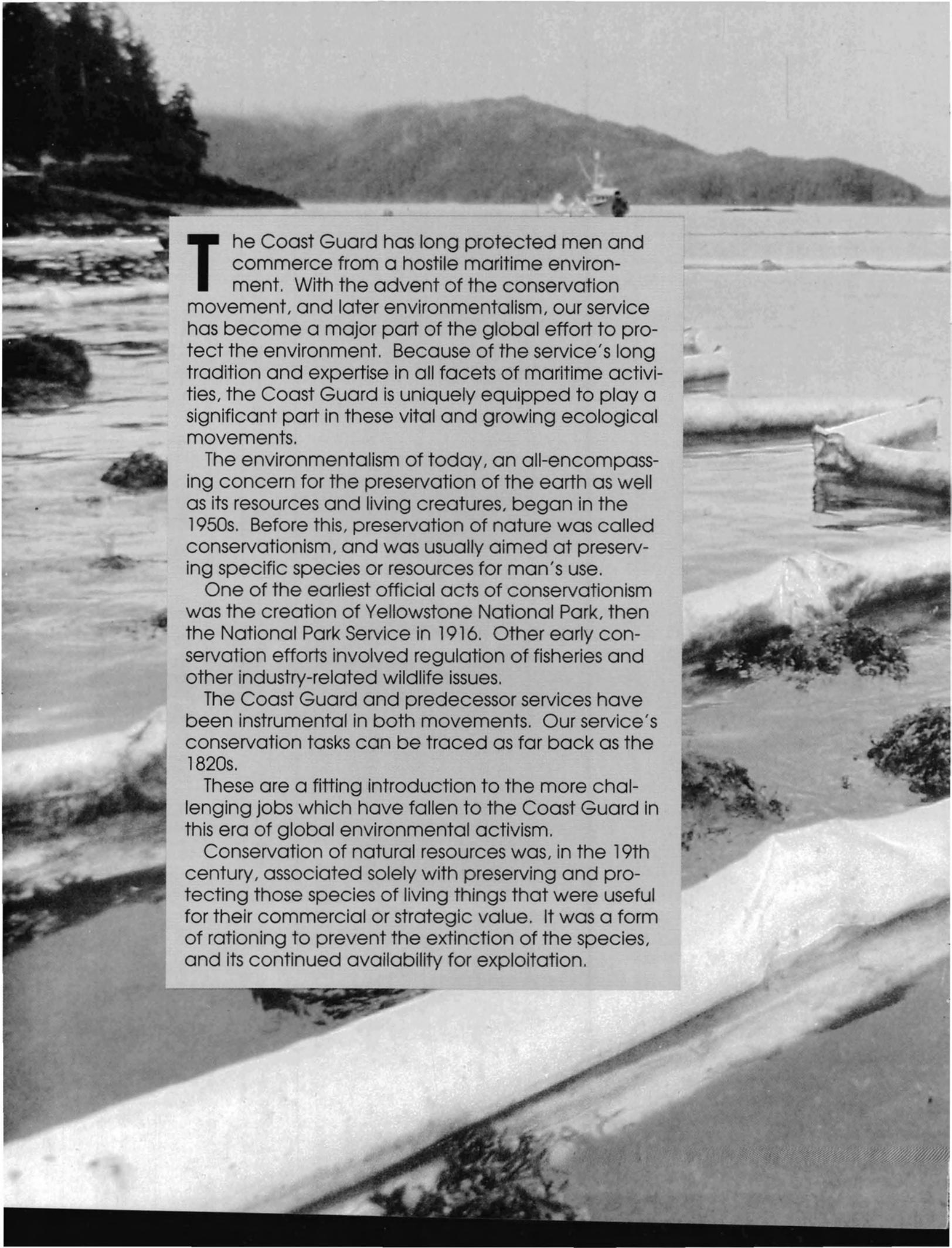


The United States Coast Guard and the  
**Environment**

by Donald L. Canney





**T**he Coast Guard has long protected men and commerce from a hostile maritime environment. With the advent of the conservation movement, and later environmentalism, our service has become a major part of the global effort to protect the environment. Because of the service's long tradition and expertise in all facets of maritime activities, the Coast Guard is uniquely equipped to play a significant part in these vital and growing ecological movements.

The environmentalism of today, an all-encompassing concern for the preservation of the earth as well as its resources and living creatures, began in the 1950s. Before this, preservation of nature was called conservationism, and was usually aimed at preserving specific species or resources for man's use.

One of the earliest official acts of conservationism was the creation of Yellowstone National Park, then the National Park Service in 1916. Other early conservation efforts involved regulation of fisheries and other industry-related wildlife issues.

The Coast Guard and predecessor services have been instrumental in both movements. Our service's conservation tasks can be traced as far back as the 1820s.

These are a fitting introduction to the more challenging jobs which have fallen to the Coast Guard in this era of global environmental activism.

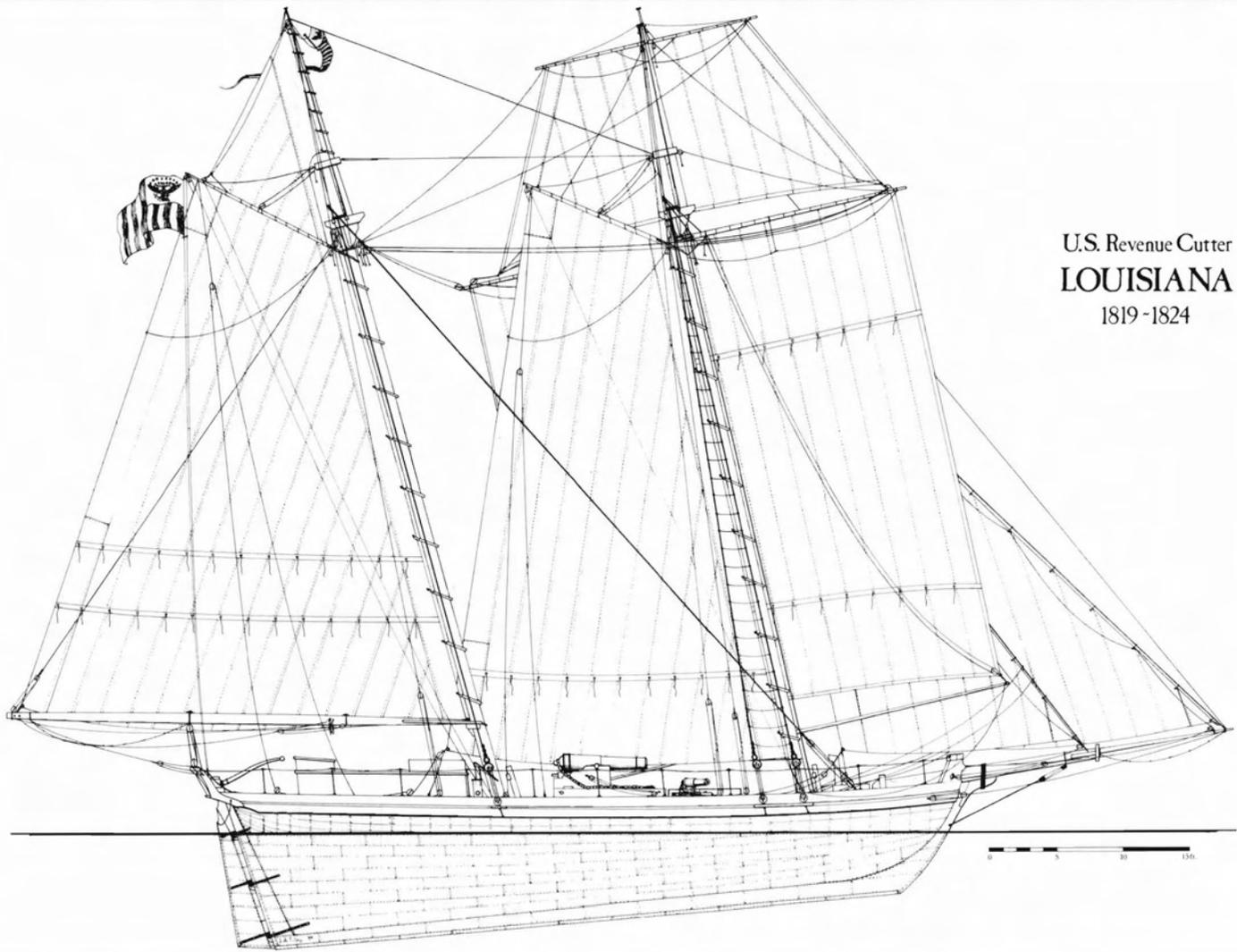
Conservation of natural resources was, in the 19th century, associated solely with preserving and protecting those species of living things that were useful for their commercial or strategic value. It was a form of rationing to prevent the extinction of the species, and its continued availability for exploitation.



