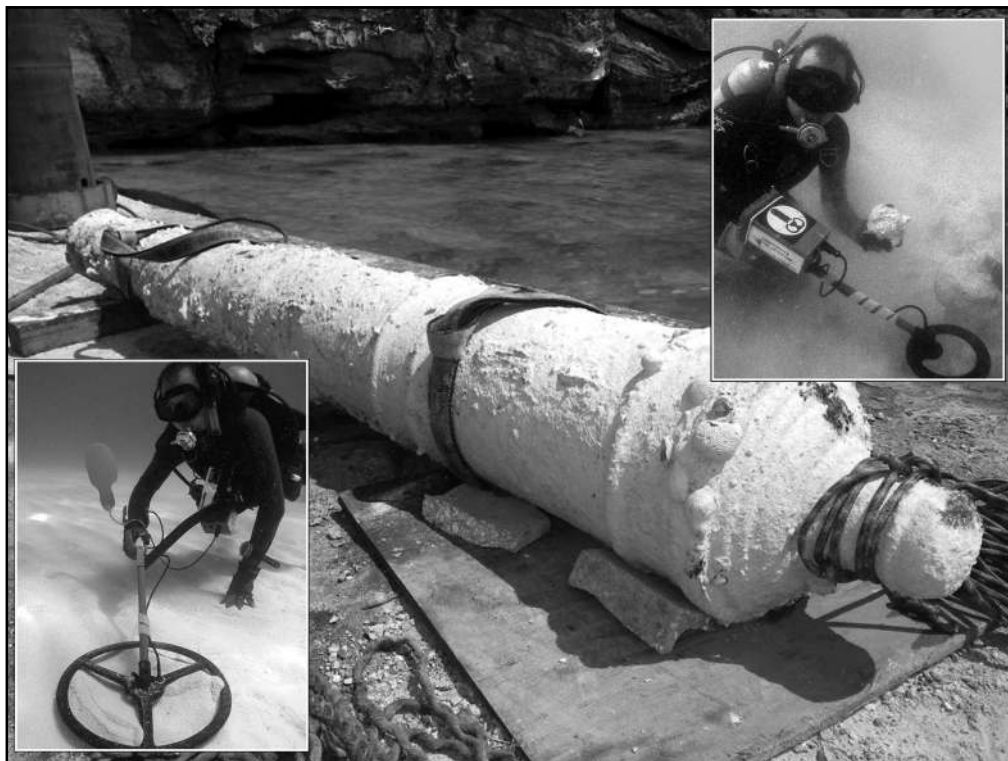


Detectors Assist In Recovery of Artifacts from Historic Bermuda Shipwreck



Main photo: Cannon recovered from the wreck of the Warwick in Bermuda, Bottom inset – diver searches site with the Pulse 8X's deep seeking 16 inch coil, Top inset – James Davidson with Pulse 8X and recovered cannon ball.

In October 1619 the naval warship *Warwick* sailed into the King's Castle Harbour in Bermuda with an important cargo from England; the colony's new governor, Captain Nathaniel Butler. After taking on provisions the *Warwick* was to travel onto the struggling colony at Jamestown, Virginia, but it never made the voyage. Before the ship could sail, Bermuda was hit by a fierce hurricane. Battered by strong winds the *Warwick* broke free from her anchors, was driven into the rocky shore, and torn apart by the pounding waves.

In 1969 Mendel Peterson of the Smithsonian Institution and now famous Bermuda shipwreck hunter EB "Teddy" Tucker located the remains of the *Warwick* and began an examination of the wreckage. What they found was a good part of the hull remained preserved under a pile of ballast stone. Fast forward another 50 years and a of the island's National Museum began a more extensive examination of the site and

recovery of some significant historic artifacts. The museum enlisted some renowned experts in the field of marine archaeology to assist in the project. One is Dr. Jon Adams, head of archaeology at the University of Southampton, who says "the *Warwick* is one of the largest and most coherent pieces of early 17th century ship structures ever found." Dr. Kroum Batchvarov with the maritime archaeology program at the University of Connecticut adds "very few wrecks of the early seventeenth century have been excavated which has limited our knowledge of shipbuilding and seafaring in this period. This makes the archaeological excavation and documentation of the *Warwick* an important contribution to that body of knowledge."

