history come alive! Experience merchant fleets of the past and an underwater magical adventure. The Copenhagen was rated at 3,279 tons and was originally 325 ft. in length, with a beam of 47 ft. and a depth of hold of 26 feet. This steamship's underwater burial ground provides habitat for a myriad of marine life, as pictured on the back page.

As with all other historical or archaeological sites on submerged bottomlands, the Copenhagen is protected by Florida laws forbidding the unauthorized disturbance, excavation or removal of artifacts. Please help keep the site intact for others and have a safe visit by observing the following rules:

- * Please do not anchor on the site; tie your boat to the mooring buoys.
- * If you are not using the buoys, anchor only in sand, as it is against Florida law to anchor in coral.
- * Maneuver slowly in the area of buoys and watch for divers.
- * Do not disturb or remove any coral on the reef.
- * Use safe diving practices and display a diver's down flag.
- * Divers should use caution and avoid sharp edges and rough surfaces. Beware of becoming entangled in stray fishing lines.
- * Please do not spearfish, collect or harvest marine life on the wreck or within 500 feet.



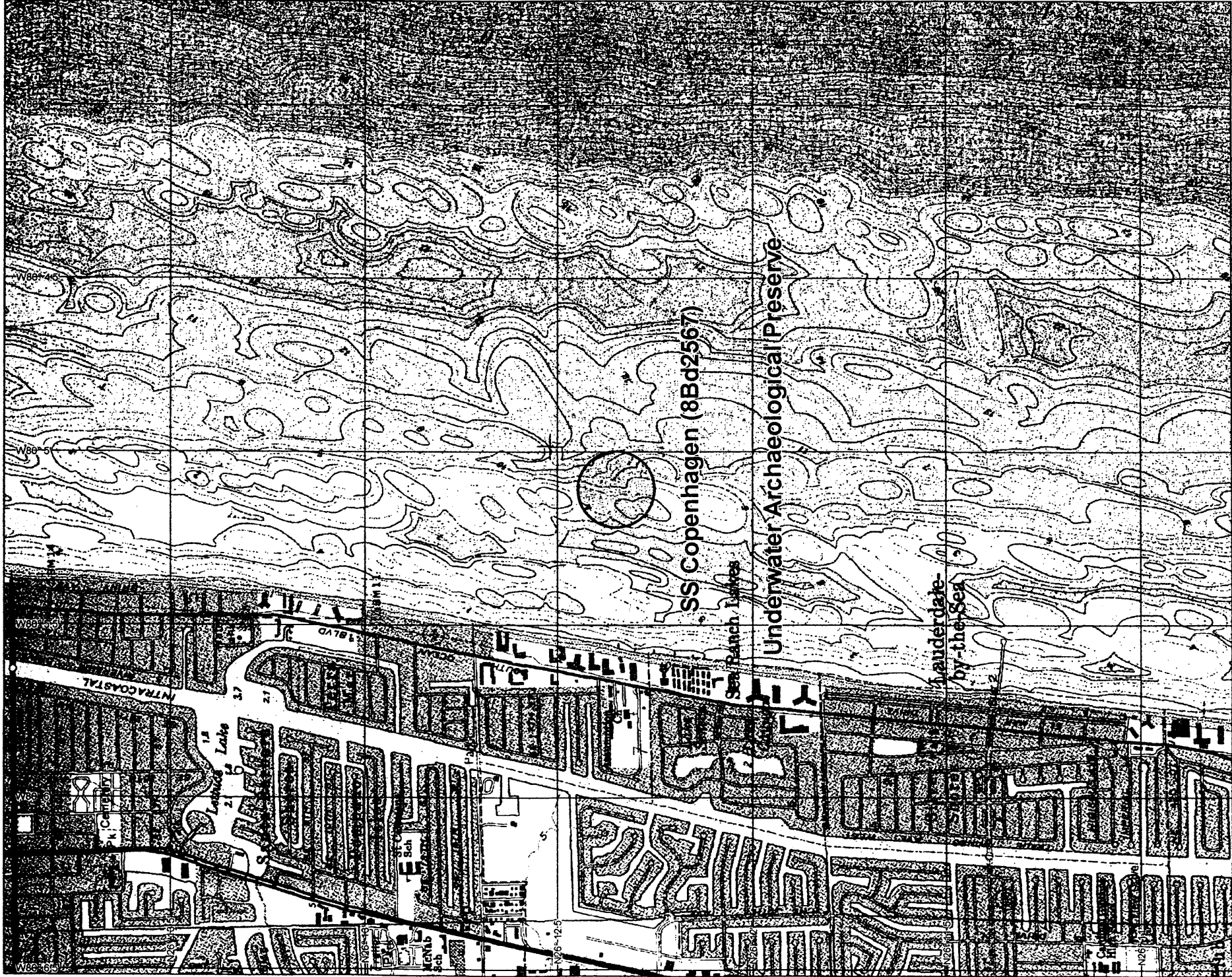
BROWARD COUNTY
DEPARTMENT OF NATURAL RESOURCE PROTECTION
Biological Resource Division

