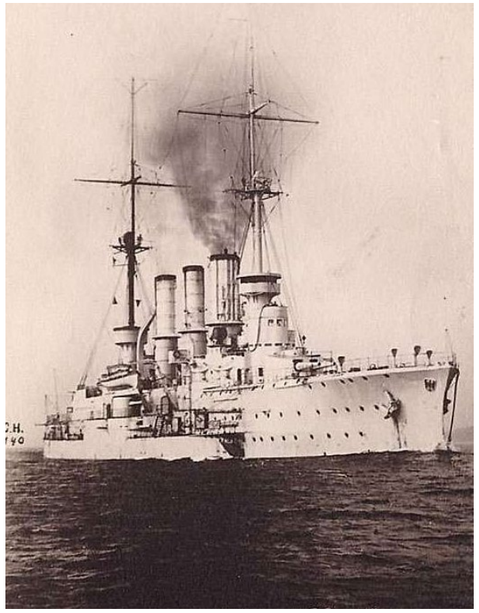
SMS Friedrich Carl

— Diving the Flagship of Admiral Ehler Behring

Text and photos by Vic Verlinden

The armored cruiser *Friedrich Carl* was constructed in the year 1902 at the well-known shipyard of Blohm & Voss in Hamburg, Germany. The armored cruiser had a length of 126m and was equipped with an impressive array of guns and torpedo launchers. She was the second ship of the Prinz Adalbert class when she was commissioned by the Imperial German Navy on the 12 December 1903.



Historical photo of SMS *Friedrich Carl*

In the early years, she served as a torpedo training ship. Because of her three engines, she could reach a top speed of 20 knots. During the outbreak of the First World War, she served as the flagship of Rear Admiral Ehler Behring. At this time, she was converted to carry two seaplanes. She was the first ship of the Imperial Navy able to carry and launch seaplanes.

At the start of the war, Behring was ordered to actively monitor the activities and movements of the Russian fleet in the Baltic Sea. To execute this mission, the *Friedrich Carl* was accompanied by several light cruisers and four destroyers. The squadron was operating from the port of Danzig but was not able to sail due to the bad weather.

Canon (left and bottom right) on the wreck of the *Friedrich Carl;* Discaarded fishing nets cover parts of the wreck (below)

An unexpected explosion

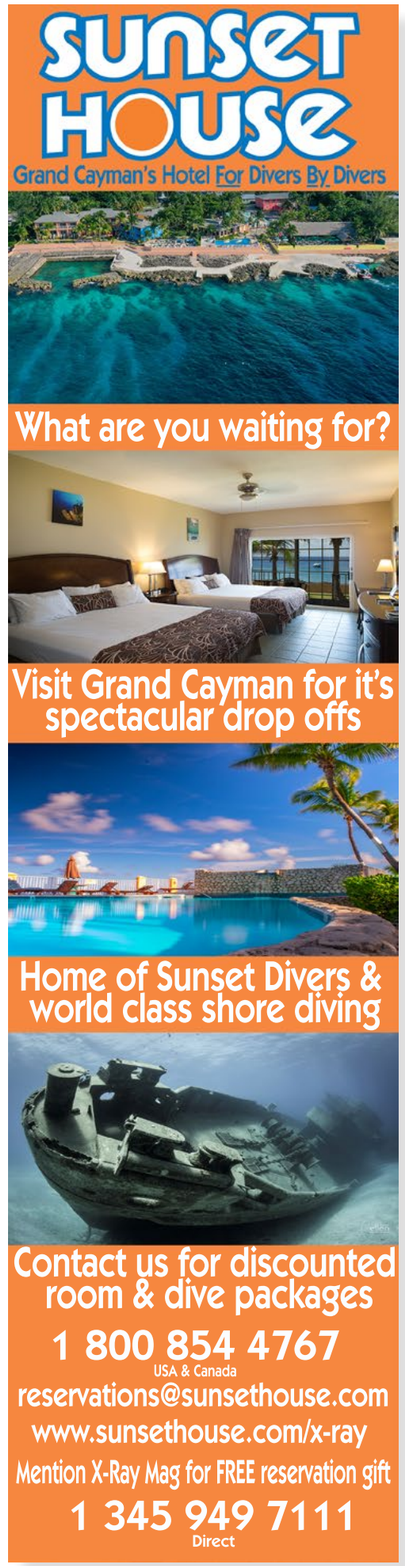
Despite the bad weather, the Russian minelayers had not been idle and had laid various mine-fields in the operating area of the *Friedrich Carl*. On 17 November, Behring ordered the continuation of the mission and the vessels left the port.