The location of *Warwick's* remains makes it an ideal archaeological site. The wreckage lies in 15 to 30 feet of water in a protected harbor. (continued on pg 4)

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Page 6 - Company News and New Product Info

Pingers are a hit with Government and Marine Industry

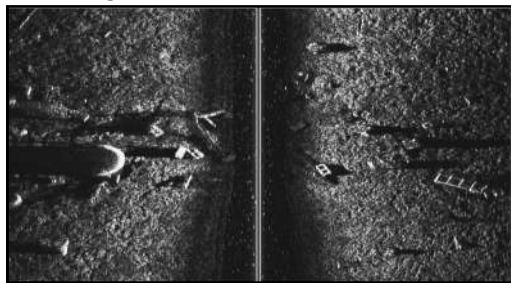
Government agencies and marine service companies are finding a variety of uses for acoustic pingers and pinger receivers. Pingers are signaling devices that can be attached to an underwater site or instrument package. Using the pinger receiver, a gun-like instrument carried by a diver, the sonar signal transmitted by the pinger can easily be detected and followed to its source.

One company employing this technology is Ocean Power Technologies (OPT) in New Jersey. As part of a contract with the US Navy, OPT has developed an autonomous buoy that generates power from waves and stores it internally. The stored electricity powers sensors and other equipment mounted on the buoy. Typical payloads are detection systems to scan areas for intruders, communications relays, environmental monitoring instruments, and oceanographic observation platforms. The impact of severe weather on the buoy is not a concern; in initial testing it rode over 50 foot waves generated by a passing hurricane with ease. However to ensure the equipment can be recovered in the event of a catastrophe, such as collision with a passing ship, the buoy is equipped with Fishers SFP-1 single frequency pinger. (continued on page 3)

Asian Firms Expand Search Capabilities

Many Asian companies and government agencies are acquiring underwater search equipment to aid in the location of lost objects and assist in performing survey operations. In China, Guangzhou Advanced Maritime Academy has added JW Fishers SeaLion-2 ROV to their program. The mission of the academy is to train people to work in this burgeoning field using the latest technology. ROVs are now routinely employed in ports around the world for inspection of ship hulls and propulsion systems.

Another Chinese agency buying underwater equipment is Tianjin Science Instruments and Equipment Corp. Recently the company acquired Fishers SSS-100K/600K dual frequency side scan. The sonar produces detailed images of the bottom of a river, lake, or ocean. The side scan allows the system operator to see the make up of the bottom (i.e. rocks, sand, mud) and any objects lying there, regardless of water clarity. The sonar can assist in mapping waterways, searching for sunk vessels, and locating drowning victims.



Side Scan image of debris on river bottom

Korea's Sonar Tech Co., a pioneer in underwater research, is using Fishers PR-1 acoustic receiver. The receiver helps find towed equipment that has separated from its umbilical. It also allows measuring instruments anchored to the seafloor to be quickly and easily relocated. The PR-1 pinpoints the exact position of the missing device by detecting a signal transmitted by an attached acoustic pinger. The receiver can be deployed from a boat or carried by a diver, and detects the signal at hundreds of meters.

Bekk Solutions Ltd. in Hong Kong offers a wide range of services for their customers in the underwater industries. They own a diverse fleet of specialized equipment with inventory strategically stationed in the UAE, India, Hong Kong, Thailand, and Singapore. Recently the company acquired Fishers PT-1 pipe tracker. This hand-held pinpointing magnetometer locates (contd on page 4)

International News

.....Dorman Long Engineering, a service provider to the oil, gas, power, and telecommunications industries in Nigeria has purchased Fishers CT-1 cable tracking system. The CT-1 locates deeply buried power and communications cables and tracks them over long distances.

