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ΠΤΥΧΙΑΚΗ ΕΡΓΑΣΙΑ

**ΘΕΜΑ:
THE BERMUDA TRIANGLE**

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Introduction

The Bermuda Triangle is a mythical section of the Atlantic Ocean roughly bounded by Miami, Bermuda and Puerto Rico where dozens of ships and airplanes have disappeared. Unexplained circumstances surround some of these accidents, including one in which the pilots of a squadron of U.S. Navy bombers became disoriented while flying over the area; the planes were never found. Other boats and planes have seemingly vanished from the area in good weather without even radioing distress messages. But although myriad fanciful theories have been proposed regarding the Bermuda Triangle, none of them prove that mysterious disappearances occur more frequently there than in other well-traveled sections of the ocean. It is one of the biggest mysteries of our time - that perhaps isn't really a mystery

Triangle area

The Bermuda Triangle is a stretch of the Atlantic Ocean bordered by a line from Florida to the islands of Bermuda, to Puerto Rico and then back to Florida. Some writers give different boundaries and vertices to the triangle, with the total area varying from 1,300,000 to 3,900,000 km² (500,000 to 1,510,000 sq mi). Consequently, the determination of which accidents have occurred inside the triangle depends on which writer reports them. The United States Board on Geographic Names does not recognize this name, and it is not delimited in any map drawn by US government agencies.

The area is one of the most heavily traveled shipping lanes in the world, with ships crossing through it daily for ports in the Americas, Europe, and the Caribbean Islands. Cruise ships are also plentiful, and pleasure craft regularly go back and forth between Florida and the islands. It is also a heavily flown route for commercial and private aircraft heading towards Florida, the Caribbean, and South America from points north.



History

- Origins

Some people trace the Bermuda Triangle history back to the time of Columbus, however the earliest allegation of unusual disappearances in the Bermuda area appeared in a September 17 1950 article published in *The Miami Herald* by Edward Van Winkle Jones. Two years later, *Fate* magazine published "Sea Mystery at Our Back Door", a short article by George X. Sand covering the loss of several planes and ships, including the loss of Flight 19, a group of five U.S. Navy TBM Avenger bombers on a training mission. Sand's article was the first to lay out the now-familiar triangular area where the losses took place. Flight 19 alone would be covered again in the April 1962 issue of *American Legion* magazine. In it, author Allan W. Eckert wrote that the flight leader had been heard saying, "We are entering white water, nothing seems right. We don't know where we are, the water is green, no white." He also wrote that officials at the Navy board of inquiry stated that the planes "flew off to Mars." Sand's article was the first to suggest a supernatural element to the Flight 19 incident. In the February 1964 issue of *Argosy*, Vincent Gaddis' article "The Deadly Bermuda Triangle" argued that Flight 19 and other disappearances were part of a pattern of strange events in the region. The next year, Gaddis expanded this article into a book, *Invisible Horizons*. In the whole of 1950s, the stories of Bermuda triangle basically had been spreading by the word of mouth. Every time there was a new incidence, people used to refer to that area by Bermuda triangle. In early 1960's, it acquired the name The Devil's Triangle.

- Research of Larry Kusche

Kusche's research revealed a number of inaccuracies and inconsistencies between Berlitz's accounts and statements from eyewitnesses, participants, and others involved in the initial incidents. Kusche noted cases where pertinent information went unreported, such as the disappearance of round-the-world yachtsman Donald Crowhurst, which Berlitz had presented as a mystery, despite clear evidence to the contrary. Another example was the ore-carrier recounted by Berlitz as lost without trace three days out of an *Atlantic* port when it had been lost three days out of a port with the same name in the *Pacific* Ocean. Kusche also argued that a large percentage of the incidents that sparked allegations of the Triangle's mysterious influence actually occurred well outside it. Often his research was simple: he would review period newspapers of the dates of reported incidents and find reports on possibly relevant events like unusual weather, that were never mentioned in the disappearance stories.

Kusche concluded that:

- The number of ships and aircraft reported missing in the area was not significantly greater, proportionally speaking, than in any other part of the ocean.
- In an area frequented by tropical storms, the number of disappearances that did occur were, for the most part, neither disproportionate, unlikely, nor mysterious;
- Furthermore, Berlitz and other writers would often fail to mention such storms or even represent the disappearance as having happened in calm conditions when meteorological records clearly contradict this.
- The numbers themselves had been exaggerated by sloppy research. A boat's disappearance, for example, would be reported, but its eventual (if belated) return to port may not have been.
- Some disappearances had, in fact, never happened. One plane crash was said to have taken place in 1937 off Daytona Beach, Florida, in front of hundreds of witnesses; a check of the local papers revealed nothing.
- The legend of the Bermuda Triangle is a manufactured mystery, perpetuated by writers who either purposely or unknowingly made use of misconceptions, faulty reasoning, and sensationalism.

- Further Responses

When the UK Channel 4 television program *The Bermuda Triangle* (1992) was being produced by John Simmons of Geofilms for the *Equinox* series, the marine insurance market Lloyd's of London was asked if an unusually large number of ships had sunk in the Bermuda Triangle area. Lloyd's determined that large numbers of ships had not sunk there. Lloyd's does not charge higher rates for passing through this area. United States Coast Guard records confirm their conclusion. In fact, the number of supposed disappearances is relatively insignificant considering the number of ships and aircraft that pass through on a regular basis.

