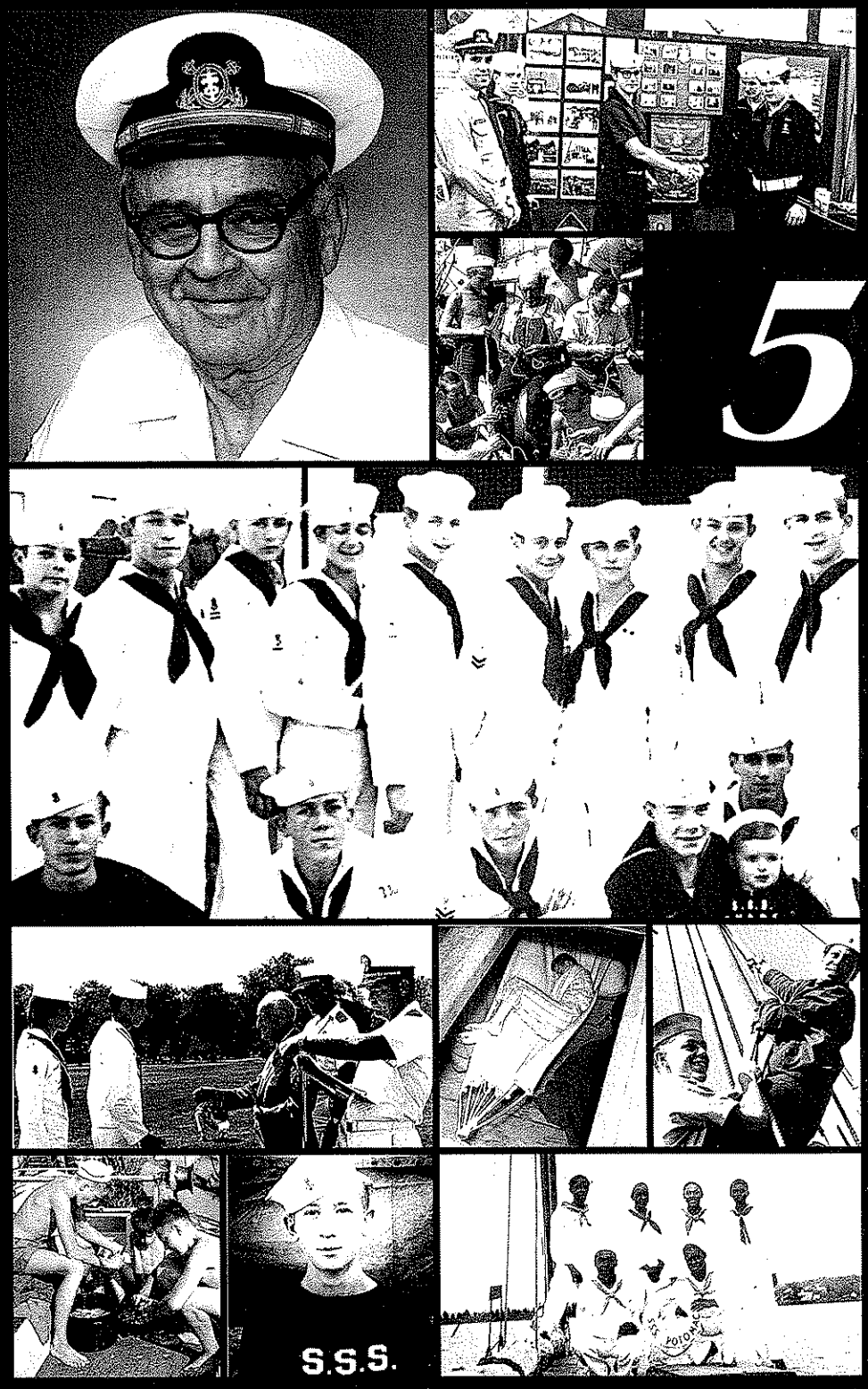
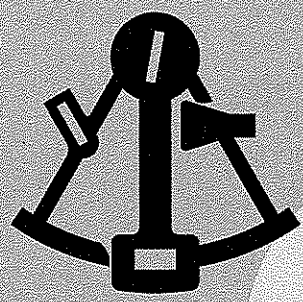
HISTORY AND TRADITIONS OF THE SEA



HISTORY AND TRADITIONS OF THE SEA

Chapter 5



The history of the sea is probably the greatest love story of all time.

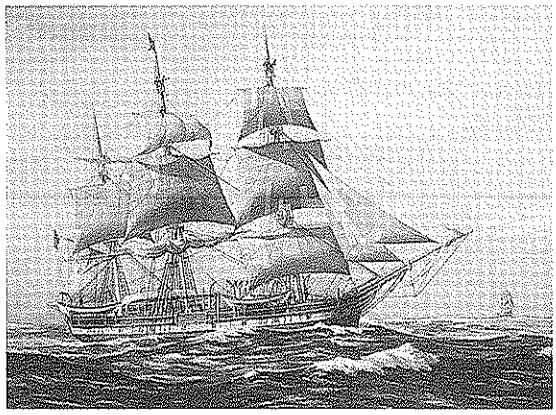
An expanse of water—whether a sparkling lake or a boundless ocean—has always lured the heart of man. The sea continues to be a siren beckoning man toward adventure and new worlds.

The first time man used water for transportation, he perhaps floated down a river while clinging to a log. Over the years, he has come to depend on the sea for both transportation and food.

His endless needs have led gradually to the development of rafts, dugouts, barges, and sailing ships. And more recently they led to ocean liners, giant warships of steel, and nuclear submarines.

This chapter tells a brief story; hopefully it will help you develop an interest in the sea and its history. This could lead you to new worlds of adventure and fun that may in turn provide lifelong diversion or even a vocation.

The Evolution of Ships



Charles W. Morgan

Hidden in the dim mists of antiquity are the beginnings of man's life afloat. Before the refinements of language, clothing or implements, man undoubtedly used the fallen log as his means of water travel. Later he hollowed it with fire or lashed several logs together into a raft for the transportation of goods or the spoils of the hunt.

One day, as he stood upon his log, he noticed that the wind seemed to carry him along. Eagerly he hung an animal skin from a sapling, stuck it into his "boat," and was rewarded by being propelled even faster.

Thus, the sail was discovered. He found that just as the paddle, which he had fashioned, pushed him through the water, so would it steer his primitive vessel.

Later, he hinged it to the stern and called it a rudder. At last, he set and rigged his mast permanently and dispensed with his paddles and oars.

Limitations of Craft

But even in the distant past, he had to keep in mind the controlling depth of the water upon which he sailed. He had to think about the prevailing wind direction, currents, tides, and ice conditions.

The materials available determined shapes, sizes, and construction. The use of his vessel determined other factors.

But as civilization progressed, the possibilities of the boat for trade, warfare, and travel became apparent. And with them came the demand for speed and space to cruise and carry cargo, to defend itself and to attack.

Thus, in the earliest modern civilization, we find the Greeks and Romans with vast fleets of galleys under both sails and oars. Into them they built powerful beaks for ramming, and furnaces so that fire could be poured upon the enemy.