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**Front Cover:** A Coast Guard helicopter prepares to hoist people off the tanker *Argo Merchant*, which ran aground off the coast of Nantucket, Mass.

**Back Cover:** A cleanup worker wipes up oil from the *American Trader* spill.



U.S. Revenue Cutter  
**LOUISIANA**  
1819-1824

**I**n 1822, the Revenue Cutter Service was directed by Congress to protect and preserve timber along the coast of Florida. The Act for the preservation of the timber of the United States in Florida sought to prevent illegal cutting and theft of live oak on government-owned land. This species of oak was only found in the lowlands of the southeast and, because of its density and strength, it was the material of choice for the hulls of American warships.

From Old Ironsides, the frigate *Constitution*, to the end of the wooden ship era of the 1870s, this wood was cut and hewn into the ribs and keels of most major naval vessels. The value of this type of wood was not lost on commercial shipbuilders, and timber poaching was relatively easy along the sparsely-populated southern coasts.

The consequence was the order for the Revenue Service to patrol these areas. As a sidelight, this particular task, involving navigating winding, narrow inland passages was one of the justifications for building the ser-

vice's first steam vessels in the 1840s.

The Revenue Service's next conservation field was the territory of Alaska, purchased by the United States in 1867. It was essentially unpopulated, and for many years no formal government was set up for the territory. Various U.S. agencies administered the territory, primarily the Revenue Service.

The Revenue Service shouldered responsibilities far beyond that of enforcing revenue laws in this frigid land. In their annual cruises from the lower 48 states, cutters brought everything from the mails to medical assistance to lumber for courthouses and churches.

These tasks were in addition to new roles: patrolling Alaska's fisheries and whaling grounds, and controlling sealing on the Pribilof Islands.

Sealing was legal, relatively easy and immensely profitable. A single voyage and load of seal furs could net \$10,000 — considerably more than an average worker's yearly income. The hunt was a matter of driving



**Far Left:** *The Revenue Cutter Louisiana and others like it were used to stop poaching along the Florida coast.*

**Left:** *CAPT Mike Healy brought reindeer to Alaska from Siberia to help the Alaskan natives survive when their traditional hunting grounds had been depleted by poachers.*

the seals to a killing ground on the islands during the summer season and delivering a blow to the head for each.

Commercial sealers sought to maximize the profit by resorting to pelagic sealing: killing the animals at sea, along their migratory routes between Alaska and San Diego. The females — newly delivered of pups — were favorite targets because their fur was more valuable.

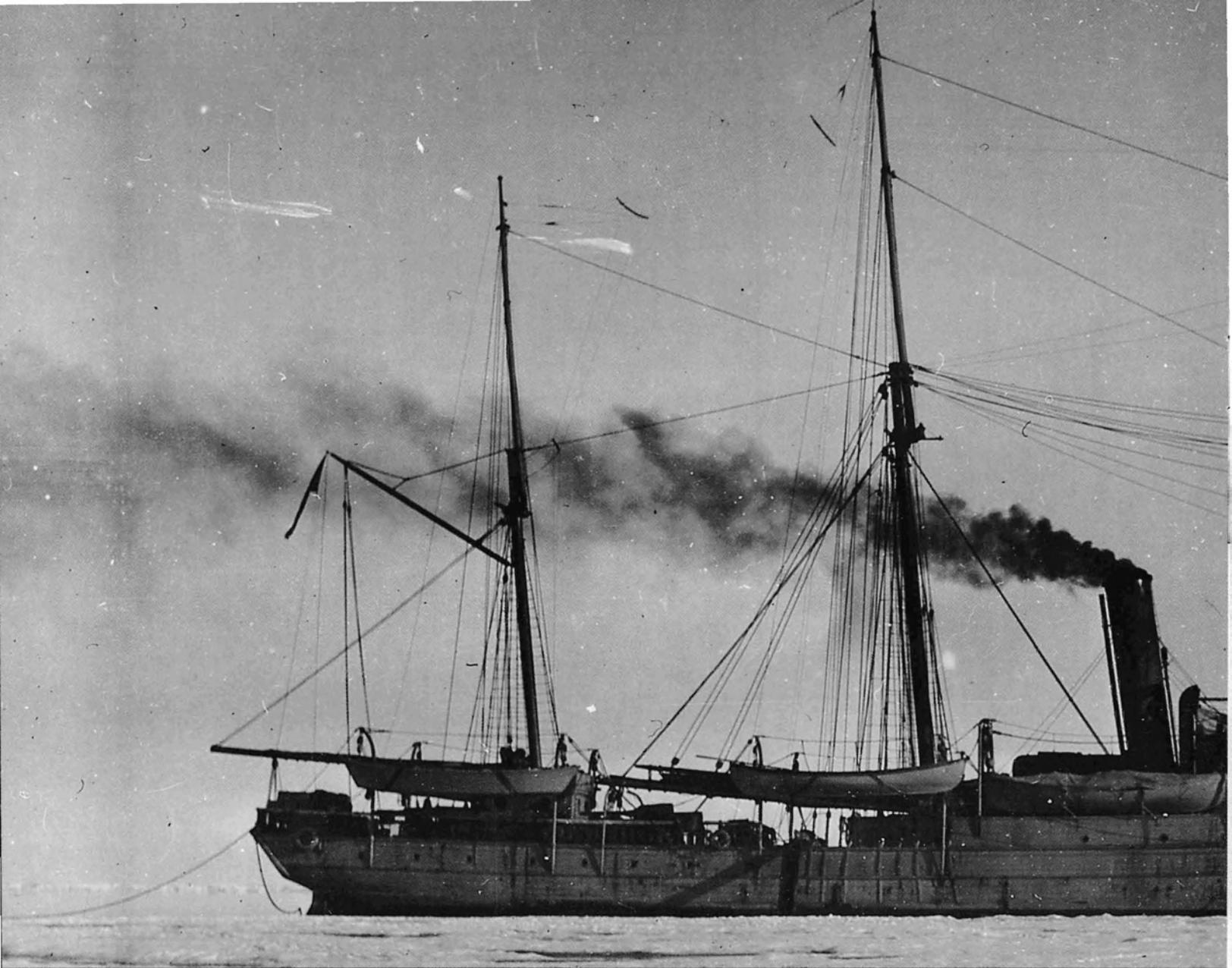
The result was nearly disastrous. In 1867 the seal population was over 4 million. In 1868, raids killed half a million animals.

The Treasury Department sent a revenue cutter and an agent to halt the slaughter. In subsequent years, regulations limiting the kill were enacted and enforced, controlling sealing on the islands as well as on the mi-

gratory routes.

The Revenue Service's and Coast Guard's Bering Sea Patrol became the key to enforcing these laws, and consequently, for preventing the extinction of this species. International conventions later strengthened the laws against illegal sealing, which helped ease the Coast Guard's task in dealing with offenders.

In 1925, the Coast Guard's responsibilities in Alaska were expanded by the creation of the Alaskan Game Commission. The commission established regulations for the protection of game animals, fishing, fur farms, etc. Seasons were established as well as licensing procedures for deer, mountain goats, bears, foxes, muskrats, migratory waterfowl, shore birds and game birds. In the



**Above:** *The RC Bear on patrol near Alaska. The Bear was one of the many cutters to enforce conservation and environmental laws in Alaska.*

regulations were provisions making hunting illegal where there was a danger of the extermination of a species.