The Coast Guard is also officially skeptical of the Triangle, noting that they collect and publish, through their inquiries, much documentation contradicting many of the incidents written about by the Triangle authors. In one such incident involving the 1972 explosion and sinking of the tanker SS *V. A. Fogg*, the Coast Guard photographed the wreck and recovered several bodies, in contrast with one Triangle author's claim that all the bodies had vanished, with the exception of the captain, who was found sitting in his cabin at his desk, clutching a coffee cup. In addition, *V. A. Fogg* sank off the coast of Texas, nowhere near the commonly accepted boundaries of the Triangle. David Kusche pointed out a common problem with many of the Bermuda Triangle stories and theories: "Say I claim that a parrot has been kidnapped to teach aliens human language and I challenge you to prove that is *not* true. You can even use Einstein's Theory of Relativity if you like. There is simply no way to prove such a claim untrue. The burden of proof should be on the people who make these statements, to show where they got their information from, to see if their conclusions and interpretations are valid, and if they have left anything out." Skeptical researchers, such as Ernest Taves and Barry Singer, have noted how mysteries and the paranormal are very popular and profitable. This has led to the production of vast amounts of material on topics such as the Bermuda Triangle. They were able to show that some of the pro-paranormal material is often misleading or inaccurate, but its producers continue to market it. Accordingly, they have claimed that the market is biased in favor of books, TV specials, and other media that support the Triangle mystery, and against well-researched material if it espouses a skeptical viewpoint. Finally, if the Triangle is assumed to cross land, such as parts of Puerto Rico, the Bahamas, or Bermuda itself, there is no evidence for the disappearance of any land-based vehicles or persons. The city of Freeport, located inside the Triangle, operates a major shipyard and an airport that handles 50,000 flights annually and is visited by over a million tourists a year.

Supernatural explanations

Triangle writers have used a number of supernatural concepts to explain the events. The top supernatural theories are:

◇ **Atlantis**

One explanation pins the blame on leftover technology from the mythical lost continent of Atlantis. Sometimes connected to the Atlantis story is the submerged rock formation known as the Bimini Road off the island of Bimini in the Bahamas, which is in the Triangle by some definitions. Followers of the purported psychic Edgar Cayce take his prediction that evidence of Atlantis would be found in 1968 as referring to the discovery of the Bimini Road. Believers describe the formation as a road, wall, or other structure, though geologists consider it to be of natural origin.

◇ **Unidentified flying objects (UFOs)**

Other writers attribute the events to UFOs. Charles Berlitz, author of various books on anomalous phenomena, lists several theories attributing the losses in the Triangle to anomalous or unexplained forces. There are a lot of UFO reports made by people who crossed the triangle but none of them is officially accepted.

◇ **Electronic Fog**

There are also theories regarding the phenomenon of electronic fog. That is the assertion made by Rob MacGregor and Bruce Gernon in their book *The Fog*. Gernon himself is a first-hand witness and survivor of this strange phenomenon. On December 4, 1970, he and his dad were flying their Bonanza A36 over the Bahamas. On route to Bimini they encountered strange cloud phenomena - a tunnel-shaped vortex - the sides of which the plane's wings scraped as they flew. All of the plane's electronic and magnetic navigational instruments malfunctioned and the magnetic compass spun inexplicably. As they neared the end of the tunnel, they expected to see clear blue sky. Instead, they saw only a dull grayish white for miles - no ocean, sky or horizon. After flying for 34 minutes, a time corroborated by every clock on board, they found themselves over Miami Beach - a flight that normally would have taken 75

minutes. MacGregor and Gernon believe that this electronic fog that Gernon experienced may have also been responsible for the famous disappearance of Flight 19, and other vanishing aircraft and ships.

◊ **Time Travel**

One of the most interesting supernatural theories is the one of time travel. This theory is based on the notion of parallel universes that are separated by time. This theory says that somehow, in the area known as the Bermuda Triangle, there is a window or door that allows transportation from one universe into another. The theory is that this transportation takes place seamlessly and without the immediate knowledge or consciousness of the individuals affected. The belief is that the individuals who have been lost in this time warp remain unchanged and do not age, and that ultimately, if they are able to cross back through time, they will be exactly the same as when they left.



Digital painting inspired by Bermuda's Triangle supernatural theories

Natural explanations

- **Compass variations**

Compass problems are one of the cited phrases in many Triangle incidents. While some have theorized that unusual local magnetic anomalies may exist in the area, such anomalies have not been found. Compasses have **natural magnetic variations** in relation to the magnetic poles, a fact which navigators have **known for centuries**. Magnetic (compass) north and geographic (true) north are only exactly the same for a small number of places. But the public may not be as informed, and think there is something mysterious about a compass "changing" across an area as large as the Triangle, which it naturally will. The "compass variation" explanation was published for the first time by U.S. coastguard in their effort to state their position on the subject of the Bermuda Triangle. The exact statement was:

"Countless theories attempting to explain the many disappearances have been offered throughout the history of the area. The most practical seem to be environmental and those citing human error. The majority of disappearances can be attributed to the area's unique environmental features. First, the "Devil's Triangle" is one of the two places on earth that a magnetic compass does point towards true north. Normally it points toward magnetic north. The difference between the two is known as compass variation. The amount of variation changes by as much as 20 degrees as one circumnavigates the earth. If this compass variation or error is not compensated for, a navigator could find himself far off course and in deep trouble."