Their merchant ships traveled farther and farther from home, making Rome and Greece mighty nations. As larger and stranger seas were visited, different conditions were encountered. Steady trade winds were discovered, and hull, sail, and gear were altered to take advantage of them.

Sailing Against the Wind

It is not known when the art of sailing against the wind was developed.

Even in the time of Columbus it was not a refined art, but the English and Dutch studies provided important knowledge. Very little advancement in design was made for centuries. It was not until the need for exploration, for new horizons of wealth, trade, and conquest was acute, that sailing became an art.

Man made his economic way on the land. To some extent, small boats advanced to maintain the island trade and to ply the paths of the inland seas. Some early types are shown in the illustrations. The large ship, however, was almost unknown until the 14th century.

Early Oceangoing Sailing Ships

The high-sided ships such as the caravels that Columbus and his followers used were to remain as the ultimate in ship design for 100 years after the discovery of America.

But gradually science mingled with practical seamanship. The trial-and-error method was slowly abandoned, and the wind became regarded as a force to be cunningly used.

High topsides and superstructures, which had offered so much windage, were reduced. The fore-and-aft rigging became more prominent for use in traveling against the wind. Speed, safety, and carrying ability became important as a sea commerce of vast proportions began to grow.

Early Charts of the Winds

Cartographers charted the known winds of the oceans. With the knowledge that there were definite paths and prevailing winds, different types of sails were developed to use these winds.

Thus for coasting, where the winds are prevailingly off the land or off the sea—"beam" winds—the schooner, the ketch, and other fore-and-aft sail plans were designed. The best point of sailing for a fore-and-after is with the wind on the beam.

Once offshore, however, steady trades and monsoons blow in a more regular path. The world-girdling packet and ship of commerce could well afford to be inefficient close to the land.

Benjamin F. Packard

Working out slowly, she would "catch her breeze" and then spread her white wings to the winds that blew day after day from astern.

Naturally, there were some trades that required a combination of both types, sailing partly along shore and partly in the trade winds. Combinations of the fore-and-aft and the square-rigger were evolved and have given us the types of brig, bark, topsail schooner, barkentine, and the square-rigged "trade-wind sail" or "raffee" of modern yachts.

The United States both before and after the American Revolution has been a leader in shipbuilding. Special-purpose vessels, such as the handy revenue cutter, the quick-maneuvering frigate, and the fishing schooner have reached their ultimate design on our waters.

But depth of water and other conditions still controlled ship design, and so we saw the development of the "centerboarder," often a large vessel, but with an important part of her underwater construction made on a hinge upward.

She could go deep into the country on shallow rivers and lakes to pick up her cargoes.

The Golden Age of Sailing

American shipping reached its zenith in the golden age of sail—the middle 1800s. Indeed a vessel had to be swift to beat a Yankee ship. American ships were regular callers in every port of the world. The fastest and grandest of these were the clippers. They were marvels of design and shipbuilding, as beautiful as a fine piece of furniture. Sail upon sail was mounted. Rigging became as complicated as a fine watch. Their seamen were among the most trained experts of the world.

The Whalers

The oil and other products of the whale were much in demand. New England shipmasters had special types of vessels built to hunt and bring home the great mammal. They often voyaged thousands of miles in their two- to four-year hunts. Such vessels had to carry supplies and water for several years, small boats in which to attack their quarry, barrels for storing oil, and furnaces for boiling the oil. They carried a cooper, blacksmith, and sailmaker.

They had to be strong enough to winter in the ice pack if caught, to fight gale and hurricane-force winds, and to carry back to port thousands of pounds of whale oil and products. They were truly remarkable vessels—full to the

gunwales with Yankee ingenuity and spirit. Even their small boats were marvels of lightness, strength, and equipment.

Steam vs. Sail

But the cry was always for speed and more speed.

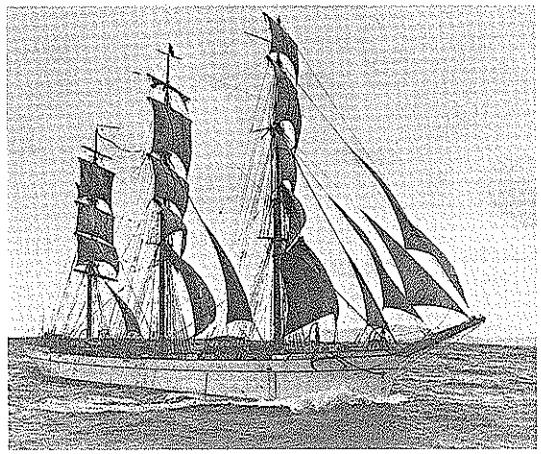
And one day in 1819, the cross-ocean passage of the steamship *Savannah* suddenly loomed up as the death of the sail ship.

Little by little, steam took the place of sail: first, merely as auxiliary power, and finally, when it became more reliable and faster, as the sole motive power of shipping.

Sail quickly disappeared. Steam first found its cradle in the hull of the sailing vessel and gradually found its way into a hull peculiarly its own.

The Windjammers

Today, the term "windjammer" is loosely applied to a variety of sailing craft. The original windjammers, however, were the largest sailing vessels ever built and were conceived as a direct challenge to steam. "Windjammer" was at first an insult. Steamship crews claimed that these huge, square-rigged ships were too gross to sail neatly into the wind as did the clipper ships, but had to be jammed into it. But the jibe became an accolade. During their 50 years of useful life, the windjammers were the climax—and the close—of the glorious days of sail.



Tusitala

Windjammers sought the wind. Almost every voyage involved an easterly and westerly Cape Horn passage. Working and living conditions for the crew were brutal, with mountainous seas and freezing weather being the norm for months on end. But the great ships carried their cargos well into this century.

The very last windjammer in commercial trade was a four-masted iron bark under Peruvian ownership that ran guano down the Chilean coast. She sank in the Pacific with 3,000 tons of guano on June 25, 1958. Her name: *Omega*, the final letter of the Greek alphabet, signifying the end.

Some of the great ships did not die, however. Their steel hulls and sturdy masts remained as reminders of the past. A number have been lovingly restored and can be visited today at maritime museums.

Steam Comes Into Its Own

Simple, piston-type engines were first used to turn twin paddle wheels in wooden hulls. Engine design moved along rapidly and the screw propeller was invented.

The demands of our Civil War brought forth the first hull constructed of iron. Great world movements and pioneering demanded more and more vessels to help open up the far corners of our globe.

The steamship, logging off her steady knots hour after hour in storm or calm, did her romantic share. Liners, built mainly to carry passengers, came into being. Great river steamers, still sporting paddle wheels because of water depth, mingled their hoarse hoots with the prairie winds. Armor-plated vessels of the Navy had two or three engines.

The turbine engine was invented. Devices for reusing the steam in low-pressure cylinders were perfected. The power developed to move the vessel was also used to light it, to make ice, and, through other mechanisms, to handle cargo, lifeboats, and do the sailor's work.

All over the earth this development was going on. The Scottish and the Germans became expert builders of iron ships and engines. Great plants grew in

America. Vessels of unbelievable length and power took to the water for trade, fighting, and exploration.