To enforce these statutes, Coast Guard officers were given equal footing with wardens, federal marshals and customs collectors. Their powers included arrest without warrant, search and seizure of prohibited weapons and evidence, and the right to transport offenders to the proper jurisdiction for prosecution. With these duties, the Coast Guard became an integral part of the early wildlife conservation effort in Alaska.

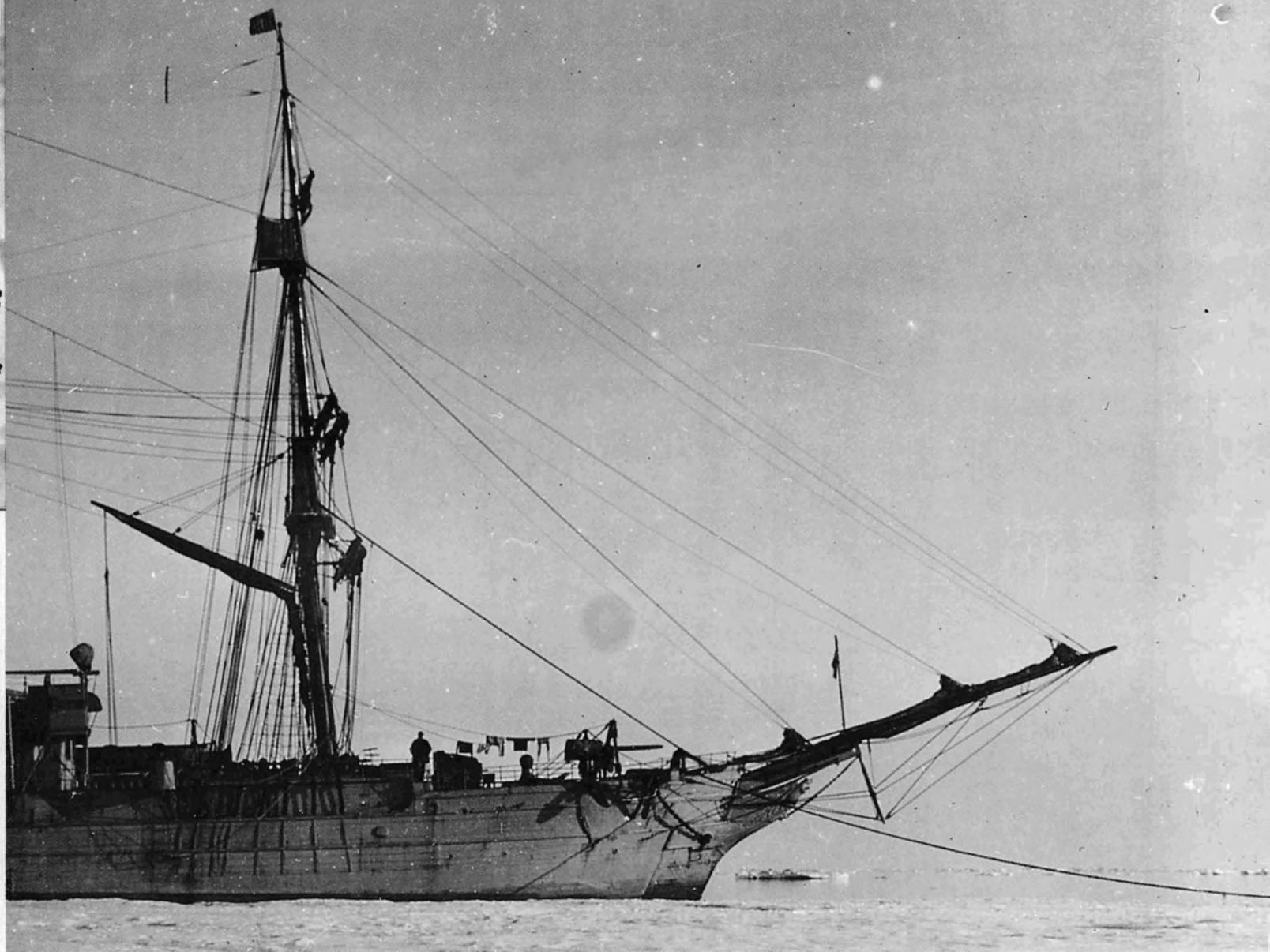
The Revenue Service also carried out an ad hoc wildlife management effort beginning in the 1880s. The legendary CAPT Mike Healy became concerned about the plight of the Eskimos, which resulted from the slaughter of the fur seals — an animal which provided many of their necessities of life, in-

cluding food and shelter.

Healy's solution was characteristically straightforward. He made passage to Siberia in his ship, the *Bear*, and loaded a cargo of Siberian reindeer. These purchased animals were delivered to the Eskimos and became the basis for the reindeer herds still seen in the 49th state.

Alaska also was the backdrop for many cooperative efforts between the service and scientists and naturalists interested in the flora and fauna of the new territory.

As early as 1869, the Revenue Service provided support to Henry Wood Elliot, a naturalist who produced a pioneering book on the wildlife of the Pribilof Islands. Later, the CGC *Corwin* supported a study of native bird life, and in the 1920s, the *Bear* was a base for naturalists from the Chicago Academy of Sciences. Results of such expeditions



were the establishment of a fur seal preserve on the Pribilofs, as well as a national wildlife refuge on the Aleutian Islands.

Similar expeditions resulted from the acquisition of the Hawaiian Islands in 1898. Prior to World War I, the CGC *Thetis* surveyed Laysan — an island some 700 miles west of Hawaii — and reported on the bird life there, a noted home for many unusual species. A Revenue Service lieutenant reported on the situation he found: “Dead birds were seen in piles of 10 and 15, and sometimes as many as 40 or 50 in a pile ... poachers had again raided the island for feathers... Between 150,000 and 200,000 birds were found lying in heaps in all parts of the island.”

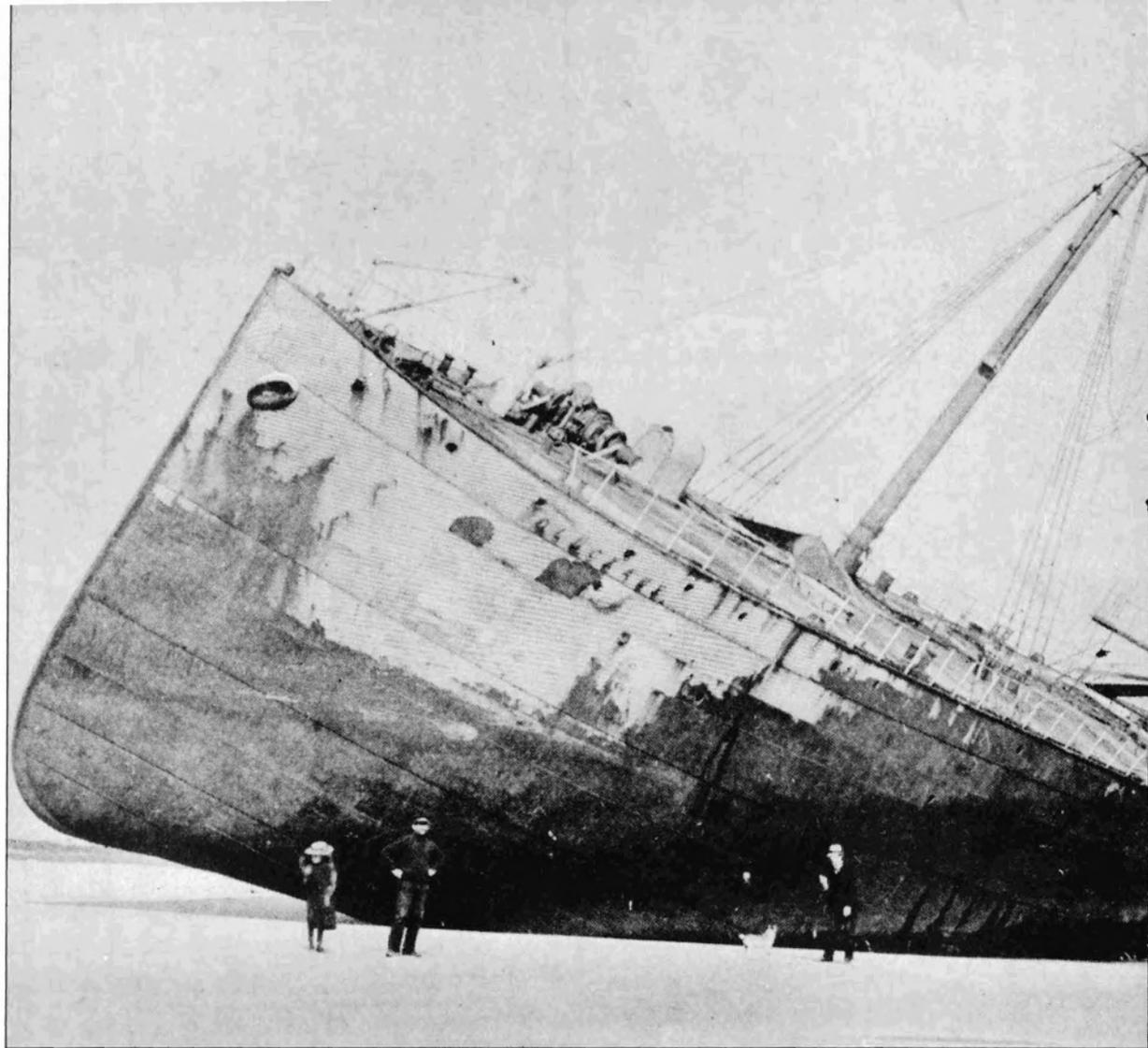
The efforts of the *Thetis* contributed to attempts to establish a refuge on Laysan.

