

Ancient Irrigation in the Southwest

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INTERVIEW

## WERNER HERZOG

on the Origins of Art



# Lost Wrecks of the Adriatic

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Life Beyond  
Imperial China

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Medieval  
Arms Race

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PLUS:  
World's Oldest Soup,  
Microarchaeology,  
Cold War Whodunit,  
Old Europe's New Money

**T**he R/V *Hercules* is anchored in the Adriatic Sea near Saranda, Albania, and the crew of the 110-foot-long research vessel is at attention. "Back deck, stand clear of the wind!" RPM Nautical Foundation (RPMNF) founder George Robb bellows into a walkie-talkie from his seat in the boat's control room, deep in the belly of the ship. "Winch going out, winch going out!"

Up on deck, two crew members ease the massive, million-dollar SeaEye Panther Plus remotely operated vehicle (ROV) off the stern. With two spindly arms and a boxy frame, the submarine robot resembles a cross between R2-D2 and a construction crane. The SeaEye is about the size and weight of a golf cart, but a single Kevlar cord attached to its protective metal cage holds it up and out over the water. The apparatus breaks the surface of the water, and the boat heaves from the sudden lightening of its load.

As robot and cage plunge into the Adriatic, a video feed streams from a camera bolted to the top of the cage to one of the dozen computer monitors in the sunless control room. "Give me TMS full-screen here," Robb calls out. "Is it off? Kill it and reopen it." The monitor goes blank and then flickers on again. Next to Robb, ROV operator Kim Wilson fiddles with a joystick, his lips clamped shut. He has the silent intensity of a boy steering a remote-controlled car. "Give me lights!" Robb shouts. Wilson flicks a switch and another camera—there are six in total—reveals the sea as a crystal-clear, turquoise expanse punctuated only by air bubbles. RPMNF archaeologist Jeff Royal inches forward on his leather recliner to get a better view.



# The Adriatic's Uncharted

Once closed to exploration,  
the waters off the Albanian coast  
begin to give up their secrets

by MARA HVISTENDAHL

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# Past

Hiding more than 200 feet down is a wealth of untouched finds, encompassing everything from ancient Roman trade vessels to medieval warships to World War II fighters. Until recently, decades of isolationist Communist rule meant Albania's waters were off-limits to archaeologists and even the recreational divers who sometimes discover sites. "Up to the 1990s the coast was protected," says Adrian Anastasi, director of the department of nautical archaeology at the Albanian Institute of Archaeology. "You couldn't do nautical research because the military had control."

But that control also means that Albania's underwater treasures have been well-preserved, insulated from the trawling and waterfront development that have ravaged other portions of the Mediterranean and Adriatic. Democracy came in 1992, opening the coast to archaeologists, and

**Above, the SeaEye remotely operated vehicle investigates a 1,600-year-old shipwreck that contained amphorae from Tunisia. At far left, the crew of the R/V *Hercules* lift the SeaEye out of the Adriatic and back onto the ship.**



in 2007 Anastasi's institute began surveying the waters in collaboration with RPMNF, a Key West-based nonprofit foundation that specializes in nautical archaeology. Together, they have been discovering shipwrecks at a dizzying pace. In four short years, they have uncovered 32 wrecks—eight of them more than 1,600 years old—in Albanian waters. "No one had done anything like this in Albania," says Auron Tare, director of the Albanian National Trust, who helped set up the survey. "It's completely uncharted territory." The region's waters contain so many wrecks, in fact, that RPMNF mostly focuses on ancient finds, leaving more modern sites largely unexplored.

For several months each summer, the *Hercules* trolls the coast, conducting detailed surveys and using the SeaEye and divers to explore potential wrecks. The long hours at sea can be grueling: Robb, Wilson, Royal, Anastasi, Tare, and the rest of the ten-member crew bunk in tiny rooms belowdecks, and despite the fast pace of discovery, the team sometimes goes weeks between finds. The daily monotony during these dry spells is broken only by dinner, which is prepared by a Michelin-rated chef. (As a former Wall Street financier, Robb can afford a few indulgences.)