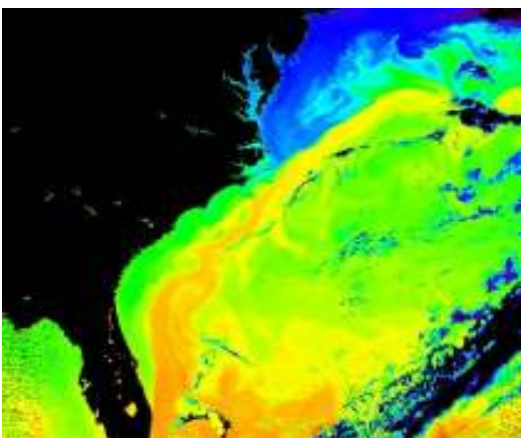
This is a very misleading statement since Compass variation does not mean that the compass needle points somewhere else. The **magnetic compass always points to Magnetic North**. The problem with this is that Magnetic North is not at the North Pole, the absolute geographic northern spot on this planet; it is 1,500 miles away. As far as the compass is concerned, the absolute north of this planet is at Prince of Wales Island in the Northwest Territories of Canada. The magnetic field of the earth can be likened to a bar magnet running through the earth from north to south. Both ends of the bar would be the north and south magnetic poles. The bar itself would be the axis or, as it is called in geophysics, the Agonic Line. This would not pose any problem to the navigator were it not for the fact that Magnetic North is located 1,500 miles away from the North Pole. Therefore, geographic north on the earth, the area we mentally

consider absolute north, is not where the compass points. Following the N on your compass is not going to The area of the Agonic Line marked in red, as it was when the Coast Guard drew up their statement 30 years ago. Along this line there is no need to adjust one's heading because Magnetic North and True North coincide. Already at Bimini island there is a 2 degree westerly variation. That means if a pilot wanted to head True West here, he would not steer 270o by his compass but 272o. It seems infinitesimal, but over time 2 degrees can lead to dozens of miles off course. In the short distances between the coast and the Bahama Islands, it doesn't amount to much here.lead you to the North Pole; it will lead you to Prince of Wales Island.



The red dots indicate True North, that is, the absolute geographic north of this planet (North Pole); and Magnetic North, 1,500 miles in a southerly direction from it

- **Gulf Stream**



The Gulf Stream is a deep ocean current that originates in the Gulf of Mexico and then flows through the Straits of Florida into the North Atlantic. In essence, it is a river within an ocean, and, like a river, **it can and does carry floating objects**. It has a surface velocity of up to about 2.5 metres per second (5.6 mi/h).[30] A small plane making a water landing or a boat having engine trouble can be carried away from its reported position by the current. The Gulf Stream, where the Triangle is located, is extremely swift and turbulent. It can pose extreme navigational challenges, especially for inexperienced sailors. The Gulf Stream has been reported to move faster than **5 mph** in some areas - more than fast enough to throw sailors hundreds of miles off course if

they don't compensate correctly for the current. It can also quickly erase any evidence of a disaster. However nowadays any vessel or aircraft in such a peril, can report immediately by using satellite equipment

- **Violent weather**

The area is subject to violent and unexpected **storms and weather changes**. These short but intense storms can build up quickly, dissipate quickly, and go undetected by satellite surveillance. **Waterspouts** that could easily destroy a passing plane or ship are also not uncommon. A waterspout is simply a tornado at sea that pulls water from the ocean surface thousands of feet into the sky. Other possible environmental effects include **underwater earthquakes**, as scientists have found a great deal of seismic activity in the area. Scientists have also spotted freak waves up to 100 feet high.



The **underwater topography** of the area may also be a factor. It goes from a gently sloping continental shelf to an extremely deep drop-off. In fact, some of the deepest trenches in the world are found in the area of the Bermuda Triangle. Ships or planes that sink into these deep trenches will probably

never be found. The area is also suitable for **Tropical cyclones**. Tropical cyclones are powerful storms, which form in tropical waters and have historically cost thousands of lives lost and caused billions of dollars in damage. The sinking of Francisco de Bobadilla's Spanish fleet in 1502 was the first recorded instance of a destructive hurricane. These storms have in the past caused a number of incidents related to the Triangle. A powerful downdraft of cold air was suspected to be a cause in the sinking of the *Pride of Baltimore* on May 14, 1986. The crew of the sunken vessel noted the wind suddenly shifted and increased velocity from 32 km/h (20 mph) to 97–145 km/h (60–90 mph). A National Hurricane Center satellite specialist, James Lushine, stated "during very unstable weather conditions the downburst of cold air from aloft can hit

the surface like a bomb, exploding outward like a giant squall line of wind and water." A similar event occurred to the *Concordia* in 2010 off the coast of Brazil.

- **Methane hydrates**

An explanation for some of the disappearances has focused on the presence of large fields of **methane hydrates** (a form of natural gas) on the continental shelves. Laboratory experiments carried out in Australia have proven that bubbles can, indeed, sink a scale model ship by **decreasing the density of the water**; any wreckage consequently rising to the surface would be rapidly dispersed by the Gulf Stream. It has been hypothesized that periodic methane eruptions (sometimes called "mud volcanoes") may produce regions of frothy water that are no longer capable of providing adequate buoyancy for ships. If this were the case, such an area forming around a ship could cause it to sink very rapidly and without warning.