Internal Combustion Engines

Then at the turn of the century, on the little rivers and quiet bays, there were heard faint popping noises from a newfangled engine that used gasoline as fuel. The echoes of that popping noise grew and mounted until the internal combustion engine became a contender of monstrous proportions.

First used in pleasure and other small craft by multiplication of units and greater power, gasoline power began to drive large vessels. It had certain disadvantages, however, such as a high fire risk and expense.

Aboard the ferry crossing the Strait of Gibraltar

Steamships paid it little heed until the day this engine was converted to use safer and inexpensive fuel oil. And now the diesel engine is in turn giving way to nuclear-powered vessels.

Hull design has remained essentially the same for all types of self-contained power. The improvements in modern liners are mainly in the accommodations.

The few remaining crack transatlantic liners now, making the passage in four-and-a-half days, and the more numerous cruise ships, are modern hotels with swimming pools, outdoor game courts, theaters, and every comfort of the present-day standards.

Sailing Today

Sail has disappeared from world commerce except in some of the island nations. Yet, there are many more sailing vessels afloat today than ever before.

A busy world is gradually learning how to play, and it is but natural that men and women turn to the grand sport of sailing. Today thousands of yachts dot the coastal and inland waters of our country. People all over are learning again the sailor's art of loving and caring for his ship. But old salts and a sentimental public still can shed a tear for the passing of one of man's noblest achievements—the full-rigged ship.

The Naval Architect

No longer are ships designed and planned by the trial-and-error methods of antiquity. Today, the profession of naval architecture is precise science with every stress and strain, bolt and plate weighed and tested.

But the designer of a vessel today must consider the same factors as the ancient man who first lashed his logs together and set off for the opposite shore. Speed, purpose, available materials, and safety are his major objectives and are still controlled by the depth of water, the prevailing weather, and the limitations set by nature.

The Exploration of the Sea

In the earliest times the great oceans were utterly unknown. Civilizations came and went. Mankind lived upon the shores of an inland Mediterranean Sea. This immense, landlocked sheet of water, across which no man could see, fed the minds of sailors with specters of impending doom.

How brave these men were, we today can hardly realize. Homer's heroes still return to Ithaca with the fairy tale of their adventures, the music of the sirens in their ears, and the cruelties of the giants upon their lips.

The Odyssey of Homer recites these things. It tells of the 10 years of voyaging of the great Odysseus, king of Ithaca, following the fall of Troy.

Arabian astronomers pictured the world as flat with fearsome edges where the horizon ended and men and ships tumbled down into hell or worse, for many had sailed away never to return. They imagined the world as a cylinder, a drum, a raft, and a disk—all adding to the confusion.

The lands became marvelous and mythical, but the waters became the abode of fear. Only sailors—and brave sailors they were—dared venture forth, and they have left behind a heritage of courage on the sea.

Into the Atlantic

And then came those men who dared push out past the western gate of the great landlocked sea into the broad Atlantic.

Bold Pytheas coasted from Marseilles northward along the fearsome coast of Spain into a changing world where days began to stretch, where time itself took on the impending threat of doom.

He fetched the Shetlands and knew the shutting down of night. His further progress was barred by an immense black fog that hung suspended in the air. This was a frightful creature in which a ship would be swallowed and where no man could breathe. And Pytheas told the truth, as he saw it, on the cold, black northern seas.

Everywhere, as men sailed beyond their knowledge, they were met by strange bedevilments. To the south was heat—in the regions of the equator—where terrible monsters of the sea lay in wait. Drawings on old charts pictured these awful creatures—serpents, leviathans, and formidable sea monsters.

The Phoenicians

The Phoenicians were great colonists. They were the first true sons of Neptune—honorable and dependable merchants on the seas.

They settled on the west coast of Africa. They traded between Cyprus and Rhodes and with Greece, Sardinia, Sicily, and Gaul.

The Bible tells us how these sailors brought gold to King Solomon from Ophir in 1100 B.C. Homer mentions them in the story of the Trojan War as supplying the belligerents with stores and luxuries. The port of Tyre superseded Sidon in importance.

In 600 B.C. we have from Ezekiel a descriptive account of the Tyrian ships built of the cedars of Lebanon, the oaks of Bashan, and the firs of Senir.

They brought home the ivory of the Indies, the linen of Egypt, and the purple dye of the isles of Elishah. It was a mighty period when these bold sailors practically owned the sea.

The Egyptians, never remarkable as sailors, were responsible for initiating one of the first great voyages of recorded time. In 600 B.C., Necho, pharaoh of Egypt, employed Phoenician sailors on a voyage around Africa.

These early ships, while rigged with a mast and square sail, depended largely upon sweeps, or oars, for their progress.

The Greeks and the Romans

The Greeks, through their mythology and in the writings of Homer, left us heroic pictures of the sea. The great voyage of the Argonauts, if it is not a myth, probably took place in 1250 B.C. Many legends surround the voyage and its objective.

Jason, son of the king of Thessaly, being deprived of his inheritance, resolved to seek his fortune by going in quest of the Golden Fleece of Colchis. Just what the Golden Fleece was, is open to discussion.

Some say it was a precious parchment containing the secret of the philosophers' stone—the transmutation of baser metals into gold. Others, that it was really the fleece used to catch the gold dust washed down the riverbeds of the golden streams emptying into the Euxine Sea.

Jason employed Argus to build his ship. In honor of the builder, she was named Argo, and the adventurers were called Argonauts.

The voyage of Jason was followed by the voyage of Odysseus. And Homer tells you of it. It was a fearsome world in which a monster of tremendous size named Polyphemus watched hopefully for the destruction of the mariner.

Greek vessels were mainly propelled by oars. They were handsome craft urged over the blue waters by the sweat of slaves with aching backs and weary arms.

A projecting prow, armored with bronze, took on the outlines of a beak and was used in ramming. Half decks and a high poop sheltered the warriors, the helmsman being aft. The craft were extremely ornate.

The Romans copied their craft from the Greeks. Centuries of history are involved in the historic conquests that make up the story of their domination of the blue waters of the Mediterranean. It was not until 260 B.C. that Rome became a great sea power.

The Carthaginians

In the meantime the Carthaginians flourished. In the voyage of Hanno, setting sail with a fleet of 60 vessels, they made one of the great expeditions of the fifth century B.C., sailing through the Strait of Gibraltar and down the coast of Africa.

It was a mighty armada carrying 30,000 men and women with great cargoes of supplies. They were the first to record the existence of crocodiles and hippopotamuses.

They met with strange, wild men whom they called Gorillae—half beast and half human. They returned to Carthage with a most marvelous tale of their adventures.

The Vikings

Viking Longship

And now we sail to the cold waters along the northern shores of Europe and the Baltic Sea. Large-boned, red-faced, flaxen-haired people inhabited those shores.

There in a cold northern climate, they literally wrung a living from the sea. Some say they were a turbulent people, piratical, heavy drinkers and heartily eating meat and fish, but this is likely to be an exaggeration.

Many of them spent their lives navigating the seas in their Viking ships while raiding the coasts of Europe.