.....Seapro Petroleum and Marine Services Company in Egypt is using Fishers TOV-1 towed video system with topside VRM-1 monitor and recorder for use in their survey and inspection operations. The firm previously bought Fishers Pulse 8X metal detectors and Diver Mag 1 magnetometer.

.....Sweeney International Marine Corp. in Canada employs teams of biologists and technicians who work on all aspects of aquaculture production. Sweeney is using Fishers DV-1 drop video system and VRM-1 to assist in their operations.

.....Subsea 7, a seabed to surface engineering, construction, and services contractor to the offshore energy industry is using Fishers PT-1 pipe tracking magnetometer on Nigeria's Escravos Gas Project.

.....China Harbour Engineering Company is using Fishers Proton 4 boat-towed magnetometer in the Gwadar Port construction project. Areas to be dredged are first surveyed with the super-sensitive metal detector to locate any metal objects that could damage dredging equipment.

.....Jotun Group based in Norway is one of the world's leading suppliers of marine paints and protective coatings. In addition to supplying these products, they also provide technical advice and assistance to their clients. To assist in viewing undersea structures the company has purchased Fishers SeaLion-2 ROV.



Jotun technician with SeaLion-2 ROV

Archaeologists Go Deep to Uncover History



University of Rhode Island's Dr. Bridget Buxton with her Pulse 8X detector

The field of underwater archaeology is expanding rapidly as the equipment required for marine exploration becomes more affordable, and more scientists and researchers learn to dive. Aiding this expansion are universities which are adding or expanding their underwater archaeology programs to give students a broader education and a better understanding of our maritime history.

One institution actively involved in marine archaeology is the University of Rhode Island (URI). The university has an on-line Museum of Underwater Archaeology with information about shipwreck projects around the world that the school is involved in. URI's Dr. Bridget Buxton, an associate professor in the history department, specializes in ancient history and Mediterranean underwater archaeology. Buxton, an accomplished scuba diver, is working with Jacob Sharvit of the Israel Antiquities Authority (IAA) to investigate the area's known shipwrecks, and to locate undiscovered sites. One wreck recently uncovered appears to be the remains of a famous lost warship from the Napoleonic siege of Acre in 1799, a wreck that historians have been trying to find for the last 50 years. Using their Pulse 8X metal detector the team located large copper nails, cannon balls, grapples, 18th century muskets, and other concretions. Future projects include searching for an ancient Greek multi-deck warship and trying to locate the lost Ptolemaic fleet from the Syrian Wars of C. 200-150 BC. The lost fleet is thought to be in an area where the IAA has already recovered over 4000 silver tetradrachmas (ancient coins).

Indiana University (IU) Bloomington has one of the oldest academic diving programs in the country. Professor Charles Beeker is the director of the school's Office of Underwater Science and Educational Resources (USER) (contd pg 5)

Government Agencies, Universities, & Military Perform U/W Searches

.....Columbian Navy's Dept of Diving and Salvage is using Fishers SSS-600K side scan sonar with Map Coverage Software in their search operations.

.....U of Maine has purchased the SeaLion-2 for its graduate school of marine sciences. Grad student Jenn McHenry came to Fishers factory to pick up the ROV and get training in its operation.



Univ. of Maine grad student Jenn McHenry with their SeaLion-2 ROV at Fishers factory with tech B. Awalt

.....University of California Santa Barbara Marine Science Institute has purchased Fishers Pulse 6X metal detector. Fishers detectors are in use by a number of marine scientists tracking various shellfish populations by affixing small metal tags.

.....Michigan's Hammond Bay Biological Station is funded by the Great Lakes Fishery Commission and participates in a formal research partnership with the University of Michigan. The Station is using Fishers Pulse 8X detector in their operations.

.....US Environmental Protection Agency in Athens, GA has purchased a quantity of Fishers SFP-1 acoustic pingers to mark the location of underwater objects.

.....University of West Florida's Archaeology Institute is using Fishers Diver Mag hand-held magnetometer. Professor and marine archaeologist Greg Cook reports, "We have been very happy with the mag. You guys provide great customer service."