Publications by the USGS describe large stores of undersea hydrates worldwide, including the Blake Ridge area, off the coast of the southeastern United States. However, according to the USGS, no large releases of gas hydrates are believed to have occurred in the Bermuda Triangle for the past 15,000 years



Graph that shows the instant loss of buoyancy on the methane hydrate eruption field

Notable incidents

- **Ellen Austin**



The Ellen Austin was an American schooner, a large multi-masted ship weighing over 1800 tons and was 210 feet long. The ship was manufactured way back in 1854 in Maine. She used to ply between London and New York over the Bermuda Triangle zone in the Atlantic ocean. In 1881 during one of her London - New York trips, she met with another ship

on the way which was moving in good speed. Strangely, the other ship had no one onboard. In order to salvage this unnamed ship, the captain of the Ellen Austin sent some of his prize crew on board this ship. When the crew boarded the ship, they in fact confirmed that there was not a single soul on board. The captain of Ellen Austin ordered the crew to guide the ship so that they could all sail together to New York. After two days, the two ships got separated by a huge sea storm. And when the storm subsided, the unnamed ship was gone and never seen again. Yes, the mystery of the ship is still being explored. The crew and the unknown ship could never be traced again. However, in 1944, a retired British navy officer, Commander Gould wrote about this incident. In his article, he mentioned that the ship was actually found again by the Ellen Austin, but again like last time, there was no one on board. And the ship was sailing erratically. The crew were also gone. The captain of Ellen Austin again sent some crew to the ship to salvage it. In few days time, the ship again disappeared and was never traced again. While the first part of the story is confirmed, the second part could not be confirmed due to lack of proper evidence. Many initially related the case to UFOs and imagined that it could be a case of abduction by the aliens.

The fact is, the mystery is not yet solved to date. Note that Ellen Austin started its journey on December 5, 1880 from London and finally reached New York on February 11, 1881. It was an unusually long journey and indicates that a lot of time was spent in searching for the unnamed ship.

- **USS Cyclops (AC-4)**

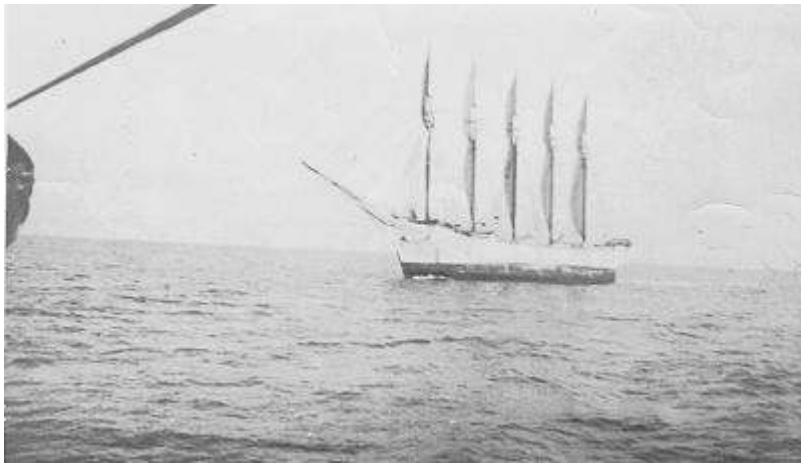
USS Cyclops was a massive carrier ship and supplied fuel to the American fleet



during the World War-I. The 522-foot Cyclops displaced 12,000 tons of water. On January 8, 1918, the ship started sail from the snow covered Norfolk navy port towards Rio of Brazil under the command of Lt. Commander Worley. The ship was only a few years old. The purpose of this voyage was to unload coal at Rio and load Manganese ores used mainly for making steel. On January 28, the ship reached Rio. It would now dock

here for two weeks. And as planned, large amount of coal was unloaded and then 10,000 tons of Manganese ores were loaded into the ship. So the ship was heavy and full. On the day of its departure, surprisingly some 73 local sailors were asked to board the ship. And more surprisingly, the American Consulate General of Rio, Gottschalk also boarded the ship. When asked why? He mentioned that he wanted to enlist his name in the US army to serve the nation during the war. USS Cyclops then set sale again on February 16th with 309 persons on board and huge load of cargo. It was homebound for Baltimore via Bahi. Now there was another odd turn to the story. After the ship left Bahi, instead of sailing straight towards Baltimore, the captain took it to Barbados in West Indies on March 3rd. He said that they needed more fuel and supplies. Although the US Consul General in Barbados did not feel the necessity of loading more coal and supplies, but the captain insisted, and it was finally done. On March 4th, Cyclops set sale again and was scheduled to reach Baltimore on March 13th. But... it was never heard of again. When the ship did not reach Baltimore as scheduled, a massive search was initiated soon along her whole course. Every naval ship from Cuba to Puerto Rico searched for any possible debris anticipating that it might had fallen pray to German Submarines. However, there was no trace of Cyclops. Until now this disappearance has remained as one of the greatest mysteries of the ocean, and strangely the ship was right in the middle of Bermuda Triangle when the incident had supposedly taken place. There are many theories, but none could prove it with real facts and evidence. Even after some 15,000-page report from the US Navy probing the Cyclops mystery, most explanations have still remained as speculations.