The Vikings were skillful and daring Norsemen who pushed their voyages across the sea to the new world, discovered both Iceland and Greenland, and colonized both. The most famous Norseman was Leif Ericsson, who was thought to be the first European to have landed in North America. He sailed from Greenland in about 1000 A.D. to seek a strange new land of which he had heard rumors. He landed in Newfoundland and then voyaged south as far as Nova Scotia. The ruins of Viking settlements have been found in Newfoundland, providing evidence that Leif Ericsson did discover the North American continent.

But the world was not ripe for their discovery. The story was preserved in the sagas—tales passed on from generation to generation by word of mouth—and

finally written down. Away from the great movements of the Middle Ages, Norsemen were all but forgotten.

Marco Polo

No history of the sea would be complete without mention of a great traveler who journeyed far and returned to the city of Venice after 20 years. He brought a tale so strange that it finally became a part of the Arabian Nights entertainments, familiar as the story of Sindbad the Sailor. This great traveler and sailor was a Venetian named Marco Polo.

The great journey took place during the closing years of the 13th century. Marco Polo became a great favorite with Kublai Khan, the emperor of China. He served him for many years as a confidential adviser in Peking.

He was the first European to hear of the island of Cipango in the "eastern ocean," now known as Japan. Kublai Khan made an unsuccessful attempt to conquer Cipango in the year 1284. Marco Polo, after 17 years in China, returned to Venice, an exciting story in itself. He brought back stories of the vast riches of the East, of places such as China, the island of Japan, the coasts of Borneo, Java, Sumatra, and the marvelous India.

Bringing from China the mariner's compass has been attributed to this great merchant sailor. In any case, its use was known to Marco Polo. He commanded ships and was familiar with every known element of navigation in his time.

The mariner's compass brought about wonderful changes in sea travel; it gave new emphasis to the study of navigation and cartography. In time, this knowledge gave birth to more discoveries and to commercial travel as we know it.

Prince Henry and Columbus

The birth and early schooling of Columbus came at a time when the whole world was in a ferment, and it was a small world. The great sailor and prince of Portugal, Prince Henry the Navigator, established the first nautical academy at Sagres.

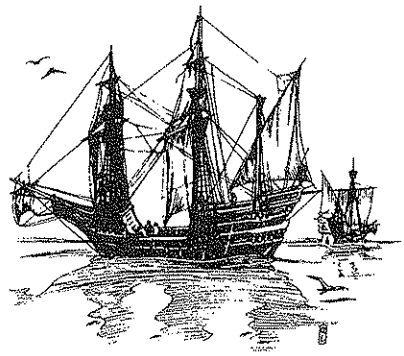
Eschewing the greatest honors of the court, he retired with the most learned men of the day and studied the problems of geography. For 22 years, Prince Henry devoted his life to the art of the sea. He died in Sagres in 1460 when Columbus, a young sailor, was engaged in Mediterranean voyages.

The work of Prince Henry the Navigator resulted in a number of famous voyages: the discovery of the Madeira Islands and the journey of a mariner named Gilianez, who rounded Cape Bojador in 1433, settling forever the wild belief that men turned black when they crossed the southern line.

We now come to what may be called the great age of the discoverers at sea. In 1492, Columbus broke the spell of terror. He paved the way for a Western civilization in his attempt to reach the East Indies.

He made four voyages to the New World. His protectress, Isabella, died and left him without influence at court. He died on May 20, 1506, attended by his son Diego and a few faithful friends.

Even the name of the New World was taken from Columbus through circumstances that gave it to Amerigo Vespucci. By mistake, a French cartographer of St. Die made Vespucci's voyage to the mainland precede that of Columbus. He proposed the name America for the new land. Generally adopted by early geographers, it has remained.



Caravels at the Time of Columbus

The Cabots

After the voyages of Vespucci, John and Sebastian Cabot were sent out by Henry VII of England, to explore the mystery lying across the "western ocean," as sailors, even to this day, call the North Atlantic.

The Cabots, in a ship named *Matthew*, discovered the mainland of North America. This was 18 months before Columbus set foot ashore on the mainland of South America at the mouth of the Orinoco River.

Da Gama

Vasco da Gama, flying the flag of King Emanuel of Portugal, and fortified with the high spirit of adventure, set sail from Lisbon. Making a rendezvous at the Cape Verde Islands and so on around the African continent, he passed the dreaded Cape called Good Hope, then went to the famed city of Calicut.

Ponce de León

Ponce de León, heroic figure of romance, sailed in search of the fountain of youth. In April 1512 he came upon a shore covered with blossoms. This is the Florida of today and was so named by him. His ships first sailed the old Bahama Channel, where new bays and new islands dotted a great warm sea as points of a perpetual fairyland.

Balboa

More picturesque figures keep stepping across the stage of those times. Vasco Nuñez de Balboa, a swashbuckling gallant, went to sea to avoid his creditors. He had himself nailed up in a cask marked "victuals" and conveyed upon a ship starting from Spain for the mainland of Hispaniola.

When the vessel was out of sight of land, he emerged. He declared to the astonished captain "that God reserved him for great things."

And he was right. This was 1511, but on September 26, 1513, from a peak in Darien, Balboa was the first European to see the Great South Sea (now called the Pacific Ocean) from its eastern shore.

Then, when he came upon its waves, he waded, in full armor, into the Great South Sea and took possession of the vast ocean in the name of the sovereigns of Castile.

Magellan

Another great sailor, Ferdinand Magellan, sailed for the Spanish king on a mighty voyage of discovery. Five vessels were fitted out at Seville, the flagship being named *Trinidad*. The fleet set sail on August 10, 1519.

Magellan was to sail across the great Pacific Sea onward for unknown leagues to the west to the real Indies of Marco Polo. Fortunately, an Italian named Pigafetta was sent along.

To him, in what is now known as Pigafetta's Narrative, we owe the true and stirring account of the first circumnavigation of the world.

On October 21, 1520, Magellan first entered the strait that bears his name. His ship, *Trinidad*, sailed on ahead into the fearsome strait flying the immortal signal, "Follow the flagship, and ask no questions."

Ships foul with barnacles, rotting food, and sailors starving and slowly perishing with scurvy—mere wrecks and shells of men—sailed onward to the west and the perils that faced them.

But there were only three ships. The *San Antonio* had put about and hurried back to Spain and so was spared the glory and the suffering. The *Santiago* was lost in the strait. Nineteen sailors died of scurvy.

They entered the harbor of the Philippine isle of Cebu. On a neighboring island named Mactan, Magellan was attacked and killed.

His ships continued; the *Victoria*, under command of Juan Sebastián del Cano, came to anchor in San Lucas on September 6, 1522, after a voyage of three years and 27 days. They had circumnavigated the globe for the first time in recorded history and probably in all time.

Magellan penetrated beyond the New World by the southern route. The northern seafaring nations turned their attention to a passage to India by the north.

Those sailing to the west were seeking the Northwest Passage; those up along the coast of Europe to the east were looking for the Northeast Passage.