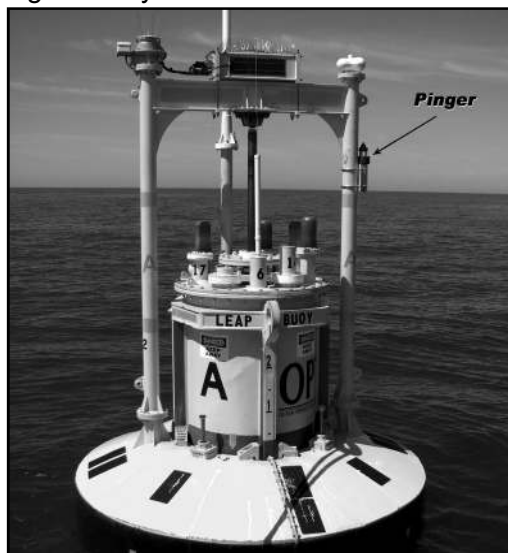
.....US Army Corps of Engineers at Ice Harbor Dam in Washington state are using a SeaLion-2 ROV with optional side cameras and scanning sonar. The Corps was successfully using Fishers original SeaLion-1 at the dam for many years before deciding to buy the new system. *JWF*

Contd from page 1 - Pingers are a hit...

Law enforcement and military diving units also utilize pingers and receivers. They attach the acoustic signaling device to an underwater crime scene or evidence, submerged vehicles or sunken vessels, monitoring instruments, mines and explosives.

The Naval Underwater Warfare Center (NUWC) is one of many military organizations adapting pingers to their applications. The Newport, Rhode Island facility originated 142 years ago as the Naval Torpedo Station. Part of their mission is to develop and test "submarine warfare systems and other systems associated with the undersea battlespace". To ensure all devices undergoing open water testing are recoverable, they are equipped with a pinger. Another of the Navy's applications is for use on autonomous underwater vehicles that perform deep water search and survey operations. JW Fishers customized their SFP-1 pingers to meet the Navy's special requirements. Researcher Ben Potter comments, "We've attached one of the SFP-1 units to our REMUS AUV. Fishers willingness to accommodate the needs of our program has been outstanding."

ASL Environmental Sciences in British Columbia, Canada provides a full range of marine services including project design, planning, consulting, instrument deployment and recovery. In addition, they also have a substantial lease pool of oceanographic equipment and a variety of bottom frames to attach instrumentation. To keep track of the instruments, they attach an SFP-1 pinger. When the time comes for recovery, ASL can easily find it by detecting the sonar signal from the pinger. Fishers PR-1 receiver, also has a boat deployment kit that enables deployment from a boat, making recovery time significantly faster. *JWF*



Ocean Power Technologies Autonomous Buoy with JW Fishers pinger attached

Commercial News

.....France Telecom Marine, a major player in the laying of submarine communications cables across the world's oceans, has acquired several of Fishers CT-1 cable tracking systems.

.....Diver Dan Diving Service in Texas is using Fishers SSS-100K/600K for their survey operations reports operations supervisor Nathan McCoy.

.....Underwater Engineering Services in Florida is using Fishers PT-1 pinpointing magnetometer to locate and track buried undersea pipelines.

.....San Diego Gas and Electric is using Fishers Diver Mag 1 hand-held magnetometer to locate and track pipelines. On a recent job an SDG&E team used the Diver Mag to mark the location of a pipeline running under San Diego's bay.



San Diego Gas & Electric's Dan Carr with Diver Mag 1 and his dive team.

.....Derrick Construction Company in Texas offers a variety of marine construction services including salvage work and pipeline installation and removal. The company recently acquired a Diver Mag 1 to assist in their operations.

.....Aberdeen based Sigma Offshore developer of cost effective solutions for floating production storage and off-loading (FPSO) vessels is using the SeaLion-2 ROV in a project in West Africa.

.....Acadian Marine and Diving, a commercial diving company in New Brunswick, Canada is using a Pulse 8X metal detector in their operations.