Fish, shrimp and sponges also fell under

the regulation enforcement tasks of the Coast Guard. As early as 1889, the service was responsible for regulating the salmon catch in Alaska, and in 1924, halibut fishing was also placed under Coast Guard control. These activities were in addition to the long-standing Coast Guard Grand Banks fishing patrol. Sponge fishing in the Gulf of Mexico was protected beginning in 1914, when it appeared that the species was facing extinction because of excessive harvesting.

In recent decades, American vessels shrimping in disputed waters off Mexico required Coast Guard protection. Similarly, in the 1960s Japanese factory trawlers violated U.S. waters in illegal competition with small American trawlers in the same areas. Coast Guard men and ships were again called upon to enforce American laws despite the possibility of international consequences.

**Right:** *The Gluckhauf, the worlds first true oil tanker, aground in 1893 on Water Island, N.Y. This was one of the earliest tanker accidents in history.*



In the years following World War II, the environmental movement became a major factor on the world scene. This movement went far beyond viewing natural things as mere resources to be exploited and cultivated by man. It became increasingly apparent that the planet was an ecosystem that required protection from the excesses of human exploitation.

The impact of environmentalism on the Coast Guard was felt most logically in the seas and inland waterways on which the service operated. Specifically, the problem of oil pollution came to the forefront — requiring a major response by the service.

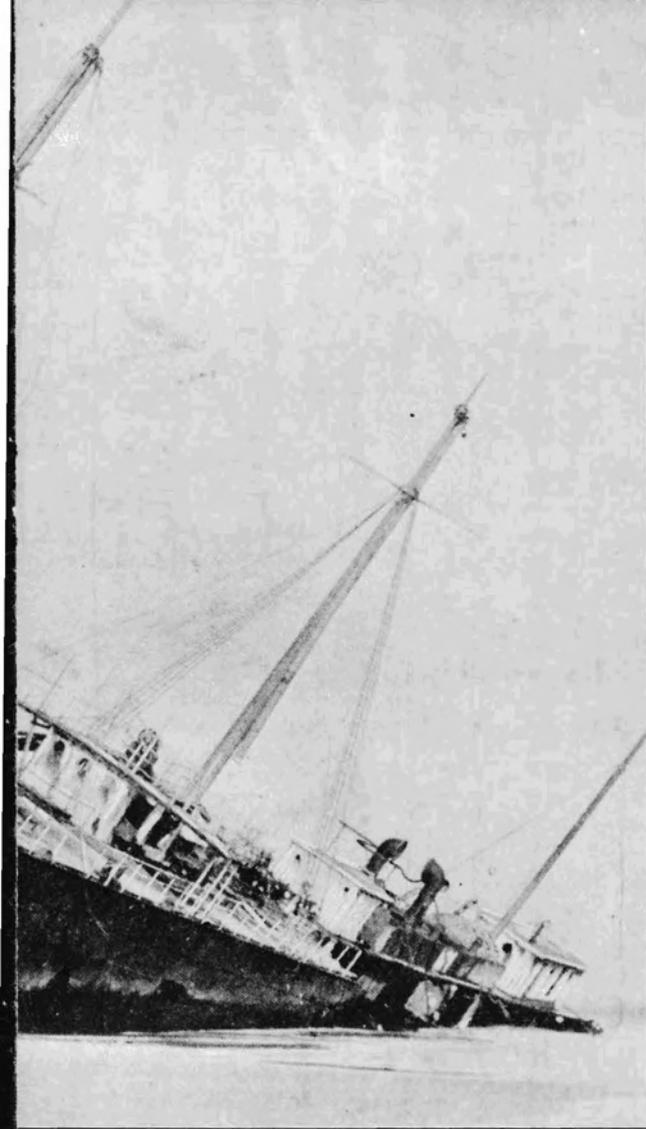
The problem of marine oil pollution might be traced as far back as 1885. In this year the first purpose-built oil tanker was constructed, the British built *Gluckauf*. Previously, petroleum had been transported in small containers loaded on conventional merchant ships. With the *Gluckauf*, the vessel hull itself became the oil container.

As the decades passed, transportation of bulk oil by sea became commonplace, ne-

cessitated by the growing demand for the fuel and the vast distances from oil producers to major consumers. With increased demand came the growth of the oil tanker. By the 1970s the vessels — though still essentially huge, powered oil cans — were the largest non-naval ships afloat.

Given the incompatibility of the cargo with the environment, as well as its volatility, the environmental disasters which have occurred may well have been foreseen.

The Coast Guard's responsibilities in the field of oil pollution can be traced back as early as 1924. The Oil Pollution Act passed in that year required penalties only for deliberate discharge of oil into coastal navigable waters of the United States. It called for regulations for the discharge of oil to ensure that seafood, health and navigation were not harmed by its discharge. Later in the same decade, international regulations established zones where discharge of oil was prohibited. International oil pollution controls were also proposed, but not implemented, in the 1930s.



These actions were in response both to the changeover in vessel fuel from coal to oil and the numbers of bulk oil tankers on the high seas. Later, another international convention further limited areas where discharges were prohibited.

Beyond these measures, the laws regulating oil pollution remained much the same until the 1970s.

A vessel named *Torrey Canyon* suddenly catapulted the oil pollution problem into a glare of international attention, all of it negative. The disaster was monumental. Approximately 30 million gallons of oil were spilled in the English Channel. The disaster illuminated the environmental devastation that resulted, as well as the unsuccessful methods used by authorities to deal with the catastrophe.

Since the 1967 *Torrey Canyon* disaster, the Coast Guard has been at the forefront of the oil pollution problem in the United States. In the years since, massive legislation has been enacted both to prevent and fight oil spills. Enforcement of such laws

has fallen to the Coast Guard.

Over the years, new technology has resulted in innovations in oil-spill cleanup methods. The Coast Guard has been a major participant in both development and use of this technology. In the same period, there have been a significant number of oil-spill accidents, from the minor to the catastrophic, culminating in the *Exxon Valdez* grounding in 1989.

The Coast Guard has again played a key part in both the containment and clean up in each of these maritime incidents, in addition to its traditional rescue-and-recovery role at the accident scene.

One of the earliest American responses to the *Torrey Canyon* disaster was legislation separating ocean traffic into lanes in areas of heavy use, to reduce the possibility of collisions. This traffic control began with the approaches to Philadelphia and New York, where inbound and outbound lanes were established, as well as buffer zones between lanes.

The Coast Guard monitored vessels as they used these lanes. However, compliance was strictly voluntary. There was no overruling the ship captain's absolute control over his vessel at sea.

In May 1967 the Department of Transportation directed that each Coast Guard district set up contingency plans for oil spill cleanup operations. These plans delineated the role of each governmental agency involved, federal, state and local. At the same time, the Coast Guard began cataloguing the resources available in each district if needed for a cleanup operation: technical help, equipment, funding sources, etc.