The Northwest Passage

Jacques Cartier, a native of St. Malo, France, was the first to attempt the Northwest Passage. Sailing in 1534 with two small 60-ton craft, he arrived at Newfoundland. He sailed onward into what he called the Gulf of St. Lawrence and took possession of those lands in the name of the king of France.

The arrival of winter forced him to return. The following year, Francis I sent him out with three ships and gave him the title of royal pilot.

He entered the mouth of the St. Lawrence River and was told by the Indians that the water was a great river that led to a vast country called Canada.

The Northeast Passage

In the meantime the English were stirring. The world was being divided. King Edward VI commissioned Sir Hugh Willoughby with "a license to discover strange countries." This navigator sailed in command of a fleet, fitted out by a company and headed by Sebastian Cabot.

The voyage was to be for the Northeast Passage. The ships sailed northward around Norway and on up into the ice. On November 10, 1556, Richard Chancellor's vessel was driven off in a storm. It was never seen again.

Novaya Zemlya was visited. Sebastian Cabot and his company wintered on those inhospitable shores, but were never heard of again.

Frobisher and Barents

In 1576, Martin Frobisher, another Englishman, set sail in two small barks and a pinnace to force the Northwest Passage to India.

But Frobisher was only able to sail to Greenland and back with a bit of ore containing gold. This resulted in a greater expedition in search of treasures; that proved to be a lamentable failure.

The most successful of the early voyagers to the north was Willem Barents, a Dutchman, who penetrated far into the ice. He arrived at Novaya Zemlya in July 1596.

Barents and his companions were the first men to winter in the Arctic and return. He added no great knowledge to geography, but established the fact that men might endure the Arctic night. When he returned from his voyage, he brought back a graphic tale of this experience.

Sir Francis Drake

Among the outstanding heroes of the sea is Sir Francis Drake. He lived in an age when the world was in the process of being divided among the great maritime nations of Europe.

The Dutch, the Portuguese, and the Spaniards had made great progress in their discoveries and in claiming new lands lying beyond the seas. Drake came at a time when England, under Queen Elizabeth, was awakening to the necessity of having a share in the apportionment of far-off lands.

The significance of this great discoverer's voyage was overshadowed by the immeasurable richness of the lands he had opened to the world. Men were like a score of ants attempting to devour an immense melon. All were afraid there would not be enough to go around.

Drake sailed with five ships—the largest, the *Pelican*, his 100-ton flagship, and the smallest, 15 tons. They got under way after a storm on December 13, 1577, and began one of the greatest of the voyages of plunder.

Drake followed Magellan; with the object of preying upon Spain, he circled the world, leaving behind him a trail of wreck and ruin.

He sailed across the Pacific to the Moluccas (Spice) Islands, and stopped at Celebes and Java, the Cape of Good Hope, and Sierra Leone. He arrived at Plymouth after a voyage of two years and 10 months.

He returned with only his flagship, renamed *Golden Hind*; captures and wrecks had depleted his original fleet. But his ship was literally lined with treasures.

Queen Elizabeth knighted Drake on the deck of his ship; he remains a most romantic sailor, and the first Englishman to circumnavigate the globe.

Thomas Cavendish followed in a similar voyage.

The Spanish Armada

Philip II, king of Spain, determined to put an end to England's growing power. The year was 1588; the fleet, named in contemporary English accounts "the most fortunate and 'Invincible Armada,'" consisted of 130 ships. It was manned by more than 19,000 sailors and 2,000 galley slaves, and carried more than 2,600 brass cannons.

In England, Elizabeth and her councillors prepared to meet the force. Ten thousand men were recruited in London and a similar number was held in reserve. The land force of England was estimated at 65,000 men.

The fleet numbered 180 vessels, but they were small and hardly half as powerful as the armada. Sir Francis Drake, Sir John Hawkyns, and Martin Frobisher were in command of divisions.

The "Invincible Armada" weighed anchor from Tagus in May 1588, sailing with the most solemn blessing of the church.

The English sailed past Plymouth so that they might attack them from the rear. The next day, with 50 swift-moving ships, Drake fell upon them. The bulky, high-sided, wallowing Spanish craft were easy to defend, but not effective in offense.

At night, as the Spanish anchored off Calais, the English sent eight fire ships among the mighty wooden fortresses, spreading fear and panic. Some cut their cables and were wrecked on the shallow shores of Flanders; others stood to the north in the North Sea, determined to sail away from their enemies and return to Spain.

A terrible storm came up. Eighty ships were lost, and only 50 ships returned to Spain.

World Colonization

The defeat of the "Invincible Armada" allowed the colonization of America to proceed. The names of Sir Richard Grenville, Capt. John Smith, and Sir Walter Raleigh were taking their places in the story of man's exploration of the sea.

The Dutch succeeded the Portuguese in the East Indies, controlling colonies they hold today. They sent ships about the world, circled the globe, and contested the right-of-way in the narrow seas, fighting with the English.

In the meantime, the great Pacific lay as an inviting riddle before the world, and the theory of a southern continent was still held. None knew of Antarctica, but all hoped to find some vast rich land out in the wide Pacific.

Again the voyagers began to seek passage to the north on the route to India. A great sailor, Henry Hudson, sailing for the Muscovy Company of London, reached the shores of North America. He entered every inlet that promised passage through.

He discovered the Hudson River in 1609, sailing on his ship, *Half Moon*.

Far to the south, the Dutch and the French were pushing their ships of discovery. The Spaniards were not idle, and the Englishmen were cruising as never before.

The art of seamanship advanced by leaps and bounds. Navigation took great strides. Geographers and cartographers were busy applying the vast funds of knowledge being brought home by sailors.

In the meantime sea law was being formulated; navies were being built; and trading ships began their peaceful conquest of the world, an enterprise which is still going on today.

England became greatly interested in the American continent as a possible new colony. In May 1607, a group of colonists landed at Jamestown, Virginia.

Thirteen years later in 1620, the Pilgrims landed from the *Mayflower* at the point now known as Plymouth, Massachusetts.

In 1642, while the Dutch and English were disputing the seas and continuing their fight with the Spaniards, Abel Janszoon Tasman left Batavia with two vessels, discovered Tasmania and New Zealand, and circled Australia. This was one of the very last voyages of major geographical discovery.

The Pirates

Meanwhile, in the West Indies and the Caribbean, renegades who had originally gone there for peaceful pursuits banded together as the buccaneers. Under Henry Morgan, William Dampier, Captain Kidd, and others, the pirates took a heavy toll on lives and shipping of all nations.

It took many years to finally suppress these buccaneers and clear the seas for regular commerce. It was not until 1723 that the last of the pirates were swept from the seas.

John Paul Jones

In 1775, when the U.S. Congress determined to outfit a naval force, the celebrated sailor John Paul Jones offered his services. He was immediately appointed first lieutenant to the *Alfred*—one of only two ships owned by Congress.

On board that vessel, at Philadelphia, he hoisted the first flag of the new nation.

In November 1777, having at last received his captain's commission, he sailed for France in command of the *Ranger*, an 18-gun war sloop. He carried dispatches telling of the victory of Saratoga.