.....Mainstream Commercial Divers based in Kentucky purchased a Diver Mag for a salvage project in North Dakota reports owner Craig Fortenbury.

.....RS and L Marine, a fiber optic and subsea power cable services company in Malaysia has acquired the Fishers CT-1 cable tracking system. *JWF*

Asian Firms Search (contd from page 2)

and tracks deeply buried pipes and armored cables. A key advantage of the PT-1 is its ability to locate pipes and cables within close proximity of iron and steel structures such as seawalls, piers, and bridges.

NAVA19 Engineering Co. Ltd in Thailand provides a variety of services including location and tracking of underwater power and communication cables. The company is using Fishers CT-1 cable tracker to assist in these operations. The system has a signal injector box which induces a signal into the cable, and a probe that detects the signal. The probe can be carried by a diver or deployed from a boat. When tracking live power cables it is not necessary to induce a signal as the probe detects the 50 Hz or 60 Hz. The system can also help find breaks in the line.

Korea's Daekee Marine Corp manufactures marine lighting systems, installs aids to navigation, and is involved in the construction of lighthouses. An essential tool routinely used in performing this work is Fishers TOV-1 towed underwater video. The system is compact enough to fit in a small boat and be deployed by one person, and is robust enough to withstand the rigors of a commercial operation. Daekee can survey the ocean bottom in areas where navigation buoys are deployed to ensure the mooring system is stable and secure. Using the VRM-1 video monitor with built-in DVR, Daekee is able to record the entire survey operation and provide a DVD complete with position coordinates, text overlay, and audio commentary. **JWF**



Daekee Marine's team deploys TOV

..... From the TREASURE CHEST.....

One of two gold coins located by Greg Lawrence and Pulse 8X



.....Canadian Greg Lawrence located two beautiful gold coins dated 1726 using his Pulse 8X detector equipped with 8 x 48 coil.

.....World famous treasure hunter and long-time Fisher detector user Carl Fismer has brought up millions in gold & silver. He has searched for, and located, wrecks with many celebrities including Arthur C. Clarke (2001: A Space Odyssey) and John Chatterton (Shadow Divers). He recently inherited all the records and research of another famous treasure hunter Jack Haskins. With information culled from these documents Fismer and his team are working several new sites

in the Carribean and central America. One thing all have in common are the Pulse 8X detectors being used to recover the booty.Ohioan Tim McPhillips has made some great finds with his Pulse 8X detector. Recent recoveries include a tomahawk head, a set of navigational dividers, and an 18th century gaming piece, like ones recovered on Queen Anne's Revenge.

.....American Russ Bennett is working with archaeologists at Panama's antiquities ministry (INAC) helping to locate wreck sites in the old port area (circa 1720 -1859) using his Fisher Proton magnetometer.



Russ Bennett (r) with his Fisher Proton 3 magnetometer is helping Panamanian archaeologists locate historic wreck sites

Historic Shipwreck (contd from page 1)

Seventy feet of the hull structure is preserved and researchers are now beginning to excavate, record, and analyze it. During the work this summer divers recovered a cannon, navigational tools, rudder hardware, parts of barrels, and fragments of ceramic containers. One of tools aiding in the recovery work is JW Fishers Pulse 8X underwater metal detector. Diver James Davidson reports, "we have been quite successful with the detector finding a range of targets including cannon balls, musket shot, bar shot, and various lead artifacts at depths up to 3 feet below the seabed, and cannon buried as deep as 6 feet."

Professor Crisman says "Collectively these finds tell us an amazing story of the changes being wrought in Bermuda and around the world by mariners, merchants, and colonizers. The fabric of the *Warwick*, it's framing timbers, planks, beams, and knees are also providing us with a new benchmark for understanding the ships that England sent around the world in the 17th century. We already know much more

about the materials, design concepts and assembly practices of early English shipwrights than we did at the start of the excavation."