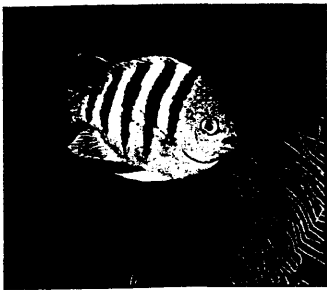
In cooperation with the Florida Department of State
Division of Historical Resources, Bureau of Archaeological Research
218 S.W. 1st Ave., Ft. Lauderdale, FL 33301 • (305) 519-1400 • Fax (305) 519-1493 • TTY (305) 357-6158

Broward County Board of County Commissioners

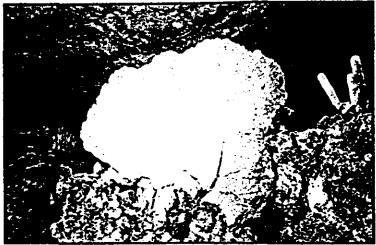
Scott I. Cowan • Suzanne N. Gunzburger • John P. Hart • Lori Nance Parrish • Sylvia Poitier • John E. Rodstrom, Jr. • Gerald F. Thompson
This public document was promulgated at a cost of \$1678 or \$335 per copy to educate the public on Broward County's first Underwater Archaeological Preserve.
An equal opportunity employer and provider of services (minority/female/disabled/veteran).







Sergeant Major



Common Sea Fan



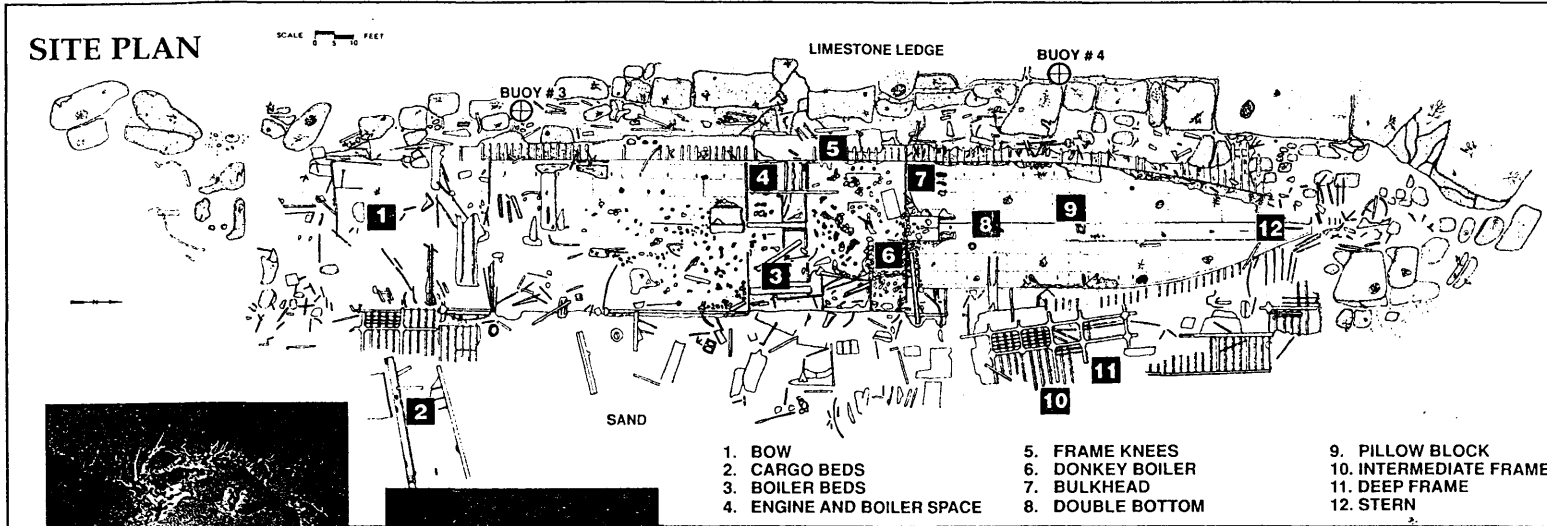
Yellowtail Damsel Fish



French Angelfish



Caribbean Spiny Lobster



THE VIEW FROM DOWN UNDER

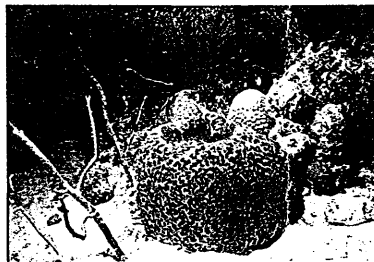
The Copenhagen provides an ideal haven for an abundance of marine life. Although much of the wreckage has been flattened over time, the frame and knees of the lower hull are readily apparent. The steel hull provides a substrate for hard and soft corals and multi-colored sponges. Juvenile reef fish and tropicals of many varieties dart in and out of the twisted structure, which serves as a sheltered nursery. Gorgonians and sea fans sway in the gentle surge along the length of the ship. The pillow block which supported the propeller shaft is a focal point for curious parrotfish. The empty beds for the ship's two boilers house a population of damselfish and sergeant majors energetically defending their niche in the sunken wreck. Coal from the ship's bunkers, although camouflaged by marine growth, litters the sea bottom near the wreck. Small lumps of black anthracite are visible around the periphery of the wreckage.



Large Star Coral



Spotfin Butterfly Fish



Loggerhead Sponge



Schoolmaster



Stoplight Parrotfish

©Photos courtesy of Paul Humann



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