



Text and photos by  
Claudia Weber-Gebert

**At the end of September 2014, the dive bomber Ju 87 R-2 was found by chance, during a harpoon competition near the Croatian island of Zirje. The significant discovery caused a stir at the time, since few of a total of 5,752 bombers produced in Germany were still in good condition.**

The wreck is remarkably well preserved; it is even said to be the world's best preserved Stuka bomber. The engine was placed in a different bay, probably torn off by the impact at the sea surface or abducted by fishing nets. Otherwise, the plane is standing almost completely intact on its wheels on the seabed at a depth of about 28m, as if it had just made a soft landing.

The enthusiasm of divers who wanted to visit the wreck was great, but at first, the site was closed for divers and the wreck was put under monument protec-

tion. Experts from the Military Museum of the Croatian Ministry of Defence identified the aircraft very quickly as an Italian Sturzkampf-Bomber, or "Stuka" (for short), Junkers Ju 87 R-2.

Apart from this Stuka, only three more

exist worldwide and are exhibited in the Museum of Science and Industry in Chicago, the Royal Air Force Museum Hendon in London and the Auto and Technik Museum Sinsheim in Germany. Two more specimens were recovered in Norway and Greece

from the bottom of the sea. Both, however, are in much worse shape than the aircraft found in front of Zirje.

#### History

In the beginning of April 1941, Yugoslavia

was invaded and occupied within a few days during the Balkan Campaign. In this Blitzkrieg, the German troops and armored units came to help the Italian allies under Mussolini. The ultimate goal of the Italians then was Greece—the path towards which



# Stuka Bomber Wreck

— *Silent Witness of WWII*

CLAUDIA  
WEBER-GEBERT





# Stuka

Clearly visible from the front are the inverted gull wings of the Stuka bomber which made the aircraft easily recognisable

the typical MG15 machine gun from the rear cockpit and the control horn from the main cockpit. Plans to salvage the wreckage to preserve and exhibit have been abandoned. The Ju 87 R-2 was, however, declared cultural heritage and is a listed monument.

Since the end of April 2015, diving the bomber is permitted. To do so, dive centers can purchase a license and bring their divers to the wreck. However, at least one person from the dive center must be present during the dive to ensure that no one damages or removes parts of the wreck.

The depth is about 28m. The Stuka Bomber stands on the sandy bottom in poseidon grass. The engine has



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Historical photo from 1943 of Junkers Ju 87Ds in flight

led over Yugoslavia.

According to the Croatian Ministry of Defense, information can be found in literature about the attack of three Italian Stuka bombers Ju 87 R (239th Squadriglia, 97 Gruppo Bombardamento a tuffo). On 12 April 1941, these bombers flew attacks on two Yugoslavian warships that took position in the bays of Jadrovac near Sibenik. Two of the Stukas were shot down, one of them was destroyed and the pilot was killed. The second Stuka bomber was damaged and forced to go down on the water. Since then, it has been sitting on the seabed.

No one knows exactly what happened to the pilots. The dome over the cockpit is miss-

ing and there were no human remains found. Presumably, the pilots were able to save themselves. (SOURCE: [HTTP://VOJNA.GOV.HR](http://vojna.gov.hr); TRANSLATION RUDI HESS, BOUGAINVILLE DIVING, BIOGRAD)

### Diving allowed

At first, the wreck was closed to the public. Experts have examined the aircraft and some parts, that are popular collectibles, have been removed and preserved for a museum, as for example



The engine block, found in a different bay, is now placed near the wreck.





Hands off and fins off the wreck! Any damage will cause the risk of closure of this dive site (left); Rear cockpit with the circular window: the machine gun was removed. The rear gunner/radio operator operated one 7.92 mm (.312 in) MG 15 machine gun for defensive purposes. (lower right)

now been transported to the wreck and is placed just a few meters from it. While descending, the Ju 87 can clearly be seen from just about 10m under the surface.

The site is flagged on the sea surface with only plastic bottles on nylon cords, so that they cannot be found easily by unauthorized persons. Divers should strictly avoid contact with the wreck—so hands and flippers off! If the wreck is damaged by divers too badly, the Croatian authorities will take protective measures and close down the wreck again

for all underwater activities. There are some more beautiful aircraft wrecks in the Adriatic, but these are at depths of 70m and more, and cannot easily be reached by amateur divers.