When the vessel was 30 miles away from the port of Memel (Klaipėda), it was struck by a heavy explosion. Immediately, the admiral gave the order to try all means to save the ship. Every possible measure to keep the ship afloat was taken; however, in the end, the abandon-ship order was given, and all sailors and officers left the ship. There were only eight deaths among the 557 crew members and officers, most of whom were taken on board the light cruiser *Augsburg*. A while later, the *Friedrich Carl* disappeared under the waves and sank to the bottom of the Baltic Sea. The loss of the beautiful warship was a heavy blow to the German navy, as the vessel could not be replaced immediately.

Dive operation in Lithuania

As early as 2017, I had decided to dive the wreck of the SMS *Friedrich Carl*, but due to circumstances, this trip was postponed. However, a new date was set for June 2018. On 23 June 2018, I was with my dive buddy, Karl Van Der Auwera, on the way to the port of Kiel in Germany. From Belgium, this was only a good 650km drive.

We embarked on a DFDS Seaways ferry that would deliver us the next day to the port city of Klaipėda in Lithuania. From there, it was only a 10-minute drive to our expedition ship, *NZ 55*. The owner of the ship is Linus Duoblys, and our dive team consisted of five divers from three different countries. My dive buddy and I would dive with closed-circuit rebreath-



Diver at one of the canons of the *Friedrich Carl* (left); The expedition ship, *NZ55* , docked at the port city of Klaipeda in Lithuania (below); Lamp on the wreck of the *Friedrich Carl* (bottom right)

ers, but there were also team members who would make the dives with open-circuit systems.

The maximum depth we would reach on the wreck would be 82m. However, the water temperature at that depth was only 3°C. The good news was that the temperature at the stage depth was 15°C. The plan was to dive the next day on another wreck, which was 40m away, so that we were able to test our equipment.

The weather reports looked good for the next few days. This was important because the *Friedrich Carl* was 40 miles from the harbor.

Test dive

The wreck of the SS *Edith Bosselmann* could be reached after two hours' sailing from the port of Klaipėda. Luckily, the weather was as predicted—calm—and there was hardly a wave to be seen on the sea.

This wreck upon which we would do our test dive was discovered two years ago and was located at a depth of 51m. The *Edith Bosselmann* was a cargo ship loaded with coal that sank on 9 December 1942 after a collision with a mine, which was laid by the Russian submarine L3.

When I started the dive on the *Edith Bosselmann* with my buddy, the visibility was not so good in the first 15m. But down on the wreck, visibility was about 12m. However, at 3°C, it was freezing cold at the bottom.

The wreck itself was positioned on its port side and partially covered by fishing gear. At the bottom, the lower part of the ship's compass was clearly recognizable. After a short reconnoitre of the cargo holds, we swam towards the stern and noticed the propellers and

The 3°C water at 82m depth of the *Friedrich Carl* keeps pile worms away, so the wood on the deck looks like new.

rudder. The dive on the *Edith Bosselmann* was a good warm-up for our dive on the SMS *Friedrich Carl* the next day.

Underwater museum

After our dive on the *Edith Bosselman*, we prepared the rebreathers again, as we had to leave early the next day. The boat trip to the wreck took more than five hours for the one-way journey. Including the diving, we would certainly be on the move for 13 to 15 hours. However, we were lucky again with the weather, and the trip went smoothly.