To find sites worth exploring in detail, the crew spends weeks scanning the ocean floor with multibeam sonar, bouncing sound waves off it to map its topography. Poring over the resulting charts, Robb and Royal look for anomalies, telltale red spots that indicate increased elevation. If the spots are surrounded by depressed green areas—features they jokingly refer to as "doughnuts"—it suggests the anomalies have been there long enough for currents to carve out the surrounding seafloor. A doughnut could mean an ancient wreck, but it could also indicate modern debris—more than once the team has stumbled across sunken plastic beach chairs. The sonar

## Righting a Cold War Wrong

# Where was the HMS *Volage*?

ON OCTOBER 22, 1946, the British ship HMS *Volage* struck a mine off the coast of Albania—a collision that blasted apart the destroyer's hull, killed dozens of its crew members, and helped spark the Cold War. As the matter, one of a trio of clashes that became known as the Corfu Channel Incident, went before the United Nations Security Council and the International Court of Justice, tensions between the United Kingdom and Albania escalated, resulting in the two countries severing relations for over four decades.

But just where the *Volage's* bow sank—the rest of the ship was towed to safety—has been a serious matter of debate. The international court found Albania liable for damages—suggesting the country had planted mines in the international waters of the Corfu Strait. Albanian dictator Enver Hoxha meanwhile, maintained that the British had provoked Albania to find a pretext for an invasion. "The Corfu Channel Incident is a concoction of the British from start to finish," Hoxha reportedly told Joseph Stalin in 1947.

Hoxha's view suddenly gained credence in 2009 when a survey conducted by the RPM Nautical Foundation and the Albanian Institute of Archaeology uncovered the bow of the *Volage* off the coast of Saranda, Albania—not in international waters, where most historians thought it was

RPM Nautical Foundation founder George Robb and archaeologist Jeff Royal watch from the ship's control room as the SeaEye ROV investigates a possible wreck site.

narrows down the possibilities, but the team must use the SeaEye to determine a site's identity. They also use divers, but the robot is preferable, especially at deeper sites, as it can stay underwater longer and gather more data.

When the SeaEye reaches a point two yards above the ocean floor, Wilson looses the ROV from its cage and steers it toward the target anomaly they identified on the sonar scan of the area. The trick is to keep the robot hovering at a steady depth to prevent it from stirring up blinding clouds of silt. Hit bottom, says Robb, and "it's like a pickup on a Texas road." Royal, the archaeologist, keeps a watchful eye on the wall of screens. The robot's arms—critical to retrieving any particularly interesting or diagnostic artifacts—are not working, and the FedEx shipment containing replacements is still a few days away, delayed by Albanian bureaucracy. Though they're in the midst of a weeklong dry spell, Royal knows each anomaly is a potential shipwreck—and that a few of those can reconfigure ancient history.

JUST 10 YEARS AGO, Croatian maritime archaeologist Mario Jurišić wrote that the history of the Albanian coast was "almost entirely unknown." He asserted, "It is only certain that maritime trade occurred in this area, and that ports that paralleled the navigational route must have existed here."

That is an understatement. The Adriatic's position between ancient Rome to the west and the important Aegean and Black Sea economies to the east means that it would have hosted a great deal of ship traffic—and shipwrecks. Well before RPMNF started working in the area, other finds pointed to the region's economic importance. In the early twentieth century, archaeologists unearthed Butrint, a majestic city founded in the seventh century B.C. at the southwestern tip of Albania, and occupied from the Bronze Age through the Ottoman period. And yet from the standpoint of nautical archaeology, the Albanian coast, from western Greece north to Montenegro, was a "gigantic blank spot," says Royal, a genial, wisecracking man who turns serious when discussing Roman history.

"It seems so obvious," he continues. "It's an area you'd think would be under a lot of influence from the economic and political development happening in the region."

"The bow is very close to the shore, and in a different position than in the official record," says James P. Delgado, director of maritime heritage for the National Oceanic and Atmospheric Administration, who joined the survey that summer, when he was president of the Institute of Nautical Archaeology at Texas A&M University.

The discovery came about when Delgado, an expert in twentieth-century wrecks, learned that the year before, the team had found the remains of a wreck measuring about 40 feet in length but had moved on after determining the ship was modern. Delgado wondered whether it could be a piece of the *Volage*.

