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Telepossession Is Nine-Tenths of the Law: The Emerging Industry of Deep Ocean Discovery

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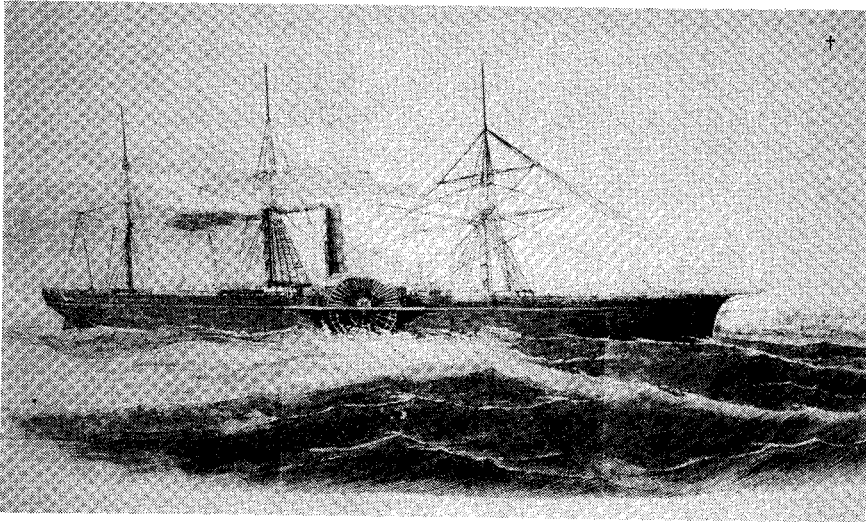
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NOTES



Telepossession Is Nine-Tenths Of The Law:††* **The Emerging Industry Of Deep Ocean Discovery†††*

† This illustration of the *S.S. Central America* was reproduced from *The Loss of the Central America*, Frank Leslie's Illustrated Newspaper, Oct. 3, 1857, at 280. It was provided to the author courtesy of Columbus-America Discovery Group and was used with permission.

†† **Possession is nine-tenths of the law.** This adage is not to be taken as true to the full extent, so as to mean that the person in possession can only be ousted by one whose title is nine times better than his, but it places in a strong light the legal truth that every claimant must succeed by the strength of his own title, and not by the weakness of his antagonist's.

BLACK'S LAW DICTIONARY 1164 (6th ed. 1990).

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INTRODUCTION

As long as there have been ships there have been shipwrecks.¹ After a ship sinks and endeavors to save human lives are made, some people's thoughts turn to how to retrieve the sunken cargo and other objects. Throughout history mankind has continually developed the technology necessary to salvage sunken ships.² The most recent technological development for

¹ For example, according to Willard Bascom, "Statistics for the eighteenth and nineteenth centuries indicate that approximately forty percent of all wooden sailing ships ended their careers by running onto reefs, rocks, or beaches made of rock, sand, or coral. Another ten to twenty percent . . . sank offshore in deeper water." Bass & Searle, *Epilog*, in *SHIPS AND SHIPWRECKS OF THE AMERICAS: A HISTORY BASED ON UNDERWATER ARCHAEOLOGY* 251 (G. Bass ed. 1988) (citing W. BASCOM, *DEEP WATER, ANCIENT SHIPS* (1976)) [hereinafter *SHIPS AND SHIPWRECKS OF THE AMERICAS*]. Furthermore, "*Lloyd's List* demonstrates that losses at sea remain a daily occurrence." *Id.*

² In order to fully appreciate both modern salvage practices and the law governing salvage and shipwrecks, it is important to note the development of technology employed in shipwreck salvage. From ancient times until the seventeenth century, "nets, grappling hooks and skin divers" were the only methods available to recover lost cargo. Note, *Underwater Recovery Operations in Offshore Waters: Vying for Rights to Treasure*, 5 B.U. INT'L L.J. 153, 153 n.1 (1987) [hereinafter *Underwater Recovery Operations*]. Between the seventeenth and nineteenth centuries the diving-bell, air-tight barrels and hard-hat diving suits were developed. *Id.* However, wrecks still had to be found by sight, that is, located visually from the surface of the water. *Id.*

The twentieth century has had the greatest advances in shipwreck discovery and retrieval technology. In 1943, Jacques-Yves Cousteau's and Emil Gagnan's invention of self-contained underwater breathing apparatus (SCUBA) gear revolutionized both diving in general, and salvage in particular. *Id.* See also *SHIPS AND SHIPWRECKS OF THE AMERICAS*, *supra* note 1, at 255. Several devices developed during and since World War II have been instrumental in locating wrecks in deeper waters. These include:

Side-scan sonar: [this] locates shipwrecks and sites on the bottom surface by detecting the echoes of high-frequency acoustic pulses transmitted from an instrument towed behind [the] ship;

Sub-bottom profiler: [this] locates shipwrecks and sites below the bottom by detecting the return signals of lower frequency acoustic pulses from [an] instrument towed behind [the] ship;

Magnetometer: [this] registers changes in the local magnetic field as the detector passes over iron-bearing cultural material. It can be used from a ship or an airplane;

Remotely operated vehicles (ROVs): [these are] a variety of submersible vehicles that can carry photographic or video cameras to image submerged objects. ROVs can also retrieve samples from the bottom;

Photography: [photographs may be in] black and white, color, and infrared at a wide variety of scales; and

Video: [video may be in] color and black and white.

U.S. Congress, Office of Technology Assessment, *Technologies for Underwater Archaeology & Maritime Preservation—Background Paper*, OTA-BP-E-37, 8 (U.S. Gov. Printing

underwater exploration and shipwreck salvage is the remotely operated vehicle (ROV).³ ROVs are unmanned submersibles that

Office, Sept. 1987) [hereinafter *Technologies for Underwater*].

Most shallow water wrecks are within easy access of both amateur divers and salvors. However, shallow and fresh water wrecks usually have broken apart and contain large scatter fields due to both natural elements and man-made threats. Deep water wrecks are sometimes better preserved, or even found intact, although subject to many natural threats. SHIPS AND SHIPWRECKS OF THE AMERICAS, *supra* note 1, at 251.

Natural threats include: corrosion and/or concretion of metals, earthquakes, erosion, floods, storms, subsidence, wave action, wood-borers and volcanoes.

Man-made threats include: anchoring, government projects, looting, lack of maintenance, neglect, non-conservation of materials recovered from underwater, oil/gas/mineral extraction, pipelines, pollution, salvaging/treasure hunting, shell-fishing, shore facility expansion, sport diving and vandalism.

Technologies for Underwater, *supra*, at 30.

Since World War II, there have been great advances in submarine technology that allow humans to visit more than 98 percent of the seafloor. *Finland; Soviet Research Submarines go Deeper Than Expected in Sea Trials*, OFFSHORE, Apr. 1988, at 91 [hereinafter *Finland*]. In 1988, two manned submarines (*MIR 1 & 2*) were delivered to the Soviet Union from Finland that are capable of descending to depths of 6,000 meters. UNDERSEA VEHICLES DIRECTORY—1990-91 19 & 47-48 (4th ed. 1990) [hereinafter UNDERSEA VEHICLES DIRECTORY]. The only other manned submarines capable of similar depths are the *Nautilus* (6,096 meters), which is owned by France, the *Sea Cliff* (6,096 meters), which is owned by the United States, and the *Shinkai 6500* (6,500 meters), which is owned by Japan. *Id.* at 19, 50-51, 72 & 79-80.

³ See *supra* note 2. These vehicles are equipped with video and still cameras, sensors and manipulator arms, and they transmit video images of the ocean floor to the controller. Broad, *Undersea Robots Open a New Age of Exploration*, N.Y. Times, Nov. 13, 1990, at C1, col. 3 [hereinafter *Undersea Robots*]. Computer control signals and data travel both to and from the submersible along a fiber optic umbilical cord that is reinforced with KEVLAR, which is a "lightweight polymer of steel-like strength." *Id.* at C1, col. 4.

See *Treasures of a Lost Voyage*, (Discovery Channel Broadcast, Sept. 9, 1990). This documentary included live video of actual recovery operations by *Nemo*, which is the submersible used by Columbus-America Discovery Group to retrieve objects from the wreck of the *S.S. Central America*. *Nemo* is a six ton telebot, or remotely operated submersible. It is equipped with: eight video cameras that feed video images in both color and black and white, some of which can deliver video in three dimensions (3-D); three still cameras; "Dexter," which is a robotic manipulating arm capable of extending fifteen feet from *Nemo*; a top-mounted deployable propeller that forces fresh water down to the seabottom to keep the worksite clear; and a retractable tray that carries and protects any artifacts retrieved from the wrecksite. *Id.*

Nemo is operated from a high-tech control center located onboard the *R/V Arctic Discoverer*. The control center is equipped with seventeen monitors, eleven computers, a menu selection screen for *Nemo* functions and a sensor monitor that reveals water temperature, depth, pressure, location and camera angle. *Id.* *Nemo* is able to operate continuously "for as long as his controllers can stand it." *Id.* For discussion of *Nemo*'s operations, see *infra* text accompanying notes 62-63 & 81.

Several other operations have used ROVs. See *Seahawk Deep Ocean Technology's*

travel under water while controlled by humans through the aid of computers.⁴ These vehicles are attached to a mothership by an umbilical cord that transmits data both to and from the ROVs.⁵

The use of unmanned submersibles is favorable in the recovery of deep ocean shipwrecks because of the attendant dangers: water depth, underwater atmospheric pressure, unpredictable weather, dangerous underwater currents and marine predators.⁶ Although a human being may still be able to reach a certain depth,⁷ the sophistication of robotic manipulating arms

operations discussed *infra* notes 184-93 and accompanying text. A ROV was used to search for wreckage beyond the reach of scuba divers from the wreck of the *Nuestra Señora de la Concepción*, which sank in 1638 after striking a reef off the coast of Saipan in the Mariana Islands. Mathers, *Nuestra Señora de la Concepción*, NAT'L GEOGRAPHIC, Sept. 1990, at 39, 51. Dr. Robert Ballard of Woods Hole Oceanographic Institution used one of his ROVs, *Jason Junior*, to enter areas of the *Titanic* and to film the grand staircase. These areas were inaccessible to his manned submersible *Alvin*. *Shipwrecks: Secrets of the Titanic*, (National Geographic Explorer, WTBS Atlanta Broadcast, Jan. 6, 1991). For *Jason Junior*'s technological specifications, see UNDERSEA VEHICLES DIRECTORY, *supra* note 2, at 169-70.

⁴ Nobbe, *Robots Go Where No Man Has Gone Before; Teleoperators and Telerobots*, MACHINE DESIGN, Jan. 25, 1990, at 52 [hereinafter *Robots*]. Computers are used to aid controllers to manipulate these robots when robotic movements are complex. *Id.* For a discussion of some present applications of robotic technology, see Woodbury, *Exploring the Ocean's Frontiers; Robots and Miniature Submarines Take Oil Drillers to New Depths*, TIME, Dec. 17, 1990, at 98; *Utilities Put Robot Technology to Work*, PUB. UTIL. FORT., Apr. 13, 1989, at 59.

⁵ See *supra* note 3. *Nemo* is tethered to the mothership by a 9,000 feet long $\frac{3}{4}$ inch fiber optic umbilical cord. Lore, *Excavating the Abyss: Treasure Hunters Will Bring Back Wealth of Gold*, INFORMATION, Columbus Dispatch, Sept. 17, 1989, at 1G, 2G, col. 2.

⁶ See, e.g., *Underwater Recovery Operations*, *supra* note 2, at 154; Note, *Property Rights in Recovered Sea Treasure: The Salvor's Perspective*, 3 N.Y.J. INT'L & COMP. L. 271, 272-73 & nn.11 & 14 (1982); Hagman, *Miracle of Miracles: Divers' Fabulous Booty Part of 40-Ton Treasure*, Wash. Times, Oct. 19, 1990, at E1 (divers at Little Bahamas Bank face barracudas and tiger sharks); Seanor, *The Case With the Midas Touch*, A.B.A. J., May 1990, at 50, 53 [hereinafter *Midas Touch*] (sharks inhabited waters of S.S. *Central America* wrecksite).

⁷ Divers using SCUBA gear are only capable of descending to depths of several hundred feet by using mixtures of different gases. Two of the major problems facing divers using SCUBA gear at these depths are nitrogen narcosis (rapture of the deep) and having to decompress in order to avoid decompression sickness (the bends). In re *Gentile*, No. 951-193 slip op. at 4 (U.S. Dept. Com. Off. Admin. L. Judge Nov. 29, 1989); SHIPS AND SHIPWRECKS OF THE AMERICAS, *supra* note 1, at 255. One invention that allows divers to go deeper is the atmospheric diving suit (ADS), which is a one man pressurized space suit that is tethered to a mothership. Depending on the make of the suit, an ADS is capable of descending to a depth of approximately 610 meters. UNDERSEA VEHICLES DIRECTORY, *supra* note 2, at 118-24.

attached to ROVs has replaced the need to risk life and limb of a diver, and it has increased the duration of time spent exploring a shipwreck site or actual salvage operations.⁸ Despite ad-

Recent experiments by COMEX, which is a French commercial diving firm, have demonstrated that divers using a hydrogen/helium/oxygen mix were able to work in the deep ocean for six days at a depth of 1,700 feet. Dane, *Deep Quest*, POPULAR MECHANICS, Jan. 1990, at 56, 58. Unfortunately, these divers "needed to spend nearly three weeks locked in a decompression chamber." *Id.* This need to decompress "remains a serious obstacle to efficiency." *Id.* The condition of High-Pressure Nervous Syndrome (HPNS), "which strikes unpredictably and may debilitate divers with hallucinations, nausea and convulsions" further hinders deep sea operations. *Id.* Experiments are underway to have divers "breathe" fluid fluorocarbons instead of gas; however, "anesthetics would be needed below about 3,000 ft. to ward off HPNS." *Id.*

⁸ Modern robotic arms are capable of picking up "objects as small as a paperclip," or "as large as a football player." Main, *Robot Demonstrates Ability to Pick Up Beer Glass, Bomb*, Tulsa World, June 10, 1989, at A1; Hall, *Gold Rush of the '90s is Under Water*, USA Today, Nov. 2, 1990, at 2A, col. 6 [hereinafter *Gold Rush*]. See also *Undersea Robots*, *supra* note 3, at C1, col. 5; *Robots*, *supra* note 4, at 52; Leidl, *One For the Gripper*, BC BUSINESS, June 1989, at 22.

Dr. Robert Ballard used *Alvin*, a manned submersible that is owned by the United States Navy and on loan to Wood's Hole Oceanographic Institution, to locate and explore the final resting place of the *Titanic*. See *Secrets of the Titanic*, *supra* note 3. *Alvin*, which can dive to a depth of approximately 4,000 meters, is the "world's most active deep-sea research submersible." WOODS HOLE OCEANOGRAPHIC INSTITUTION, DSV *Alvin* 1, 12 (1989). See also UNDERSEA VEHICLES DIRECTORY, *supra* note 2, at 19-21.

Several of the disadvantages of using a manned submersible are that accommodations are very cramped, visibility is afforded through small portholes, and life-support must be maintained. Additionally, it takes over two hours to descend about 10,000 feet. Thus, four hours of the dive time in a deep water operation would be spent monotonously travelling to and from the site. This loss of work time increases the costs of an operation and hampers recovery or discovery operations. Furthermore, a manned submersible's time underwater is limited by the battery power with which the submersible has been equipped. Telephone interview with Hanke Kite-Powell, Woods Hole Oceanographic Institution (Jan. 9, 1991).

On the other hand, by using ROVs, human controllers do not suffer from fatigue as in a manned dive, visibility is much greater than that afforded by the small portholes on manned submersibles, and no time is wasted by travelling to and from the wrecksite. "ROVs are safer and less expensive to operate than manned vehicles and can stay submerged for days or even weeks, compared to 8 to 12 hours for manned submersibles." Mindell, *Images From the Deep*, BYTE, June 1990, at 256. A ROV's depth limitation is determined by the length of the umbilical cord that connects it to a mothership. *20,000 Rogues Under the Sea*, ECONOMIST, Dec. 22, 1990, at 109. ROVs may be equipped to use lasers for imaging to ascertain their position at a wrecksite, and they may also utilize lasers to "see and photograph better than ordinary light, which diffuses easily." *Id.* Seahawk Deep Ocean Technology's (Seahawk) ROV, *Merlin*, operates twenty-four hours a day. *Merlin* is operated by a three person crew. Video images are displayed on three 36-inch video screens that provide a 180 degree view of broadcast-quality video. "Merlin" Comes to Life (New shipwreck-excavation ROV completed), Seahawk Deep Ocean Technology Press Release [hereinafter "Merlin" Comes to Life]. See also Seahawk Video

vances in technology⁹ that allow commercial deep ocean operations, cost remains the most prohibitive factor. In response to the tremendous costs of a high-tech deep ocean operation, which usually costs several million dollars,¹⁰ the limited partnership¹¹

(available from Seahawk Tape, 5102 South Westshore Boulevard, Tampa, Florida 33611). For discussion of Seahawk's operations, see *infra* notes 184-93 and accompanying text.

Treasure hunter, author and marine archaeologist, Robert F. Marx, comments that salvage has "gone from the swashbuckling days when everybody had tattoos and a gold earring and a gold coin around their neck and a treasure map in their back pocket. Now it's become a science, it's really oceanography and deep diving operations and special equipment." Seahawk Video, *supra*. See also *Gold Rush*, *supra*, at 2A, col. 2.

For a current listing of both manned and unmanned submersibles in use, see UNDER-SEA VEHICLES DIRECTORY, *supra* note 2.

⁹ See *supra* notes 2-3 and accompanying text.

¹⁰ For example, Columbus-America Discovery Group "has expended in excess of ten million dollars in the project" to recover objects from the wreck of the S.S. *Central America*. Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel, 742 F. Supp. 1327, 1329 (E.D. Va. 1990). Seahawk invested two million dollars into equipment to begin its deep water discovery and recovery operations. Schmalz, *Salvagers Find Hulk of Galleon South of Florida*, N.Y. Times, June 28, 1989, at A14, col. 1 [hereinafter *Salvagers*].

Additionally, Herbert Humphreys Jr. of Memphis, Tennessee, has formed MAREX, which is a company that salves both shallow and deep water shipwrecks. MAREX is presently salving the wreck of the *Nuestra Señora de las Maravillas*, which sank in shallow water on January 4, 1656 in the Grand Bahamas Banks. Hagman, *She Carried Emeralds by the Ton*, TREASURE DIVER, Nov. 1989, at 34. As of July, 1989, this ongoing salvage operation with expenses of \$5,000.00 per day had cost more than \$4.5 million. Hagman, *New Find Raises Hopes of Salvagers*, Wash. Times, July 13, 1989, at E2. At the same time MAREX undertook a recovery operation using a ROV in the summer of 1990 on a World War I Italian liner in the Mediterranean Sea at a depth of 1,500 feet. "Spectacular" Treasure Found by Local Hunters After 4 Year Search, Caymanian Compass, Aug. 31, 1990, at A2, col. 1, 2 [hereinafter "Spectacular"]. MAREX has planned three recovery operations for the Summer of 1991, two of which would involve the use of ROVs. Unfortunately, in order to salve these shipwrecks, large amounts of capital are needed from investors. If one were to charter a ROV for use at a salvage site it would cost approximately \$5,000.00 per day. One must also take into account that a five person crew would be needed to operate it, and the mothership would need a winch in order to raise and lower the ROV to and from the water. Telephone interview with Michael Anderson, MAREX International, Cornwall, England office (Mar. 27, 1991). MAREX has created a computer database of thousands of wrecks for its future reference and possible recovery operations. *Id.* See also Hagman, *Divers Mine Depths for Treasures*, Wash. Times, Oct. 19, 1990, at E8.