On the *Ranger* in Quiberon Bay, he received the first salute given to the new flag, the Stars and Stripes. And he was to make that flag respected in the narrow seas. Given command of the 42-gun *Duc de Duras*, he changed her name to *Bonhomme Richard* as a compliment to Benjamin Franklin's almanac and the sayings of Poor Richard.

On this badly manned and poorly furnished vessel, Jones sailed as commodore of a small squadron. After taking several prizes, his squadron fell in with the H.M.S. *Serapis* and the H.M.S. *Countess of Scarborough*.

They fought one of the most desperate sea battles of modern times. In the heat of the battle, the *Alliance* of Jones's squadron fired into the *Bonhomme Richard*.

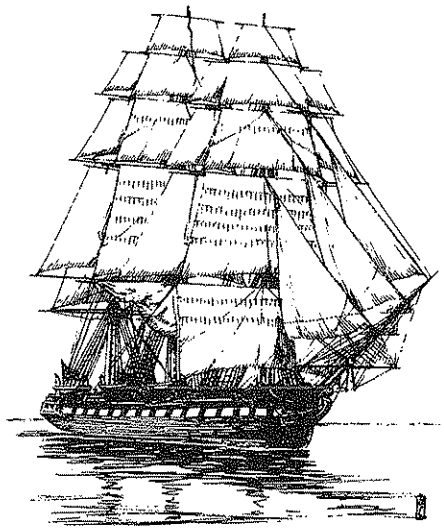
After being summoned to surrender by Capt. Richard Pearson of the *Serapis*, Jones made the historic reply, "I have not yet begun to fight." Jones captured the *Serapis* and transferred his flag to her since the *Bonhomme Richard* was so badly shattered that she sank.

In the meantime, England and her wooden hulls were coming to grips with the power of Napoleon. Mighty fleets, greater in tonnage and power than the famed "Invincible Armada," were cruising the seas. England was in the struggle for the command of the sea against France and Spain.

The United States took advantage of this power struggle to gain prestige on the sea.

War of 1812

The prestige and sea power of Great Britain were at their height in 1812. But the small republic of the United States of America, a maritime people, was chafing under the restraints of trade, the arbitrary searching of American ships for British deserters, and other acts of hostility by the British.



U.S.S. *Constitution*

A declaration of war by Congress was followed by sending to sea a fine fleet of able frigates, the true beginning of the U.S. Navy. They were splendid vessels ably commanded. The war was for free trade and sailors' rights; its most brilliant actions were fought by sailors.

The small Navy had received splendid training by being involved for years in fighting against the Barbary states. The United States put an end to the payment of tribute to these Barbary pirates of the sea.

Then in 1807, something happened that inflamed the minds of the people. The U.S. frigate *Chesapeake*, proceeding to sea with a green crew, in time of peace, was fired upon by the British frigate *Leopard* and then searched.

This led to increasing friction. Congress prohibited British vessels from entering American waters. The U.S. frigate *President*, under Commodore Rodgers, poured a broadside into the British warship *Little Belt*, and war was declared.

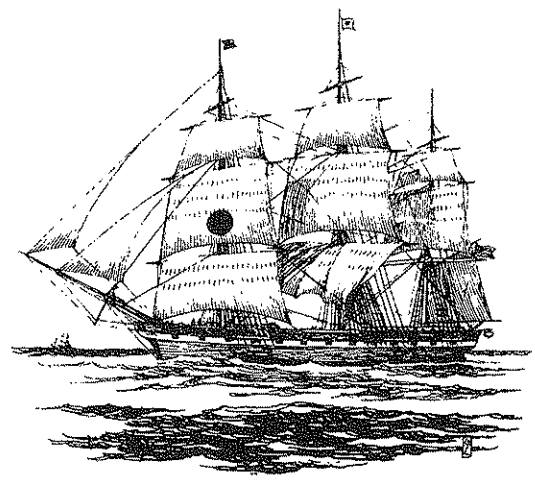
Against the naval power of Great Britain, fresh from its victory at Trafalgar, the United States had but three frigates of 44 guns, three of 38 guns, and some smaller craft. Within an hour after the declaration of war, Commodore Rodgers was at sea with the frigates *President*, *United States*, *Hornet*, *Congress*, and *Argus*.

The greatest damage was done to British prestige when the frigate *Constitution*, commanded by Capt. Isaac Hull, captured the British frigate *Guerriere*, and the frigate *United States*, with Capt. Stephen Decatur, captured the British frigate *Macedonian*. The *Constitution*, then under the command of Capt. William Bainbridge, took the British frigate *Java*.

The War of 1812 left America with a feeling of confidence on the sea. Her rights had been recognized; better conditions prevailed in the world.

Packet Ships

The packet ships were instituted by Americans, starting the first regular passenger and fast freight service across the Atlantic. Whalemen and merchants of New England, New York, Baltimore, and Philadelphia sent their ships about the world.



A Black Ball Packet Ship

The Clipper

The packet ship was followed by an American production, the clipper, a sailing model of extreme sharpness and tremendous spread of sail. It was the final perfection of the sailing ship. It led in speed over the long sea routes, astonishing the world by the rapidity of its passage from port to port.

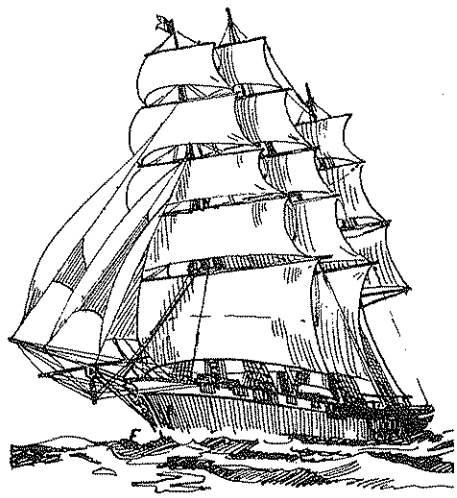
The first true clipper, the *Rainbow*, was launched in New York in 1845. The era of the clippers extended until about 1860.

The British were quick to copy the design of American ships docked in their ports, and soon the world was to witness a great rivalry in speed sailing.

The fastest hour-run recorded was that of the ship *James Bains*. This is taken from her log: "June 17, 1856: lat. 44 S., long. 106 E., ship going 21 knots with main skysail set."

The American clipper *Sovereign of the Seas* averaged 17 3/4 knots for her day run on March 18, 1853. The clipper ship *Lightning*, on her maiden voyage from Boston to Liverpool, averaged 18 knots on March 1, 1855.

And so they went, great ships like the *Flying Cloud*, the *Red Jacket*, the *Great Republic*, the *Romance of the Seas*, and the *Sweepstakes*, to name only a few.



A Clipper Ship

The Civil War

Steam had already begun to dispute the age of sail; and the commerce destroyers *Alabama*, *Florida*, and *Shenandoah* took their toll on the sea during the Civil War.

The war marked the complete transition from sail to steam in fighting ships. It brought forth the armored vessel (ironclad) in the battle between the Confederate *Virginia*, built on the partially burned hull of the captured Union frigate *Merrimac*, and the Union *Monitor*.