Thanks to the perfect organization of Rudi Hess of Bougainville Diving in Biograd—at the dive site and underwater—our dive team's photography trip to the past became possible.

### About the Stuka

The Ju 87 R-2 dive bombers were produced in Germany



Front cockpit view: the control horn has been removed for the museum

by the manufacturer Junkers Aircraft Factory Ag from 1937 to 1944 in various types, with a total of 5,752 parts.

As single-engine low-wing aircraft with folding wings, rigid chassis and a two-man crew, the bombers were used by the German Luftwaffe as a precise weapon. In swooping maneuvers, bombs could be dropped with high precision and the intended targets were destroyed. Hence, the plane was given the name dive

bomber or "Stuka" for short (Sturz-Kampf = dive fight). Although the Stuka bombers had serious shortcomings, they were the most successful air combat unit of WWII.

During a flight presentation in Neuhamm, Germany, on 15 August 1939, 13 Stukas crashed from a low altitude. However, since the "success rate" at the bombing was much larger and more accurate than that of other bombers, the Stukas were used during WWII by the German Luftwaffe and the allies again for airstrikes. The principle strategy of the Stukas (which flew slow, actually) was this: fly at high altitude to the destination, drop the bombs in a quick swooping maneuver



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above the target, and then leave the target as quickly as possible. The sniper in the rear cockpit had the task of clearing backwards approaching aggressors with a machine gun.

K. H. Eichhorn, born in 1943, was in the German Air Force from 1962 to 1976. He wrote in his online Airplane Archives the following concerning the special swooping technique of the Stukas:

“Importantly, there was an automatic dive control, in which the machine was transferred to horizontal flight in a preprogrammed distance from the ground. The pilot had to first adjust ten vital handles to program the dive. After that, he had

to bring one of the red lines painted in various degrees in the cockpit dome in a line with the horizon, and then aim for his goal manually like a fighter plane, while only using the ailerons. The swooping angle very often amounted to exactly 90 degrees and started with a roll maneuver over one of the wings directly vertically above the intended target. Strangely, in the Junkers they had not, like many other bombers, the feeling of having already exceeded the normal 90 degrees. In general, the Ju 87 during the swoop, in which it was so marvelous, showed a much better performance than in the normal horizontal flight—particularly because



Diving procedure of the Ju 87

The glass canopy of the aircraft is missing. It is believed the pilots made it out of their aircraft in time.

## Stuka

FACTS: Technical data for Ju 87 R-2

BUILDING MATERIAL: Duraluminium, all-metal construction method

COVERING: Smooth metal

CREW: 2

ENGINE: Jumo 211D, rated power of 950 hp at takeoff 1200 hp

WINGSPAN: 13.8m

WING AREA: 39.9m<sup>2</sup>

LENGTH: 11.1m

HEIGHT (on the ground): 4.01m

WEIGHT OF EMPTY AIRCRAFT: 1,185kg

MAXIMUM TAKE-OFF WEIGHT: 4,390kg

TOP SPEED (in horizontal flying position): 383km/h

DIVE SPEED: 650km/h

SERVICE CEILING: 8,100m

HIGHEST RANGE (no load): 1,252km

HARD POINTS LOAD: 500kg bomb or a bomb of 250kg plus two underwing tanks with 600 liters of fuel

SMALL ARMS: Two fixed machine guns MG17 7.9mm in the wings and one movable MG15 7.9mm machine gun in the rear cockpit ■

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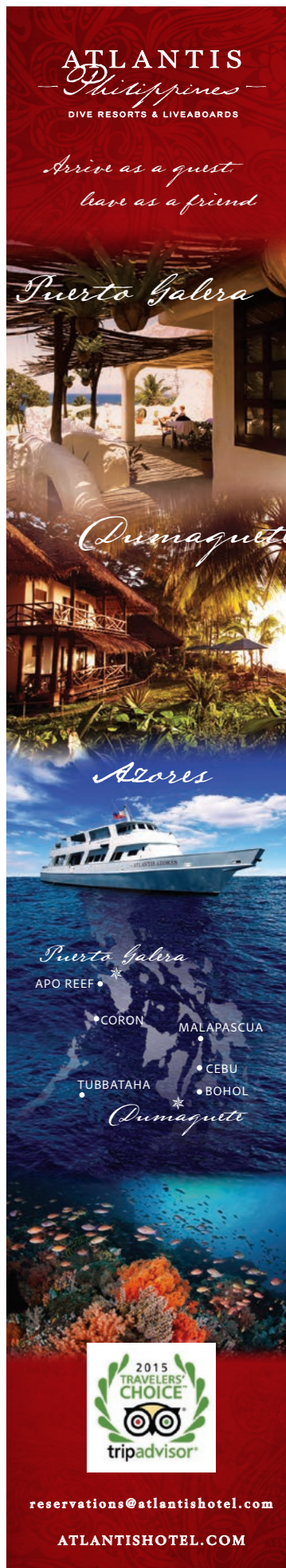
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Clearly visible from above are the M17 wing guns, the inverted gull, or "cranked", shape of the wing improved the pilot's ground visibility and also allowed a shorter undercarriage height.