¹¹ Foster-Simeon, *Investors Sink Funds in Hopes of Ocean Booty*, Wash. Times, Oct. 19, 1989, at C1. In a limited partnership, investors provide investment capital to a salvage company in the hopes of yielding a high return on their investment. Yet their liability is limited to the amount of money they invest. See, e.g., D. VAGTS, BASIC CORPORATION LAW 18-32 (3d ed. 1989).

For a discussion of Columbus-America Discovery Group's investors, see Wilkinson,

has become the preferred way to finance a potential operation.¹² The discovery and subsequent recovery of objects from the *S.S. Central America* is the prime example of the difficulties, opportunities and litigation in the new industry of deep ocean discovery operations.¹³

The United States Mail Steamship Company owned the *S.S. Central America*, which was a side-wheeled steamship that carried passengers, mail and gold shipments from Panama to New York.¹⁴ The *S.S. Central America* successfully completed forty-three voyages along the third leg of the sea route from San Francisco to New York during the California gold rush of the nineteenth century.¹⁵ During its forty-fourth voyage in 1857 the *S.S. Central America* encountered a fierce hurricane and sank 160 miles off the coast of South Carolina.¹⁶ For over a century adventurers dreamed of finding this vessel and retrieving its re-

Doubloon or Nothin', FORBES, Mar. 18, 1991, at 58.

MAREX sells interests in its diving operations in \$20,000.00 "units" but the investor must qualify, which means that he or she has to be able to absorb the loss "if the ship doesn't come in." Bailey, *Partners to Share Risks, Rewards of Sea's Bounty*, Mem. Com. Appeal, Nov. 29, 1990, at N5.

¹² "There are few investments on the globe that rival the allure of sandy gold doubloons and seaweed-choked jewels. Historically, opportunities to invest in sunken treasure have offered a daring, romantic and virtually assured method of losing money, in either short- or long-term installments." *Doubloon or Nothin'*, *supra* note 11, at 58. Despite this track record, treasure hunters usually will find investors for their quests. See, e.g., *Divers Mine Depths for Treasures*, *supra* note 10, at E8; Reed, *Sunken Treasure!*, READER'S DIG., Dec. 1990, at 79, 80; *Golden Quest Inc. to Salvage Sunken Spanish Galleon Off Oregon Coast Believed to Contain \$500 Million*, PR Newswire, July 21, 1989; Note, *Salvage of Ancient Treasure Ships*, 1986 LLOYD'S MAR. & COM. L.Q. 16, 16 n.1 (1986). At the present time, "improvements in underwater exploration technology are opening treasure diving to a whole new breed: businessmen." Boylan, *Treasure Hunt Turns High-Tech*, Gannett News Service, Apr. 25, 1990.

¹³ *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 742 F. Supp. 1327 (E.D. Va. 1990). See Boye, *Treasure Hunters Have to Sit on Their Booty*, Chi. Tribune, Dec. 9, 1990, at C15.

¹⁴ See *Treasures of a Lost Voyage*, *supra* note 3.

¹⁵ On its ninth voyage in 1854, the *S.S. Central America* carried the first treaty between the Imperial government of Japan and the United States. Frantz, *Salvage of Gold Hits Rough Seas; a Ship Bearing Treasure Worth up to \$1 Billion Sank in 1857. But Claims to the Booty Are Still Legally Murky, With Insurers Refusing to Pull up Anchor*, L.A. Times, Apr. 3, 1990, at A1, col. 1 [hereinafter *Salvage of Gold Hits Rough Seas*].

¹⁶ *Id.* See also *Treasures of a Lost Voyage*, *supra* note 3; *Midas Touch*, *supra* note 6, at 50; Voorhees, *Sunken Ship is Treasure For TV Documentary*, Seattle Times, Sept. 9, 1990, at TV2; STORY OF AN AMERICAN TRAGEDY (J. Conrad ed. 1988).

ported shipment of three tons of gold. One adventurer, Thomas G. Thompson, an engineer who worked briefly on the salvage of the *Nuestra Señora de Atocha*,¹⁷ was intrigued by the business possibilities of a deep ocean treasure hunt.

Thompson began his own treasure hunting company, Columbus-America Discovery Group (Columbus-America), and convinced investors to fund an operation to find and salve a shipwreck. The first order of business was to choose a shipwreck. After researching potential candidates the *S.S. Central America* was ultimately chosen. For several years Thompson and his organization studied voluminous documents about the shipwreck and developed computer software programs to create probability maps of the ship's location.¹⁸ Columbus-America then set out to actually locate and retrieve the fabulous gold cargo carried onboard the *S.S. Central America*.¹⁹

Part I of this article discusses maritime law and admiralty jurisdiction. Part II of this article discusses the various aspects of the *S.S. Central America* litigation. Part III of this article analyzes the doctrine of telepossession as it was created and applied by the District Court and the *in rem* determination in regard to both federal maritime and international law. Finally,

¹⁷ *Sunken Treasure!*, *supra* note 12, at 79-80. The *Nuestra Señora de Atocha* and the *Santa Margarita* (also known as the *La Margarita*) were located by Melvin Fisher in 1985 after a fifteen year search. The wrecks were located in international waters off the Florida Keys at a depth of 55 feet. Unfortunately, the wrecks were strewn over a wide area because of the effects of more than three centuries of currents. *See, e.g.*, *State of Florida, Department of State v. Treasure Salvors, Inc.*, 621 F.2d 1340, 1342-43 (5th Cir. 1980), *aff'g*, *Treasure Salvors, Inc. v. Unidentified Wrecked and Abandoned Sailing Vessel*, 459 F. Supp. 507 (S.D. Fla. 1978), *reh'g denied*, 629 F.2d 1350 (5th Cir. 1980), *cert. granted*, 451 U.S. 982 (1981), *aff'd in part, rev'd in part*, 458 U.S. 670 (1982). These vessels sank during a hurricane in 1622, which claimed nine ships out of the twenty-eight ship fleet heading for Spain. R. MARX, *SHIPWRECKS IN THE AMERICAS* 200-02 (1983 ed.).

¹⁸ "Through a series of historic, statistical, analytical and subjective methods, Stone helped locate the wrecked 19th century ship and its \$1 billion treasure." *Don Brout of Maritime Overseas Announces 1991 Franz Edelman Competition Finalists*, PR Newswire, Jan. 28, 1991. *See* Stone, *Search for the S.S. CENTRAL AMERICA: Mathematical Treasure Hunting*, *INTERFACES*, Jan.-Feb. 1992 (Forthcoming). These methods "were used to generate the probability distribution for the location of the wreck." *Id.* (advance Abstract at 2.)

¹⁹ Crawford, *Piracy on the High Seas? A Judge's Decision to Award a Treasure-Laden Shipwreck to Its Salvagers Has Stunned Cargo Insurers*, *INS. REV.*, Oct. 1990, at 37; *Treasures of a Lost Voyage*, *supra* note 3; Miller, *Battle Over Fortune in Treasure not Over*, *United Press International*, Sept. 13, 1990.

Part IV of this article addresses the implications of the doctrine of telepossession in the evolution of both the laws of salvage and finds in domestic and international forums.

I. THE LEGAL FRAMEWORK OF SALVAGE RIGHTS

Considering that 70 percent of the earth is covered by water, and half of that is approximately 3,000 meters deep,²⁰ the deep seabed is rapidly becoming within the reach of mankind. The body of law that covers disputes arising from shipwrecks or shipwreck discoveries is admiralty, or maritime law, which is one of the oldest bodies of law.²¹ Today's modern admiralty laws are derived from trade practices used by early seafaring peoples plying their trade in the Mediterranean Sea.²² Modern admiralty law in the United States developed from these same ancient laws as they were applied in England and eventually spread to the British colonies.²³ Admiralty courts in the United States were established under the United States Constitution.²⁴ Today, United States admiralty law is administered in federal courts, and it is governed by the Federal Rules of Civil Procedure.²⁵ Federal courts are competent to assert jurisdiction to hear admiralty cases by virtue of 28 U.S.C. section 1333.²⁶ State courts

²⁰ *Finland*, *supra* note 2, at 91. Yet, less than one percent of the ocean floor has been explored. *Treasures of a Lost Voyage*, *supra* note 3.

²¹ Admiralty may be defined as "a corpus of rules, concepts, and legal practices governing certain centrally important concerns of the business of carrying goods and passengers by water." G. GILMORE & C. BLACK, *LAW OF ADMIRALTY* 1 (2d ed. 1975) [hereinafter G. GILMORE & C. BLACK].

²² *Id.* at 3. Tradition states these Eastern Mediterranean rules were later adopted into Rhodian law, Roman law and spread to Europe where they were codified in the Middle Ages as the Rules of Oleron. *Id.* at 3-5.

²³ Colonial Vice-Admiralty courts were established in British North America quite prior to the American Revolution. *Id.* at 10-11.

²⁴ United States Constitution, article III, section 2 states: "The Judicial Power shall extend to all Cases, in Law and Equity, arising under this Constitution, the Laws of the United States, and Treaties made, or which shall be made, under their Authority; . . . to all Cases of admiralty and maritime Jurisdiction . . ." U.S. CONST. art. III, § 2.

²⁵ FED. R. CIV. P. SUPP. C(1), effective July 1, 1966.

²⁶ Admiralty, maritime and prize cases, 28 U.S.C. Section 1333, is an adaptation of section 9 of the Judiciary Act of 1789 that provides:

The district courts shall have original jurisdiction, exclusive of the courts of the States, of:

(1) Any civil case of admiralty or maritime jurisdiction, saving to suitors in all cases all other remedies to which they are otherwise entitled.

may also hear certain maritime claims, however these claims are decided by applying federal maritime law.²⁷ The authority to amend federal maritime law belongs to Congress, and it cannot be delegated to the states.²⁸

Admiralty law has a unique proceeding unknown to the common law. This is known as an *in rem* proceeding. The *in rem* proceeding gives to persons "a right conceived of as a property interest in the tangible thing involved (usually but not always a ship) in the . . . amount of the accrued liability. This right is called a maritime lien."²⁹ The authority for an *in rem* proceeding in United States' courts is Federal Rules of Civil Procedure

(2) Any prize brought into the United States and all proceedings for the condemnation of property taken as prize.

28 U.S.C. § 1333 (1988).

See *Treasure Salvors, Inc. v. The Unidentified Wrecked and Abandoned Sailing Vessel*, 640 F.2d 560 (5th Cir. 1981).

[T]he admiralty jurisdiction of the United States courts is not limited by the nationality of the ships, sailors or seas involved and since the principles of the law of salvage are part of the *jus gentium*, i.e., the international maritime law, United States courts have long adjudicated salvage claims involving foreign vessels, alien salvors and salvage operations occurring on the high seas.

Id. at 567 (citing *Sobonis v. Steam Tanker National Defender*, 298 F. Supp. 631 (S.D.N.Y. 1969); *Barkas v. Cia Naviera Coronado, S.A.*, 126 F. Supp. 532 (S.D.N.Y. 1954); *The Bee*, 3 F. Cas. 41 (D. Me. 1836) (No. 1219)). See generally Robol, *Admiralty's Adjudicatory Jurisdiction Over Alien Defendants: A Functional Analysis*, 11 J. MAR. L. & COM. 395 (1980).

²⁷ "The jurisdiction of the admiralty and of the common law courts is therefore to a certain extent concurrent. The common law jurisdiction, when concurrent with admiralty jurisdiction, may be exercised by state courts . . ." 1 E. JHIRAD & A. SANN, *BENEDICT ON ADMIRALTY* § 121 (rev. 7th ed. 1981) (citation omitted).

²⁸ See, e.g., *Carlisle Packing Co. v. Sandanger*, 259 U.S. 255 (1922); *Knickerbocker Ice Co. v. Stewart*, 253 U.S. 149 (1920); *Chelentis v. Luckenbach Steamship Company, Inc.*, 247 U.S. 372 (1918). The United States Supreme Court held consistently in these cases that state enactment of workmen's compensation statutes for seamen were unconstitutional because it was the responsibility of Congress to enact seamen protection laws for the purpose of uniformity.

²⁹ G. GILMORE & C. BLACK, *supra* note 21, at 35. The maritime lien is "independent of possession, it is non-consensual, and is commonly said not to be extinguished by transfer to a bona fide purchaser without notice of its existence." *Id.* at 36 (citations omitted). The lien is enforced in a proceeding against the vessel. *Id.* A person seeking a lien against a vessel files a claim with the admiralty court. The court then orders the arrest of the vessel. The owner of the vessel then makes an appearance in court to secure the release of the vessel by posting a bond. If the owner does not appear, and a lien is established on the merits, the vessel is then sold in a judicial sale, the proceeds are paid to the lienor, and the balance, if there is any, is given to the owner of the vessel. *Id.* at 36-37.

Supplemental Rule C(1),³⁰ and an *in rem* proceeding is one legal method used to determine salvage claims.

A. *The Salvor*

The law of salvage³¹ was developed to promote the socially productive goal of saving objects that are threatened or are in danger of being lost through accidents or acts of nature.³² There

³⁰ Supplemental Rule C, **Actions in Rem: Special Provisions**, of the Federal Rules of Civil Procedure provides:

(1) **When Available.** An action in rem may be brought:

(a) To enforce any maritime lien;

(b) Whenever a statute of the United States provides for a maritime action in rem or a proceeding analogous thereto.

Except as otherwise provided by law a party who may proceed in rem may also, or in the alternative, proceed in personam against any person who may be liable.

Statutory provisions exempting vessels or other property owned or possessed by or operated by or for the United States from arrest or seizure are not affected by this rule. When a statute so provides, an action against the United States or an instrumentality thereof may proceed on in rem principles.

FED. R. CIV. P. SUPP. R. C(1).

For a discussion of the *in rem* proceeding and the underlying policies, see Rutherglen, *The Contemporary Justification For Maritime Arrest and Attachment*, 30 WM. & MARY L. REV. 541 (1989); Alexander, *Treasure Salvage Beyond the Territorial Sea*, 20 J. MAR. L. & COM. 1 (1989).

For a thorough discussion of the constitutionality of an *in rem* proceeding, see Comment, *Student Symposium on Maritime Arrest and Rule C*, 6 MAR. LAW. 247-93 (1981); Annotation, *Constitutionality of Provision in Rule C, Supplemental Rules For Certain Admiralty and Maritime Claims, Allowing In Rem Seizure of Property*, 64 A.L.R. FED. 946 (1983 & Supp. 1990).

³¹ Salvage is "a service voluntarily rendered in relieving property from an impending peril at sea or other navigable waters by those under no legal obligation to do so." 3A M. NORRIS, *BENEDICT ON ADMIRALTY* § 2 (rev. 7th ed. 1989) [hereinafter 3A BENEDICT]. See also M. NORRIS, *THE LAW OF SALVAGE* (1958) [hereinafter *LAW OF SALVAGE*]; G. GILMORE & C. BLACK, *supra* note 21, at 532-85.

³² Traditionally, items or cargo lost to wrecks or accidents, which became subject to a salvage award, were labelled either wreck, flotsam, jetsam, or lagan:

In maritime law a wreck is a vessel, cargo or those things coming from a vessel, which have been abandoned without hope or expectation of return It also includes jetsam, flotsam and lagan.

...
 "Flotsam" is where a ship is sunk . . . and the goods float on the sea; "Jetsam" is where the ship is in danger of being sunk, and, to lighten the ship, the goods are cast into the sea "Lagan" is when the goods which are so cast into the sea and . . . such goods are so heavy that they sink to the bottom, and the mariners . . . tie to them a buoy, or cork, or such other thing that will not sink so that they may find them again.

are three requirements to be deemed a salvor:³³ (1) there has to be a marine peril;³⁴ (2) the service rendered must be voluntary;³⁵ and (3) there must be some probability of success.³⁶ The salvor also must act in good faith.³⁷ If these requirements are met, the salvor is entitled to a salvage award.³⁸ Traditionally, the salvage award could not exceed the value of the ship.³⁹ When determin-

3A BENEDICT, *supra* note 31, at § 133 (emphasis in original) (citations omitted). See also Kenny & Hrusoff, *The Ownership of the Treasures of the Sea*, 9 WM. & MARY L. REV. 383, 384 (1967) [hereinafter *Ownership of the Treasures*].

³³ A salvor is "[a] person who without any particular relation to a ship in distress, proffers useful service, and gives it as a volunteer adventurer, without any pre-existing covenant that connected him with the duty of employing himself for the preservation of the ship." 1 M. NORRIS, *LAW OF SEAMEN* 272 (4th ed. 1985) (citations omitted).

³⁴ With long-sunken ships the marine peril does not have to be actual. The peril of the elements has been deemed sufficient. See generally Annotation, *Nature and Extent of Peril Necessary to Support Claim for Marine Salvage*, 26 A.L.R. FED. 858 (Supp. 1990). See, e.g., *Platoro Ltd., Inc. v. The Unidentified Remains of a Vessel*, 518 F. Supp. 816 (W.D. Tex. 1981), modified, 695 F.2d 893 (5th Cir.), cert. denied, 449 U.S. 901 (1983); *Treasure Salvors, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 569 F.2d 330 (5th Cir. 1978), aff'g and modifying, 408 F. Supp. 907 (S.D. Fla. 1976). But see *Subaqueous Exploration & Archaeology, Ltd. v. The Unidentified, Wrecked and Abandoned Vessel*, 577 F. Supp. 597 (D. Md. 1983) (held peril of the elements was insufficient). For lists of both natural and man-made perils to sunken ships, see *supra* note 2.

³⁵ See, e.g., *The Blackwall*, 77 U.S. (10 Wall.) 1 (1869).

³⁶ See, e.g., *Rickard v. Pringle*, 293 F. Supp. 981 (E.D.N.Y. 1968).

³⁷ 3A BENEDICT, *supra* note 31, at § 99. See, e.g., *The Boston*, 3 F. Cas. 932 (C.C. Mass. 1833) (No. 1673).

³⁸ The award used to be based on a moiety rule. "For saving anything from the wreck of a vessel the salvor was given one-fifth of what he saved. For goods lost to the sea's bottom, depending on the depths involved, the salvor was given one-third or one-half of the salvaged property." 3A BENEDICT, *supra* note 31, at § 1.

³⁹ In 1910, plenipotentiaries from many countries met in Brussels to create a multilateral salvage treaty. The purpose, as it was stated in the preamble, was to provide "for the unification of certain rules of law with respect to assistance and salvage at sea." Assistance and Salvage Convention, Sept. 23, 1910, 37 Stat. 1658, T.S. No. 576 [hereinafter Assistance and Salvage Convention]. The Convention relates mostly to salvage of ships in marine peril. Shipwrecks were not specifically discussed. Article 2 only discusses assistance and salvage of seagoing vessels. It states: "In no case shall the sum to be paid exceed the value of the property salvaged." *Id.* at Art. 2, 37 Stat. at 1670.