Stiffer international rules concerning oil pollution came about in 1973 with the International Convention for the Prevention of Pollution from Ships (MARPOL).

First, the definition of oil was widened to include sludge, fuel oil, etc.

Second, segregated ballast tanks were required on tankers over 70,000 deadweight tons. Previously, cargo tanks were also used for water ballast when the vessel was running light. Oil pollution resulted when the water was pumped out. It carried an oily residue with it. Segregated tanks were those specifically for water ballast, not oil cargo. These tanks also were located to provide areas where bottom damage would not result in oil spillage.

In the United States, the Federal Water Pollution Control Act and the Ports and Waterways Safety Act gave the Coast Guard sig-



**Above:** *Coast Guardsmen care for one of 500 pelicans that were caught in an oil slick off Puerto Rico March 5, 1968. Most sea birds are very susceptible to oil spills.*

nificant authority to deal with pollution enforcement. These laws set up cleanup and liability standards for spills and called for Coast Guard scrutiny of hazardous materials vessel construction and design. A national emergency contingency plan for oil spills was also instituted.

As a result of these laws, Marine Environmental Response (MER) units were set up as the part of the Coast Guard organization concerned primarily with pollution response. The responsibilities of this unit are varied. One task is determining if foreign vessel operators are able to compensate injured parties for any damages caused by cargo spills. A second is tracing sources of oil spills. A third is instigating cleanup by the responsible party.

A national oil and hazardous substance contingency plan has been developed to deal with these disasters. A national response team composed of 12 federal agencies, among these are the Nuclear Regulatory Commission, Department of the Interi-

or, Department of Justice, Department of Agriculture, Department of Transportation and Coast Guard.

At the site of a spill, the on-scene coordinator is either the commanding officer of the local Coast Guard unit or an officer of the Environmental Protection Agency.

On the international level, where spills cross national borders, the Coast Guard is active in cooperative efforts with the nation involved, usually as part of a joint contingency plan.

The Coast Guard has been instrumental in both development and implementation of new techniques to deal with oil pollution. These include spill prevention as well as cleanup technology. Prevention includes improvements in cargo vessel safety, control and navigation devices, and improved oil loading and offloading methods. Cleanup technology includes hazardous material detection devices, spill containment equipment, oil dispersant chemicals and removal skimmers.



**Left:** Contract workers clean the last of tar balls from the beaches of Sandy Hook, N.J. on March 18, 1980. The tar balls were the result of a major oil spill after the barge Ethel H and tanker Southwest Cape collided in New York Harbor.

The environmental impact of oil spills is tied directly to the characteristics of the vessels that carry most of the world's oil: the very-large crude carrier. These huge ships, carrying 100,000 tons or more, have proliferated since the late 1950s. Many have two major deficiencies.

Ranging upward from 900 feet in length, they are some of the largest ships ever built. Such large ships are not very maneuverable. Many ships make this maneuverability even worse by having only one rudder and propeller. Historically the ships have been little more than powered oil tanks. Between their cargo and the sea there was only a single steel skin.

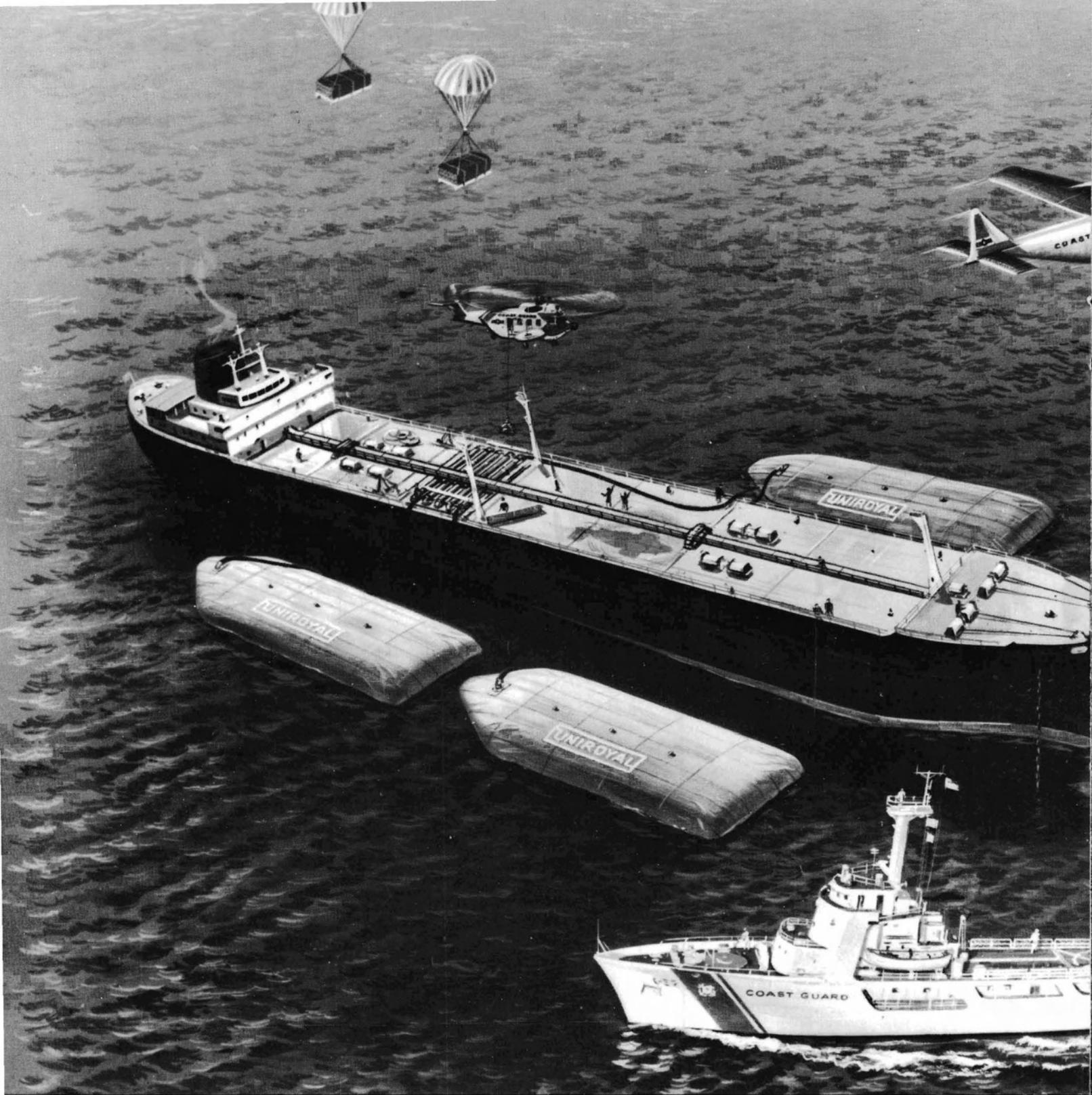
These gigantic vessels are being built with double hulls, one hull inside the other, to try to make safer and more damage resistant tankers.

As early as 1977, the Coast Guard advocated emergency steering standards and back-up radar for collision avoidance for these vessels. The double hull was proposed by the Coast Guard in 1973, and nearly made into law the following year (the bill was vetoed by President Ford). Segregated ballast tanks have been put forth as an alternative or substitute for double bottoms, and the Coast Guard has been regulating the number, size and location of such tanks.

Two other tanker safety measures have been gaining acceptance. Crude-oil washing is a method of cleaning cargo tanks using high pressure oil, rather than water, resulting in a useful oil residue, rather than a useless oil and water mixture. To prevent accumulation of volatile fumes in cargo tanks, the inert gas system has been developed. This pumps inert gas into the tanks, displacing the oil fumes, reducing the danger of explosion aboard the vessel. Both systems have been required for certain tank vessel categories since 1979.

The Coast Guard has also been instrumental in a wide variety of measures to prevent the occurrence of oil spills and to prepare officers and crew for such contingencies. Among these measures are licensing, drug and alcohol testing of crew and officers, implementing vessel-safety programs and spill-prevention training, developing terminal and cargo-transfer manuals, improving piloting procedures, and mandating traffic-control systems and vessel-speed limitations.