## Stuka

to summon all his force to pull the machine into straight flight while carefully using the trim flaps to perform the maneuver." (SOURCE: www.kheichhorn.de)

The model Ju 87 was built in six different types. The suffix "R" from the Ju 87 R-2 model discovered in Croatia stands for "range"; additional fuel tanks for twice the range were installed under the wings. This was necessary for operations in the Mediterranean and across the Channel.

Most of the machines were equipped with an additional

so-called "Jericho horn", which produced the typical siren sound of Stukas. It had a psychological effect aimed to instill fear and terror in the people in the target areas. These sirens were powered by small propellers on the landing gear in very rapid and steep nosedives. Incidentally, the Stukas' haunting howls are still often used in action movies when airplanes crash. ■

*Claudia Weber-Gebert is an advanced diver, dive writer and underwater photographer based in Germany.*



The wreck is resting on the seafloor as if it just made a soft landing, with the chassis of the wheels completely intact.

Even after more than 70 years in saltwater, the wings are not broken.

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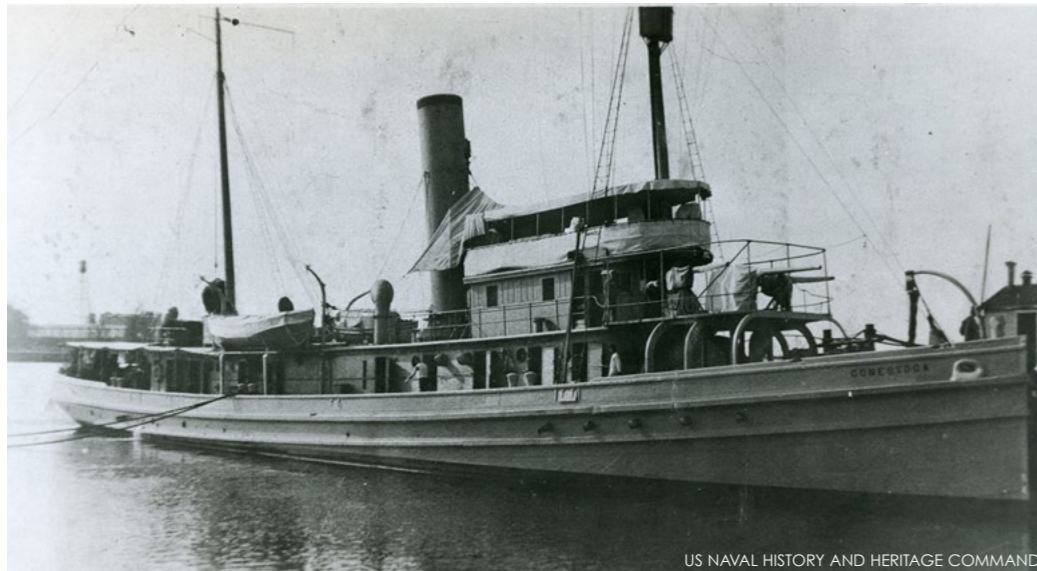
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# US Navy finds a tug that was lost for nearly a century



US NAVAL HISTORY AND HERITAGE COMMAND

The wreck of USS *Conestoga* has been discovered within the waters of Greater Farallones National Marine Sanctuary in California, 95 years after the Navy seagoing fleet tugboat disappeared with 56 officers and sailors aboard.