- **Carroll A. Deering**



Carroll A. Deering was a five-masted commercial schooner that was found run aground off Cape Hatteras, North Carolina, in 1921. Its crew was missing. The Deering is one of the most written-about maritime

mysteries in history, with claims that it was a victim of the Bermuda Triangle, although the evidence points towards a mutiny or possibly piracy. On August 19, 1920, the Deering prepared to sail from Norfolk, Virginia to Rio de Janeiro with a cargo of coal. The ship was captained by William H. Merritt. Merritt's son, Sewall, was his first mate. He had a ten-man crew made up entirely of Scandinavians (mostly Danes). On August 22, 1920, the Deering left Newport News. In late August, Captain Merritt fell ill and had to be let off at the port of Lewes, Delaware, along with his son. The "Deering Company" hastily recruited Captain W. B. Wormell, a retired, 66-year-old veteran captain, to replace him. Charles B. McLellan was hired on as first mate. The vessel set sail again for Rio on September 8, 1920, and arrived there, delivering its cargo without incident. Wormell gave his crew leave and met with a Captain Goodwin, an old friend who captained another cargo vessel. Wormell spoke of his crew with disdain, though he claimed to trust the engineer, Herbert Bates.[1] The Deering left Rio on December 2, 1920, and stopped for supplies in Barbados. First Mate McLellan got drunk in town and complained to Captain Hugh Norton of the Snow that he could not discipline the crew without Wormell interfering, and that he had to do all the navigation owing to Wormell's poor eyesight.[2] Later Captain Norton, his first mate and another captain were in the Continental Café and heard McLellan say, "I'll get the captain before we get to Norfolk, I will".[2] McLellan was arrested, but on January 9 Wormell forgave him, bailed him out of jail, and set sail for Hampton Roads. The ship was next sighted by the Cape Lookout Lightship in North Carolina on January 28, 1921, when the vessel hailed the lightship. The lightship's keeper, Captain Jacobson, reported that a thin man with reddish hair and a foreign accent told him the vessel had lost its anchors. Jacobson took note of this, but his radio was out, so he was unable to report it. He noticed that the crew seemed to be "milling around" on the fore deck of the ship, an area where they were usually not allowed. On January 31, 1921, the Deering was sighted run aground on Diamond Shoals, an area off the coast of Cape Hatteras, North Carolina, that has long been

notorious for its reputation as a common site of shipwrecks. Rescue ships were unable to approach the vessel owing to bad weather. The ship was not boarded until February 4, and it became clear that the ship had been completely abandoned. The ship's log and navigation equipment were gone, the crew's personal effects and the ship's two lifeboats were gone as well. In the vessel's galley it appeared that certain foodstuffs were being prepared for the next day's meal at the time of the abandonment. The Coast Guard vessel Manning attempted to salvage the Deering, but found this impossible. The vessel was scuttled, using dynamite, on March 4 to prevent her from becoming a danger to other vessels. The U.S. Government launched an extensive investigation into the disappearance of the crew of the Deering. Five departments of the government—Commerce, Treasury, Justice, Navy, and State—looked into the case. Herbert Hoover, then Secretary of Commerce, was intrigued by the fact that several other vessels of various nationalities—most notably the sulfur freighter Hewitt—had also disappeared in roughly the same area. Though most of these vessels were later revealed to have been sailing in the vicinity of a series of particularly vicious hurricanes, the Hewitt and Deering were proven to have been sailing away from the area of the storm at the time. Hoover's assistant, Lawrence Ritchey, was placed in charge of the investigation. Ritchey tried to chart what happened to the vessel between its last sighting at Cape Lookout and its running aground at Diamond Shoals by reading the log books of the Coast Guard lightships stationed at those places. The investigation remained largely fruitless, but it did take an interesting turn when, according to Kusche, Christopher Columbus Gray admitted the letter he had recovered had been forged. When an Italian inquiry into the disappearance of the vessel Monte San Michele revealed that there indeed had been heavy hurricanes in the vicinity, most of the conspiracy theories were dropped and mutiny was generally accepted as the answer to the riddle. In July 1921, the consulate general in Portugal reported that a sailor named Augusto Frederico Martins was under suspicion as being a member of the missing crew, until it was later discovered that he was a cook for the vessel Portugal. Another potential lead turned up when a member of the crew of the missing Hewitt, B.O. Rainey, was found serving on another vessel; however, when approached by State Department officials, he claimed that he had left the Hewitt before it left port at Sabine, Texas. The investigation finally wound down in late 1922 without an official ruling on the fate of the Deering. No explanation for the disappearance of the crew of the Carroll A. Deering was ever officially verified, though all of the genuine evidence seems to point to mutiny. Still, the case is a favorite of paranormalists and Bermuda Triangle proponents and has gained a reputation as a successor to the Mary Celeste as one of the truly great maritime mysteries.

- **Flight 19**



The saga of Flight 19 remains as one of the most mysterious disappearances in Bermuda Triangle. Five Avenger bomber planes that took off from the Naval base at Florida on 5th of

December 1945, never returned. U.S Navy's final report mentioned "Reasons Unknown" when citing the cause of the incident. So what was actually Flight 19 and what really happened? My findings below are the closest to the reality that one can possibly get to. Flight 19 was a training flight with five TBM Avengers or Torpedo Bombers and was led by Commander Charles Taylor. Each was a 3-seater plane, very robust, safe and US Navy's best bombing planes to destroy enemy submarines. It could carry up to 2000 pounds of bombing ammunitions and had a range of 1000 miles. Other than Taylor, there were 13 others in the flight (in different planes) but were all trainees. Taylor was the only experienced pilot. On December 5, 1945 at 2:10 p.m., the five Avengers of Flight 19 took off one after the other from the Naval Air Station (NAS) of Fort Lauderdale at Florida for a routine training session. It was a clear day.