Despite efforts to prevent these disasters, they continue to occur. The Coast Guard is



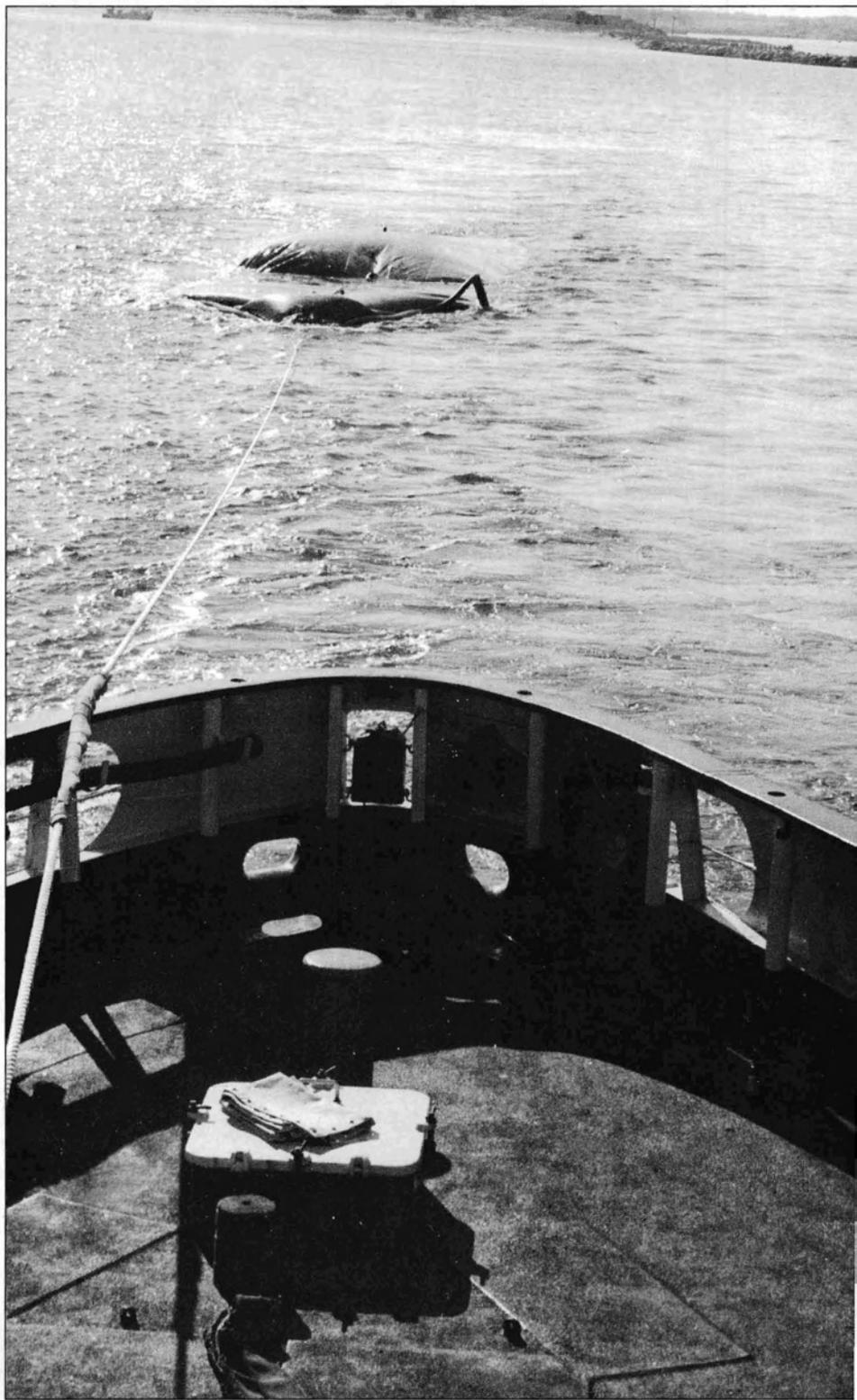
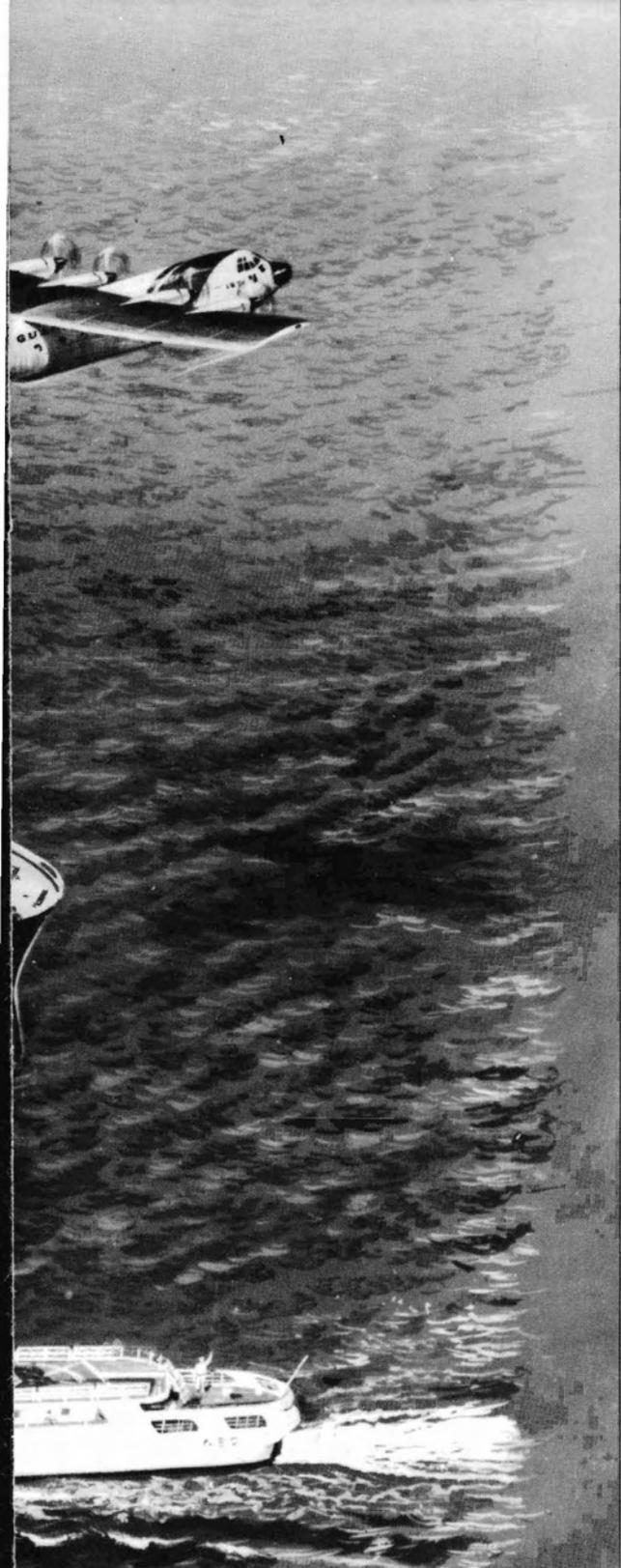
**Above:** This drawing shows how the ADAPTS system looks. Folded oil bladders are being dropped from an aircraft while a helicopter lowers a pump. Filled oil bladders float alongside.

then called upon for expertise in every aspect of the cleanup, from damage assessment and limitation to operational control of the cleanup. Coast Guard vessels, aircraft and personnel form the backbone of the response mechanisms. A wide variety of clean-up techniques and equipment is employed in the process.

The Air Deployable Antipollution Trans-

fer System (ADAPTS) was developed by the Coast Guard to facilitate a major need when a loaded tanker grounds in a remote area. These vessels must be lightered before they can be moved to sheltered waters.

ADAPTS consists of a pump compact enough to be carried by helicopter and lowered through a standard 14-inch tank cleaning hatch, a diesel engine for power and a



collapsible fuel cell. This system allows the liquid cargo to be pumped off and into a vessel alongside the stranded ship. Without such a system, many oil cargoes might well be spilled in the open ocean.