When it left San Francisco on 25 March 1921, *Conestoga* was en route to Tutuila, American Samoa, via Pearl Harbor, Hawaii. When *Conestoga* failed to reach Hawaii by its anticipated arrival date, the US Navy mounted a massive air and sea search around the Hawaiian Islands, the tug's destination. Unable to locate the ship or wreckage, the Navy declared *Conestoga* and its crew lost on 30 June 1921, the last US Navy ship to be lost in peacetime without a trace. Until now, what happened, and where the wreck and its crew lay, has been described as one of the top maritime mysteries in US Navy history.

In 2009, the NOAA Office of Coast Survey, as part of a hydrographic survey near the Farallon Islands off San Francisco, documented a probable, uncharted shipwreck at a depth of 56.5m (185ft). In October 2015, NOAA confirmed the identification and location of *Conestoga* during a

mission that included an archaeologist from the Naval History and Heritage Command, as well as several senior Navy officers.

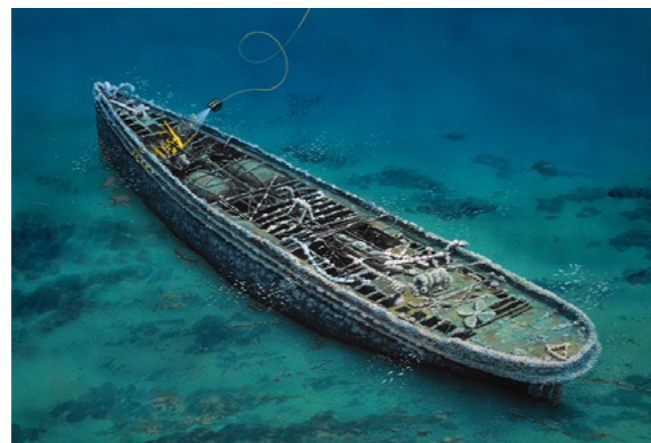
### Battling a storm

Weather logs indicate that around the time of *Conestoga's* departure, the wind in the Golden Gate area increased from 23 miles per hour to 40 miles per hour, and the seas were rough with high waves. A garbled radio transmission from *Conestoga* relayed later by another ship stated the tug was "battling a storm and that the barge she was towing had been torn adrift by heavy seas".

Based on the location and orientation of the wreck in 189ft-deep water, three miles off Southeast Farallon Island, NOAA and its technical and subject matter experts believe

*Conestoga* sank as officers and crew attempted to reach a protected cove at the island.

"This would have been a desperate act, as the approach is difficult and the area was the setting for five shipwrecks between 1858 and 1907," according to NOAA's report on the *Conestoga* discovery. "However, as *Conestoga* was in trouble and filling with water, it seemingly was the only choice to make." ■



ARTIST DANIJEL FRKA © RUSS MATTHEWS COI

Artist's impression of the shipwreck of the USS *Conestoga*



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# Vasco da Gama's shipwreck discovered off the coast of Oman

Vasco da Gama was the first European to reach India by sea, linking Europe and Asia for the first time by ocean route, as well as linking the Atlantic and the Indian Oceans entirely and definitively, and in this way, the West and the Orient. This was accomplished on his first voyage to India (1497–1499).

His ship, which sank in a storm in May 1503 off the coast of Al Hallaniyah Island in Oman's Dhofar region, is the earliest ship from Europe's Age of Discovery ever to be found and scientifically investigated by a team of archaeologists and other experts.

Commanded by Vicente Sodré, da Gama's maternal uncle, the Portuguese East Indiaman is believed to have been one of two ships left behind during da Gama's second voyage to India to disrupt trade between India and the Red Sea.

The wreck site was initially discovered by a team from Blue Water Recoveries Ltd (BWR), based in West Sussex, England



Gold cruzado coins minted in Lisbon between 1495 and 1501 were some of key individual artefacts that helped in identification of the wreck site as Vicente Sodré's *nav Esmeralda*.



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Portuguese ship wrecked on a remote island in the Sultanate of Oman in 1503 is the earliest ship of discovery to be found and scientifically investigated by archaeologists.

in 1998 in an expedition to mark the 500th anniversary of da Gama's discovery of a direct sea route to India, but full-scale archaeological survey and excavation by Oman's Ministry of Heritage and Culture did not begin until 2013.