This Convention has been criticized recently "[b]ecause of its existing state of complexity and its conflicts with the law of finds, the salvage law does not provide an adequate source of law to determine the ownership of wrecks discovered in international waters." Note, *The Recovery of Shipwrecks in International Waters: A Multilateral Solution*, 8 MICH. Y.B. INT'L LEGAL STUD. 231, 241 (1987) [hereinafter *The Recovery of Shipwrecks*]. The author suggests that the Assistance and Salvage Convention could be amended, and in order to provide certainty to both owners of commercial vessels and salvors it should standardize the time passage constituting abandonment to be a uniform five years. *Id.* at 245.

ing the amount of a salvage award, several factors are considered. These factors include: (1) the promptitude, skill and energy displayed by the salvors; (2) the value of the property saved; (3) the risk incurred by the salvors in rescuing the property saved; (4) the value of the property employed in the salvage operation; (5) the degree of danger from which the property was saved; (6) the degree of success achieved; (7) the proportions of value lost and saved; (8) the intention to abandon; and (9) the location.⁴⁰

B. *Salvor's Right of Possession*

Traditionally, the first salvor to reach a wreck lying in navigable waters⁴¹ obtained a right of possession⁴² of the vessel and its cargo.⁴³ Traditional possession required the salvor to be pre-

A recent development concerning salvage awards is pollution of the marine environment by salvors. See Comment, *Protecting the Environment with Salvage Law: Risks, Rewards, and the 1989 Salvage Convention*, 65 WASH. L. REV. 639 (1990) (suggesting a workable system of salvage law that protects both the salvage industry and the environment).

⁴⁰ *The Shreveport*, 42 F.2d 524, 534 (E.D.S.C. 1930); *The "Sabine"*, 101 U.S. 384 (1879); *The Blackwall*, 77 U.S. (10 Wall.) 1 (1869). "A successful salvage must be viewed as one continuum from beginning to end." *Saint Paul Marine Transportation Corp. v. Cerro Sales Corporation*, 505 F.2d 1115, 1121 (9th Cir. 1974).

⁴¹ Navigable waters refers to "all waters, salt or fresh, with or without tides, natural or artificial, which are in fact navigable in interstate or foreign water commerce . . ." G. GILMORE & C. BLACK, *supra* note 21, at 32.

⁴² "Possession" is defined as:

Having control over a thing with the intent to have and to exercise such control. The detention and control, or the manual or ideal custody, of anything which may be the subject of property, for one's use and enjoyment, either as owner or as the proprietor of a qualified right in it, and either held personally or by another who exercises it in one's place and name. Act or state of possessing. That condition of facts under which one can exercise his power over a corporeal thing at his pleasure to the exclusion of all other persons.

The law, in general, recognizes two kinds of possession: actual and constructive possession . . . A person who, although not in actual possession, knowingly has both the power and the intention at a given time to exercise dominion or control over a thing . . . is then in constructive possession of it.

BLACK'S LAW DICTIONARY 1163 (6th ed. 1990) (citations omitted); 73 C.J.S. *Property* §§ 28, 30 (1983 & Supp. 1990); 78 C.J.S. *Salvage* § 138 (1972 & Supp. 1990). For discussions of the doctrine of possession, see R. BROWN, *THE LAW OF PERSONAL PROPERTY* 13-23 (3d ed. 1975); Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73 (1985); Epstein, *Possession as the Root of Title*, 13 GA. L. REV. 1221 (1979).

⁴³ 3A BENEDICT, *supra* note 31, at § 150 (citing *The Akaba*, 54 F. 197 (4th Cir. 1893); *The Bark Cleone*, 6 F. 517 (D. Cal. 1881); *The Port Hunter*, 6 F. Supp. 1009 (D. Mass.

sent at a salvage site and to have the capability to save the wreck.⁴⁴ Merely placing a buoy or other object identifying the site was deemed insufficient.⁴⁵ Thus, the intent to actually control and possess the wreck was necessary.⁴⁶ The recent *Treasure Salvors* cases have held that salvors of ancient treasure ships located in international waters are not required to have the entire wreck reduced to possession in order for the *res* to be deemed present within the court's jurisdiction. This allows a court to make a determination as to the status of a party claiming a salvage award.⁴⁷

1934)). A salvor must reduce the salvaged objects to his/her exclusive possession. This possession is good against the owner of the vessel. In an *in rem* proceeding, the salvor "goes against the vessel," that is "the salvor acquires a lien on the property salvaged which maritime law gives as a means of aiding him in securing his compensation for his voluntary salvage services." *Id.* at § 150. The owner of the vessel has to post a bond in order for the vessel (if it is not sunken) to be released. This right of possession was created in order for a salvor to have a definite and particular *res* from which a salvage award could be recovered.

⁴⁴ "Possession, it has been held, implies being actually on board the salvaged vessel or standing by, but it does not include merely sighting the stricken object and making claim to it." *Id.* at § 151 (citing *The John Wurts*, 13 F. Cas. 903 (S.D.N.Y. 1847) (No. 7434). See, e.g., *Dominguez v. Schooner Brindicate II*, 204 F. Supp. 817 (D.P.R. 1962) (first "salvor" to arrive at derelict did not possess capability to save wreck). The presence requirement protects first salvors from claims or conflicts from interloping, rival or subsequent salvors. Potential remedies available to first salvors when others interfere are the temporary restraining order or the injunction. See LAW OF SALVAGE, *supra* note 31, at § 152.

⁴⁵ 3A BENEDICT, *supra* note 31, at § 151. See also *The Port Hunter*, 6 F. Supp. 1009 (D. Mass. 1934).

⁴⁶ "It is not enough that a person has the intention to occupy; he must actually take the article into possession; into manual occupation." *Deklyn v. Davis*, 1 Hopk. Ch. 135, 140 (N.Y. 1824) (citing 2 BL. Com. 156.; 1 Rutherford Inst. 75 to 81). See *Eads v. Brazelton*, 22 Ark. 499 (1861). "Possession need not have been manual," but rather, "as their nature and situation permitted." *Id.* at 511.

⁴⁷ *State of Florida, Department of State v. Treasure Salvors, Inc.*, 621 F.2d 1340, 1346-47 (5th Cir. 1980), *aff'g*, *Treasure Salvors, Inc. v. Unidentified, Wrecked and Abandoned Sailing Vessel*, 459 F. Supp. 507 (S.D. Fla. 1978), *reh'g denied*, 629 F.2d 1350 (5th Cir. 1980), *cert. granted*, 451 U.S. 982 (1981), *aff'd in part, rev'd in part*, 458 U.S. 670 (1982) (*res* located on outer continental shelf that was subject of admiralty proceeding deemed within the court's control under *in personam* principles and therefore ancillary process was proper). Under the Federal Rules of Civil Procedure a party may proceed *in rem* against a vessel and/or *in personam* against a party who may be liable to them. FED. R. CIV. P. SUPP. R. C(1). See *Hener v. United States*, 525 F. Supp. 350, 354 (S.D.N.Y. 1981) (*res* located in territorial waters of State of New York deemed within court's control under *Treasure Salvors* rationale).

C. *The Law of Salvage Versus the Maritime Law of Finds*

Under the law of salvage, the first salvor to reduce a wreck to their exclusive possession is entitled to a salvage award.⁴⁸ Conversely, under the maritime law of finds, the first finder of an object who reduces it to their exclusive possession becomes the owner.⁴⁹ Under maritime law, "[i]n a first finder situation, the law of finds and salvage merge to give the first finder/salvor sole possession of the property."⁵⁰ The determination to be made is whether the property has been abandoned.⁵¹ "[I]n extraordinary cases . . . where the property has been lost or abandoned for a very long period . . . the maritime law of finds supplements the possessory interest normally granted to a salvor and vests title by occupancy in one who discovers such aban-

⁴⁸ See *supra* notes 31-40 and accompanying text.

⁴⁹ Title as a finder is complete only when the finder has taken such possession of the thing as its nature and circumstances permit. 36A C.J.S. *Finding Lost Goods* § 2 (1961 & Supp. 1990). See Note, *Treasure Salvage: The Admiralty Court "Finds" Old Law*, 28 LOY. L. REV. 1126 (1982).

⁵⁰ *MDM Salvage v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 631 F. Supp. 308, 311-12 (S.D. Fla. 1986) (citing *Treasure Salvors, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 640 F.2d 560, 567 (5th Cir. 1981)). This may include the entire vessel and its contents. If the finder maintains "appropriate possession and control of an identifiable abandoned wreck site," he can continue his operations. *Id.* at 311. See 3A BENEDICT, *supra* note 31, at § 158.

⁵¹ Abandonment "is the act of leaving or deserting such property by those who were in charge of it, without hope on their part of recovering it and without the intention of returning to it." 3A BENEDICT, *supra* note 31, at § 134; LAW OF SALVAGE, *supra* note 31, at §§ 130-34; 80 C.J.S. *Shipping* § 259 (1953 & Supp. 1990). See BLACK'S LAW DICTIONARY 2 (6th ed. 1990).

Abandonment. The surrender, relinquishment, disclaimer, or cession of property or of rights. Voluntary relinquishment of all right, title, claim and possession, with the intention of not reclaiming it. The giving up of a thing absolutely, without reference to any particular person or purpose, as vacating property with the intention of not returning, so that it may be appropriated by the next comer or finder. The voluntary relinquishment of possession of thing by owner with intention of terminating his ownership, but without vesting it in any other person.

[The t]erm includes both the intention to abandon and the external act by which the intention is carried into effect

Time is not an essential element of act, although the lapse of time may be evidence of an intention to abandon, and where it is accompanied by acts manifesting such an intention, it may be considered in determining whether there has been an abandonment.

Id. (citations omitted).

doned property and reduces it to possession."⁵² It is after this progression of maritime law that the discovery of the S.S. *Central America* occurred.

II. THE DISCOVERY OF THE S.S. *Central America*

A. *Facts and Legal Proceedings*

The S.S. *Central America*, which originally had been christened the S.S. *George Law*,⁵³ was one of two luxury side-wheeled steamships that "engaged in regular bi-monthly service on the

⁵² *Treasure Salvors, Inc. v. The Unidentified Wrecked and Abandoned Sailing Vessel*, 640 F.2d 560, 567 (5th Cir. 1981). The *Treasure Salvors* cases ultimately determined who would be awarded the bounty recovered from the wrecked Spanish galleons *Nuestra Señora de Atocha* and *Santa Margarita*. These two wrecks from the 1622 *Tierra Firme Flota* of twenty-eight ships were found in international waters off the coast of Florida, and they were located by Melvin Fisher after some fifteen years of searching. See *supra* note 17.

The maritime law of finds was applied in the final determination of ownership of these wrecks. *Treasure Salvors, Inc. v. Unidentified, Wrecked and Abandoned Sailing Vessel*, 408 F. Supp. 907 (S.D. Fla. 1976), *aff'd and modified*, 569 F.2d 330 (5th Cir. 1978) (*Treasure Salvors I*); *Treasure Salvors, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 459 F. Supp. 507 (S.D. Fla. 1978), *aff'd sub nom.*, *State of Florida, Department of State v. Treasure Salvors, Inc.*, 621 F.2d 1340 (5th Cir.) (*Treasure Salvors II*), *reh'g denied*, 629 F.2d 1350 (5th Cir. 1980), *cert. granted*, 451 U.S. 982 (1981), *aff'd in part and rev'd in part sub nom.*, 458 U.S. 670 (1982), on remand, *aff'd per curiam*, 689 F.2d 1254 (5th Cir. 1982); *Treasure Salvors, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 640 F.2d 560 (5th Cir.) (*Treasure Salvors III*), on remand, 546 F. Supp. 919 (S.D. Fla. 1981); *Treasure Salvors, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 556 F. Supp. 1319 (S.D. Fla. 1983) (*Treasure Salvors IV*). Unfortunately, this did not end *Treasure Salvors'* legal battles over objects recovered from these shipwrecks. See *DiLucia v. Treasure Salvors, Inc.*, 713 F. Supp. 1425 (S.D. Fla. 1989) (investor brought suit seeking greater portion of interest in treasure recovered from salvage operation).

The growing trend in litigation over long-wrecked ships has been to apply the maritime law of finds. See *Klein v. Unidentified, Wrecked and Abandoned Sailing Vessel*, 568 F. Supp. 1562, 1565-66 (S.D. Fla. 1983), *aff'd*, 758 F.2d 1511 (11th Cir. 1985) (court adopted the "embedded in the soil" exception to the common law of finds for claim to shipwreck embedded in the soil of federal parklands); Comment, *Law Determining Ownership of Shipwreck in the United States*, 1987 LLOYD'S MAR. & COM. L.Q. 24 (1987) (discussing the *Klein* decision). But see LAW OF SALVAGE, *supra* note 31, at § 150 (title to property lost at sea can never be lost).

⁵³ *Midas Touch*, *supra* note 6, at 52. See also Ringle, *Salvaging the Gold of History; 133 Years Later, the Sunken Ship Central America Gives Up a Trunk and Its Treasures of the Past*, Wash. Post, Nov. 29, 1990, at D1, D8. *George Law* was the name of one of the founders of the steamship company. The ship was re-christened because "[George] Law had sold all his stock four years before." *Id.* at D8.

Atlantic leg of the Panama route."⁵⁴ During her mere four year life from 1853 to 1857, the *S.S. Central America* had safely delivered in forty-three voyages nearly one-third of all gold shipped from California during that period.⁵⁵ On September 9, 1857, the *S.S. Central America* entered the fringes of a hurricane.⁵⁶ The *S.S. Central America* developed a leak on September 11, 1857.⁵⁷ After a heroic thirty hour struggle by both the crew and passengers to bail the ship, on September 12, 1857, the *S.S. Central America* finally sank approximately 200 miles off the coast of Charleston, South Carolina.⁵⁸ The ship then foundered to a depth of over 7,000 feet, where it remained undisturbed for more than 130 years.⁵⁹

In 1985, Columbus-America, which is a limited partnership,

⁵⁴ STORY OF AN AMERICAN TRAGEDY, *supra* note 16, at xi. The Panama route was faster, safer and more comfortable than the overland route from California to the east coast during the California Gold Rush. *Id.* See also *Treasures of a Lost Voyage*, *supra* note 3.

⁵⁵ STORY OF AN AMERICAN TRAGEDY, *supra* note 16, at xi.

⁵⁶ *Id.* at 9.

⁵⁷ *Id.*

⁵⁸ The passengers and crew had to bail the ship by hand for more than thirty hours because the steam boilers had gone out after being engulfed by incoming water from the leak. *Id.* at xii. Approximately 153 persons were rescued, and about 425 persons perished in the sinking. *Midas Touch*, *supra* note 6, at 50. See H. BALDWIN, SEA FIGHTS AND SHIP-WRECKS: TRUE TALES OF THE SEVEN SEAS 13-18 (1955).

⁵⁹ Seanor, *\$1 Billion Ruling*, A.B.A. J., Oct. 1990, at 22. Accounts by survivors of the sinking are chronicled in STORY OF AN AMERICAN TRAGEDY, *supra* note 16, at 1-66. The *S.S. Central America* was reported to have been carrying a shipment of gold that was headed for New York banks. *Sunken Treasure!*, *supra* note 12, at 80. Reports indicated the shipment of gold weighed approximately three tons. *Id.* The failure of such a vast amount of much-needed gold to reach New York banks is reported to have triggered the Panic of 1857. *Salvage of Gold Hits Rough Seas*, *supra* note 15, at A1; *Midas Touch*, *supra* note 6, at 50.

[I]n 1858, Atlantic Mutual Insurance Company . . . and Sun Mutual Insurance Company . . . entered into a salvage contract with Brutus Villeroi dated July 28, 1858, for an attempted salvage of the gold from the *Central America*. The undertaking was to be by means of Villeroi's invention of a submarine boat at his own expense. The agreement provided the insurance companies would advance no funds, and under no circumstances were insurance companies to incur any expense or liability in connection with the attempted salvage. Nothing ever came of that undertaking.

Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel, 742 F. Supp. 1327, 1344 (E.D. Va. 1990).

Within the past few years, several unsuccessful searches to locate the wreck were attempted. *Id.* at 1343. Additionally, the technology necessary for this type of undertaking has been available for the last twenty years. *Id.* at 1345.

was formed, and it began search operations for the *S.S. Central America*.⁶⁰ Columbus-America initially took sonar recordings in 1986.⁶¹ In July 1987, Columbus-America used its ROV, *Nemo*,⁶² to retrieve a lump of anthracite coal from the wreck.⁶³ The coal was flown to shore, and it was brought to Federal District Court in Norfolk, Virginia, in an attempt for the court to assert *in rem* jurisdiction over the vessel.⁶⁴ The District Court granted jurisdiction, and upon a motion made by Columbus-America, the Court issued a temporary restraining order.⁶⁵ The Court ap-

⁶⁰ Columbus-America originally raised \$1.6 million from its investors. "Using historical data, including period newspaper and magazine accounts, and contemporary meteorological information on the nature of hurricanes, it made a computer analysis that yielded a probability field of 1,400 square miles." *Midas Touch*, *supra* note 6, at 50. See also *supra* note 18.

⁶¹ Columbus-America used the advanced side-scanning submersible Sea MARC, which can scan a swath three miles wide at a time, to locate the *S.S. Central America*. *Treasures of a Lost Voyage*, *supra* note 3. Side-scan sonar is used to detect wrecks by emitting sound waves and measuring with extreme accuracy the length of time it takes these sound waves to bounce back from the sea or lake bed to the sonar unit. Thus if some obstacle rests on or protrudes from the sea or lake bottom, the sound waves return from it sooner than from the bottom beyond, and this time differential is recorded on a paper chart.

SHIPS AND SHIPWRECKS OF THE AMERICAS, *supra* note 1, at 251. See also *supra* note 2. "The search for the *S.S. Central America* covered an area of 1,400 square miles in 40 days." *Admiralty Law: Sunken Treasure*, *ECONOMIST*, Aug. 26, 1989, at 1.

⁶² For *Nemo*'s capabilities and technological features, see *Treasures of a Lost Voyage*, *supra* note 3.

⁶³ A lump of anthracite coal would be representative of the type of fuel that was used by a vessel from the same era as the *S.S. Central America*. The coal was deposited with the court in order to satisfy several criteria. Foremost, the presence of the coal within the jurisdiction of the court could satisfy the presence requirement for an *in rem* proceeding. Second, retrieving a verifiable artifact from the shipwreck would help to prove Columbus-America had found the *S.S. Central America* and was entitled to certain rights as first finder/salvor. Third, Columbus-America possessed the capability to salvage the *S.S. Central America*. Fourth, being in possession of an artifact demonstrated Columbus-America's intention to control and possess the wreck. See *supra* notes 31-47 and accompanying text.

⁶⁴ *Midas Touch*, *supra* note 6, at 53. See Note, *The Treasure Below: Jurisdiction Over Salvaging Operations in International Waters*, 88 COLUM. L. REV. 863, 866-71 (1988) [hereinafter *Treasure Below*] (discussing the assertion of *in rem* jurisdiction by the district court over the wreck of the *S.S. Central America*). For a discussion an *in rem* proceeding, see *supra* notes 29-30 and accompanying text.