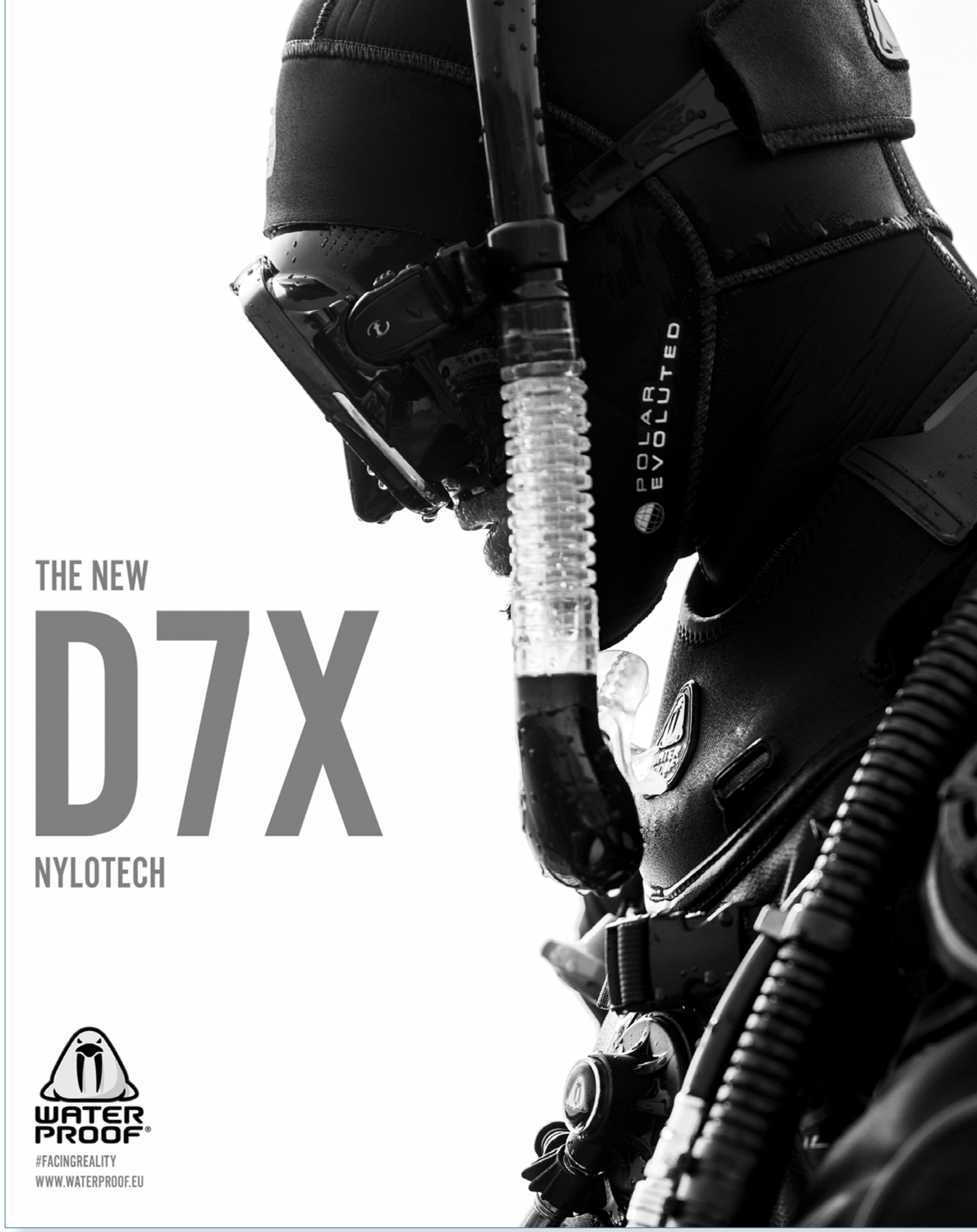
The dive plan was such that Auwera and I would be the first team to launch. We did a final inspection of the equipment and jumped into the water to start our descent. At a depth of 15m, I started to feel the cold temperature of the water. But because it was our second dive, we were already a bit adapted to the cold, so it was not so bad.

The wreck was at a maximum depth of 82m, but when we landed on the bottom, we could not distinguish the wreck in the dark. We swam around to try and find it, because the downline could not be far from the wreck. After swimming around for 10 minutes, we decided to ascend. When we had risen about 15m, we suddenly saw the wreck and swam across the port side to the midship section. Here, we immediately saw the large guns that were turned outwards. It was a beautiful sight in the light of the camera lights, because the wreck was almost clear of marine growth.