A second device is the Open Water Oil Containment and Recovery System. This consists of a 1,000 foot-long, U-shaped floating barrier. Vessels tow each end of the bar-

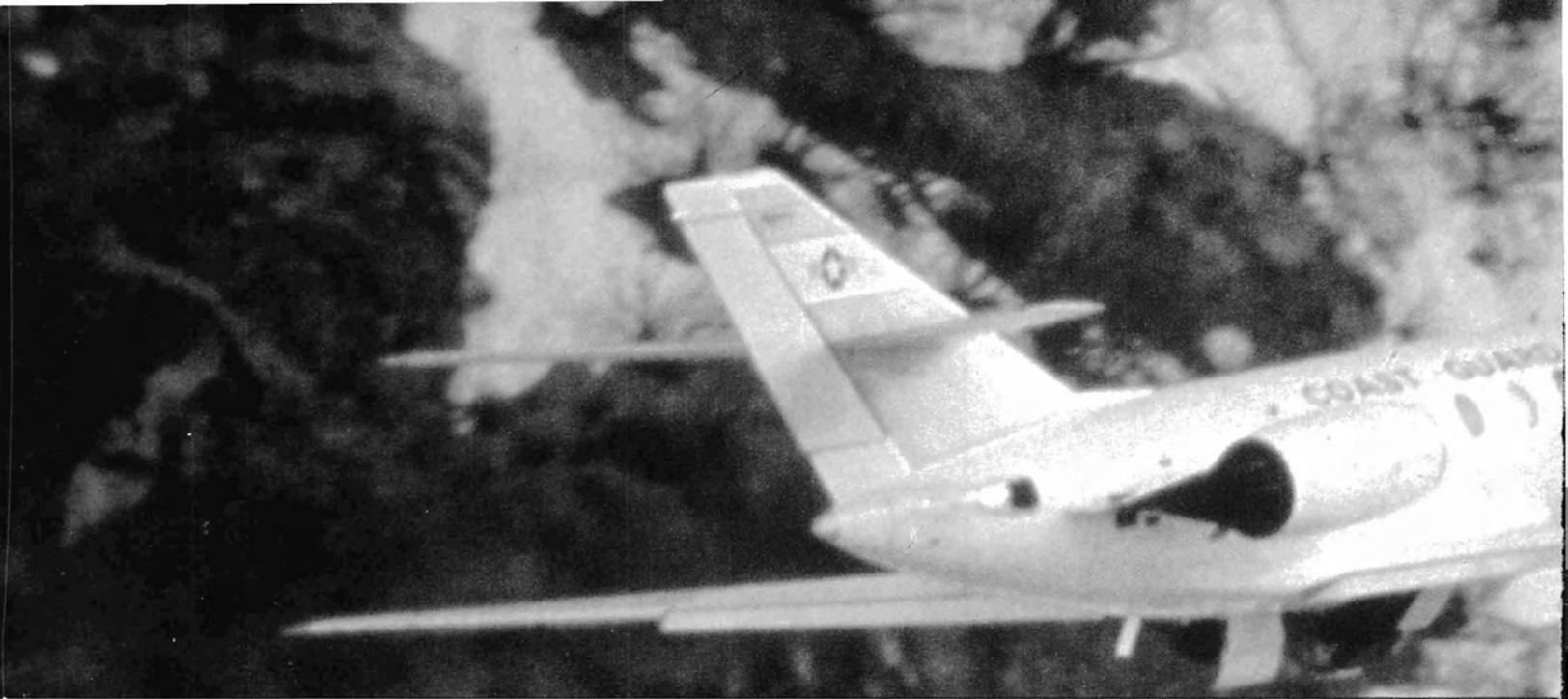
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rier to capture the floating oil. Then built-in pumps and skimmers suck the oil into suitable containers for removal.

A third tool is AIREYE. This aerial surveillance system, installed in Coast Guard aircraft, can detect the location of oil on the open sea, facilitating the tracking of spills and estimating the size of the oil slick.

Other devices include various types of

**Above:** The CGC Madrona tows a 140-foot bladder, capable of holding 140,000 gallons of oil, to shore during an ADAPTS test off the coast of Virginia in May 1970.



**Above:** Coast Guard aircraft like this one are used to carry AIR-EYE which is used to locate and track oil spills.

containment booms designed to limit the spread of the oil. Some booms are fireproof; others are sorbent, capable of absorbing the oil before being disposed of.

Centralized command and control is a major need in large cleanup efforts, and the Coast Guard provides traffic control for the numerous vessels and aircraft involved. At the height of the *Exxon Valdez* cleanup the CGC *Rush*, with suitable radar, became a floating air traffic control tower, directing more than 300 aircraft daily in and around the spill site.

According to Coast Guard estimates, the number of tank ship and barge casualties has declined since 1980. However, the annual number of these casualties ranges from 600 to 1,000 vessels.

These are primarily groundings and collisions and risk an average of 76 million gallons of oil per year. The majority of these are minor incidents.

### Significant incidents

**1974: METULA** A Shell tanker, the *Metula*, grounded in the Strait of Magellan, with a 64-million-gallon cargo of crude, more than twice the size of the *Torrey Canyon's* load. In a remote area noted for adverse sea and weather conditions, the cargo had to be removed to allow the vessel to be refloated. Three ADAPTS units, along with Coast Guard personnel, were dispatched at the request of the Chilean government and succeeded in removing 50,000 tons of crude from the vessel.

ADAPTS also provided pumping for seawater ballast when needed. The vessel was

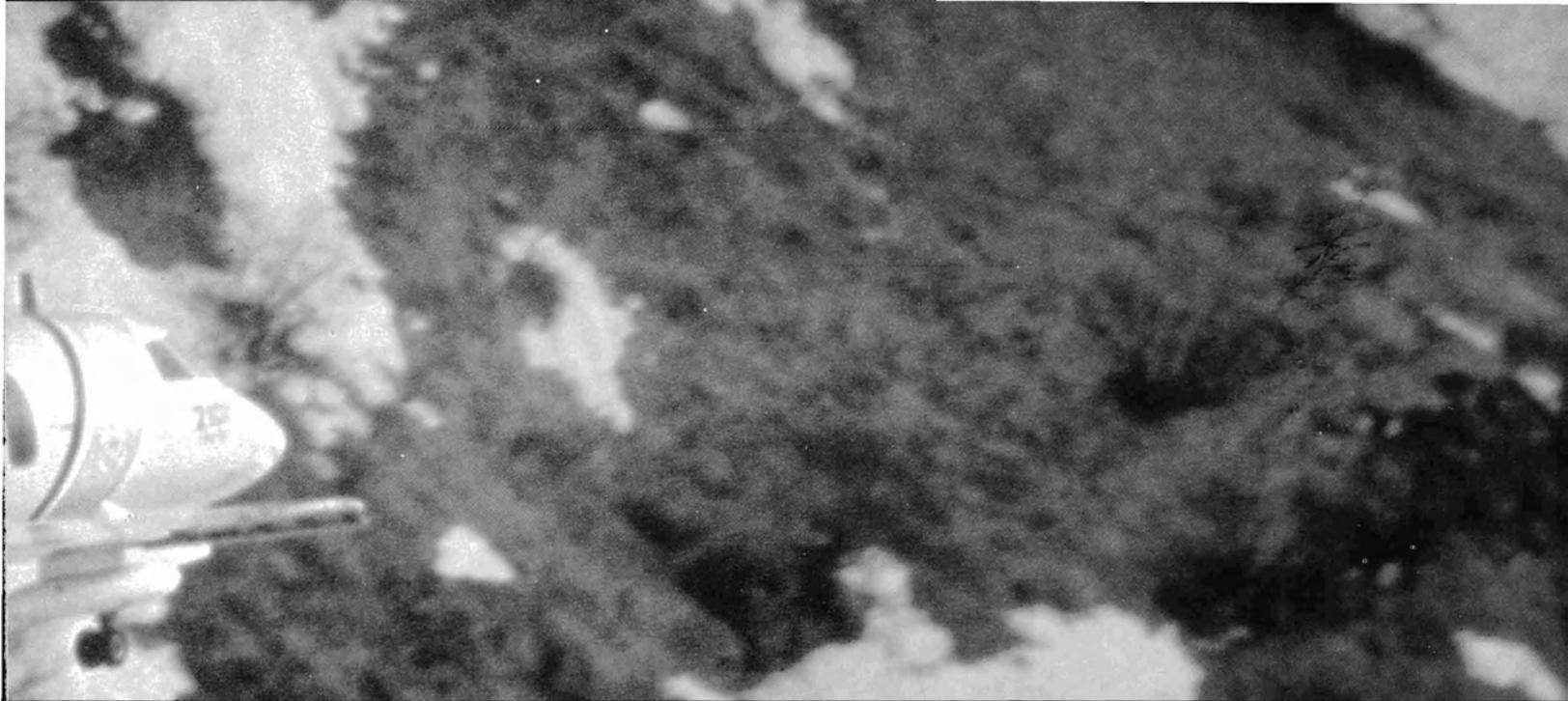
successfully refloated and later scrapped.