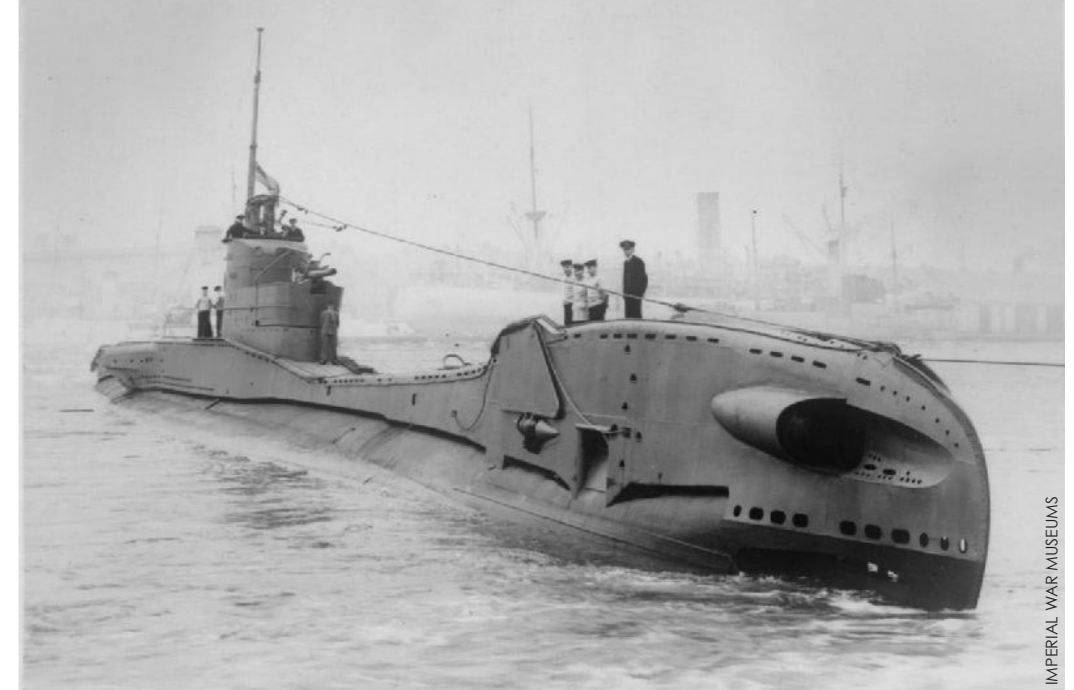
The ship predates the next oldest Iberian shipwreck by 30 to 50 years, so it is hoped it will provide new information about maritime trade and warfare during the turn of the

16th century.

"The armaments that the site has produced are already providing us with information about the martial nature of these voyages and the site has the potential to tell us much more about the men and ships that undertook these adventures and the peoples that they encountered," the project's archaeological director, Dave Parham, of Bournemouth University told the *Independent*. ■



Details of the wreck site reveal that the ship is believed to be the *nav Esmeralda* (shown right) commanded by Vicente Sodré, who was the maternal uncle of Vasco da Gama.



IMPERIAL WAR MUSEUMS

British T-class submarine, in this case, HMS *Thorn*—the sister ship to HMS *Tarpon*—underway on the River Mersey on completion

## WWII British sub HMS Tarpon found off Jutland

The wreck was found and identified in the Danish part of the North Sea, near the fishing port of Thyborøn, by Danish commercial diver Gert Normann in March 2016.

HMS *Tarpon* left Portsmouth on 5 April 1940 and ordered to Norway. On the 10th, *Tarpon* was ordered to take up a new position but was never heard from again. Post-war German records showed that *Tarpon* had attacked the Q-ship Schiff 40/*Schürbek*, but her first torpedoes had missed. A sustained counterattack that went on most of the morning finally brought wreckage to the surface and it became clear the submarine had been sunk. All 59 crew members were probably killed by the blast wave when a depth charge hit right behind the conning tower.

Gert Normann, who accidentally found the wreck while undertaking another enterprise, calls the find unusual. "It is an unusual find and in particular so close to Jutland. It is a quite special sensation to see the

wreck after its dramatic demise." Gert Normann told the Danish daily *Jyllands-Posten*.

### Inaccurate positions

That 76 years should pass before the vessel was located is down to misleading information about the submarine's location, said Normann. "There are many listings of positions where submarines sank, but they are very inaccurate and many are completely misleading," he said, adding that he expected HMS *Tarpon* to be in the very deep waters of Skagerrak.

The submarine is considered a war grave, so divers are not allowed to penetrate the submarine. Instead, it is allowed to lie as an untouched tomb while the hull rusts away. ■