US Navy Avenger planes similar to Flight 19

Flight 19 - Bermuda Triangle As per plans, the flight's path was to first go towards East into the sea for 56 miles up to Hens and Chicken Shoals to practice bombings. Then they were supposed go further east for another 67 miles towards the Bahamas. At this point they would turn north and go for 73 miles. Then turn back and head straight for the Naval Base back in Florida. This way they would cover a triangular

area over the sea. The triangle with the yellow line on the picture below was the planned route of the flight 19. The weather over the route was reported as excellent, a typical sunny Florida day. At about 3:30 p.m., Taylor sent a message to the control tower that his compass was malfunctioning and he thought he was somewhere around the Florida Keys, which is a chain of islands in the south of Florida. So instead of heading towards East, he thought that they actually flew southwards due to compass problems. Immediately an instruction was given from the tower to turn north and fly towards Miami, only if he was sure that they were at the Florida keys. However, Taylor's idea of being close to the Keys was wrong. They had probably gone to the East as originally planned, but for some reason he got confused. As he guided the flight more towards north, further out to the sea the avengers traveled. At 3.45 p.m., Taylor's voice was heard again at the control towers. This time he sounded worried and confused ... "Cannot see land, we seem to be off course". At this stage there was another transmission that was picked up when one trainee student said to the other "If we would just fly west, we would get home." He was right. But who would care? After all they had to follow a stubborn leader. While these days the pilots use modern navigational equipment like the GPS, in 1945 a pilot had to rely on his starting point, speed, time of flight and the direction indicated by the compass to know where he would exactly be during the flight. If any of these deviated, there was a high chance that the flight would be lost. However, let me also state an interesting fact here before we go further into the Flight 19 story. While Taylor was an experience pilot, he did have a history of getting lost. He was lost thrice during the World War II. And in two of such occasions, he had to ditch his plane into the sea to get rescued. Secondly, he did not have good knowledge about the area around east and south of Florida. So, an interesting twist to the story? Yes. In fact, at about 4:45 p.m. on that day, it was quite clear to the men on the Base Station that Taylor was hopelessly lost, and he was still trying to go further North and then East again. He was then instructed to hand over the control to one of the students. Apparently he did not. At 5:50 p.m. the ComGulf Center somehow managed to trace the Flight 19 avengers on its radar. It was apparently at the east of New Smyrna Beach, Florida. By then communications had become so poor that this information could not be passed on to the lost planes. It was getting dark. The weather started to become rough too and the Avengers were very low in fuel. Hope was rapidly fading for the Flight 19 by then. Officers at the naval base station thought it was enough. At 7:27p.m, two Martin Mariner planes were sent to search the Flight-19. These mariners were like flying boats that could also land on the sea. The last transmission from Flight 19 was heard at 7:04 p.m. Search continued all through the night and the next day. There was no sign of the Avengers. The rescue Mariners were supposed to meet at the search zone. But strangely the second Mariner never showed up, it too disappeared.

- **Star Tiger and Star Ariel**



◇ On January 30, 1948, the Star Tiger, a Tudor aircraft was on its way to Bermuda. The long 12 hours journey from Santa Maria in Azores was almost coming to an end. At 3:15 a.m., the radio operator of the aircraft received the radio position of the plane. It was all set to land at 5a.m in Bermuda. In just one and half hours time, the 25 passengers on board would see the marine lights of Bermuda. But 5a.m. had come and gone. The plane was never seen or heard of again. Here is the full story of Tudor Star Tiger's mysterious disappearance in Bermuda Triangle.

The Background

Star Tiger was the third Tudor Mark IV aircraft that was ordered by the British South American Airline (BSAA). It was an extended and improved Tudor aircraft manufactured by the Avro Corporation. Avro also manufactured two other types: Yorks and Lancastrians. In 1948, the Tudor was a relatively new aircraft and had history of 575 hours of flying experience from the time it was first launched. However, there was no prior incidence of accidents or malfunction. The dreaded flight of Tudor Star Tiger. On January 28, 1948, Star Tiger started from Lisbon for its first leg of journey to Santa Maria in the Azores. It was supposed to be a short halt for refueling. But due to bad weather conditions and strong winds, the Captain Brian W

McMillan decided that they would fly to Bermuda the next day. So on 29th January, the flight took off from Santa Maria despite strong winds. There were 25 passengers on board, and one of them a very distinguished person - Air Marshal Sir Arthur Coningham, a hero of World War II.

The captain decided to fly at an exceptionally low altitude of 2000 feet in order to avoid the strong head wind that originates particularly due to the Gulf stream at the Atlantic. At 3:15 a.m., when many of the passengers were sleeping or dozing, the radio operator of the flight pressed a button to get position of the plane from Bermuda's radio operator. The Bermuda operator responded giving the position of the plane at 72 degrees. On receiving the message, the Captain McMillan and the flight radio operator agreed that the Estimated Time of Arrival at Bermuda would be 5a.m. The Bermuda operator tried to contact the Star Tiger later at 3:50am but got no response. He tried again at 4:40am when it was almost time for the flight to start its descend for landing. He did not get any response again and immediately declared a state of emergency. The plane's landing time of 5am had long passed. There was no trace of the flight, nor there was any distress call raised by the captain of the flight. There was a massive rescue operation launched by the USAAF personnel with 26 aircraft flying for 882 hours to search for the Star Tiger. The operation lasted for 5 days. But they found no trace of it or its passengers and the crew. On January 31, 1948, the news of the passenger Sir Arthur Coningham's death shared the front page of The New York Times along with other terrible news of Mahatma Gandhi's assassination and the death of Orville Wright. Investigation on the disappearance of Star Tiger. The British Aviation Ministry immediately grounded the other two Tudor aircraft owned by the BSAA airlines although they were later released only for cargo operation. The ministry also initiated a thorough investigation headed by Lord MacMillan. The investigation lasted for 11 days. The team came back with a lot of observations on what could not have happened rather than what may have happened to the Star Tiger flight. Very rare to be seen in the history of such investigation, the team admitted its inability to reach to the real cause. This is what they quoted in their final report: "In closing this report it may truly be said that no more baffling problem has ever been presented for investigation. In the complete absence of any reliable evidence as to either the nature or the cause of the accident of Star Tiger the Court has not been able to do more than suggest possibilities, none of which reaches the level even of probability. Into all activities which involve the co-operation of man and machine two elements enter of a very diverse character. There is an incalculable element of the human equation dependent upon imperfectly known factors; and there is the mechanical element subject to quite different laws. A breakdown may occur in either separately or in both in conjunction. Or some external cause may overwhelm