Great actions were fought during the Civil War. Most of these were between fleets and forts, as at New Orleans and Mobile Bay, where Adm. David Farragut distinguished himself.

The one great sea battle of the war involved the Confederate commerce destroyer *Alabama* with Comdr. Raphael Semmes. Off the harbor of Cherbourg, June 19, 1864, the Confederate ship was sent to the bottom, but only after she had done irreparable damage to American merchant shipping.

Two great events of economic and maritime importance immediately preceded the Civil War: the opening of Japan to the world by Commodore Matthew Perry in 1853, and the laying of the first transatlantic telegraph cable in 1858. The cable, laid by the U.S.S. *Niagara* and H.M.S. *Agamemnon*, lasted for 23 days and then broke, but it still proved the feasibility of cable messages.

Then the steamship *Great Eastern*, a monstrous iron vessel too big for her time, was employed in laying the first successful telegraph cables between the Old World and the New World.

The Present Trend

The builders of steamers made constant advances, increasing in tonnage and power. Ships like the S.S. *United States* reached the limits of navigable size, as the harbor depth at port terminals limits further increase in dimensions. Her size: length, 990 feet; breadth, 101 feet; gross tonnage, 53,300. She carried 2,000 passengers and a crew of 1,000 at a top speed of about 30 knots.

Great Britain's H.M.S. *Queen Elizabeth* was about the same length and had a tonnage of 85,000.

During World War II, ships like these carried large numbers of troops to and from Europe.

World War I

A great chapter in the history of the sea was written in this war. Warships of great power remained opposed to each other in stalemate until the Battle of Jutland.

But the main activities on the sea were those of the submarines against merchant craft and the revival of the convoy system of sending merchant craft across the seas.

The sinking of merchant craft without warning, in direct violation of the law of the sea, made the United States declare war on Germany in 1917.

World War II

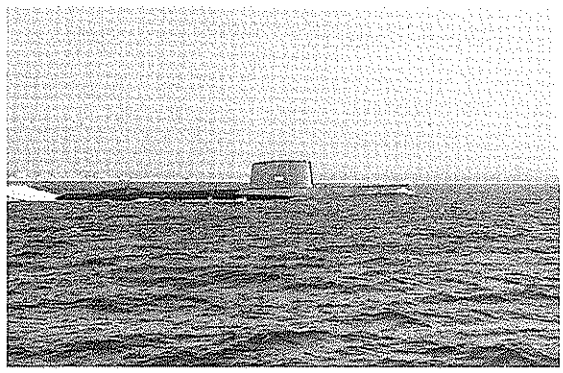
This war, fought on two oceans, forced the United States to develop the greatest navy and merchant marine the world has known. New methods of construction, including prefabrication of parts and sections of ships, enabled the rapid building of the fleets.

The types of freighters like the *Liberty* and *Victory* kept the long supply lines filled. The aircraft carrier added a revolutionary fighting arm to the Navy. The invention of radar, loran, and sonar permitted safe navigation through fog and darkness.

American seamen added a heroic chapter to history with their share in World War II.

Nuclear-Powered Submarines

In 1955, a joint project of the U.S. Navy and the Atomic Energy Commission produced the first nuclear-powered submarine. This was the first time that atomic power had been harnessed for undersea duty. Three years later this submarine, the *Nautilus*, under Comdr. William R. Anderson, made history by sailing under the North Pole. This underwater cruise was the first transpolar voyage from the Pacific to the Atlantic.



U.S.S. *Triton*

The *Nautilus* was driven by an atomic power plant, composed of a turbine driven by steam generated in an atomic reactor.

In 1959, the *Savannah* was launched as the world's first atomic-powered merchant ship. The vessel was 595 feet in length and was able to make speeds up to 35 knots.

In 1960, the submarine *Triton* traveled underwater around the world. Since the successful journey of the *Nautilus*, the United States and many other nations have developed warships and commercial vessels powered by nuclear energy.

Undersea Exploration

In 1953, Auguste Piccard designed and built a steel sphere to be used for undersea exploration. In this sphere, he descended 10,300 feet into the sea. Following this successful experience, he and his son Jacques designed the bathyscaphe—a diving craft for undersea observation.

In 1960, Jacques Piccard and Donald Walsh descended 35,800 feet into the Pacific Ocean in the bathyscaphe.

The craft consists of a thick-walled steel sphere attached to a large cylindrical hull, with the sphere protecting the crew and the scientific instruments from the crushing water pressure.

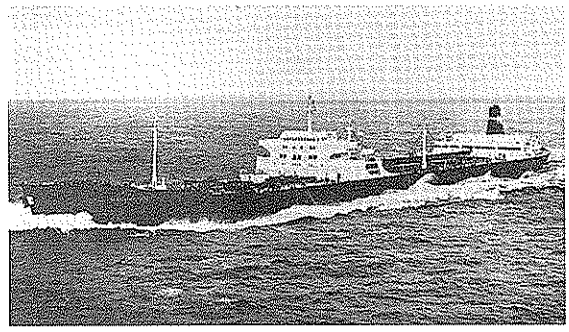
The bathyscaphe operates underwater, using gasoline for buoyancy. It is driven horizontally by two small screw propellers which are turned by

battery-driven motors. It is driven down by the release of gasoline and brought up by the release of ballast.

Conqueror of the Northwest Passage

In 1906, 409 years after John Cabot made the first attempt to find a northwest passage to the Orient, the Norwegian Roald Amundsen completed the first transit east to west in the little sloop *Gjoa*. Sixty-three years later the large icebreaker tanker S.S. *Manhattan*, accompanied by a U.S. Coast Guard icebreaker, emerged from the ice-filled Prince of Wales Strait in the Arctic, entered the Beaufort Sea, and completed the first commercial trip through the icebound Northwest Passage.

This time the objective of the venture was not to find a passage to the Orient, but to make possible the commercial use of oil discovered within the Arctic Circle. The journey proved that properly constructed large ships can travel the ill-famed Northwest Passage.



S.S. *Manhattan*

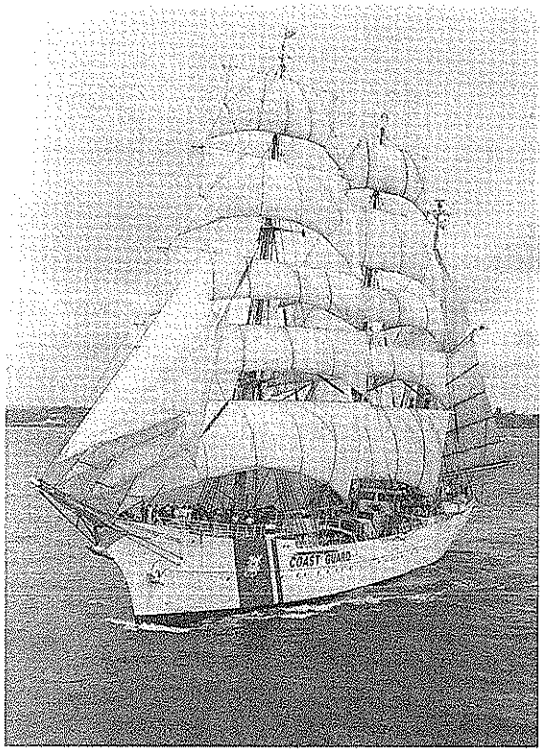
Modern Shipping

Many changes have taken place in the past few years in the design and use of ships. The great passenger liners have all but disappeared from transatlantic routes and have been replaced by smaller cruise ships catering to vacationing tourists. The cruise ship aims to visit a wide variety of ports rather than deliver passengers from one point to another. The latter function has been taken over by airlines.