⁶⁵ *Midas Touch*, *supra* note 6, at 53. In order to obtain a temporary restraining order Columbus-America had to post a bond for \$100,000.00. *Columbus-America Deep Search, Inc. D/B/A Columbus-America Discovery Group v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, No. 87-363-N, slip op. at 2-3 (E.D. Va. July 9, 1987) (order granting temporary restraining order).

pointed Columbus-America as the substitute custodian for any objects retrieved from the wrecksite.⁶⁶ The temporary restraining order was replaced by a preliminary injunction.⁶⁷ Boston Salvage Consultants, who were rival salvors, appealed this preliminary injunction to the United States Court of Appeals for the Fourth Circuit. The Fourth Circuit denied Boston Salvage Consultant's motion for a stay of the preliminary injunction.⁶⁸ The Circuit Court relied on *Cobb Coin v. Unidentified, Wrecked and Abandoned Sailing Vessel*⁶⁹ and *Treasure Salvors v. Un-*

⁶⁶ See Periodic Reports of Substitute Custodian on the Progress of Recovery Operations by Columbus-America Discovery Group (Sept. 15, 1987) and (June 14, 1989).

⁶⁷ In granting the request for a preliminary injunction against the intervenors, the Court determined: "[P]laintiff [Columbus-America] discovered and located the sunken vessel, marked the location and is in the process of undertaking the salvage of said sunken vessel." Columbus-America Deep Search, Inc. D/B/A Columbus-America Discovery Group v. The Unidentified, Wrecked and Abandoned Sailing Vessel, No. 87-363-N, slip op. at 1 (E.D. Va. July 17, 1987) (order granting preliminary injunction). The Court ordered that:

(1) Boston Salvage Consultants, Inc.; (2) S. S. George Law Limited Partnership; (3) The R/V Liberty Star, her Master, officers, crew, and all persons aboard; (4) Lamont-Doherty Geological Institute; (5) the Board of Trustees of Columbia University; (6) and any other person having notice of this Order, actual or otherwise; are enjoined and restrained from conducting search, survey, or salvage operations, photographing or recovering any objects, entering, or causing to enter anything on or below the surface of the Atlantic Ocean, or otherwise interfering with operations being conducted by Plaintiff within the [injunctioned area].

Id. at 2. See *Treasure Below*, *supra* note 64, at 878-79. The author concluded that in order for the court to properly assert jurisdiction principles of the law of salvage should be applied for purposes of issuing an injunction against potential intervening salvors. *Id.*

The preliminary injunction vested the right to visit and photograph the wreck of the *S.S. Central America* solely with Columbus-America. By analogy, the right to photograph, which may be deemed intellectual property, was denied to a diver who desired to dive on and photograph the wreck of the *U.S.S. Monitor*, which is located in approximately 230 feet of water several miles off the North Carolina coast. Gary Gentile, a professional diver, spent five years filing eleven applications for a permit to dive on the wreck of the *U.S.S. Monitor*, which is located in a marine sanctuary with limited access rights. In re Gentile, No. 951-193 slip op. at 7 (U.S. Dept. Com. Off. Admin. L. Judge Nov. 29, 1989). After this appeal Gentile was finally allowed to visit the wreck of the *U.S.S. Monitor*. For a discussion of the fruits of this labor, see Hess, *The Battle for the U.S.S. Monitor*, SHIPS AND SHIPWRECKS: THE NEWSLETTER OF NAUTICAL HISTORY AND DISCOVERY, Nov. 1990, at 1. One year later Gentile filed another application to photograph the wreck once more, which was denied. In re Gentile, No. 051-389 slip op. at 5 (U.S. Dept. Com. Off. Admin. L. Judge Nov. 30, 1990).

⁶⁸ Boston Salvage Consultants, Inc. v. Columbus-America Deep Search, Inc. d/b/a Columbus-America Discovery Group, No. 87-3606, slip op. at 1 (4th Cir. 1987).

⁶⁹ 525 F. Supp. 186 (S.D. Fla. 1981).

identified, *Wrecked and Abandoned Sailing Vessel*,⁷⁰ which held that district courts have jurisdiction to grant this type of injunctive relief, in denying this motion.⁷¹

In September 1987, other salvors attempted to enter into the injunctioned area where Columbus-America was conducting operations.⁷² Columbus-America again sought confirmation of its exclusive rights to the wreck of the *S.S. Central America* in the District Court. In this proceeding, a show cause hearing was held for the intervening salvors to show cause why they should not be held in contempt for violating the preliminary injunction.⁷³ The District Court held the intervening salvors in civil contempt and issued an order assessing certain preliminary damages, requiring the contemnors to turn over any information gathered and declaring that any further violations of the injunction would result in an assessment of damages and attorneys' fees against the intervenors.⁷⁴

In June 1989, the District Court awarded interim title to certain objects retrieved from the wrecksite to Columbus-America.⁷⁵ The Court held as a matter of law that Columbus-America was first salvor; it had reduced all items to exclusive possession; it had achieved exclusive custody, control and possession of the wreck; it possessed the capability to save the wreck; and it had "expended substantial labor in rendering its salvage service."⁷⁶

In August 1989, the Court issued a permanent injunction against any intervenors.⁷⁷ The Court held as a matter of law that

⁷⁰ 546 F. Supp. 919 (S.D. Fla. 1981).

⁷¹ *Boston Salvage Consultants, Inc.*, No. 87-3606, slip op. at 3.

⁷² *Midas Touch*, *supra* note 6, at 52.

⁷³ The rival salvors were Dana Leonard, master of the *M/V Cameron Seahorse*, Steadfast Oceanengineering, Inc., Zapata Gulf Marine Corp., South Carolina Marine Archeological Trust, and Walter Kreisle, who was the organizer of the expedition aboard the *Cameron Seahorse*. *Columbus-America Deep Search, Inc. d/b/a Columbus-America Discovery Group v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, No. 87-363-N, 1988 A.M.C. 2957, 2958 (E.D. Va. 1988).

⁷⁴ *Id.* at 2963.

⁷⁵ *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel, S.S. Central America, in rem*, No. 87-363-N, 1989 A.M.C. 1955, 1959 (E.D. Va. 1989).

⁷⁶ *Id.* at 1957-58. For further discussion of this decision, see *infra* notes 135-52 and accompanying text.

⁷⁷ *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and*

Columbus-America as first salvor was entitled to continue its operations without interference. "This right to exclusion of other salvors is a substantive right of admiralty, vested in a first finder, and a first finder who establishes his privileged status is entitled to a court order enforcing his substantive salvage rights without further proof."⁷⁸ The Court incorporated by reference its June 30, 1989 opinion awarding interim title to objects retrieved to Columbus-America.⁷⁹ The Court also released the bond that had secured the temporary restraining order.⁸⁰

After these court proceedings, Columbus-America continued its salvage work uninterrupted. Once Columbus-America's operations confirmed that gold was present,⁸¹ in September 1989, thirty-nine insurance companies, including underwriters at Lloyd's of London, intervened to assert ownership of the more than three tons of gold.⁸² These insurance companies claimed

Abandoned Sailing Vessel, (believed to be the S.S. Central America), *in rem* and The Unidentified, Wrecked and Abandoned Sailing Vessel, (possible scatter, portions, and/or debris of the S.S. Central America), *in rem*, No. 87-363-N, slip op. at 4-5 (E.D. Va. Aug. 18, 1989) (order granting permanent injunction).

⁷⁸ *Id.* at 3 (citing *The Amethyst*, 1 F. Cas. 762 (D. Me. 1840) (No. 330); 3A BENE-DICT, *supra* note 31, at § 152; *The Tubantia*, 18 Lloyd's List L. Rep. 158 (1924)).

⁷⁹ *Id.* at 2.

⁸⁰ *Id.* at 4. See also *supra* note 65.

⁸¹ As of October 1989, Columbus-America had retrieved more than one ton of gold from the S.S. *Central America* wrecksite. *Midas Touch*, *supra* note 6, at 55; Ringle, *Treasure Hunters' Golden Moment; In Norfolk, Ceremony For the Salvage Team*, Wash. Post, Oct. 6, 1989, at C1. Columbus-America devised a way to retrieve entire stacks of gold coins without damaging their proof finish as well as retrieving them in the same configuration that they were in on the ocean bottom. An open-ended box is lowered to the site that will be used to surround the stack of coins. A silicone compound is then injected into the box to engulf the coins. When the silicone has hardened, the stack is then brought to the surface by *Nemo. Treasures of a Lost Voyage*, *supra* note 3; *Deep Quest*, *supra* note 7, at 58.

On October 5, 1989, the United States Marshall's Service "arrested" the recovered artifacts pursuant to an order by the District Court. The arrest was under an ancient writ of admiralty, whereby the Marshall physically attaches a copy of the court's arrest order to the items, and formally brings the object(s) as a "defendant" into court to determine ownership rights. The objects were then turned over to Columbus-America in their capacity as Substitute Custodian. Robol & Schatz, *The S.S. Central America Project: International Law and Individual Freedom*, at 3 (1990) (handout accompanying lecture by Richard T. Robol, Esq., "Treasure Salvage and the S.S. *Central America* Case," Pace University School of Law, Nov. 1, 1990). See *supra* notes 29-30 and accompanying text.

⁸² *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 742 F. Supp. 1327, 1332 (E.D. Va. 1990). The State of New

they had rights of subrogation to the cargo of gold on board the *S.S. Central America* because they had paid claims against insurance policies issued, and therefore they were the rightful owners of the gold.⁸³

In November 1989, Dennis Standefer, a former business associate of Thomas Thompson (who is the president of Columbus-America), filed suit against Thompson seeking a portion of any salvage award.⁸⁴ In March 1990, the court dismissed with prejudice the claims of twenty-three of the insurance companies.⁸⁵ On March 29 and April 2, 1990, three additional parties made special appearances to intervene at the trial set for April 3, 1990, in order to assert a claim against any find or salvage—based on their status as persons who aid salvors in that they contributed to the ultimate success of salvaging the *S.S. Central America*.⁸⁶ These parties asserted they had furnished information to Columbus-America or that Columbus-America had used information belonging to them.⁸⁷

In June 1990, the District Court granted summary judgment to Thompson.⁸⁸ The Court held that the contract (to find and salvage the *S.S. Central America*) entered into between Thomp-

York through its insurance commissioner was later substituted for nine of the companies.

⁸³ The insurance companies asserted claims because of "payments made for losses, they were subrogated to the rights of the owners in the cargo of gold; that they were making claims on behalf of themselves and the account of the owners; and that they are the owners of said properties and entitled to possession thereof." *Id.* at 1332. Subrogation is defined as

[t]he substitution of one person in the place of another with reference to a lawful claim, demand or right, so that he who is substituted succeeds to the rights of the other in relation to the debt or claim, and its rights, remedies, or securities Insurance companies . . . generally have the right to step into the shoes of the party whom they compensate and sue any party whom the compensated party . . . could have sued.

BLACK'S LAW DICTIONARY 1427 (6th ed. 1990) (citations omitted).

⁸⁴ *Standefer v. Thompson*, No. 89-753-N, slip op. at 1 (E.D. Va. June 27, 1990) (order granting summary judgment). This suit was merged with *Columbus-America*, 742 F. Supp. at 1332.

⁸⁵ *Columbus-America*, 742 F. Supp. at 1333, 1348 Appendix A. The claims of these insurance companies were dismissed because they either were no longer in existence or their claim of a relationship with a party asserting a claim failed for a lack of proof.

⁸⁶ *Id.* at 1333.

⁸⁷ *Id.* The parties were Harry G. John, Jack F. Grimm and the Board of Trustees of Columbia University. For further discussion, see *infra* notes 118-30 and accompanying text.

⁸⁸ *Standefer*, No. 89-753-N, slip op. at 11-12.

son and Standefer was unenforceable because of the non-occurrence of a condition precedent, and by the mutual abandonment of the contract by the conduct of the parties.⁸⁹

B. *Final Determination of the In Rem Proceeding*

On April 3, 1990, the trial of Columbus-America's *in rem* proceeding to determine the final status of Columbus-America's claim of title to the *S.S. Central America* and its cargo commenced. There remained, however, twelve intervening parties to the action. All parties stipulated the two issues the court would determine at the trial on the merits were:

- (1) whether the artifacts and items recovered from the Central America were a find or whether the operation was a salvage; and
- (2) whether any party other than the plaintiff established any right, title or interest in the items. If the Court determined the operation was not a find, then the Court would hold further hearings to determine and deal with the rights of the insurance companies.⁹⁰

1. *Salvage Versus Find*

The first stipulated issue in the case was whether the law of salvage or the maritime law of finds should be applied. Columbus-America contended that the maritime law of finds should be applied under the reasoning of *Treasure Salvors, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel (Treasure Salvors I)*,⁹¹ which held that "title to abandoned property

⁸⁹ *Id.* at 11.

⁹⁰ *Columbus-America*, 742 F. Supp. at 1333.

⁹¹ 569 F.2d 330 (5th Cir. 1978), *aff'd and modifying*, 408 F. Supp. 907 (S.D. Fla. 1976). "Disposition of a wrecked vessel whose very location has been lost for centuries as though its owner were still in existence stretches a fiction to absurd lengths." *Id.* at 337. The *Treasure Salvors* case concerned the discovery and salvage operations by Treasure Salvors on the sunken vessel *Nuestra Señora de Atocha* and its sister ship, the *Santa Margarita*. These ships were located by Treasure Salvors after searching international waters for fifteen years. The hulks of the two Spanish galleons were located on the outer continental shelf off the United States. The *Treasure Salvors* cases ultimately held that Treasure Salvors was entitled to full possession and title to the wrecks as first finder. *Treasure Salvors, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 459 F. Supp. 507 (S.D. Fla. 1978), *aff'd sub nom.*, *State of Florida, Department of State v. Treasure Salvors, Inc.*, 621 F.2d 1340 (5th Cir.) (*Treasure Salvors II*), *reh'g denied*, 629 F.2d 1350 (5th Cir. 1980), *cert. granted*, 451 U.S. 982 (1981), *aff'd in part and rev'd in*

vests in the person who reduces that property to his or her possession."⁹² The insurance company claimants argued that the law of salvage should be applied because difficulties may be brought about by applying the law of finds.⁹³ The District Court, using the reasoning of *Treasure Salvors I* and *Klein v. Unidentified, Wrecked and Abandoned Sailing Vessel*,⁹⁴ concluded the maritime law of finds should apply to wrecks located on the outer continental shelf.⁹⁵ The *S.S. Central America* was determined as a matter of fact to be located on the outer continental shelf in an area that "is approximately 160 miles off the east coast of the United States."⁹⁶

In order for the maritime law of finds to apply, the Court had to determine whether the vessel and its contents had been "lost" or "abandoned."⁹⁷ The Court stated, "[t]here are two considerations in determining whether property has been *lost* or *abandoned*. First, whether the location of the property is known, and second, even if its location was known, whether it has been abandoned."⁹⁸ The Court interpreted "lost" as meaning "not able to find, whereabouts unknown, unable to locate, no longer possessed, removed from reach or attainment."⁹⁹ The Court then interpreted "abandonment" as meaning "a yielding to natural impulses, to withdraw protection, support or claim; to desert; to cease intending or attempting to perform; to terminate posses-

part sub nom., 458 U.S. 670 (1982), on remand, *aff'd per curiam*, 689 F.2d 1254 (5th Cir. 1982); *Treasure Salvors, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 640 F.2d. 560 (5th Cir.) (*Treasure Salvors III*), on remand, 546 F. Supp. 919 (S.D. Fla. 1981); *Treasure Salvors, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 556 F. Supp. 1319 (S.D. Fla. 1983) (*Treasure Salvors IV*). See *supra* notes 17 & 52.

⁹² *Treasure Salvors I*, 569 F.2d at 337.

⁹³ *Columbus-America*, 742 F. Supp. at 1334 (citing LAW OF SALVAGE, *supra* note 31, at § 150).

⁹⁴ 758 F.2d 1511 (11th Cir. 1985), *aff'g*, 568 F. Supp. 1562 (S.D. Fla. 1983).

⁹⁵ *Columbus-America*, 742 F. Supp. at 1336.

⁹⁶ *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel, S.S. Central America, in rem*, No. 87-363-N, 1989 A.M.C. 1955, 1955 (E.D. Va. 1989).

⁹⁷ *Columbus-America*, 742 F. Supp. at 1334-35. See *supra* notes 48-52 and accompanying text.

⁹⁸ *Columbus-America*, 742 F. Supp. at 1334-35 (emphasis in original).

⁹⁹ *Id.* at 1335. The court concluded there was no doubt the vessel was lost, because the claimants "have sought throughout this proceeding to compel the plaintiff to reveal the exact location of the wreck and how they located it." *Id.* at 1343 n.5.

sion or protection.”¹⁰⁰ The Court reasoned that loss is involuntary, while abandonment is by intent and design.¹⁰¹ The Court stated that factors constituting abandonment are: (1) consideration of the property; (2) the time, place and circumstances; (3) the actions and conduct of the parties; (4) the opportunity or expectancy of recovery; and (5) all other facts and circumstances.¹⁰²

In this litigation, the property in dispute is primarily the shipments of gold. The total amount of the gold carried onboard the *S.S. Central America* is not known, but it is estimated to be in the neighborhood of three tons.¹⁰³ The insurance companies’ interests in the shipments are the rights to subrogation from the claims for loss that were paid under the insurance policies.¹⁰⁴

The Court reasoned under a time, place and circumstances analysis (factor (2)) “that even though lapse of time and non-use are not sufficient, in and of themselves, to constitute abandonment, under certain circumstances, they may give rise to an implication of intention to abandon.”¹⁰⁵ The *S.S. Central America* sank approximately 160 miles on the high seas over 130 years ago.¹⁰⁶ The technology to undertake such a salvage did not exist, and an attempted salvage operation at the time never went past the planning stage.¹⁰⁷

The Court then examined the actions and conduct of the insurance companies (factor (3)). In order for an insurance company to prove its right to subrogation, it must prove that there

¹⁰⁰ *Id.* at 1335.

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.* at 1347. The most often-occurring quotation of the quantity of gold carried onboard is three tons, or 77,000 troy ounces. See, e.g., *Midas Touch*, *supra* note 6, at 55. This quantity does not include the gold that was carried onboard by the passengers, which will never be known.

¹⁰⁴ Hence, even if the insurers did not abandon their claim or title to the insured gold, and were fully subrogated to the rights of the shippers, they have no standing to claim all of the gold aboard

Clearly, there were substantial sums of gold aboard the *Central America* other than the sums covered by insurance.

Columbus-America, 742 F. Supp. at 1347.

¹⁰⁵ *Id.* at 1336.

¹⁰⁶ See *supra* text accompanying notes 56-59.

¹⁰⁷ *Columbus-America*, 742 F. Supp. at 1344. See *supra* note 59.

was an insurance policy.¹⁰⁸ The court acknowledged expert testimony by Columbus-America that the shipment of goods by sea is an ordinary commercial transaction that consists of four types of documents: "(1) the invoice; (2) the Bill of Lading; (3) the Draft or Bill of Exchange; and (4) the Insurance Certificates."¹⁰⁹ The Court described the transaction process,¹¹⁰ and it held that none of the insurance companies had furnished any of the above documents. The insurance companies then sought to prove their rights through the use of old newspaper accounts of the sinking of the *S.S. Central America*. Over Columbus-America's objection of hearsay, the court held that "where [the articles] deal with such an event as the sinking of the Central America, they are admissible as an ancient document."¹¹¹ Some articles mentioned claims that would be paid upon a proper showing of

¹⁰⁸ L. BUGLASS, *MARINE INSURANCE AND GENERAL AVERAGE IN THE UNITED STATES* (2d ed. 1981).