Another important archaeological project that is employing the underwater metal detector is the African Slave Wrecks Project. One of the primary objectives of the project is to locate and document the wreck sites of ships that carried slaves. Partners in this project include the IZIKO Museums of Cape Town in South Africa, the Slavery Museum of Angola, the US National Park Service Submerged Resource Unit, The Southern African Heritage Resources Agency, and George Washington University. The group intends to identify and preserve maritime cultural resources and promote them as tourism sites, an alternative to the commercialization of archaeological artifacts. Louis Mare, one of the researchers on the project reports, "We are very impressed with the Pulse 8X. In our first test on a local beach we recovered two cannon balls along with the usual coinage and some jewelry items. The team is now convinced this device will be an essential tool in our projects." **JWF**

Archaeologists go deep (contd from pg 2) and also a member of the Marine Protected Areas Federal Advisory Committee, part of NOAA. He has directed numerous shipwreck projects and is a pioneer in preserving wreck sites as underwater museums. In addition to his knowledge and experience in the history behind these submerged time capsules, he is also an accomplished diver. The current focus of Indiana's archaeology program is the wreck of the *Quedagh Merchant*. The ship was reportedly captained by the pirate William Kidd as he raced to New York in ill-fated attempt to clear his name. The ship went down in 1669 off the coast of the Dominican Republic and the wreckage now lies in 10 feet of warm, clear Caribbean water, with cannons and anchors scattered about. According to Beeker, it is a unique example of 17th century ship construction. The location is ideal for in-depth archaeological study and the perfect place for students to put into practice the methods and techniques learned in the classroom.

"When we're on these remote sites, we need equipment that is rugged and reliable. JW Fishers Pulse 8X detectors and PT-1 pinpointing magnetometers are what we rely on. They have consistently performed well on our projects. These devices are easy to operate. The students can pick them up and in a very short time



IU's Prof. Beeker filming the wreck site experience the thrill of locating an artifact on a wreck site."

In describing how his passion was ignited for this exciting field one student said, "Over the course of my studies I became increasingly interested in history and archaeology. Then one of my professors discussed the merits of underwater archaeology, and the whole notion of conducting archaeology underwater hit me like a freighter. Shipwrecks are commonplace throughout the world and I'm taking for granted the rich maritime heritage that surrounds me." As Prof. Beeker so aptly puts it, "The students are our future. I want to know in 20, 50, 100 years from now, we still have these underwater sites." **JWF**

.....Grayson Fire Dept in Kentucky is using the SSS-600K side scan sonar in their search operations. Three members of the team attended a training session at Fishers factory. After completing the



Members of Grayson Fire Department with their new Fisher SSS-600K Side Scan Sonar one day course the team returned home, and two days later were out on Grayson Lake practicing with their new sonar. Lt. Kyle Morgan reported, "we can clearly see tires, tree limbs, and several cinder blocks on the bottom. The images are impressive."

.....Benton County Dive Team in Bentonville, AR has acquired Fishers TOV-1 towed video system. The TOV sends live video to the surface for viewing and recording. Towing the camera is similar to towing a diver except there are no time or depth limitations with the TOV. To view the picture from the underwater camera the team purchased the VRM-1 which has a built-in flat screen monitor and digital video recorder.

.....The Port Police at Los Angeles Harbor Department are using Fishers SeaOtter-2 ROV. Their job is to ensure the safety of all passenger and cargo vessels passing through the port. This includes guarding both topside and underwater areas against possible terrorist threats, monitoring discharge pollution, and checking ship's hulls for compartments carrying drugs or contraband.

.....The Maricopa County Sheriffs Dept in Arizona has purchased Fishers DV-1 drop video. Dive team leader Jeff Hanson reported they had borrowed a TOV-1 from a neighboring county to help locate a small airplane that crashed in a deep lake. They had been searching for more than month with out success. With the help of the camera system the plane was found in 2 days. They were so impressed, they decided to get their own system. They also got the VRM-1 monitor and recorder with it.

