Supplementary Material for CFB3333/PHY3333
Professors John Cotton and Stephen Sekula
February 10, 2012
Based on the following information on the web:
http://www.physics.smu.edu/pseudo/BermudaTriangle
US Navy Avengers (similar to Flight 19)
From “Flim-Flam!” by James Randi
Lloyd's of London

- A huge market where underwriters can join together to pool and spread risk (insurance).

“I was involved in a television program called 'The Bermuda Triangle' that was shown in Britain in about 1992 on Channel 4, the Equinox Programme and that was produced by John Simmons of Geofilms. At that time the producers checked with Lloyds of London to learn whether an unusually large number of ships had sunk in the triangle. They determined that large numbers of ships had not sunk there.”

– Bill Dillon - Geologist, USGS
(http://woodshole.er.usgs.gov/project-pages/hydrates/bermuda.html)
Shipwrecks of the Great Lakes
A Timeline of “The Sandra” Story
"The Sandra carried radio. It was a 350-foot freighter which sailed with 12 men on board from Miami to Savannah. There 300 tons of insecticide were loaded for Puerto Cabello, Venezuela. The Sandra sailed - and disappeared without a trace."

"On June 16, in the 'small world' year of 1950, search was abandoned. The fate of the craft and the dozen on board was written down as an official mystery."

(E.V.W. Jones, Miami AP, Miami Herald Sep 17, 1950)
"The Sandra was a square-cut tramp steamer. Rust spots showed here and there along her 350-foot length. She carried 12 men and radio equipment. She had sailed from Savannah, Georgia, with 300 tons of insecticide destined for delivery at Puerto Cabello, Venezuela."

"Thumping her way leisurely southward through the heavily traveled steamer lanes off Jacksonville, the Sandra was on course. All was in order. From her bridge the friendly, winking beacon of St. Augustine light must have been easily visible through the peaceful tropic dusk that shrouded the low Florida coastline off the starboard rail."

"The crewmen had been at mess, and now those not on duty drifted aft to smoke and talk and reflect upon the dying day and what the morrow would bring. Probably not one of those present suspected he would never live to see it."

"When the search vessels and planes were called off, several days later, the case was officially recorded as `unsolved.'"

(George X. Sand, "Sea Mystery at Our Back Door", Fate Oct 1952.)
"The Sandra, a freighter 350 feet long, radio-equipped, sailed from Savannah, Georgia in June, 1950, for Puerto Cabello, Venezuela. Heading south, she passed Jacksonville and St. Augustine along the well-traveled coastal shipping lane."

"Then she disappeared as completely as if she had never existed, in the tropic dusk, just off the Florida coast."

"There was another futile search by air and sea. No debris or bodies were ever found, in the sea or on the beaches."

(Vincent Gaddis, "The Deadly Bermuda Triangle", Argosy Feb 1964)
"The S.S. Sandra was a freighter 350 feet in length, radio-equipped. From Savannah, Georgia in June, 1950, she sailed for Puerto Cabello, Venezuela with three hundred tons of insecticide. Heading south, she passed Jacksonville and St. Augustine along the well-traveled coastal shipping lane."

"Then she disappeared as completely as she had never existed - in the tropic dusk, in peaceful weather - just off the Florida coast."

"There was another futile search by air and sea. Nothing was ever found floating on the surface. No debris or bodies were ever washed up on the beaches by waves or tides."

(Vincent Gaddis, "Invisible Horizons", 1965)

Note that Gaddis borrowed heavily from his article a year earlier.
"The freighter Sandra, bound for Puerto Cabello from Savannah in June 1950, carrying a cargo of insecticide, passed by St. Augustine, Florida, in good weather, and thereafter all contact was lost and never re-established."
(Charles Berlitz, "The Bermuda Triangle" 1974)
The real story of The Sandra
Librarian Larry Kusche, author of "The Bermuda Triangle Mystery Solved", found the following in primary sources.
"Lloyd's List, April 24, 1950: Miami, April 19 - The 185-foot Costa Rican Sandra, with 11 men on board, has been reported six days overdue."

"Lloyd's List, May 2, 1950: Miami, April 27 - Search is being made for ... motor vessel Sandra, which left Savannah on April 5 for Puerto Cabello with a cargo of 340 tons of DDT and has not since been reported."

"Lloyd's List, June 3, 1950: Miami, May 29 - The United States Coast Guard has given up the search for motor vessel Sandra and the vessel is considered lost."
Finally, Kusche found a weather report for the dates in question.

Miami Herald, Sat. April 8, 1950: "A storm growing from the low pressure areas which caused thunderstorms and strong winds in Florida during the past three days approached hurricane force and buffeted Atlantic shipping lanes Friday ... [Winds] reached a speed of 73 miles an hour off the Virginia Capes, two miles an hour under hurricane strength..."

"The Florida winds left a 40-foot shrimp boat, the St. Paul, missing at sea... and the Coast Guard started a search Friday."
The Sandra sailed on April 5, right into a storm.

Jones (1950) had a number of details wrong. The ship was 185 feet long, not 350. It sailed on April 5, not in June. The weather was stormy, not peaceful. The search was called off by May 29, not June 16. Lloyd's listed a crew of 11, not 12.