Even pile worms cannot tolerate this cold water, and that was the reason why the wood, which was still on the deck, appeared like new. All the details, such as the ship's lights, were clearly visible on this wreck, which made it unique for a ship from the First World War.

We had a maximum bottom time of 25 minutes, and these were now used up, so we had to start our ascent. For the next two days, we went back to the wreck.

Our second dive was the best of all the dives because we managed to swim towards the



The highlight of the expedition was finding the bronze German Imperial Eagle coat of arms on the *Friedrich Carl*.

bow of the wreck where we found a bronze plate with an eagle on it. On our way towards the bow, we filmed the bollards and various other parts; however, the view of the beautiful bronze eagle on the plate was the highlight of all the dives to the wreck. This alone made the trip to Lithuania more than worth it!

In search of the stern

During the last dive, we wanted to explore the stern and the bridge. The visibility was a lot less this time when we descended. The many fishing nets on the wreck made it a dangerous business, if one did not pay attention. We had landed back at the big guns, but a few meters farther on, we could see one of the smaller guns that was placed on the side of the ship.

We swam away from the sea bottom as there was a big silt cloud that reduced the visibility to almost zero. Here, we found various grenades, which were scattered over this part of the seabed. However, there was no sign of the propellers and some other parts of the ship. The part where the bridge was supposed to be was probably under a layer of mud, which was regrettable. In the future, an expedition will be undertaken to remove the fishing nets from the wrecks in Lithuania. ■

Having dived over 400 wrecks, Vic Verlinden is an avid, pioneering wreck diver, award-winning underwater photographer and dive guide from Belgium. His work has been published in dive magazines and technical diving publications in the United States, Russia, France, Germany, Belgium, United Kingdom and the Netherlands. He is the organizer of the tekDive-Europe technical dive show. See: ***tekdive-europe.com****.*

PROFESSIONAL:

Someone who is defined by the standards of education and training they receive in order to gain the expert knowledge and skill necessary to perform a certain role.

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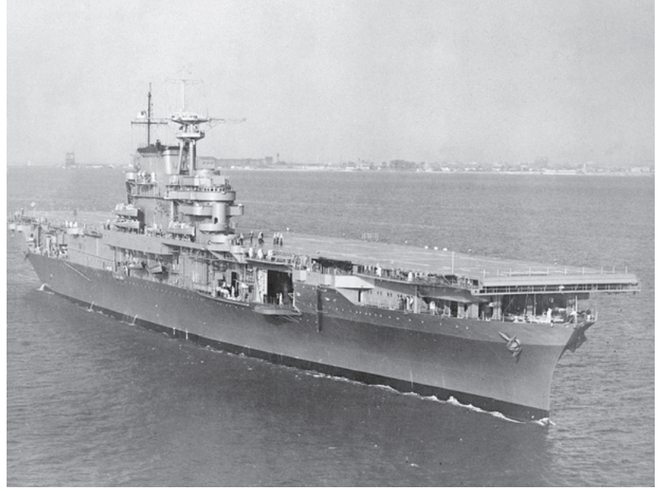


US NAVY PHOTO 80-G-463613 / PUBLIC DOMAIN

The wreckage of the USS *Hornet* has been found near the Solomon Islands 76 years after the aircraft carrier was sunk during a World War II naval battle.

Wreckage of WWII aircraft carrier USS *Hornet* discovered

More than 75 years after the aircraft carrier USS *Hornet* sank in a Second World War battle, Paul Allen's *Petrel* research vessel has uncovered its wreckage three miles under the South Pacific Ocean.

The USS *Hornet* was involved in many key events of the war, including launching the famed Doolittle Raid on Tokyo—the first airborne attack on the Japanese home islands after Pearl Harbor and the United States' entry into the war. It also played a major part in the Battle of Midway. After a fierce battle off Santa Cruz Island in October 1942, which has been described as one of the more bloody and vicious at-sea battles of the war, the USS *Hornet* was attacked by a wave of Japanese dive bombers, torpedo planes and destroyers, hitting the ship with torpedoes.