To support a claim for a total loss of cargo, the documents required are:

- (1) Evidence of loss.
- (2) Invoices confirming the value of the cargo.
- (3) Insurance policy or insurance certificates.
- (4) A full set of the original bills of lading evidencing the shipment of the cargo, duly endorsed.
- (5) In most cases, a letter of subrogation is required from the assured authorizing the underwriter to use the assured's name in any proceedings with a view to effecting recovery from other parties responsible for the loss.

These documents are retained by the underwriter and serve as proof of his interest in any salvage or recovery from third parties without committing him to assume any liabilities arising therefrom.

Id. at 93. See also M. MCFARLAND, *CARGO LOSS & DAMAGE* 94-95 (1942).

With British marine insurance policies, "losses cannot be paid unless the policy is actually produced and the claim paid is endorsed thereon." BUGLASS, *supra*, at 47. "British policies are documents of title and after they have been issued, the named assured can assign the right of collection thereunder without the knowledge of the underwriters, who are bound to rely on the document itself for evidence of the right of the party to collect the claim." *Id.*

¹⁰⁹ *Columbus-America*, 742 F. Supp. at 1344.

¹¹⁰ "[T]he merchant takes his invoice, obtains the Bill of Lading and insurance certificate, draws a draft on the purchaser, encloses the draft with the other three documents attached and presents this to his banker who puts the draft in the process of collection." *Id.*

¹¹¹ *Id.* at 1343. "Hearsay is not admissible except as provided by these rules or by other rules prescribed by the Supreme Court pursuant to statutory authority or by Act of Congress." FED. R. EVID. 802. "The following are not excluded by the hearsay rule . . . : (16) **Statements in ancient documents.** Statements in a document in existence twenty years or more the authenticity of which is established." FED. R. EVID. 803(16).

proof. Later articles stated that claims were paid under the insurance policies.¹¹² The Court stated, "[I]t can be assumed the aforesaid documents or sufficient ones were obtained and presented."¹¹³ The Court held that the insurance companies failed to demonstrate a right to subrogation.¹¹⁴

The Court considered the opportunity or expectancy of recovery under factor (4) and stated the insurance companies had no expectancy of recovery of the gold, and they intended to abandon their claim or interest in the gold by "intentionally destroy[ing] every evidence of their claim, right or title thereto."¹¹⁵ "A clear intention of abandonment is given when all records or memorandum of the property are deliberately destroyed and no effort is made or undertaken to locate or recover the property for over a hundred years."¹¹⁶ In balancing all relevant factors the Court concluded that the *S.S. Central America* and its contents were abandoned, and it dismissed all of the claims by the insurance companies.¹¹⁷

2. *Rights of Third Party Claimants*

Having resolved the first stipulated issue, the Court then addressed the second stipulated issue: whether any party other than the plaintiff established any right, title or interest in the items.¹¹⁸ The claims of the Board of Trustees of Columbia University (Trustees), John and Grimm¹¹⁹ were based on the principle that persons who aid salvors are entitled to a portion of the salvage award¹²⁰ if there is an absence of fraud or bad faith.¹²¹

¹¹² *Columbus-America*, 742 F. Supp. at 1344.

¹¹³ *Id.*

¹¹⁴ *See supra* note 83.

¹¹⁵ *Columbus-America*, 742 F. Supp. at 1345. "The insurers own evidence indicates they always retain documents as long as they believe they have an interest in any subrogated items." *Id.* The Court described the inaction by the claimants, as well as their knowledge of the pending litigation. The Court then stated that the insurance companies had knowledge of potential salvage operations since 1979, and they had taken no action toward the recovery of the gold. *Id.*

¹¹⁶ *Id.* at 1348. The court stated that "[t]he record is totally void of any effort or activity on the part of any of the insurance companies to attempt to locate or recover the *Central America*." *Id.* at 1344. *See supra* note 59.

¹¹⁷ *Columbus-America*, 742 F. Supp. at 1348.

¹¹⁸ *Id.* at 1333.

¹¹⁹ *See supra* text accompanying notes 86-87.

¹²⁰ *See* 3A BENEDICT, *supra* note 31, at §§ 91-92.

Their contention was based on a contractual arrangement between Lamonte-Dougherty Geological Observatory (Lamonte), which is a unit of Columbia University, and Santa Fe Communications, Inc. (Santa Fe). Messrs. John and Grimm obtained an assignment from Santa Fe.¹²² In the early 1980s prior to the formation of Columbus-America, Thompson had entered into discussions with John regarding possible investment by John in a search operation for the *S.S. Central America*. Thompson sent John a prospectus for a mapping to be done by Lamonte. In 1984, John, then-president of Santa Fe, contracted with the Trustees "to map a twenty nautical square mile area of the Continental Margin of the United States."¹²³

In 1986, Thompson contacted the Trustees and ordered certain information from the survey. Thompson purchased "some 20 8 X 10 negatives of the sonar record"¹²⁴ for \$250.00. Thereafter, the Trustees contacted Thompson and offered tapes of the record for \$1,732.00,¹²⁵ which Thompson declined. Trustees, John and Grimm contended at trial that Columbus-America used these negatives to locate the *S.S. Central America*, and Columbus-America argued that the negatives were not used. The claims of Trustees, John and Grimm depended on two criteria: First, they had to prove that Columbus-America used the information; and secondly, if they proved that Columbus-America used the information, they had to demonstrate the target was the *S.S. Central America* or that the information "lead to or assisted in locating the *S.S. Central America*."¹²⁶ The Court stated:

It is asking too much to believe that if Thompson . . . could obtain the details of the location for \$1,750.00, that he would not pay that sum rather than be confronted with searching in the dark for it at a cost of \$20,000.00 per day, the daily cost to oper-

¹²¹ *Id.* at §§ 99-100.

¹²² *Columbus-America*, 742 F. Supp. at 1337 n.2.

¹²³ *Id.* at 1337. Under one of the terms of the contract, which was set to expire on Sept. 30, 1984, "Trustees would be free to publish the results of the research, without restrictions, one year after termination of the contract." *Id.* at 1338.

¹²⁴ *Id.*

¹²⁵ *Id.* The negatives were an index of the tapes.

¹²⁶ *Id.* at 1339.

ate the search vessel.¹²⁷

The Court noted Columbus-America's recovery efforts, as well as its request to enlarge its injunction box in 1988 because an earlier target that was passed over was in fact the *S.S. Central America*. Further, the Court found it unusual that in 1987 when it enjoined Trustees from entering the injunction box, the Trustees "made no contention it had furnished the information of a likely target to Thompson."¹²⁸ In regard to Trustees, John and Grimm, the Court held that the parties had failed to establish:

(1) that they furnished information that assisted or could have assisted in the location of the *Central America*; (2) that plaintiff and/or Thompson used any information furnished; (3) even if the information was of value and was used, that any such use would entitle them to share in any recovery.¹²⁹

The Court then dismissed the claims of Trustees, John and Grimm.¹³⁰

In August 1990, the Norfolk District Court resolved the two stipulated issues in favor of Columbus-America and awarded Columbus-America sole ownership of all objects retrieved as well as those yet to be retrieved.¹³¹ This decision established that Columbus-America was in fact a finder and not merely a salvor of the *S.S. Central America*. Judge Kellam gave notice to his earlier decision awarding interim title to objects retrieved from the wreck of the *S.S. Central America*.¹³² He acknowledged that Columbus-America had invested much time and effort in its search operations,¹³³ and that no other party had established any rights

¹²⁷ *Id.*

¹²⁸ *Id.* at 1340.

¹²⁹ *Id.* at 1341.

¹³⁰ *Id.* at 1341, 1348.

¹³¹ *Id.* at 1348.

¹³² *Id.* at 1332, 1341 (referring to *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel, S.S. Central America, in rem*, No. 87-363-N, 1989 A.M.C. 1955 (E.D. Va. 1989)).

¹³³ The Court stated:

A specially equipped ship was obtained for the undertaking. Among the equipment was a side-scan sonar, satellite navigation, tele-operated deep-sea equipment (submersible with stereo camera and robotic arms) and computer modeling software, all of which helped to make the discovery possible.

... [A] study had to be made of what might be revealed by the sonar. Very little

in the *S.S. Central America*.¹³⁴

III. THE DOCTRINE OF TELEPOSSESSION

A. *The District Court's Creation of Telepossession*

In June 1989, the Federal District Court in Norfolk awarded interim title to recovered objects to Columbus-America.¹³⁵ This was the first decision to give legal recognition to the use of ROVs in lieu of actual human presence at a shipwreck site as well as the first decision to award title to salvors based on recovery operations utilizing ROVs and their attending real-time video images. Judge Kellam's decision spawned two legal doctrines, "telepresence" and "telepossession,"¹³⁶ as a basis for awarding interim title to Columbus-America. Judge Kellam held that Columbus-America had achieved exclusive custody, control and possession of the wreck of the *S.S. Central America* as well as conditions and circumstances permitted.¹³⁷ The District Court concluded as a matter of law:

[i]n the deep ocean, exercise of effective control is achieved not through physical presence of a human being at the ocean bottom, but instead through a combination of live imaging coupled with the capability to manipulate the environment through teleoperated or robotic vehicles. Effective possession of an object is attained in this unique environment by: (1) locating the object searched; (2) real time imaging of the object; (3) placement or capability to place teleoperated or robotic manipulators on or near the object, capable of manipulating it as directed by human beings exercising control from the surface; and (4) present intent to control (including deliberately not disturbing) the location of

work like this had been done before . . . After one develops his or her best guess as to which image is the target he is looking for, it is necessary to make a number of passes over the object, use video cameras, and to study the image and data in order to undertake to reach a better understanding. There is no set pattern to follow . . . It is a new field in science.

Id. at 1330.

¹³⁴ *Id.* at 1348.

¹³⁵ *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel, S.S. Central America, in rem*, No. 87-363-N, 1989 A.M.C. 1955, 1959 (E.D. Va. 1989).

¹³⁶ *Id.* at 1958.

¹³⁷ *Id.* at 1957-58.

the object (so-called "telepresence" and "telepossession.")¹³⁸

The District Court, however, made no distinction between "telepresence" and "telepossession." "Telepresence" should be defined as the use of live video feed to be present at a location through ROVs (factors (1) and (2) enumerated above).¹³⁹ Whereas "telepossession" should include the telepresence factors in its definition along with factors (3) and (4)—having the intent and technological capability to exert control over objects using ROVs, video cameras, computer imaging and still photos to video-map and document a wrecksite as well as the use of robotic manipulators to retrieve objects.¹⁴⁰ In this manner the traditional requirements for salvage rights are satisfied,¹⁴¹ and there would be no confusion with regard to technical or scientific

¹³⁸ *Id.* at 1958. To the Court, telepossession is analogous to effective possession. BLACK'S LAW DICTIONARY 515 (6th ed. 1990). This is also known as constructive possession: "A person has constructive possession of property if he has power to control and intent to control such item. [It e]xists where one does not have physical custody or possession, but is in a position to exercise dominion or control over a thing." *Id.* at 314 (citations omitted).

¹³⁹ See Arnold, *The Miracle of Telepresence: Technology Meets Show & Tell*, SEA TECH., June 1990, at 43 & 44-45. Dr. Robert Ballard (who has located both the *Titanic* and the *Bismarck*) of Woods Hole Oceanographic Institution in Massachusetts entered into a joint venture with the television series National Geographic Explorer. In this joint venture, Dr. Ballard's ROVs, *Medea* and *Jason*, were sent to the ocean floor, and fed live video to the mothership, which was then transmitted to a satellite. (Dr. Ballard defines this as telepresence.) Gerner, *Explorer Taking Students on a Journey Across Time*, Chi. Tribune, Apr. 29, 1990, at C1. The site was in Lake Ontario, and the sunken ships were the *Hamilton* and the *Scourge*, which were U.S. Navy warships from the War of 1812. *Id.* The live video was shown to 250,000 elementary and high school students in the United States and Canada, who were able to see the ocean floor via three-dimensional images simultaneously as *Jason* "saw" them. Shryer, *Sunken Ships Become TV Stars*, L.A. Times, May 10, 1990, at E8, col. 1.

Telepresence also has been defined by the National Aeronautic and Space Administration (NASA). NASA's "main aim is to perfect a technique it calls telepresence that uses a head-mounted display and DataGloves to make robots mimic human movements." *The Unreal Thing*, ECONOMIST, Sept. 15, 1990, at 107. This technological process of computer-generated imagery for the purpose of remotely controlling robots at a distant location or to merely computer-generate a scene for entertainment or other purposes has also been defined as "virtual reality." *Id.*; Chandler, *It's Better Than Being There; Robot Stand-ins Reach Out and Touch*, B. Globe, Dec. 3, 1990, at 35.

Therefore, at a time when the speed of technology is surpassing the speed of the dictionary, it is imperative to create clear legal definitions of newly emerging concepts and phenomenon at the earliest possible opportunity.

¹⁴⁰ See *supra* notes 138-39.

¹⁴¹ See *supra* notes 33-38 & 41-47 and accompanying text.

terms.¹⁴²

The Court recognized:

[t]he majority of time and effort in this endeavor has involved analyzing and developing new technologies; performing historic, engineering, mathematical and scientific research; organizing efforts; and completing other work to support at-sea operations. In deep ocean salvage, actual at-sea operations to physically manipulate an object are only a small part of deep ocean salvage.¹⁴³

Judge Kellam further reasoned that "the special circumstances which characterize deep ocean salvage, including rough seas, sailing distances to a safe port, remoteness from repair facilities and assistance, and the complexity and innovativeness of technology and applications"¹⁴⁴ justify a finding of reasonable presence at the salvage site rather than the traditional requirement of constant actual presence.¹⁴⁵ Under this newly created telepossession test, the expansion of the traditional doctrine of possession, whether actual, constructive or effective,¹⁴⁶ provides a new basis to award title to discoverers of deep ocean shipwrecks. Judge Kellam's decision enabled Columbus-America to continue expending vast amounts of resources in the confidence that its rights to the *S.S. Central America* were protected.¹⁴⁷

The District Court's June 1989 opinion recognized the importance of the historic preservation of shipwreck sites.¹⁴⁸

¹⁴² See *supra* note 139.

¹⁴³ *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel, S.S. Central America, in rem*, No. 87-363-N, 1989 A.M.C. 1955, 1959 (E.D. Va. 1989).

¹⁴⁴ *Id.* at 1958.

¹⁴⁵ This requirement pertains to the problem of intervening rival salvors. The use of an injunction or temporary restraining order solves this often-occurring problem. See *supra* notes 44-46 and accompanying text. For the usage of the temporary restraining order in this litigation, see *supra* notes 65, 67 & 77 and accompanying text. For the outcome of court proceedings regarding violations of the temporary restraining order and preliminary injunction, see *supra* notes 68-74 and accompanying text.

¹⁴⁶ See *supra* note 138 and accompanying text.

¹⁴⁷ The District Court took notice that recovery operations at sea cost \$20,000.00 per day. *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 742 F. Supp. 1327, 1339 (E.D. Va. 1990).

¹⁴⁸ For information regarding the declaration of a shipwreck site located within the territory or control of the United States as historic under the guise of the National Register of Historic Places, which is a department of the National Parks Service, see NATIONAL PARK SERVICE, NATIONAL REGISTER BULLETIN 20: TECHNICAL INFORMATION ON COMPREHENSIVE PLANNING, SURVEY OF CULTURAL RESOURCES, AND REGISTRATION IN THE

"Courts may decline to apply the maritime law of finds to shipwrecks of substantial historical or archaeological significance where a salvor has failed to act in good faith to preserve the scientific, historical and, in the limited situations where applicable, archaeological provenance of the wreck and artifacts."¹⁴⁹

NATIONAL REGISTER OF HISTORIC PLACES (1987). See also *Technologies for Underwater*, *supra* note 2, at 5.

See *Symposium*, in *UNDERWATER ARCHAEOLOGY PROCEEDINGS FROM THE SOCIETY FOR HISTORICAL ARCHAEOLOGY CONFERENCE* 35-59 (J. Arnold III ed. 1989) (discussing current projects of marine archaeological historic preservation as well as legal developments throughout the United States). Executive and legislative control of shipwrecks has been reinforced by the Abandoned Shipwrecks Act of 1987, 43 U.S.C. §§ 2101-2106 (1988). For discussion of this new legislation that applies to shipwrecks located within the territorial waters of the United States, see *infra* notes 161-65 and accompanying text. For discussion of the historic preservation of shipwrecks under international law, see *infra* notes 169-82 and accompanying text.

To date, it appears in practice that preservation under international admiralty law—including the doctrine that a finder must act in good faith to protect the scientific, historic and archaeological value of a shipwreck—under the control of the judicial branch of government is most effective in assuring treatment of shipwrecks and preservation as individual entities, rather than as objects of control based on politics and special interests. See Robol, *supra* note 26, at 397-401.

¹⁴⁹ *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel, S.S. Central America, in rem*, No. 87-363-N, 1989 A.M.C. 1955, 1957 (E.D. Va. 1989) (citing *Cobb Coin Company, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 549 F. Supp. 540, 559, 1983 A.M.C. 1018, 1042-43 (S.D. Fla. 1982) (*Cobb Coin II*). The *Cobb Coin* cases concerned the recovery of part of the vast treasures carried by a fleet of vessels (sometimes referred to as the plate fleet) that sank during a storm off the Florida coast in 1715. For descriptions of some of the treasures that were lost, see *SHIPWRECKS IN THE AMERICAS*, *supra* note 17, at 192-93 & 206-09. In *Cobb Coin II*, Judge King recognized, "The cultural heritage of the western world, the colonial appetite of the Spanish Empire, nearly three centuries of man's timeless quest for wealth and adventure, and the distribution of authority in the American Federalist legal system are all substantially intertwined in [the] litigation." *Cobb Coin II*, 549 F. Supp. at 540, 1983 A.M.C. at 1019.

See *MDM Salvage, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 631 F. Supp. 308 (S.D. Fla. 1986).

Archaeological preservation, on-site photography, and the marking of sites are particularly important . . . as the public interest is compelling in circumstances in which a treasure ship, constituting a window in time provides a unique opportunity to create a historical record of an earlier era. These factors constitute a significant element of entitlement to be considered when exclusive salvage rights are sought.

Id. at 310.