.....Rhode Island Bomb Squad, part of the state's Department of Public Safety has purchased a Pulse 8X metal detector with optional deep seeking 16 inch coil. Team member Tom Groff writes, "Love the new gear. Well done."

.....Oklahoma Highway Patrol is using the Pulse 8X detector in their evidence recovery operations reports patrolman Jeremy Allread.

.....New Bedford Police Department in Massachusetts is using Fishers SSS-100K/600K dual frequency side scan in their search operations reports Lt. Jill Simmons, longtime member of the department's port security team. The coastal city has a busy port and a small airport and the team is often called when a vessel sinks or a plane goes down in the ocean. The department was already successfully using Fishers TOV-1 towed video and Pulse 8X metal detector.



Side scan image of sunken vessel

.....Boston Police Department's dive team has added Fishers DHC-1 diver-held camera system to their extensive list of underwater crime scene investigation tools. The VRM-1 monitor & recorder was also acquired with the system.

.....Chautauqua County Emergency Services in NY is using the SSS-100K/600K side scan sonar to assist in locating cap-sized boats, submerged vehicles and drowning victims. Two members of the dive team came to Fishers for training.



Chautauqua County Dive Team Members with their Fisher SSS-100K/600K sonar

— OTHER NEWS and NEW PRODUCTS —



Capt. Carl Fisser with his Pulse 8X detector

Captain Carl Fisser, internationally famous wreck hunter and star of the hit TV series *Treasure Divers*, is now available for personal presentations via SKYPE at your next dive show or event. "Fizz", as he's called by friends, has located shipwrecks around the globe and recovered millions in treasure. In 2010 he received the prestigious Mel Fisher Lifetime Achievement Award. The award is presented annually to a person who has shown "immense perseverance in following their Quest in Life. Such a quest would exemplify the person's ability to achieve in life what others might only dare to dream". In addition to regaling your group with tales of wreck hunts and treasures found, he'll take questions from the audience, and offer recovered coins and artifacts for purchase. For more details go to www.carlfisser.com or email him at captfizz@yahoo.com. **JWF**

JW Fishers is now offering a new higher resolution version of its popular SCAN-650 scanning sonar. The SCAN-650 can be mounted on an ROV or used as a "stand-alone" search system. This sonar can scan an area up to 120 meters in diameter. The SCAN-650 produces detailed images of objects on the bottom regardless of water clarity. The new version, SCAN-650NB, has a narrower sonar beam which produces higher resolution images especially over the longer ranges. Scanning sonar is ideal as an "ROV guidance system", showing the operator what the underwater environment looks like far beyond the video range of its cameras. This sonar is also in widespread use by law enforcement agencies and public safety dive teams assisting in the location of drowning victims, sunken boats, and submerged vehicles. **JWF**



New Narrow Beam Scanning Sonar



Image of bicycle on river bottom produced by Fishers SSS-1200 kHz side scan sonar

JW Fishers has added a new higher frequency to their very popular line of side scan sonar systems. The 1200 kHz is available in a single frequency side scan system, as are Fishers 600 kHz and 100 kHz, and also in a dual frequency system. Fishers dual frequency side scan sonars combine two sets of transducers in one towfish allowing the operator to switch between frequencies at any time during operation. Customers wanting a dual frequency side scan can now select any combination of two frequencies. The 100 kHz has the longest range, up to 600 meters, but the lowest resolution. The 600 kHz has very good resolution, at ranges up to 75 meters. The new 1200 kHz has the highest resolution, but the shortest range; up to 25 meters.

Fishers side scan sonars are in use by commercial diving companies, law enforcement agencies, and military units worldwide. These systems produce detailed images of the underwater environment regardless of water clarity. They are the ideal instrument for finding shipwrecks, locating mines and other explosive devices, surveying areas before pipeline installation, finding drowning victims, and submerged vessels and vehicles. **JWF**

If you have a story you would like to share, send us a photo and write-up, or call Chris or Jack at (800) 822-4744 or (508) 822-7330. Send faxes to (508) 880-8949, email: jwfishers@aol.com or visit the website at www.jwfishers.com.

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