The team returned to the site to investigate. As the remotely operated vehicle reached the ocean floor, Delgado spied a partially buried steel hull lying on its side in the mud, misshapen in a way suggestive of damage from an explosion. Electrical wiring established that the ship dated to World War II or later. The surrounding debris, meanwhile,



Dishes and a canteen were seen in the wreckage of the bow of the HMS *Volage*. The Cold War-era destroyer (below) was in Albanian waters—where it shouldn't have been.

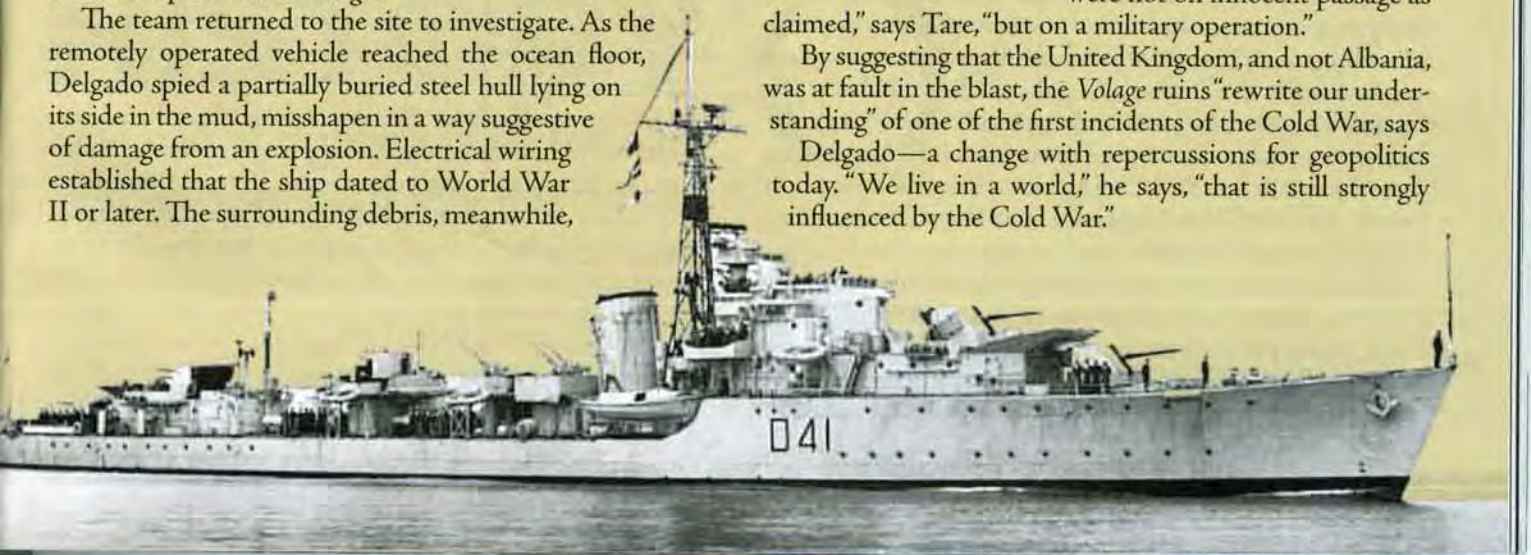
was neatly arranged, much as it would have been onboard—suggesting the hull sank quickly, as a vessel that hit a mine would have. "The dishes were still stacked," says Delgado.

Auron Tare, director of the Albanian National Trust, followed the discovery with research in the British National Archives. He found a four-minute reel of film, shot from another ship, confirming the *Volage* was close to shore when it exploded. Together, the discoveries upend decades of Cold War gospel. "All evidence proves that the British ships were not on innocent passage as

claimed," says Tare, "but on a military operation."

By suggesting that the United Kingdom, and not Albania, was at fault in the blast, the *Volage* ruins "rewrite our understanding" of one of the first incidents of the Cold War, says

Delgado—a change with repercussions for geopolitics today. "We live in a world," he says, "that is still strongly influenced by the Cold War."





This early amphora, made in Sicily or southern Italy, probably carried wine in the 5th or 4th century B.C. Such finds are changing our understanding of the place of the eastern Adriatic in ancient trade networks.