Located at 5,400m

But now, after years of searching, the wreckage of the USS *Hornet* was discovered in late January 2019, by the expedition crew of the research vessel RV *Petrel*. The *Hornet* was found 5,400m (about 17,700ft) below the surface, resting on the floor of the South Pacific Ocean. The *Petrel* made history in 2017 when it discovered the wreck of the USS *Indianapolis*, which was sunk in 1945 by a Japanese submarine in one of America's worst naval disasters. The *Petrel* took on the search for the *Hornet* as part of its mission to investigate scientific phenomena and historical mysteries in the South Pacific. The 250ft research vessel's previous shipwreck finds include the USS *Lexington*, the USS *Juneau* and the USS *Helena*.

The 10-person expedition team on the 250ft RV *Petrel* were able to locate the *Hornet's* position by piecing together data from national and naval archives, which included official deck logs and action reports from other ships engaged in the battle. Positions and sightings from nine other US warships in the area were plotted on a chart to generate the starting point for the search grid. In the case of the *Hornet*, she was discovered on the first dive mission of the *Petrel's* autonomous underwater vehicle and confirmed by video footage from the remotely operated vehicle, both pieces of equipment depth-rated to 6,000m.

Proud to find the ship's remains, the expedition team said the find was an homage to Paul Allen, who passed away in December 2018 from complications related to non-Hodgkin lymphoma. ■

WWII Japanese Battleship IJN *Hiei* also found by Paul Allen's research vessel *Petrel*

One of the first Japanese battleships sunk by US forces during World War II has been found by the exploration ship RV *Petrel*. It lies upside down in 900m of water, northwest of Savo Island in the Solomon Islands.

IJN *Hiei* was a warship of the Imperial Japanese Navy during World War I and World War II. As the second of four Kongō-class battlecruisers, it was among the most heavily armed ships of any navy at the time. In 1942, *Hiei* took part in many Imperial Japanese Navy missions, like the invasion of the Dutch East Indies (now Indonesia), the Indian Ocean raid of April 1942, as well as the Battle of Midway. Subsequently, it was redeployed to the Solomon Islands, bound for the Naval Battle of Guadalcanal. This was a series of naval battles between Allied (mainly American) and Imperial Japanese forces during the Guadalcanal Campaign in the Solomon Islands on 12 to 15 November 1942.

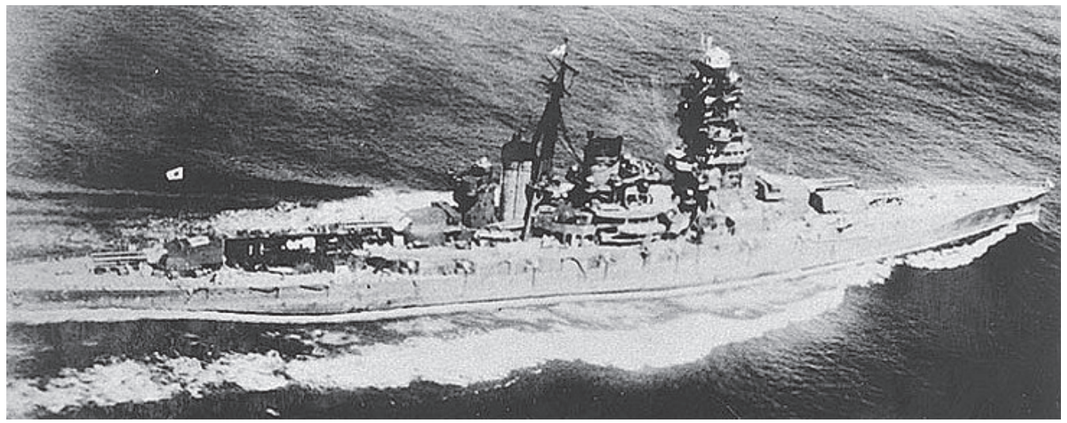
Combat and loss

In the First Naval Battle of Guadalcanal, *Hiei* inflicted much damage on American cruisers and destroyers before its steering machinery was damaged by enemy vessels and shells from USS *San Francisco*. *Hiei's* sister ship, *Kirishima,* attempted to tow *Hiei* to safety, but water had flooded *Hiei's* steering compartments, jamming the rudder to the starboard; this caused the ship to steer in circles. After suffering more torpedo and dive-bomber attacks throughout the day, the crew was ordered to abandon ship, and escorting destroyers scuttled *Hiei* with torpedoes. In the evening of 14 November, *Hiei* succumbed to the waves. 188 of the crew perished. It was the first battleship lost by Japan during World War II.