See also 3A *BENEDICT*, *supra* note 31, at § 99. A salvor "must act in entire good faith and with honesty of purpose." *Id.* To the Court in the *S.S. Central America* case, "This emerging maritime doctrine finds its roots in the admiralty principle that a salvor may not conduct itself so as to despoil property at sea." *Columbus-America*, No. 87-363-N,

The Court noted that Columbus-America had

scrupulously avoided acts which might destroy important scientific or historical data. It has developed new technologies and applications for protecting the scientific and historical provenance of the wreck. It has created two new scientific subdisciplines to assist its efforts. It has preserved information and artifacts for future generations. It has disseminated its research.¹⁵⁰

Determining that Columbus-America's technological and scientific efforts to the preserve the wreck of the *S.S. Central America* "met the threshold requirement for application of the law of finds to abandoned shipwrecks having historical or archaeological significance,"¹⁵¹ the court awarded interim title to objects retrieved from the wrecksite to Columbus-America.¹⁵²

B. *The Decision Was Consistent With Federal Maritime Law*

The extension of the doctrine of possession¹⁵³ to include telepossession through teleoperated devices, or ROVs, is consistent with the recognition given by admiralty courts that salvage operations are inherently dangerous.¹⁵⁴ The District Court knew its decision would open the legal door to the application of advanced technology to future deep ocean operations. The Court recognized "the Fifth and Eleventh Circuits relied on the law of finds instead of the maritime salvage law"¹⁵⁵ to determine ownership of shipwrecks found on the outer continental shelf. Under

1989 A.M.C. at 1957.

¹⁵⁰ *Columbus-America*, No. 87-363-N, 1989 A.M.C. at 1958.

¹⁵¹ *Id.*

¹⁵² *Id.* at 1959.

¹⁵³ See *supra* notes 42-47 & 138 and accompanying text.

¹⁵⁴ See *The Blackwall*, 77 U.S. (10 Wall.) 1 (1869).

Compensation as salvage is not viewed by the admiralty courts merely as pay . . . but as a reward given for perilous services, voluntarily rendered, and as an inducement to seamen and others to embark in such undertakings to save life and property.

Public policy encourages the hardy and adventurous mariner to engage in these laborious and sometimes dangerous enterprises . . .

Id. at 14.

¹⁵⁵ *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 742 F. Supp. 1327, 1336 (E.D. Va. 1990) (relying on *Treasure Salvors, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 569 F.2d 330 (5th Cir. 1978); *Klein v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 758 F.2d 1511 (11th Cir. 1985)).

federal maritime law, when wrecks located in international waters have been discovered, courts have applied the maritime law of finds.¹⁵⁶ The application of the maritime law of finds is consistent with decisions by British courts,¹⁵⁷ which formed the foundation of federal maritime law.¹⁵⁸

¹⁵⁶ *Martha's Vineyard Scuba Headquarters, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 833 F.2d 1059 (1st Cir. 1987) (salvor of *S.S. Republic*, which sank sixty miles south of Nantucket Island into 300 feet of water, awarded title to artifacts recovered); *Treasure Salvors, Inc. v. The Unidentified Wrecked and Abandoned Sailing Vessel*, 640 F.2d 560 (5th Cir. 1981); *Treasure Salvors Inc. v. The Unidentified Wrecked and Abandoned Sailing Vessel*, 569 F.2d 330 (5th Cir. 1978), *aff'g and modifying*, 408 F. Supp. 907 (S.D. Fla. 1976) (salvor of *Nuestra Señora de Atocha* and *Santa Margarita*, which were located twelve miles offshore, awarded title); *Indian River Recovery Co. v. The China*, 645 F. Supp. 141 (D. Del. 1986) (law of finds applied, and commercial salvor denied salvage rights to wreck located in contiguous zone because wrecksite had a history of being a public diving area); *MDM Salvage, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 631 F. Supp. 308 (S.D. Fla. 1986) (salvors of artifacts from sunken Spanish galleons awarded title to those artifacts found in international waters); *Brady v. The Steamship African Queen*, 179 F. Supp. 321 (E.D. Va. 1960) (salvor of *African Queen*, which grounded on a shoal nine miles off the coast of Delaware, awarded title when abandonment was express). *Cf. United States v. Smiley*, 27 F. Cas. 1132 (C.C. Cal. 1864) (No. 16,317) (indictment against salvors, who recovered gold from sunken and abandoned Pacific Mail Steamship Company vessel, *Golden Gate*, which was located in territorial waters of Mexico, dismissed for lack of jurisdiction). (Pacific Mail Steamships plied the first leg of the sea route from San Francisco to New York during the gold rush days. *See Treasures of a Lost Voyage*, *supra* note 3.)

But see Hatteras, Inc. v. The U.S.S. Hatteras, No. G-78-77, 1984 A.M.C. 1094 (S.D. Tex. 1984) (salvor of United States Navy warship located on the continental shelf denied title to artifacts retrieved because a warship remains property of the government).

¹⁵⁷ *See supra* note 23 and accompanying text. Had this case been decided in Great Britain, it would probably have had a similar outcome. An early British case to apply the common law of finds (granting ownership of sunken vessel to the salvors) in a salvage case was *The Tubantia*, 18 Lloyd's List Rep. 72 [1924]. The *Tubantia* was a ship that was torpedoed in 1916 and foundered to a depth of 100 feet in international waters. A British salvor began to save the ship in 1922. The salvor was awarded ownership of the vessel and its contents even though the entire wreck had not been fully reduced to possession. The court applied the reasoning that the salvors "were dealing with [the wreck] as a whole." 18 Lloyd's List Rep. at 160.

A recent British case to apply the law of finds is *Pierce and Another v. Bemis and Others the Lusitania*, [1986] 1 Q.B. 384. The *Lusitania* was torpedoed in 1915 and sank in international waters. In 1983, salvors located the wreck at a depth of 315 feet, and they began to retrieve objects from the sunken ship by using a ROV. The salvors were awarded ownership of the salvaged objects. *Id.* at 401.

¹⁵⁸ Much distinction has been made between the "British rule" and "American rule." *See, e.g., Ownership of the Treasures*, *supra* note 32, at 384-98. Under the British rule, wrecks found within the territorial waters of Great Britain belong to the crown. *See Protection of Wrecks Act, 1973*, ch. 33. Wrecks found in international waters, however, would belong to individuals who reduce those wrecks to their exclusive possession. *See*

Wrecks located within the territorial waters of the United States, on the other hand, have been subject to both the law of salvage and the maritime law of finds; although it depends on whether the state has waived its sovereign immunity to suit under the eleventh amendment.¹⁵⁹ Some courts have applied the

supra note 157. See also Lillington, *Wreck or Wreccum Maris?*, 1987 LLOYD'S MAR. & COM. L.Q. 267 (1987) (discussing the *Lusitania* decision). Under the American rule, wrecks located within the territorial waters of the United States between three and twelve miles offshore (and in Federal lands) may belong to the United States Government if it decides to exert its sovereign prerogative. Wrecks located less than three miles offshore may belong to a state if that state presses its sovereign prerogative. These two rules have become quite similar with the passage of the Abandoned Shipwrecks Act, 43 U.S.C. § 2101 (1988). See *infra* notes 161-65 and accompanying text. Additionally, both countries have held that ownership of wrecks located in international waters vests with whoever reduces them to possession. See *supra* notes 156-57. There now seems to be little distinction between these two different rules.

¹⁵⁹ The United States Constitution, Eleventh Amendment provides: "The judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State." U.S. CONST. amend. XI.

See *The Sindia Expedition, Inc. v. The Wrecked and Abandoned Vessel, Known as "The Sindia,"* 895 F.2d 116 (3d Cir. 1990), *rev'd*, 710 F. Supp. 1020 (D.N.J. 1989) (salvor's claim not barred by eleventh amendment when the State of New Jersey asserted claim of ownership); *Fitzgerald v. The Unidentified Wrecked and Abandoned Sailing Vessel*, 866 F.2d 16 (1st Cir. 1989) (suit against wreck located within Puerto Rico's territorial waters barred by eleventh amendment); *Marx v. Government of Guam*, 866 F.2d 294 (9th Cir. 1989) (claim for ownership of two Spanish galleons dismissed for lack of jurisdiction because territory of Guam possesses sovereign immunity); *Platoro Limited, Inc. v. The Unidentified Remains of a Vessel*, 518 F. Supp. 816 (W.D. Tex. 1981), *modified*, 695 F.2d 893 (5th Cir. 1983) (salvors entitled to award for salvage of 16th century Spanish wreck); *Jupiter Wreck, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 691 F. Supp. 1377 (S.D. Fla. 1988) (eleventh amendment barred federal court from hearing claim of ownership of 17th century shipwreck embedded in territory of the State of Florida); *Riebe v. The Unidentified, Wrecked and Abandoned 18th Century Shipwreck*, 691 F. Supp. 923 (E.D.N.C. 1987) (eleventh amendment barred federal court's determination of state's assertion of title to shipwreck located in North Carolina's territorial waters); *Subaqueous Exploration & Archaeology, Ltd. v. The Unidentified, Wrecked and Abandoned Vessel*, 577 F. Supp. 597 (D. Md. 1983) (complaint dismissed for lack of jurisdiction under the eleventh amendment for claim to wrecks in Maryland territorial waters); *Hener v. United States*, 525 F. Supp. 350 (S.D.N.Y. 1981) (law of salvage applied where neither party claiming ownership pressed their claim); *Weber Marine, Inc. v. One Large Cast Steel Stockless Anchor and Four Shots of Anchor Chain*, 478 F. Supp. 973 (E.D. La. 1979) (salvor of anchor from Mississippi River awarded salvage expenses). Cf. *Sea Dweller Diving Co. v. The Wrecked and Abandoned Steam Vessel, No. 87-3409-1* (D.S.C. Dec. 20, 1989) (dispute regarding whether sunken steam vessel *Lawrence* was located in international or South Carolina's territorial waters dismissed for lack of jurisdiction); *State of Florida by Ervin v. The Massachusetts Co.*, 95 So.2d 902 (Fla. 1957) (salvor denied salvage rights to abandoned battleship *Massachusetts* be-

maritime law of finds when shipwrecks have been clearly abandoned.¹⁶⁰ Since 1988, both the Abandoned Shipwrecks Act and state law apply in the determination of ownership rights to wrecks located in United States' territorial waters.¹⁶¹ Under the

cause vessel became property of the State of Florida under the principle of sovereign prerogative). See also Annotation, *Rights in and Ownership of Wrecked or Derelict Vessels and Their Contents Not Cast Upon the Shore*, 63 A.L.R.2d 1369 (1960 & Supp. 1990).

Contra Chance v. Certain Artifacts Found and Salvaged from the Nashville a/k/a The Rattlesnake, 606 F. Supp. 801 (S.D. Ga. 1984), *aff'd*, 775 F.2d 302 (11th Cir. 1985) (ownership of Civil War era vessel awarded to the State of Georgia under the embedded in the soil exception to the maritime law of finds); Klein v. The Unidentified, Wrecked and Abandoned Sailing Vessel, 568 F. Supp. 1562 (S.D. Fla. 1983), *aff'd*, 758 F.2d 1511 (11th Cir. 1985) (ownership of 18th century English vessel awarded to federal government under the embedded in the soil exception to the maritime law of finds); Cobb Coin Company, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel, 549 F. Supp. 540 (S.D. Fla. 1982) (*Cobb Coin I*); Cobb Coin Company, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel, 525 F. Supp. 186 (S.D. Fla. 1982) (*Cobb Coin II*) (In *Cobb Coin I* and *Cobb Coin II* salvor awarded title to artifacts retrieved from 1715 plate fleet located within territory of Florida under the maritime law of finds); Commonwealth v. Maritime Underwater Surveys, Inc., 531 N.E.2d 549, 1987 A.M.C. 2590 (Mass. 1987), *aff'd*, 1989 A.M.C. 425 (Mass. 1988) (ownership of artifacts salvaged from pirate ship *Whydah*, which sank in 1717, awarded to salvors rather than the State of Massachusetts when the court applied the maritime law of finds because the Massachusetts statute conflicted with federal maritime law).

¹⁶⁰ See Rickard v. Pringle, 293 F. Supp. 981, 1968 A.M.C. 1008 (E.D.N.Y. 1968) (sixty-one year old wreck of vessel *Acara* was derelict and had been expressly abandoned by its owners); Wiggins and Moulton v. 1100 Tons, More or Less, of Italian Marble, 186 F. Supp. 452, 1960 A.M.C. 1774 (E.D. Va. 1960) (salvor of portion of cargo from sixty-six year old wreck of vessel *Clythia* awarded title because clearly abandoned); Thompson v. United States, 62 Ct. Cl. 516 (1926) (salvor of three year old wreck of vessel *Gut Heil* awarded title because expressly abandoned); Deklyn v. Davis, 1 Hopk. Ch. 135 (1824) (wreck of American Revolution-era British warship *H.M.S. Hussar* clearly abandoned by the crown).

¹⁶¹ Growing national interest in historic shipwrecks, persistent lobbying efforts, plus inconsistent federal court decisions evidencing the clash between federal maritime law and state historic shipwreck protection statutes led the United States Congress to enact the Abandoned Shipwrecks Act of 1987, 43 U.S.C. §§ 2101-2106 (1988). For inconsistent federal court decisions, see *supra* notes 159-60 and accompanying text. For final guidelines for the Abandoned Shipwrecks Act, see Abandoned Shipwrecks Act Guidelines, 55 Fed. Reg. 50,116 (1990). For discussions of the Abandoned Shipwrecks Act, see Note, *The Abandoned Shipwrecks Act of 1987: Navigating Turbulent Constitutional Waters?*, 10 U. BRIDGEPORT L. REV. 361 (1990); Runyan, *Shipwreck Legislation and the Preservation of Submerged Artifacts*, 22 CASE W. RES. J. INT'L L. 31 (1990); Note, *The Proposed Abandoned Shipwreck Acts of 1987—Archaeological Preservation and Maritime Law*, 12 SUFFOLK TRANSNAT'L L.J. 381 (1989); Giesecke, *The Abandoned Shipwreck Act: Affirming the Role of the States in Historic Preservation*, 12 COLUM.-V.L.A. J. L. & ARTS 379 (1988).

The national interest in historic shipwrecks was fueled by the discovery of the Ti-

Abandoned Shipwrecks Act, the United States asserted title to all abandoned shipwrecks located within the territory of the United States and then transferred this title to those states where the shipwrecks are located.¹⁶² The Abandoned Shipwrecks Act authorizes states and United States possessions to "carry out their responsibilities . . . to (A) protect natural resources and habitat areas; (B) guarantee recreational exploration of shipwreck sites; and (C) allow for appropriate public and private sector recovery of shipwrecks consistent with the protection of historical values and environmental integrity of the shipwrecks and the sites."¹⁶³ The effect of the Abandoned Shipwrecks Act is

tanic in 1985. This prompted the United States Congress to enact legislation protecting the *Titanic's* final resting place. See R.M.S. *Titanic* Maritime Memorial Act, 16 U.S.C. § 450rr (1988). For discussions of this legislation, see Nafziger, *Finding the Titanic: Beginning an International Salvage of Derelict Law at Sea* 12 COLUM.-V.L.A. J. L. & ARTS 339 (1988); Note, *Historic Shipwreck Legislation: Rescuing the Titanic From the Law of the Sea*, 13 J. LEGIS. 92 (1986); Note, *Ownership Rights in the Titanic*, 37 CASE. W. RES. L. REV. 72 (1986); Note, *Finders Keepers? The Titanic and the 1982 Law of the Sea Convention*, 10 HASTINGS INT'L & COMP. L. REV. 159 (1986).

¹⁶² The Abandoned Shipwrecks Act section 2105 **Rights of ownership** provides in pertinent part:

(a) **United States title.** The United States asserts title to any abandoned shipwreck that is—(1) embedded in submerged lands of a State; (2) embedded in coralline formations protected by a State on submerged lands of a State; or (3) on submerged lands of a State and is included in or determined eligible for inclusion in the National Register.

(c) **Transfer of title to States.** The title of the United States to any abandoned shipwreck asserted under subsection (a) of this section is transferred to the State in or on whose submerged lands the shipwreck is located.

(d) **Exception.** Any abandoned shipwreck in or on the public lands of the United States is the property of the United States Government.

43 U.S.C. § 2105 (1988).

¹⁶³ 43 U.S.C. § 2103 (1988). See *Technologies for Underwater*, *supra* note 2, at 27. Twenty-seven states and three U.S. possessions, Guam, Puerto Rico and the Northern Mariana Islands, have passed legislation to manage the historic shipwrecks in their waters purportedly for the public good. The twenty-seven states include: Alaska, Arizona, Colorado, Florida, Georgia, Hawaii, Indiana, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Montana, New Hampshire, New York, North Carolina, North Dakota, Oregon, Rhode Island, South Carolina, Texas, Vermont, Virginia, Washington and Wisconsin. Giesecke, *Shipwrecks: The Past in the Present*, 15 COASTAL MGMT. 179 & 184-88 (1987 & Jan. 1989 update). "No state prohibits sport diving on historic shipwrecks and most laws provide in some way for recovery activities by private parties." Shallcross & Giesecke, *Recent Developments in Litigation Concerning the Recovery of Historic Shipwrecks*, 10 SYR. J. INT'L L. & COM. 371, 372 n.3 (1983) (citing Giesecke, *Shipwreck Archaeology and the Law*, Ph.D. dissertation, Wash., D.C. (1984)).

In actual practice, the government administrative agencies and government em-

that historic and abandoned shipwrecks in United States territorial waters have been removed "from the purview of admiralty courts and place[d] . . . expressly under historic preservation law."¹⁶⁴ This assertion of title to territorial shipwrecks by both the United States and the several states leaves deep ocean discovery as the only enticement to discoverers who might not desire to negotiate with either a state or the federal government for salvage rights in a territorial wreck when neither the law of finds nor the law of salvage would apply.¹⁶⁵ Federal decisions applying the maritime law of finds to shipwrecks in international waters provides both certainty and legal protection to those who assume great risks—financial, personal and legal—in their quest for both adventure and reward,¹⁶⁶ and they are most consistent with the jurisprudential philosophy that power (and property rights) flow from the individual to the government—and not the other way around.

C. *Decision Did Not Impinge on the International Community*

Under international law, the law of the sea refers to the "relations, activities and interests of states involving the sea."¹⁶⁷ Four conventions were created under the United Nations Conference on the Law of the Sea (UNCLOS I).¹⁶⁸ These conven-

ployed archaeologists responsible have suppressed enjoyment of the wrecks, not only by sport divers, salvors and photographers, but also by the general public as well. For one example, see *supra* note 67. See also Reynolds, *The Wreck and the Reckoning; U.S. Park Service Wins its Case Against Undersea Treasure Hunters in the Country's Largest-Ever Archaeological Protection Venture*, L.A. Times, Dec. 27, 1990, at J8, col. 1.

¹⁶⁴ *Technologies for Underwater*, *supra* note 2, at 47.

¹⁶⁵ "The law of salvage and the law of finds shall not apply to abandoned shipwrecks to which section 2105 of this title applies." 43 U.S.C. § 2106 (1988). For one salvor's perspective, see Fisher, *The Abandoned Shipwreck Act: The Role of Private Enterprise*, 12 COLUM.-V.L.A. J. L. & ARTS 373 (1988).

¹⁶⁶ See, e.g., Amberg, *They Were a Ragtag Band of Treasure Hunters Who Spent 16 Years Finding a Fabled Shipwreck. Their Dreams Came True—and Their Lives Were Irrevocably Changed. Now, Five Years Later, They Realize They Didn't Just Find Sunken Treasure, They Found Pieces of Fate*, Chi. Tribune, July 20, 1990, at T1.

¹⁶⁷ L. HENKIN, R. PUGH, O. SCHACHTER & H. SMIT, *INTERNATIONAL LAW* 1234 (2d ed. 1987) [hereinafter *INTERNATIONAL LAW*].

