100th Anniversary of the Sinking of the *USS San Diego* : Findings of the Two-Year Interdisciplinary, Multi-Agency Inquiry

Gary Lehman

And now it can be told. An interdisciplinary team of ten US Federal agencies, the military, scientists and academicians collaborated on a two-year study of the wreck of *USS San Diego* on the occasion of the 100th anniversary of its sinking, to determine definitely what happened that day. The study was undertaken in memory of the six sailors killed in the sinking. New technologies were employed in the study, including finite-element engineering modeling of the flooding and sinking timeline based on loads aboard the ship and interior compartmentalization, high density/definition photogrammetry mapping and side scan sonar analysis of the wreck and debris field, and underwater unmanned probes (UAV's and ROV's) equipped with laser beams to measure the structure.

The initial court of inquiry by the US Navy brass has been confirmed -- the finding: German submarine *U165* laid the mine that sank *USS San Diego*.

Many of us here in the northeast have dived on the *USS San Diego*. Many of us have seen photos and videos of the brooding wreck. In this article we'll relate that there is quite a backstory to this ship and its sinking! Towards the end of WWI in 1918, *USS San Diego* was sunk by a German naval mine. July 19th, 2018 marked the 100th anniversary of the sinking of this 15,000-ton cruiser, technically called *CA-6* (and named *USS San Diego*). *San Diego* was destroyed by a 'bottom' mine, laid by German Uboat *U165*, and she sank 10 miles southeast of Fire Island, NY. Six sailors were killed. *USS San Diego* was the only major US warship sunk during World War I. She is on her side in 110' of water, and is slowly, inexorably, collapsing / imploding -- and will at some point in the not-too-distant future be completely reclaimed by the ocean…

During WWI, Germany and Britain vigorously laid naval mine fields in an attempt to sink each other's ships and to have supremacy on the high seas. Laying of mines can be defensive - to deny the enemy use of certain parts of sea lanes, or to protect friendly shipping by quarantining areas (securing those areas from enemy surface or submarine penetration). Mines can also be used offensively, and can be laid in known enemy shipping lanes (with intention to damage / destroy enemy ships).

For purposes of this discussion, mines can either have positive buoyancy and be attached to an anchor on the bottom (in water deeper than 200'), or can be placed on the bottom (in water less than 200' deep). In the former case, when a ship strikes a moored mine (generally suspended by a chain from a bottom anchor point extending upwards to just below the water's surface), the resulting explosion

blows a hole into the ship's hull when contact is made. In the latter case, the displacement of water caused by the explosion of the on-the-bottom-placed mine can split open or even collapse the hull of the ship as it passes over the mine, which then detonates and causes the displacement of water. This results in the loss of water to support the weight of the ship, which can break the back of the hapless vessel.

Owing to naval warfare in the Franco-Prussian war of 1870, Germany got a big head start over the British in naval mine warfare, technology and doctrine. Consequently, German naval mine technology was more advanced than that of the British at the start of WWI. During WWI the German Navy also met with considerably greater success sinking ships than the British did, due to more aggressive, and primarily offensive naval mine tactics. The British captured a German mine and reverse-engineered it; this improved design proved effective for the British but by then, land-based warfare was the deciding strategic factor.

USS San Diego was only one of hundreds of Allied ships which were sunk to German naval mines in WWI. Several notable losses to the British Navy come to mind. Germany got off to a good start in WWI with its naval mine warfare, right off the bat. A few months after the start of hostilities in 1914, the largest warship to be sunk in WWI - *HMS Audacious* – was sunk in October 1914 by a German mine which had just been laid just a few days prior in the likely staging area for British warships. (The humiliation and propaganda value of this loss to the Germans was too great, and the sinking was kept secret by the British Admiralty and the press corps until the end of the war. But the Germans knew *HMS Audacious* had been sunk and reported this). *HMS Audacious* was just two-years old, having been launched in 1912 and commissioned in 1913, and she was the pride of the British Navy – and then -- with her paint barely dry—she was sunk and on the bottom. Another grievous loss to the British in WWI to a German naval mine was the cruiser *HMS Hampshire* on June 5,1916 - a stone's throw from Scotland's Orkney Island. *HMS Hampshire* was almost exactly the same size as *USS San Diego*. She was on her way to Russia with Lord Kitchener of Khartoum and his entourage to meet with the Russian Imperial War staff to coordinate their fighting strategies in a two-front war against Germany. *Hampshire* hit a German mine. Kitchener was a British field marshal, imperial administrator, revered 'Conqueror of the Sudan' (hence Kitchener of Khartoum), commander-in-chief during the South African (Boer) War, and Secretary of State for War at the beginning of World War I. Lord Kitchener, his entire staff, and virtually all of ship's company were lost in the sinking. There is a massive monument at Orkney's Marwick headlands, overlooking the spot where *HMS Hampshire* was destroyed. (I spoke with shopkeepers in Orkney who, to this day, remember their parents and grandparents, farmers on the fertile Marwick moors, talking about that terrible night of the explosion.)

Another stunning British ship loss to a German naval mine was His Majesty's Hospital Ship *HMHS Brittanic.* She was the sister ship to *RMS Titanic*. *Brittanic* was discovered by Jacques-Yves Cousteau in 1975, and was the object of several dive expeditions to explore her and also to determine the circumstances of her sinking. During WWI Germany steadfastly maintained, contrary to British claims at the time, that *Brittanic* was *not* torpedoed by a German submarine (and in fact, this was true – *Brittanic*

was NOT sunk by a torpedo attack). *Brittanic* was a hospital ship and fully-illuminated, with a big 'red cross' on each side of the ship, making it impossible to misidentify *Brittanic* as a man-o-war. Of course, it suited British propaganda purposes at the time to *claim* that *Brittanic* was wantonly torpedoed by "the German Hun". (If this is of interest, I greatly recommend reading Richie Koehler's book *Mystery Of The Last Olympian* http://www.mysteryofthelastolympian.com/ which details the sinking of Brittanic, the human side of the story, the full envelope of historical background, and of course the spell-binding dive operations around the exploration of *Brittanic.* Be prepared however to not put the book down; trust me, you will read it cover to cover!).

So, taking all this together - we see that the German Admiralty in WWI had a hugely effective naval mine warfare campaign in effect--so much so, that it reached across the Atlantic Ocean in 1918 to sink the *USS San Diego*, the 100th anniversary of whose sinking we observed in July, 2018!

PS: For those who wish to personally inspect a warship (intact and topside!) which pioneered some of the naval architecture of *USS San Diego,* visit Independence Seaport Museum in Philadelphia, where museum ship *USS Olympia* (C6) is restored to its 1898 combat configuration. There are striking visual similarities to *USS San Diego* (you will readily see the family resemblance, although *Olympia* is 2/3 the size). *Olympia* is the oldest steel-hulled ship of the US Navy still afloat. She was forged in battle in the Spanish-American War, and (with other ships of the US fleet,) destroyed the Spanish navy fleet in Manila harbor in 1898. From her bridge Commodore Dewey famously instructed *Olympia*'s captain, "You may fire when you are ready, Gridley" (and …you can actually stand in his footprints on the bridge!).