both man and machine. What happened in this case will never be known and the fate of Star Tiger must remain an unsolved mystery." So what was the cause of Tudor Star Tiger disappearance? Did the Star Tiger run out of fuel? Not possible. It was confirmed by the investigators that with its fuel tank capacity, it should have had fuel for at least one more hour of flying even after reaching Bermuda. Was it an engine failure? The Tudor Mark IV aircraft had four engines. It is known that with the reduced load of the fuel, the aircraft could easily fly with 3 or even 2 engines. Three engines failing all at the same time is absurd. Was it a structural failure or collapse? Even if it was a structural failure due to strong wind, the Star Tiger was flying at such a low height of 2000 feet that there should not have been any problems with the cabin pressure. So the passengers should have been all safe. There was no distress call made by the crew either. Many receiving stations were listening on Star Tiger's frequency, and none heard anything.

◇ The Star Ariel was one of three enlarged and improved versions of the Avro Tudor, designated Mark IVs. On 17 January 1949 the Star Ariel was awaiting flight instructions at Kindley Field, Bermuda, with no passengers. BSAA Tudor G-AHMK Star Lion meanwhile suffered an engine failure on approach to Bermuda, landing without incident. Star Ariel was promptly pressed into service to take G-AHMK's passengers on to their destination of Kingston, Jamaica. Star Ariel took off at 08:41 with 7 crew and 13 passengers. Weather conditions were excellent, and her pilot, Captain John McPhee, decided on a high altitude flight to take advantage of it. About an hour into the flight McPhee contacted Kingston by radio:

"I DEPARTED FROM KINDLEY FIELD AT 8:41 A.M. HOURS. MY ETA AT KINGSTON 2:10 P.M. HOURS. I AM FLYING IN GOOD VISIBILITY AT 18,000 FT. I FLEW OVER 150 MILES SOUTH OF KINDLEY FIELD AT 9:32 HRS. MY ETA AT 30° N IS 9:37 HRS. WILL YOU ACCEPT CONTROL?"

And then at 09:42:

"I WAS OVER 30° N AT 9:37 I AM CHANGING FREQUENCY TO MRX."

No more messages were received from Star Ariel and Kingston finally reported her overdue.

The search for the Star Ariel began with another Tudor IV, G-AHNJ Star Panther. She had earlier landed at Nassau, and now refuelled and took off at 15:25 to fly out to Star Ariel's route, bisect it, and follow it back to Bermuda. Another aircraft took off from Bermuda, flew 500 mi (800 km), then did a 10 mi (16 km) lattice search all the way back. A US Navy task force headed by the battleship USS Missouri and including the aircraft carriers USS Kearsarge and USS Leyte assisted in the search, which expanded to dozens of ships and several planes over the next few days.

By 19 January the search had been broadened to an area of 55,000 sq mi (140,000 km²) southwest of Bermuda. USAF Major Keith Cloe, who had been put in charge, said that the search would be continued until 22 January and extended if any reports of debris were received.[1] The search was finally abandoned on 23 January, with aircraft from Kindley Field having flown over 1,000,000 mi (1,600,000 km).[2] No sign of debris, oil slicks, or wreckage had been found.

- **Douglas DC-3**



The disappearance of a Douglas DST airliner, registered NC16002, occurred on the night of 28 December 1948 near the end of a scheduled flight from San Juan, Puerto Rico to Miami, Florida. The aircraft carried 29 passengers and three crew members.[1] No probable cause for the loss was determined by the official investigation and it remains unsolved. Captained by pilot Robert Linqvist, assisted by co-pilot Ernest Hill and stewardess Mary Burkes, the aircraft ended its Miami-San Juan leg at 19:40 EST on 27 December. Linqvist informed local repair crewmen that a landing gear warning light was not functioning and that the aircraft batteries were discharged and low on water. Unwilling to delay the aircraft's scheduled takeoff for Miami for several hours, Linqvist said the batteries would be recharged by the aircraft's generators en route.

Linqvist taxied NC16002 to the end of runway 27 for takeoff, but stopped at the end of the apron due to lack of two-way radio communication. Though capable of receiving, Linqvist reported to the head of Puerto Rican Transport, who had driven out to the aircraft, that the radio could not transmit because of the low batteries. After agreeing to stay close to San Juan until they were recharged enough to allow two-way contact, NC16002 finally lifted off at 22:03. After circling the city for 11 minutes, Linqvist received confirmation from CAA at San Juan and told the tower that they were proceeding to Miami on a previous flight plan.