¹⁶⁸ Convention on the High Seas, Apr. 29, 1958, 13 U.S.T. 2312, T.I.A.S. No. 5200, 450 U.N.T.S. 82; Convention on the Continental Shelf, Apr. 29, 1958, 15 U.S.T. 471, T.I.A.S. No. 5578, 499 U.N.T.S. 311; Convention on the Territorial Sea and the Contiguous Zone, Apr. 29, 1958, 15 U.S.T. 1606, T.I.A.S. No. 5639, 516 U.N.T.S. 205; and Con-

tions delineated zones where a country may exert sovereignty.¹⁶⁹ Under these delineations, shipwrecks located within the internal or territorial waters of a country are subject to the sovereign jurisdiction of that country.¹⁷⁰ Shipwrecks located in a contiguous zone are covered only in a cursory fashion,¹⁷¹ however the conventions do not apply to shipwrecks.¹⁷²

vention on Fishing and the Conservation of the Living Resources, Apr. 29, 1958, 17 U.S.T. 138, T.I.A.S. No. 5969, 559 U.N.T.S. 285.

¹⁶⁹ The *internal waters* of a country and the *territorial sea* are the exclusive jurisdiction of a country. Convention on the Territorial Sea and Contiguous Zone, *supra* note 168, at Art. 1. The territorial sea is defined as "a belt of sea adjacent to its coast." *Id.* The *contiguous zone* is a "zone of the high seas contiguous to its territorial sea . . . [that] may not extend beyond twelve miles from the baseline from which the breadth of the territorial sea is measured." *Id.* at Art. 24. The *continental shelf* is "the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea . . ." Convention on the Continental Shelf, *supra* note 168, at Art. 1. The *high seas* "means all parts of the sea that are not included in the territorial sea or in the internal waters of a State." Convention on the High Seas, *supra* note 168, at Art. 1. The high seas are "open to all nations, [and] no State may validly purport to subject any part of them to its sovereignty." *Id.* at Art. 2. Freedom of the high seas includes freedom of navigation, fishing, freedom to lay submarine cables and pipelines and freedom to fly over the high seas. *Id.*

¹⁷⁰ The national law of the country where shipwrecks are located would determine the rights of salvors. See SHIPWRECKS IN THE AMERICAS, *supra* note 17. Marx's book lists many historic shipwrecks that occurred in the New World between 1492 and 1825. It also discusses the national salvage laws of the countries where these shipwrecks are located. Marx writes that almost all of the countries in South America and in the Caribbean claim ownership to artifacts recovered from shipwrecks located within their zones. Some have strict percentage sharing statutes (like the old moieties rule *supra* note 38) for the salvors of these artifacts, yet they reserve the right to purchase the salvors' share of the artifacts for whatever price that country deems just. See, e.g., "Spectacular", *supra* note 10, at A2, col. 1 (salvor of *Nuestra Señora de las Maravillas* entered into a contract with the Bahamian government whereby the government received twenty-five percent of the value of all artifacts recovered).

¹⁷¹ In regard to marine archaeological antiquities under UNCLOS I, [o]nly a flimsy indication may be found in the Convention on the Territorial Sea and the Contiguous Zone of 1958, by virtue of which the coastal state can take certain measures in the contiguous zone (beyond and bordering its territorial waters). These measures, however, would entail only customs controls, and might be of some incidental importance with regard to illicit traffic in protected antiquities. Altes, *Submarine Antiquities: A Legal Labyrinth*, 4 SYR. J. INT'L L. & COM. 77, 81 (1976) (citations omitted) [hereinafter *Submarine Antiquities*].

¹⁷² In regard to the Continental Shelf, the International Law Commission explained "it is clearly understood that the rights in question do not cover objects such as wrecked ships and their cargoes (including bullion) lying on the seabed or covered by sand of the subsoil." *Report Of The International Law Commission To The General Assembly*, 2 Y.B. INT'L L. COMM'N 298, U.N. Doc. A/3159 (1956). See *Submarine Antiquities*, *supra* note 171, at 79.

The inadequacies of both UNCLOS I and the United Nations Convention on the Law of the Sea II (UNCLOS II)¹⁷³ led the United Nations in 1974 to commence United Nations Conference on the Law of the Sea III (UNCLOS III).¹⁷⁴ Shipwrecks located in international waters are mentioned in two provisions of UNCLOS III: Articles 149 and 303.¹⁷⁵ Under Article 149, shipwrecks found under the high seas are part of the common heritage of mankind.¹⁷⁶ Under Article 303, "States have the duty to protect objects of an archaeological and historical nature found at sea."¹⁷⁷ Article 303, however, does not "affect the rights of identifiable owners [of vessels] or the law of salvage or other rules of admiralty."¹⁷⁸ What is meant by "archaeological and historical objects"¹⁷⁹ are those shipwrecks dating from between

¹⁷³ "A Second Law of the Sea Conference in 1960 to determine the width of the territorial sea, an issue left unresolved in the 1958 Convention, did not succeed." *INTERNATIONAL LAW*, *supra* note 167, at 1231.

¹⁷⁴ Convention on the Law of the Sea, Dec. 10, 1982, U.N. Doc. A/CONF.62/122, reprinted in 21 I.L.M. 1261 (1982).

¹⁷⁵ *Id.* at Arts. 149, 303. For a thorough discussion of the breadth of articles 149 and 303, see Oxman, *Marine Archaeology and the International Law of the Sea*, 12 COLUM.-V.L.A. J. L. & ARTS 353 (1988).

¹⁷⁶ Article 149, *Archaeological and historical objects* provides:

All objects of an archaeological and historical nature found in the Area shall be preserved or disposed of for the benefit of mankind as a whole, particular regard being paid to the preferential rights of the State or country of origin, or the State of cultural origin, or the State of historical and archaeological origin.

Convention on the Law of the Sea, *supra* note 174, at Art. 149. "[O]bservers and commentators have often neglected to give adequate attention to the less political provisions of the Convention." Marine archaeology is one example. Note, *Archaeological and Historical Objects: The International Legal Implications of UNCLOS III*, 22 VA. J. INT'L L. 777, 778 (1982).

¹⁷⁷ Convention on the Law of the Sea, *supra* note 174, at Art. 303(1).

¹⁷⁸ *Id.* at Art. 303(3).

¹⁷⁹ See Caffisch, *Submarine Antiquities and the International Law of the Sea*, 13 NETH. Y.B. INT'L L. 3, 25-32 (1982). This author criticized draft articles 149 and 303 of UNCLOS III. Evidently the drafters of the articles were influenced by his comments, because the final draft articles contain different language. *The Recovery of Shipwrecks*, *supra* note 39, at 234 n.15. According to Oxman,

The term "archaeological objects and objects of historical origin" is not defined.

... [It] is not intended to apply to modern objects whatever their historical interest. ... [it] does at least suggest the idea of objects that are many hundreds of years old.

... [I]f a rule of thumb is useful for deciding what is unquestionably covered by this article, the most appropriate of the years ... would be 1453 ... Everything older would clearly be regarded as archaeological or historical. [A] slight

1453 and 1533 and earlier. Shipwrecks that occurred after 1533 would not be protected under UNCLOS III.

The rub then becomes how shipwrecks dating from 1533 or later can be protected if they are not deemed "historic." Much attention has been focused on the importance of both submarine antiquities and the historic preservation of shipwrecks.¹⁸⁰ Even if "non-historic" shipwrecks are not protected under UNCLOS III, they are protected by international admiralty law principles,¹⁸¹ and they arguably might be protected under the Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property (UNESCO).¹⁸² In addition, the United States, along with other countries, has enacted legislation to protect "historic" shipwrecks located in its territorial waters, and will probably enact legislation with extraterritorial applications regarding its international zones of control.¹⁸³ Few would argue that the shipwreck of the *S.S. Central America* in 1857 is not historic to the United States. The Federal District Court in Norfolk, Virginia, afforded

adjustment to 1492 for applying the article to objects indigenous to the Americas, extended perhaps to the fall of Tenochtitlán (1521) or Cuzco (1533) in those areas, might have the merit of conforming to historical and cultural classifications in that part of the world.

Oxman, *The Third United Nations Conference on the Law of the Sea: The Ninth Session* (1980), 75 AM. J. INT'L L. 211, 241 n.152 (1981).

¹⁸⁰ See Runyan, *Shipwreck Legislation and the Preservation of Submerged Artifacts*, 22 CASE W. RES. J. INT'L L. 31 (1990); PROTECTION OF CULTURAL PROPERTY AND ARCHAEOLOGICAL RESOURCES: A COMPREHENSIVE BIBLIOGRAPHY OF LAW-RELATED MATERIALS 20-22 & 70-84 (F. Houdek ed. 1988); Van Meurs, *Legal Aspects of Marine Archaeological*, 1986 ACTA JURIDICA 83 (1986); Prott & O'Keefe, *International Legal Protection of the Underwater Cultural Heritage*, 14 REVUE BELGE DE DROIT INTERNATIONAL 85 (1978) [hereinafter *International Legal Protection*]; Note, *Marine Archaeology and International Law: Background and Some Suggestions*, 9 SAN DIEGO L. REV. 668 (1972).

For recent underwater discoveries around the world, see *Discoveries Underwater* (8 Part Series), (BBC-KCET Los Angeles Production, 1988).

¹⁸¹ See *supra* note 149 and accompanying text.

¹⁸² Nov. 14, 1970, 96 Stat. 2351, 823 U.N.T.S. 231. Although this convention does not make "specific reference to underwater cultural property . . . [it] would undoubtedly apply in the particular circumstances to which [it was] directed." *International Legal Protection*, *supra* note 180, at 89.

¹⁸³ These other countries include, but are not limited to: Italy, Spain, France, Norway, Denmark, the Netherlands, Australia and Great Britain. *Underwater Recovery Operations*, *supra* note 2, at 156-57 & n.6 (citing *Submarine Antiquities*, *supra* note 171, at 87-93); *International Legal Protection*, *supra* note 180, at 90. See 1 L. PROTT & P. O'KEEFE, *LAW AND THE CULTURAL HERITAGE: DISCOVERY AND EXCAVATION* (1984). For descriptions of these international zones, see *supra* note 169.

greater protection to the S.S. *Central America* than would have been received under UNCLOS III, which has not yet entered into force. Indeed, international admiralty law protects all interests—including scientific and environmental interests—rather than merely archaeological or other special interest groups.

IV. IMPLICATIONS IN THE EVOLUTION OF THE DOCTRINE OF TELEPOSSESSION

The District Court's landmark decision will affect future deep ocean discoverers. For example, during the time of Columbus-America's discovery and recovery operations, a company named Seahawk Deep Ocean Technology (Seahawk) used advanced technology to discover the wrecks of two Spanish galleons located in international waters off the coast of Florida.¹⁸⁴ Seahawk uses a ROV¹⁸⁵ to retrieve objects from these wrecks.¹⁸⁶

¹⁸⁴ In 1989, Seahawk Deep Ocean Technology (Seahawk) located what is believed to be the wreck of the *Nuestra Señora de Merced*, which is a sister ship of both the *Nuestra Señora de Atocha* and *Santa Margarita*. See *supra* notes 17 & 52. The *Merced* (presumably) has been located in international waters 75 miles off Key West, Florida at a depth of 1500 feet, and it is intact. In this instance intact means that the wreck is not strewn, and the artifacts are all located in one general area. In the past, only two other Spanish galleons have been found virtually intact. *Salvagers*, *supra* note 10, at A14, col. 1.

Seahawk has retrieved over 6,000 objects from the first wreck including: 28 gold bars, 700 silver coins, 3 rare mariner's astrolabes, 44 intact olive jars, a porcelain plate with the papal seal, miscellaneous metalware, 3,000 freshwater pearls and a two carat emerald and gold ring. 8 *Seahawk Update*, Dec. 1990, at 4. Seahawk has retrieved the ship's bell, but it is unable to identify the shipwreck. Seahawk has employed two people to work full time in the Library of the Indes in Seville, Spain in the hopes of identifying the shipwreck. Seahawk has determined that the shipwreck occurred after 1621 because this is the latest date on any silver coin retrieved from the wrecksite. Telephone interview with Dan Bagley III, Seahawk (Jan. 3, 1991). The objects recovered from the wrecksite have been appraised at \$4.7 million. Telephone interview with Dan Bagley III of Seahawk, (Mar. 27, 1991).

¹⁸⁵ Because of the depths of these wrecks,

Seahawk is using *Merlin*, a \$2 million submersible capable of diving to a depth of 4,950 feet, to recover the loads of the Spanish galleons: *Merlin* is lowered to the site on a steel cable. Aboard are four video cameras, a video recorder, and several still cameras. The operators on the mothership use video signals to move and manipulate *Merlin*, which is connected to the mothership through a fiber-optic cable. Recovered objects are placed in an 8' x 8' basket and raised to the surface. *Merlin* uses movable arms and suction hoses to pick up objects—from olive jars to gold bars. The sonar system automatically records the locations of recovered items on an electronic grid.

Gold Rush, *supra* note 8, at 2A, cols. 3 & 4.

Subsequent to Columbus-America's day in court, Seahawk brought two *in rem* proceedings to seek ownership rights in these wrecks. Unlike Columbus-America's *in rem* proceeding, Seahawk's proceedings were not contested by any party claiming an interest in the galleons. The United States District Court for the Middle District of Florida was notified that a ROV was being used in the recovery operations.¹⁸⁷ The use of a ROV did not seem to make an impact either way on the District Court,¹⁸⁸ which awarded Seahawk title to both galleons in uncontested proceedings.¹⁸⁹

In order to preserve the historic, scientific and archaeological importance of the wrecks, both discoverers, Seahawk and Columbus-America, have formed associations with scientists, archaeologists, historians and other organizations.¹⁹⁰ Seahawk's

¹⁸⁶ Seahawk is salvaging its second Spanish galleon wreck located in international waters at a depth of 1200 feet. Like the first wreck discovered by Seahawk, this ship's identity is still unknown. It is believed to be one of the ships from a Spanish fleet that sank in the early 1700s. *Ancient Ship Artifacts Recovered Off Florida*, Bus. Wire, Nov. 8, 1990. To date, Seahawk's *Merlin* has retrieved a number of copper cooking pots, one dozen bronze cannons and various other artifacts. 8 *Seahawk Update*, Dec. 1990, at 1. However, this galleon is not in as good a condition as the other wreck. Objects at this site are heavily encrusted with coral. *Id.* Seahawk resumed its operations at this second site in mid-April, 1991. Additionally, Seahawk plans to open a 10,000 square foot museum to display recovered artifacts from both wrecks. Telephone interview with Dan Bagley III, Seahawk (Mar. 27, 1991). See 9 *Seahawk Update*, Feb. 1991, at 4; 10 *Seahawk Update*, May 1991, at 2.

¹⁸⁷ Telephone interview with Allen von Spiegelfeld, Esq., Fowler, White, Gillen, Boggs, Villareal and Banker, P.A., Tampa, Florida, attorney for Seahawk (Feb. 20, 1991).

¹⁸⁸ *Id.*

¹⁸⁹ *Seahawk I, Ltd. v. The Unidentified Wrecked and Abandoned Sailing Vessel*, No. 89-913-CIV-T-15B, slip op. at 1 (M.D. Fla. Nov. 29, 1990); *Seahawk II, Ltd. v. The Unidentified Wrecked and Abandoned Sailing Vessel*, No. 89-1708-CIV-T-15A, slip op. at 1 (M.D. Fla. Dec. 14, 1990).

¹⁹⁰ See *Treasures of a Lost Voyage*, *supra* note 3 (demonstration of experiments performed by scientists associated with Columbus-America). Columbus-America's scientists are performing eight types experiments that fall within three main categories: bioscience, physical and chemical studies and historical archaeology. These experiments were planned to run for multi-year periods. The experiments include (1) deterioration of metal objects; (2) microbiological studies; (3) wood degradation; (4) indexing abyssal fauna; (5) concentration and composition of the food chain; (6) sedimentation studies; (7) biomedical and biochemical research; and (8) development of archaeological record. *Id.*

For a discussion of Seahawk's association with Harbor Branch Oceanographic Institution, see *Seahawk Video*, *supra* note 8. Seahawk has entered into a series of several year agreements with Harbor Branch Oceanographic Institution. Telephone interview with Dan S. Bagley III, Seahawk (Feb. 20, 1991); *Seahawk Teams up With Harbor*

association with Harbor Branch Oceanographic Institution is stated to be long-term.¹⁹¹ In this new industry of deep ocean discovery,¹⁹² forming a relationship with scientific organizations mutually benefits both deep ocean discoverer and scientist. The discoverer gains the experience and knowledge of the scientist in order to facilitate recovery, and the scientist is given the opportunity to study a shipwreck site through the use of the discoverer's equipment. The application of ROVs to deep ocean discovery and recovery is also beneficial to marine archaeology.¹⁹³

Branch, Bus. Wire, Aug. 30, 1990.

¹⁹¹ Seahawk Video, *supra* note 8. To Seahawk, "When you find something like this, you no longer work for yourself (or your 8,000 shareholders), you work for the world." *Personalities: Treasure Hunters* (FOX television broadcast, Dec. 6, 1990).

¹⁹² To Seahawk, "there is a new growth industry in deep water search, discovery and recovery because there are probably 100,000 shipwrecks around the world that are located in deep water. The discovery of two galleons within one year proves the system works." Seahawk Video, *supra* note 8. For enticing descriptions of a few of these wrecks, see *Sunken Fortunes Around the World*, USA Today, Oct. 6, 1989, at 6A.

¹⁹³ Compared to commercial salvors,

[a]rchaeologists have a different kind of interest. Before anything is raised they want a site to be properly surveyed and mapped. . . . Once material is lifted it must be preserved; this sometimes requires extensive technical expertise and investment of resources. The material should be properly catalogued and its ultimate disposition recorded so that it can be properly studied by other scholars for comparison with other and possibly later finds. Finally, it is very important that a report of the excavation is published so that the record is available to other researchers—once the material has been raised the integrity of the site has been destroyed. Information about the placement of objects and the nature of the location may assist later researchers puzzled by the cause of the shipwreck or the apparent disposal of the cargo.

International Legal Protection, supra note 180, at 100 (citations omitted).

The use of ROVs to protect the historical, archaeological and scientific characteristics of wrecks is more precise than the most thoughtful and careful human marine archaeologist could perform. Columbus-America uses X, Y and Z mapping to create its archaeological record. The mothership, the *R/V Arctic Discoverer*, is kept in place through satellite navigation and the use of thrusters to make sure that the vessel stays within two to four meters of its position. *Treasures of a Lost Voyage, supra* note 3; Brennan, *Down to the Deep for a Treasure in Gold*, Wash. Post, Sept. 9, 1990, at Y9. Four transponders are located at the wrecksite. The transponders' locations are keyed into the satellite navigation system. An acoustical grid and the sonar onboard *Nemo* coordinate with a computer on the mothership via the use of information updates every thirty seconds to document that objects retrieved from the wrecksite are mapped within an accuracy of two centimeters. *Treasures of a Lost Voyage, supra* note 3. In this manner, should one desire to recreate the wrecksite, every object retrieved from the wrecksite could be placed within two centimeters of its original location. *Id.* Three operators document every object's location. One operator inputs a verbal description of an object into a computer. Another operator creates a videotape documentation record of an object in

The impact of new underwater technology, the doctrines of telepossession and telepresence and the conscious awareness of the importance of historic and scientific preservation by the admiralty courts are affecting and will continue to affect both maritime law and deep ocean discovery. One problem thus becomes how to protect and/or preserve "historic" shipwrecks found in international waters from deep ocean discoverers whose avarice blinds them from recognizing the importance of historical, archaeological and scientific information from these wrecks.