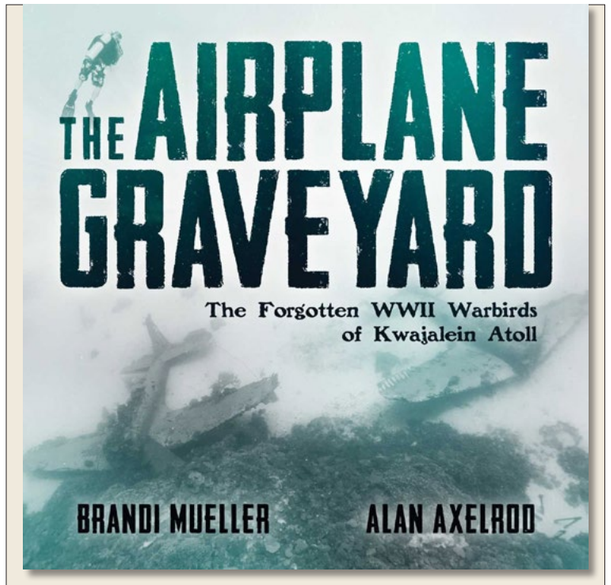
Finding the wreck

Researchers in Japan picked up *Hiei's* sonar signature off the Solomon Islands in early 2018, prompting the RV *Petrel* to investigate the site and capture the first underwater views on location. Images posted to Facebook from the expedition show the *Hiei's* 127mm guns scattered in the debris field, a crate of 25mm anti-aircraft shells resting on the capsized hull, a hole ripped in the hull during its final battle, and portholes dottingthe remains. *Petrel* also posted sonar images of the battleship and her debris field on the seafloor. *Hiei* is the fourth Japanese battleship found by *Petrel's* crew.

"It is highly likely that an ammunition room on the battleship's bow side exploded for some reason," said Kazushige Todaka, director of the Kure Maritime Museum in Hiroshima Prefecture, after viewing the footage taken by *Petrel's* research team. ■



IJN *Hiei* in Tokyo Bay, 11 July 1942. During the battle of Guadalcanal, *Hiei* became the target of most of the American fire, with American 5" guns inflicting severe damage on *Hiei's* superstructure at close range.



Never before published in book form, see extraordinary images of the forgotten American WWII airplanes resting on the bottom of the Kwajalein Atoll lagoon, from award-winning underwater photographer Brandi Mueller. Available on:
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wreck rap

Wreck Festival 2019

University of Warsaw, 9 February 2019

Text and photos by Peter Symes

It was frosty and sunny—quite a pretty day—when I walked through the empty streets of Warsaw one quiet Saturday morning in February. As I was heading from my hotel to the eighth edition of the International Shipwreck Festival, which was held in the University of Warsaw's library, only a couple of morning joggers and some drowsy walkers seemed to be out walking their shivering dogs.

The festival is a one-day event, but with four concurrent sets of presentations, it could easily be held over a full weekend. In which case, attendees would still be left with the agony of choosing between the various presentations—and yet, perhaps not so much for the international attendees and non-Polish speakers, as just about half of the presentations were held in English, the rest in Polish. That limitation went some way to make picking a presentation easier; but still, some of the topics of the presentations that were only held in Polish looked frustratingly interesting. Ah, well. I understood I should count my blessings, and there were still plenty of interesting topics among the English presentations.

Among the first set of presentations, I had the choice of Immi Wallin's presentation about the shipwrecks of Tallinn, or one about the wrecks of Messina Strait (between mainland Italy and Sicily) by Dr Gianmichele Ialria. As I had already heard Wallin's presentation at Eurotek 2018, I was left with an easy choice. Ialria's presentation on the Ar.Bio.Me project was accompanied by some good 3D visualisations, which clearly illustrated the bottom profiles and locations of wrecks under investigation. His talk was translated into Polish, which made for a stop-and-go manner of presentation, but I found that it was actually a benefit, as it made room for reflection and digestion of the information before moving on.