**1975: MYSTERY OIL SPILL** Many spills result from deliberately ignoring oil disposal regulations, such as those that require waste oil to be offloaded into designated barges rather than at sea.

In July 1975 a mystery spill appeared, damaging the shoreline of south Florida. With no clues except the oil itself, the Coast Guard took comparison samples from vessels in port at the time. More than 200 vessels were checked and 50 samples taken. In October, a match was found and the offending tanker captain was arrested and jailed. The fine was \$10,000 plus one year imprisonment for failure to report the spill.

**1976: SANSINENA** Poor ventilation procedures during cargo transfer resulted in the explosion of this tank vessel in Los Angeles harbor. The blast threw the deckhouse 750 feet into the air and damaged 260 vessels in the vicinity. The CGC *Venturous* was immediately on the scene, assisting in firefighting, traffic control and oil containment. A nine-foot-thick layer of bunker fuel lay on the bottom around the stern of the vessel and over two miles of containment booms were set up. Three weeks later, most of the oil had been recovered.

**1976: ARGO MERCHANT** This Liberian tanker grounded off Nantucket, Mass., in December, carrying 7.3 million gallons of fuel oil. The CGCs *Sherman*, *Vigilant*, *Spar* and *Bittersweet* were on the scene and prepared to use the ADAPTS system on the vessel. However, deteriorating weather — 30-knot winds and heavy seas — prevented removal of its cargo before the hull began to buckle.



**Left:** Remains of the tanker Sansinena rest in Los Angeles Harbor after a week of fire-fighting followed its explosion. About 10,000 gallons of oil spilled from the ship and spread throughout the harbor. Cleanup operations continued for several months.

The bow was wrenched from the hull and opened the cargo to the sea. This was the largest spill up until then in American waters. Northwestern winds dispersed the oil out to sea.

The *Argo Merchant* accident and 14 more tanker accidents in or near American waters over the next 10 weeks caused great concern about tanker safety, leading to a large tanker safety movement.

**1977: GOLDEN JASON** This incident illustrates the preventive aspect of the Coast Guard's oil pollution mission. The vessel, carrying 9.2 million gallons of crude, arrived at Newport News, Va., after developing engine trouble off North Carolina. A Coast Guard inspection revealed serious structural defects in the ship. The cargo was immediately removed and the vessel was scrapped shortly thereafter.



**Above:** This sea otter was caught in the oil spilled during the Exxon Valdez accident in Prince William Sound. More than 4,500 birds and almost 500 sea otters along with numerous other animals were killed as a result of the accident.

**Right:** The Exxon Valdez surrounded by containment boom aground in Prince William Sound.

**1989: EXXON VALDEZ** On March 24, 1989, the tank vessel *Exxon Valdez* struck a reef not more than 75 miles from the Alyeska oil terminus of the Trans Alaska pipeline, in Prince William Sound, Alaska. At the time, the vessel, carrying 53 million gallons of crude, was under the surveillance of the Coast Guard vessel traffic service radar.

The ship struck Bligh Reef at a speed of 12 knots, tearing open its hull from forepeak to just forward of the engine room. Its single-skin, high-tensile steel bottom did little to prevent this damage.

With eight of its eleven tanks ruptured, more than 10 million gallons of crude oil spilled within five hours. Furthermore, there was the danger that the ship would capsize, making both the cleanup and the removal of the remaining oil imperative.

A Coast Guard investigator was dispatched within 30 minutes of the grounding, and several contingency plans went into effect.

Alyeska accepted responsibility for the spill and was, according to the prearrangement, to have a barge on site within five hours. Instead, it was 12 hours before the vessel arrived. By then the 10.1 million gallons covered an area four miles long and 1,000 feet wide. This was the largest oil spill ever in American waters.

The nature of Prince William Sound compounded the enormity of the disaster. The pristine shoreline was noted for its natural beauty and variety of wildlife. The sound presented a second problem: its remote location.

The nearest port, Valdez, had only a small landing strip and limited phone service, forcing large aircraft with cleanup equipment and personnel to land at Anchorage, some nine driving hours away. Twelve-foot tide differentials and rough seas only



added to the immediate problem.

The cleanup grew to enormous proportions. More than 450 vessels of all types were employed and more than 1,800 personnel. Forty skimmers, 300,000 feet of containment booms and 40 aircraft were used (not including Air Force transports).

The Coast Guard contingent included four cutters, four buoy tenders, nine aircraft, six ADAPTS units, six skimmers and more than 200 people. The CGC *Rush* provided traffic control for the aircraft involved, and the Coast Guard provided coor-



dination of the effort. By the height of the effort, 750 to 1,000 daily flights were logged at the small Valdez airport.

The cargo was completely removed by April 4, and the vessel was refloated. It was towed away the following day.

Deteriorating weather prevented the extensive use of chemical dispersant agents. A second cleanup method, burning off the oil, was also stymied by the weather.

Skimmers were the primary cleanup instruments, and these were severely handicapped by the weathering of the surface oil.

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It became the consistency of axle grease, clogging hoses, skimmers and transfer pumps.

In the end, the disaster was the largest in U.S. history. More than 350 miles of shoreline was coated with oil, causing extensive damage on the ecosystem of Prince William Sound. More than 4,500 birds were killed, and nearly 500 otters. Both fishing and tourist industries were severely damaged, and litigation has yet to end.

Major legislation resulted from the catastrophe.

**Right:** The tanker Mega Borg burns in the Gulf of Mexico off the coast of Texas. The fire burned for a week and 3.9 million gallons of oil were spilled.



**1990: MEGA BORG** This Norwegian tanker exploded and burned off the coast of Texas. First on the scene was the CGC *Cushing*, followed by the *Buttonwood*, *Point Spencer*, *Steadfast* and *Valiant*. The commanding officer of Marine Safety Office Galveston headed the regional response team.

It was three days before the fire was under control, and a full week before it was extinguished. More than 3.9 million gallons of crude were spilled. Skimming vessels recovered 350,000 gallons of the oil.

Two methods of oil cleanup were used.

Aerial-dropped dispersants were used to breakup the oil. Bio-remediation was also used. This involves spreading oil-eating bacteria over the spill. These bacteria converted the oil into a fatty substance that could be eaten by marine life.

### **OPA 90**

One of the major results of the *Exxon Valdez* spill was the passage of the Oil Pollution Act of 1990. In this act, Congress addressed tanker construction, personnel licensing and the emergency rapid-response capability.



The act called for mandatory double hulls on new tankers and gradual phasing out of non-complying vessels. The licensing requirements for ship's officers were strengthened in the area of drug and alcohol testing. The rapid-response capability was expanded nationwide, and new emphasis was placed on oil pollution research.

The act has given the Coast Guard its single largest legislative tasking in history. The major responsibility is the creation of distant response groups.

These will consist of pre-positioned equipment, including booms and skimmers,

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ready for any emergency in their geographical area.

As the Coast Guard enters its third century of existence, its responsibilities have expanded into areas that could not have been foreseen by its founders. Its early years of conservation duties were certainly sidelights to its main missions: enforcing revenue laws and promoting safety at sea. Now increased concern about the environment promises to continue to make environmental protection one of the most important Coast Guard missions.