Perhaps one avenue to create controls over deep ocean discoverers would be to amend the multilateral Assistance and Salvage Convention.¹⁹⁴ An international salvage commission could be created that implements a license-to-salvage program on a case-by-case basis. The commission, which could be composed of representatives from member nations, scientists, historians and marine archaeologists could determine whether a vessel that is the subject of a potential deep ocean recovery operation should be deemed "historic." Therefore the wreck would be either off limits to professional salvors or subject to more elaborate recovery efforts. The next problem becomes enforcement. Perhaps national enabling legislation could be adopted that prohibits the importation of objects retrieved from "historic" shipwrecks, as well as provisions that would subject violators to civil and/or criminal penalties for failure to comply. Incidentally, however, preservation, if controlled by administrative agencies rather than through courts, would give way to special interest groups and political expediency.

situ. A third operator logs the navigational position of an object. All three operators log the information with the same reference number. An object is then manually tagged with this same reference number when it reaches the surface. *Id*.

Seahawk's *Merlin* can video document an entire wrecksite in deep water in two days. This same feat if done by a human being in shallow water would take at least six weeks, and the mapping would not be as precise or as complete.

Merlin has 70 millimeter still cameras aboard to take pictures of artifacts *in situ* and then digitize them into a computer for later access. *Merlin* will automatically log the X, Y and Z location coordinates of each artifact with greater-than-human precision. These coordinates will be logged immediately onto the topside computers along with the digitized pictures, the video footage and research observations for further scientific investigation.

"*Merlin*" Comes to Life, *supra* note 8. All incoming sensor information and data are updated and recorded every five seconds. Seahawk Video, *supra* note 8.

¹⁹⁴ Assistance and Salvage Convention, *supra* note 39.

A more practical solution would be for independent admiralty courts to review the capabilities of a discoverer under the standards pronounced in the *S.S. Central America* decision.¹⁹⁶ This review of the capability to salve a wreck requirement¹⁹⁸ will meet the demands of the new industry of deep water discovery, along with providing effective controls for protecting and preserving shipwrecks and their sites.

For example, admiralty courts could require users of ROVs to possess certain technological capabilities¹⁹⁷ to satisfy the goals of marine archaeology (the preservation of scientific, historical and archaeological information). Furthermore, discoverers, scientists and others should be required to collect and disseminate information collected from an operation, which will be the implementation mechanism for obtaining these goals.¹⁹⁸ One preservationist has written that marine archaeologists in the future "may be able to 'excavate' a shipwreck using only remote sensing equipment, without disturbing the seabed or recovering any artifacts."¹⁹⁹ The question discoverers would ask remains: "Why should objects at the bottom of the sea stay there when they could be brought to shore for the world to see?" One will have to wait for the answer.

In regard to non-historic shipwrecks, the impact of telepossession is clear. Recently, the United States government sold its salvage rights in a sunken World War II shipwreck to an association of investors.²⁰⁰ The ship, the *John Barry*, was carrying a bullion shipment when it was torpedoed and sunk by a German submarine. The *John Barry*, is rumored to have carried approxi-

¹⁹⁶ *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel, S.S. Central America, in rem*, No. 87-363-N, 1989 A.M.C. 1955 (E.D. Va. 1989).

¹⁹⁸ See *supra* note 44 and accompanying text. See also 3A BENEDICT, *supra* note 31, at §§ 88-90.

¹⁹⁷ For example, X, Y and Z coordinating. See *supra* note 193. Additionally, a discoverer's equipment should be comparable to the most advanced technology. For descriptions of this technology, see *supra* notes 2-3 and accompanying text.

¹⁹⁸ See *supra* note 193 and accompanying text.

¹⁹⁹ Giesecke, *The Future Underwater*, in *THE SEA REMEMBERS* 227 (P. Throckmorton ed. 1987).

²⁰⁰ Cheney, *Team Finds \$275 Million Shipwreck*, *Toronto Star*, Dec. 12, 1990, at A1. The group of investors purchased the rights in August, 1989, for \$50,010.00 from the United States Government, and the investors agreed to give ten percent of all treasure recovered to the United States government. *Id.*

mately 2,000 tons of silver bullion and coins.²⁰¹ These investors entered into a commercial contract for salvage with Oceaneering International, Inc. (Oceaneering), a United States-based contract salvor, which uses a ROV equipped with manipulator arms (the *Gemini 2*) to recover the silver. The wreck has been located by Oceaneering at approximately 112 miles south of Oman in the Arabian Sea at a depth of 8,364 feet.²⁰² Should these investors fail to pay the contract price to Oceaneering, Oceaneering could commence an *in rem* proceeding against the *John Barry* to recover its salvage costs. Oceaneering could prove its claim to the *John Barry* through telepossession of the wreck as well as telepresence at the wrecksite.

The waves from the *S.S. Central America* decision are already being felt within the international legal community. Recently the Austrian government commissioned Eastport International (Eastport), an American defense contractor and ROV designer,²⁰³ to find a sunken freighter, the *Lucona*. The *Lucona* is a Panamanian-registered tanker that sank on January 23, 1977 and caused the deaths of six of the twelve crewmen aboard.²⁰⁴ The cargo aboard the *Lucona* was insured as expensive uranium processing equipment. An Austrian citizen, Udo Proksch, owned the insured cargo, and he collected \$12.5 million in insurance proceeds for the loss.²⁰⁵ Proksch is now on trial in

²⁰¹ The silver (consisting of 58 million ounces of bullion and three million silver Saudi coins) was shipped from the United States to the Indian National Bank in 1944 in order to stabilize the Indian rupee when the *John Barry* sank. *Id.* The United States Government was able to sell its rights in the shipwreck because of the mistaken assumption that ownership of a government vessel, particularly a military vessel, remains with that government unless expressly abandoned. See *Hatteras, Inc. v. The U.S.S. Hatteras*, No. G-78-77, 1984 A.M.C. 1094 (S.D. Tex. 1984). In regard to wartime bullion shipments, see *supra* note 172.

This misconception that the government does not lose its rights, except through express abandonment, ignores the established rule of international law that sovereigns do, in fact, lose their rights through desuetude, extinction and other doctrines. To date, the misconceptions about sovereign ownership have not been subjected to rigorous litigation by sophisticated counsel, and they will probably be overturned when rigorously contested. See generally Collins, *The Salvage of Sunken Military Vessels Project Jennifer: A Dangerous Precedent?*, 8 J. MAR. L. & COM. 433, 436 (1977).

²⁰² *Team Finds \$275 Million Shipwreck*, *supra* note 200, at A1.

²⁰³ *Saddler, Small Defense Contractors Dive Into Commercial Pool*, Wall St. J., Jan. 24, 1991, at B2, col. 3.

²⁰⁴ *20,000 Rogues Under the Sea*, *supra* note 8, at 109.

²⁰⁵ *Id.*; *Controversial Sunken Ship Found*, United Press International, Feb. 11,

an Austrian court, and he is charged with insurance fraud and the murders of the six crewmen.²⁰⁶ Investigators and the prosecution believe the *Lucona* carried only worthless scrap metal.²⁰⁷

The judge trying the case, Hans Christian Leiningen-Westerburg, held that "testimony from six people who survived the *Lucona* in a state of shock was insufficient and reports by marine experts ruled out collision or a strike by a torpedo or mine as the cause of the sinking."²⁰⁸ At this phase of the trial the Austrian government commissioned Eastport to locate and survey the wreck of the *Lucona*. Eastport located the wreck at a depth of 14,500 feet in the Arabian Sea²⁰⁹ by using its advanced robot sonar device, *Magellan 725*.²¹⁰ Eastport photographed and videotaped the wreckage, which was scattered over a half-mile wide area.²¹¹ Eastport has been retained by the court as an expert witness,²¹² and the photographs, videotapes and retrieved objects are to be used as evidence by the Austrian government in their prosecution of Proksch to prove that the ship exploded and was intentionally sunk.²¹³ This information obtained through telepossession was deemed by the court to be admissible evidence. This is the first extension of the doctrine of telepossession by the international community, and it is a non-maritime application. Sooner or later, the doctrine of telepossession will be extended to the recovery of abandoned satellites and other objects in outer space.²¹⁴

1991.

²⁰⁶ *Investigators May Have Found Wreck in Austrian Murder Mystery*, Reuter Lib. Rep't, Feb. 6, 1991.

²⁰⁷ *Austria Orders Ship Wreck Raised in Insurance Swindle*, Reuter Lib. Rep't, May 31, 1990.

²⁰⁸ *Id.*

²⁰⁹ *Controversial Sunken Ship Found*, *supra* note 205.

²¹⁰ *Id.*

²¹¹ *Id.*

²¹² Wells, *In the Ocean Deep, Eastport Robots Creep*, Wash. Bus. J., Jan. 21, 1991, at 1.

²¹³ *Controversial Sunken Ship Found*, *supra* note 205.

²¹⁴ See Almond, *Sea Salvage Law Could Solve Chaos of Space Debris*, Defense News, Dec. 10, 1990, at 34. Japanese industry is presently developing robots that can be used in deep water exploration as well as robots that will be sent into space to refuel and repair satellites. *Robots* (Financial News Network television broadcast, Jan. 22, 1991) (videotape available from Strictly Business 913-649-6381). Telerobots are planned to play a major role in assembling and servicing the NASA space station, Freedom. Astronauts onboard the space station will control the robots working out in space through the

On the domestic front, after Columbus-America's day in court, *Zych v. The Unidentified, Wrecked and Abandoned Sailing Vessel*²¹⁵ was brought in a District Court in Illinois. Instead of the use of the telepossession doctrine, the District Court relied on the *S.S. Central America*²¹⁶ decision in order to decide two legal issues: (1) how to prove abandonment;²¹⁷ and (2) how an insurance company must prove its rights to subrogation.²¹⁸ The discovery of the shipwrecks *Lady Elgin* and *Seabird* by Zych,²¹⁹ who used state of the art technology, sparked a legal controversy of right of ownership among Zych, the state of Illinois and the *Lady Elgin* Foundation. The *Lady Elgin* Foundation purchased subrogation rights in the shipwreck *Lady Elgin* from CIGNA (which is the successor in interest to AETNA), the insurance company that paid insurance claims for the loss of the ship—in return for sharing twenty percent of the proceeds from any sale of retrieved artifacts.²²⁰ CIGNA was able to produce documents that demonstrated its intention to not abandon the *Lady Elgin*, as well as documents proving its right to subrogation.²²¹ The District Court cited the *S.S. Central America* decision as “[t]he only reported case which the Court and the parties have been able to locate in which an insurer has asserted title to a shipwreck.”²²² The Court held that CIGNA had

use of monitors, computers and human factors controls. *Robots*, *supra* note 4, at 52. See also *supra* note 139.

²¹⁵ *Zych v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 755 F. Supp. 213 (N.D. Ill.), *amended by*, No. 89-C-6501, 1991 WL 2536 (N.D. Ill. 1991).

²¹⁶ *Columbus-America Discovery Group, Inc. v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 742 F. Supp. 1327 (E.D. Va. 1990).

²¹⁷ See *supra* notes 48-52 & 97-105 and accompanying text.

²¹⁸ See *supra* notes 83 & 108-10 and accompanying text.

²¹⁹ The *Lady Elgin*, which plied the Great Lakes, was returning to Milwaukee from a Democratic Party rally in Chicago when she sank on September 8, 1860 after being rammed by the lumber schooner *Augusta*. More than 300 persons perished in the sinking. She was found by Zych after sixteen years of searching. *Zych v. The Unidentified, Wrecked and Abandoned Sailing Vessel*, 746 F. Supp. 1334, 1336 (N.D. Ill. 1990). The *Seabird* sank on April 9, 1868 after catching fire and becoming engulfed in flames. *Id.* at 1337. See Grady, *Shipwreck Finder Fights to Be Keeper*, Chi. Tribune, Apr. 12, 1991, at 1.

²²⁰ *Zych*, 755 F. Supp. at 214.

²²¹ The Foundation submitted documents and affidavits from CIGNA that demonstrated: AETNA insured the *Lady Elgin*, AETNA received claims, paid them in full and it instructed its agents not to abandon the *Lady Elgin*. *Id.* at 215.

²²² *Id.*

demonstrated its right to subrogation and had not abandoned the vessel.²²³ Therefore ownership vested with the *Lady Elgin* Foundation. The test for whether an insurance company has abandoned its subrogation rights to a sunken vessel as created in the *S.S. Central America* decision and followed by the *Lady Elgin* Court should send insurance companies scrambling to their archives to search for documentation to prove both their subrogation rights and their intention not to abandon these rights. Both the *Lady Elgin* and *S.S. Central America* decisions should also motivate insurance companies to enter into contracts or agreements with private discoverers or commercial salvors so that the insurance companies will not lose their ownership interests in shipwrecks they have insured, in the few instances where and if they have not already lost them.

Also on the domestic front, on May 8, 1991, a New York-based company named Scientific Search Project (Scientific) using its exploration vessel *Deep See*, which is equipped with sonar instruments and underwater cameras,²²⁴ located the resting place of five United States Navy TBM Avengers that were believed to be ones that mysteriously vanished on December 5, 1945.²²⁵ All five airplanes are located at a depth of approximately 600 feet in an area that is situated ten miles northeast of Fort Lauderdale, Florida.²²⁶ Attorneys for Scientific brought an *in rem* proceeding in Federal District Court in Miami, Florida seeking ownership of the airplanes.²²⁷ The District Court granted temporary possession to Scientific²²⁸ and appointed Sci-

²²³ *Id.* at 216.

²²⁴ 'Lost' Planes Found in Triangle, Chi. Tribune, May 17, 1991, at C4. In six months of searching for Spanish galleons along the Florida coast, Scientific Search Project has "located the wrecks of 114 ships and airplanes." *Mystery of 'Lost' Patrol may be Solved*, L.A. Times, May 18, 1991, at A1, col. 1. This includes the discovery of a "Douglas TBD Devastator . . . found off the eastern coast of Florida in deep waters." *Missing Link Naval Aircraft Found*, Bus. Wire, Dec. 4, 1990. When this plane is recovered, it will be the only one of its kind in existence. *Id.*

²²⁵ *Navy Says it Owns Wreckage of Planes Claimed by Salvors*, United Press International, May 18, 1991; Clary, *Mystery of 'Lost Patrol' May be Solved*, *supra* note 224, at A1, col. 1.

²²⁶ *Navy Says it Owns Wreckage of Planes Claimed by Salvors*, *supra* note 225.

²²⁷ *Scientific Search v. Five (5) Unidentified Wrecked Air Craft*, No. 91-CV-1008 (S.D. Fla. filed May 16, 1991).

²²⁸ *Robots to Examine "Lost Patrol" in Bermuda Triangle*, United Press International, May 17, 1991; *Mystery of 'Lost Patrol' may be Solved*, *supra* note 224, at A1, col. 1.

entific substitute custodian of the airplanes.²²⁹ Scientific verified the identification of the airplanes by using ROVs²³⁰ and achieved telepossession of the airplanes as well as telepresence at the wrecksite. Scientific submitted a videotape of sonar images of the airplanes to the District Court in order to prove it found the airplanes. Subsequently, these airplanes turned out to not in fact be the famous missing squadron. For this and other reasons, the *in rem* proceeding was dismissed without prejudice.²³¹ The use of the videotape of the sonar images to prove possession of the airplanes constituted a logical extension of the doctrine of telepossession. The traditional requirement of the presence of the *res* within the jurisdiction of a court²³² was extended by Columbus-America's use of both videotape and the lump of anthracite coal.²³³ The use of sonar images of the airplanes alone by Scientific, which was accepted by the District Court as proof of possession in order to grant a preliminary injunction, was the first extension of the doctrine of telepossession by a federal district court, and it will most assuredly be repeated in the future.

There are many applications to the doctrines created by the *S.S. Central America* litigation beyond claiming ownership to sunken shipwrecks. The doctrine of telepossession, as the above examples demonstrate, will encourage courts in the future to create other doctrines to meet the demands created by advances in technology. Domestic and international law is not impinged upon by acceptance of the telepossession doctrine. And, in fact, when situations arise in other countries, courts will be able to reach for the doctrine with open arms and readily embrace its numerous applications. Telepossession may be applied not only in regard to discovery or salvage of sunken vessels, but it may also be used to promote justice in outer space²³⁴ and in many

²²⁹ Telephone interview with Barbara E. Locke, Esq., Holland & Knight, Miami, Florida, attorney for Scientific (May 21, 1991).

²³⁰ 'Lost' Planes Found in Triangle, *supra* note 224, at C4.

²³¹ Telephone interview with Barbara E. Locke, Esq., Holland & Knight, Miami, Florida, attorney for Scientific (June 6, 1991).

²³² See *supra* notes 41-47 and accompanying text.

²³³ See *supra* notes 61-67 and accompanying text.

²³⁴ See *supra* note 214 and accompanying text.

other areas of law.

CONCLUSION

Columbus-America will continue its operations for at least one more summer, and it continues to have an ongoing association with the scientific community. Seahawk's operations with the Spanish galleons are also ongoing.²³⁵ Other deep ocean discoverers both private and commercial are looming on the horizon because advances in technology make deep ocean discovery more feasible than it was before. Furthermore, the doctrine of telepossession creates security for the discoverer who undertakes such adventure. Mutually beneficial relationships between discoverers and experts in different disciplines may be the wave of the future towards a scheme whereby the public is benefitted and incentives are provided to discoverers to cover the high cost of the carrying on adventures like the *S.S. Central America* discovery.

International admiralty law protects the historic, archaeological and cultural aspects of shipwrecks where UNCLOS III fails.²³⁶ In the developing industry of deep ocean discovery and recovery the use of ROVs and their attending technological encumbrances have created change in traditional concepts of the maritime laws of finds and salvage. Their effect on other areas of law are soon to be seen. With the proper legal framework including the doctrine of telepossession, a responsible procedure for deep ocean shipwreck discovery and recovery as well as mutually beneficial relationships with the scientific community and other organizations, the deep ocean discovery of shipwrecks has the potential to become a lucrative multi-disciplinary world-wide

²³⁵ *Seahawk Retriever Leaves to Resume Excavation of Ancient Treasure Ship*, Bus. Wire, May 14, 1991.

²³⁶ See *supra* notes 174-79. Under admiralty law, salvors are required to use good faith and to come into court with clean hands. See 3A BENEDICT, *supra* note 31, at §§ 99-100. There is much dispute regarding UNCLOS III and its application to the economic use of the high seas. Additionally, because UNCLOS III is not in force, maritime courts around the world are still the mechanism for solving disputes regarding shipwrecks and shipwreck discoveries. Even if UNCLOS III enters into force, maritime courts will continue their traditional role of solving disputes that develop in international waters.

enterprise. Hopefully this will be an enterprise in which individuals throughout the world will have an opportunity to obtain a share.

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