Dr Peter Campbell of the RPM Nautical Foundation gave a talk about Aegean wrecks, which was fluid, fast-paced and substantial, turning my frantic note-taking into some sort of made-up, hard-to-decipher shorthand. He described how the organisation's survey covered wrecks that were both Greek and Roman, spanning many centuries, and how these finds showed the

The venue was formerly a library but is now converted into lecture or presentation halls.

Wreck hunter David Mearns (right) found the HMS *Hood*, HMAS *Sydney* and the German raider *Kormoran*; The logo of the University of Warsaw (left)

cultural evolution, which took part over these centuries. The cargo these vessels were carrying was local merchandise, but some parts were clearly being transported over long distances, showing trade routes connecting the Black Sea to North Africa and Egypt. Find more information at: **korseai.com**.

The next presentation I attended had the intriguing title, "Wrecks of Submarines and Sunken Churches," by the Russian team Ivan Borovikov and Konstantin Bogdanov. The bit on the sunken churches concerned a hydroelectric project stemming the flow of the Volga River, which resulted in towns becoming submerged. See: **uwex.org/en/media**.

Moving on to a different continent and climate, Captain Mark "Sharky" Alexander spoke about recreational and technical wreck dives in the US state of Florida—off Pompano Beach, the Keys and Pensacola—where he now runs a liveaboard called *Ultimate Getaway*. He gave a brief overview of the most well-known artificial wrecks, such as the *Spiegel Grove*, *USS Duane*, *USS Vandenburg* and others, before moving on to the deeper, more technical wrecks, making a more detailed mention of the *USS Wilkes-Barre* and *HMCS Canada / MV Queen of Nassau*. In regards to wreck sites off Pensacola, the former aircraft carrier *USS Oriskany*, which was turned into an artificial reef, got most of the attention for obvious reasons.

David Mearns—the wreck hunter who once located the wreck of the *HMS Hood*, which was sunk in the Denmark Strait while giving chase to the German battleship *Bismarck* during WWII—gave a lengthy and very captivating narration of how they, in 2008, found the *HMAS Sydney* after first locating the German raider *Kormoran*, which sank her off Western Australia on 19 November 1941. These finds have been reported earlier in our magazine and on our website where the details are still available. He also described how they analysed the wreck, and armed with thousands of photos, were able to stitch together how the battle, in all likelihood, unfolded.

Richie Kohler gave a cool presentation on German U-boats in the Mexican Gulf, and how one of them was found only about a mile away from the passenger ship *Robert E. Lee*, which it sank. The images taken by an ROV from Robert Ballard's vessel *Nautilus* were really stunning, and the wreck appeared to be in amazing condition, with little corrosion or marine growth due to the anoxic conditions on the bottom of the Mexican Gulf. Otherwise, it was very much intact. Kohler made a salient point about "fixing broken history" as being the best thing we could do with diving.

The final presentation of the day was by Chris Jewell, who was part of the team that rescued the boys trapped in the Thai cave in 2018. This rescue has been detailed in a previous report in the magazine, so I will not go into further details here.

Cocktails and a banquet dinner was held directly afterwards, at 9 p.m., in the gorgeous columned hall of the university, which rounded off a productive but very long day in the best possible manner. Falling asleep late that evening was not a problem.

On a concluding but slightly different note, I found Warsaw to be an intriguing and interesting city, which impressed me in many ways. The city was pretty much obliterated during WWII, but the Poles decided to reconstruct the city as it used to look before the war. Hence, it has the immediate appearance of an old European city, with a compact centre of centuries-old buildings. Only, almost all of these buildings were recreated after the war. It would have fooled me if I had not read up on its history before I came. Seeing where the Jewish ghetto once stood and where several hundred thousand Jews were transported to concentration camps during the Holocaust left an indelible impression, which keeps coming back to me. War is evil! ■

Richie Kohler giving his presentation

In June 1941, a ship launched as HMS *Oakley* was transferred to Poland and renamed ORP *Kujawiak*. It was sunk on 16 June 1942 after running into a mine near Malta while participating in Operation Harpoon. Thirteen Polish sailors died and 20 were wounded. The bell was recovered in 2017.

"Say cheese." The presenters line up for a group photo.

The banquet dinner was held in the beautiful columned hall of the university.

Dr Peter Campbell's presentation on the Aegean shipwrecks