The weather was fine with high visibility, but the aircraft did not respond to subsequent calls from San Juan. At 23:23, the Overseas Foreign Air Route Traffic Control Center at Miami heard a routine transmission from NC16002, wherein Linnquist reported they were at 8,300 ft (2,500 m) and had an ETA of 04:03. His message placed the flight about 700 mi (1,100 km) from Miami. Transmissions were heard sporadically throughout the night by Miami, but all were routine.

At 03:40, Linnquist reported he was 50 mi (80 km) south of Miami. The transmission was not heard at Miami but was monitored at New Orleans, Louisiana, some 600 mi (970 km) away, and was relayed to Miami. The accident investigation report[2] issued by the Civil Aeronautics Board said the pilot may have incorrectly reported his position. Miami weather was clear but the wind had moved from northwest to northeast. The accident investigation report said Miami transmitted the wind change information but neither Miami nor New Orleans "was able to contact the flight" so it is unknown whether NC16002 received it. Without this knowledge the aircraft could have drifted 40–50 mi (64–80 km) off course, which widened the search area to include hills in Cuba, the Everglades and even Gulf of Mexico waters. Nothing further was heard from Linnquist and the aircraft has never been found. In subsequent years, researchers into unexplained disappearances have included the flight among others said to have disappeared in what came to be termed the Bermuda Triangle. A plane similar to the DC-3 has been found by divers in the Bermuda Triangle. It is possible that this is the aircraft that was lost, however it is impossible without certain parts and registrations to be certain.

In a report released 15 July 1949, the board convening the investigation filed several factors about the aircraft:

◇ The aircraft originally built on 12 June 1936, and had a total of 28,257 flying hours prior to the landing in San Juan. It was inspected several times in the past two years and certified to be airworthy.

◇ The aircraft was given a partial overhaul, including the replacement of both engines in November 1948. An in-flight test was conducted to judge the results of the overhaul, including flying to New Jersey and back. Again, the aircraft was certified to be airworthy.

◊ The company's maintenance records were incomplete. In one case a subcontractor working on an engine in October 1948 completed the task but did not save any records proving it.

As far as human error, the report cited several occurrences:

◊ Captain Linquist told San Juan that his landing gear down indicator lamps did not work. This led to the discovery that his batteries were low on water and electrical charge. While he ordered the refilling of the batteries with water, he ordered the reinstallation of the batteries on board the aircraft without recharging them.

◊ The aircraft left with the batteries charged only enough to satisfy two-way radio communication with the tower, with the understanding an in-flight flight plan would be filed before they left the vicinity of San Juan. This was not done, and the plane continued on a course for Miami. It was noted in the report that the plane's radio transmitter did not function properly due to the low battery charge.

◊ The aircraft left San Juan with a cargo/passenger weight 118 lb (54 kg) over the allowable limit.

◊ A message was sent to the plane concerning a change in wind direction which could have been strong enough to push the plane off course. It was not known if the plane received the message.

◊ The plane's electrical system was not functioning normally prior to departing San Juan.

Because of the lack of the plane's wreckage and other sufficient information, probable cause for the loss of the aircraft could not be determined

- **KC-135 Stratotankers**

On August 28, 1963, a pair of US Air Force KC-135 Stratotanker aircraft collided and crashed into the Atlantic. The Triangle version of this story specifies that they did collide and crash, but there were two distinct crash sites, separated by over 160 miles (260 km) of water. However, Kusche's research showed that the unclassified version of the Air Force investigation report stated that the debris field defining the second "crash site" was examined by a search and rescue ship, and found to be a mass of seaweed and driftwood tangled in an old buoy.

- **Connemara IV**

A pleasure yacht was found adrift in the Atlantic south of Bermuda on September 26, 1955; it is usually stated in the stories (Berlitz, Winer[15][16]) that the crew vanished while the yacht survived being at sea during three hurricanes. The 1955 Atlantic hurricane season shows Hurricane Ione passing nearby between the 14th and 18th of that month, with Bermuda being affected by winds of almost gale force.[18] In his second book on the Bermuda Triangle, Winer quoted from a letter he had received from Mr J.E. Challenor of Barbados:[47]

On the morning of September 22 Connemara IV was lying to a heavy mooring in the open roadstead of Carlisle Bay. Because of the approaching hurricane, the owner strengthened the mooring ropes and put out two additional anchors. There was little else he could do, as the exposed mooring was the only available anchorage. In Carlisle Bay, the sea in the wake of Hurricane Janet was awe-inspiring and dangerous. The owner of Connemara IV observed that she had disappeared. An investigation revealed that she had dragged her moorings and gone to sea.

Conclusion

In conclusion, the Bermuda Triangle has always been a subject of question and fear. It has been studied to no end and questions have not been answered. Many still today search for answers to all those lost in its clutches with no answer in sight. Those lost will probably never be found, but perhaps if we keep searching, we can find out what happened to those ships and planes lost to put minds at rest.

There are many scientists and military personnel that believe the area of the Bermuda Triangle is nothing more than a coincidence. There are some that have theorized that per square foot of ocean, there is nothing extraordinary about the number of missing planes, ships, and people. They imply that this is "normal" for the ocean to behave like this and many to be lost at sea and it is nothing exclusive about the Bermuda Triangle.

Those who have lost loved ones to The Devil's Triangle still have yet to find so much as a piece of jewelry or clothing from those lost. The book will never be close for them and hopefully we will continue to search for answers even if they are outside our realm of thinking and science. Who really knows what lies in the depths of the Bermuda Triangle?

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