But in the absence of more archaeological evidence, it was hard to say with certainty what role the area played in regional trade. As a result, many historians embraced a narrative put forth by ancient Roman texts—that the eastern shore of the Adriatic was in fact not so economically critical, and that the Illyrians, the people who inhabited it, were pirates, not traders. Polybius (ca. 200–118 B.C.) summed up what would become the prevailing analysis of Balkan maritime activity in Book II of *The Histories*: “For a long time previously they [the Illyrians] had been in the habit of maltreating vessels sailing from Italy, and now while they were at Phoenice, a number of them detached themselves from the fleet and robbed or killed many Italian traders, capturing and carrying off no small number of prisoners.”

Today, RPMNF and the Albanian Institute of Archaeology are changing that interpretation. The surveys of Albanian and surrounding waters have uncovered wrecks that give strong evidence of trade. Last summer in Montenegrin waters just north of Albania, RPMNF found a wreck site covered with amphorae of a type known to have originated in Sicily and southern Italy, dating to the fourth century B.C., suggesting a clear commercial route across the Adriatic. The ship, Royal says, “would have been coming from Italy or Sicily and continued right past northern Albania and into Montenegro”—providing further evidence that the region’s people were traders rather than pirates. Royal believes the region may have also hosted trading partners for Corinth, the ancient city-state in southern Greece established in the late seventh century B.C. RPMNF has already found five wrecks containing Corinthian amphorae, and Royal hopes future work will reveal Corinthian trade routes.

Albanian waters are so archaeologically rich that the crew is making modern discoveries as well. In 2007, RPMNF found what appear to be the remains of the HMS *Regulus*, a 235-foot World War II minesweeper that reportedly sank off the southern shore of Albania after hitting a mine on

January 12, 1945. Another particularly striking modern find is the long-missing bow of the HMS *Volage*, which is rewriting a controversial bit of Cold War history (see sidebar on page 26). Nautical archaeologists are just starting to understand the region, Royal stresses. But that is an improvement on years past, he adds. “Before, archaeologists didn’t even know what questions to ask.”

THE MOOD IN THE control room is tense. Wilson steers the SeaEye toward the anomaly using a 3-D model of the seafloor generated by the ship’s GPS. Robb and Royal are antsy, their eyes glued to the wall of monitors. “This is when we turn into little kids,” Robb says.

Suddenly in the corner of one screen a long curved, gray-green object pops into view. “That is an anchor!” Robb says, smiling.

“It’s a long daddy,” Royal chimes in, as the full object appears on-screen. Octopus eggs hang off the curved fluke, and the shank is covered with tiny crustaceans. A lobster clings to the tip.

Where there is an anchor, there is often a wreck, and now the expedition’s team members wonder whether they’ll break their dry spell. “This is a good sign,” Robb says, to no one in particular. Tare jogs in from the next room and kneels on the floor to get a good look.

Wilson steers the SeaEye west, then north. A school of fish swims into view—another good sign, since fish tend to hide in wreck debris. The fish disappear, and a rectangular column, long and fuzzy with sea life, takes their place.

“Looks like wood!” Royal shouts.

“Yep, wood,” Tare says. “Wow.” Then everyone is talking at once. “That looks like a cannon!” “Looks like a cannon lying on something.” “Wow, there’s a lot of stuff here.” “A cannon and an anchor—that means a ship!”

The ship’s hull long ago disintegrated, but sure enough, the team has found a wreck. The SeaEye’s cameras reveal a ram, two anchors, and fragments of five cannon. Robb announces the discovery over his walkie-talkie, and the rest of the crew crowds into the tiny control room—captain, chef, videographer, divers, and engineers, all vying for a look. Wilson traces the outline of the wreck with the SeaEye, and Royal decides based on the features of the cannon and anchors, that they are looking at a ship from the early eighteenth century. Later he will run the images past modern-era specialists, but his assessment means that for now, at least, the team won’t linger there. There are simply too many ancient wrecks waiting to be discovered. As the SeaEye hovers over the ocean floor, though, the crew members take a minute to marvel. Then they go back to work. ■

Mara Hvistendahl is a science journalist based in The Netherlands.