The first major change in merchant shipping was the container ship. The typical freighter dealing in break-bulk cargo spent several days in port while its holds were emptied and then refilled. A ship in port is losing money. A container ship carries over a thousand standard-size containers in its holds and as deck cargo. The containers are packed by the shipper and moved to special container ports by truck or rail. There, massive equipment loads the containers aboard ship and the turnaround is reduced to a matter of hours. Other advantages of container cargo are that the merchandise is handled only by the shipper and the receiver and, since the containers are weatherproof, dockside warehousing is not needed. At first, standard freighters were converted to containers but special ships are now built for this purpose. The superstructure has been moved aft to leave a clear deck for access to holds and the deck cargo.

With the need to import oil from the Middle East, the supertankers emerged. These are the largest moving manmade objects. Some are as wide as a football field and four times as long; a quarter mile in length. They are called VLCCs, or Very Large Crude Carriers, and ULCCs, Ultra Large Crude Carriers. The problems of managing these "oilbergs" underway in close quarters can only be imagined. They are too deep for most ports. Thus, offshore pumping stations have been built to handle the cargo. Unfortunately, groundings and fires have spilled billions of tons of crude oil into the sea with great environmental damage. International efforts and regulations have resulted in fewer spills from leaking valves and less frequent illegal dumping of ballast water and tank flushings.

Modern merchantmen sometimes confuse landsmen, and even other mariners, by using such terms as "RO-RO" or "LASH" to describe ships. These ships are typical of the specialized vessels that are emerging as additions to the merchant and military fleet. A RO-RO ship carries a cargo that rolls on and rolls off. Ramps at dockside and aboard allow automobiles, trucks, semi-trailers, earthmoving equipment, and even tanks to be driven into place and secured for the voyage. At the destination, they are driven off.



U.S.C.G. *Eagle*

"LASH" stands for lighters aboard ship. Here lighters or barges are lifted fully loaded aboard the ship while it is anchored in a harbor. At the destination they are unloaded and towed to docks. In this way a large ship can serve harbors where wharf space is limited or the depth at docks is too shallow for larger ships.

Nondisplacement vessels are becoming more practical. The hydrofoil ship looks perfectly normal until it gains speed. Then it rises on wing-like foils beneath its keel to attain far greater speed for less power expended than a normal planing hull. Surface effect ships ride on the water's surface cushioned on a layer of air. Again, great speed is possible. Hydrofoil and surface effect vessels are being used as ferries and for law enforcement where speed is an important factor.

Many of today's merchant fleets sail under what are known as "flags of convenience." These ships may be owned and operated by an American, Japanese, or European firm but are registered in a nation with fewer restrictions, regulations, and taxes. While Liberia is not thought of as a maritime nation, the number of merchant ships registered there exceeds that of Japan, and Panama's registered merchant fleet is almost three times the size of that of the United States. The lower standards of seamanship, licensing, crew size and pay, and safety regulations required under flags of convenience have been blamed for some serious maritime disasters. Many of the abuses are being corrected by implementation of the International Convention on Standards for the Training and Certification of Watchkeepers, 1995.

Museums and Ship Restorations

Many excellent museums trace the history of the sea, ships, and those who sailed them. A number of museums include restorations of famous vessels. A visit to one of the great maritime museums is an excellent superactivity for a Sea Scout ship. A visit could also be included in a Sea Scout's family vacation. The following is a partial list of U.S. maritime museums and restorations by states. Also included are some listings in England.

California

The Maritime Museum Association of San Diego has a number of ships on display. *Star of India* is the oldest iron-hulled sailing ship afloat. Also on display is the ferryboat *Berkeley* and the steam yacht *Medea*.

The San Francisco Maritime Museum includes the full-rigged windjammer *Balclutha*.

The San Francisco Maritime State Historic Park exhibits *Alma*, a scow schooner; *C.A. Thayer*, a lumber schooner; *Wapama*, a Pacific Coast steam schooner; *Eureka*, a paddlewheel ferry; and *Hercules*, a paddlewheel tug.

Connecticut

Mystic Seaport Museum includes a village area with crafts, scrimshaw, models, paintings, prints, navigational instruments, and live demonstrations of many crafts associated with shipbuilding and ship's equipment. On display is the *Charles W. Morgan*, the only whaleship still under sail; the *Joseph Conrad*, a

full-rigged training ship; the *L.A. Dunton*, a Grand Banks fishing schooner; the *Emma C. Berry*; and others.

The U.S. Coast Guard barque *Eagle* is available for visits when in port at the U.S. Coast Guard Academy in New London. The *Eagle* was built as a sail training vessel for the German Navy during the 1930s and is now used to train U.S. Coast Guard cadets.

District of Columbia

The Smithsonian Institution has excellent displays on shipping and the maritime industry. Included is the National Watercraft Collection, probably the most complete collection of models of American watercraft.

The Truxton-Decatur Naval Museum and the U.S. Navy Memorial Museum both have excellent exhibits.

Florida

A replica of H.M.S. *Bounty* can be visited in St. Petersburg.

Georgia

The nuclear ship *Savannah* and historical models may be visited in Savannah.

Hawaii

The U.S.S. *Arizona* Memorial and U.S.S. *Utah* Memorial may be visited in Pearl Harbor. These are dedicated to the memory of the men still entombed in these sunken warships.

Maryland

The U.S. Naval Academy Museum at Annapolis has an excellent collection of admiralty models and exhibits related to naval history. Annapolis is also a fine spot to visit, since it is a colonial era seaport that continues to function as the sailing capital of the United States, with many shipyards, boat design firms, and sail lofts.

Baltimore's waterfront includes the National Aquarium, the U.S.S. *Constellation*, the U.S.S. *Torsk*, the lightship *Chesapeake*, the retired Coast Guard Cutter *Taney*, the skipjack *Minnie V*, the Liberty ship *James Brown*, and the schooner *Freedom*.

The Chesapeake Bay Maritime Museum in St. Michael's Harbor specializes in Chesapeake Bay history. On display are *T.J. Leonard*, a skipjack; *Edna E. Lockwood*, a bugeye; *Chesapeake*, a lightship; and many others.

The Calvert Marine Museum in Solomons focuses on local maritime history, estuarine biology, and paleontology. Also included are the Drum Point lighthouse and many examples of Chesapeake Bay watercraft.

Massachusetts

The Francis Russell Hart Nautical Museum is on the campus of the Massachusetts Institute of Technology.

The U.S.S. *Constitution*, the oldest commissioned warship afloat, can be visited in Charlestown.

The U.S.S. *Massachusetts* is berthed in Fall River.

The Whaling Museum in Nantucket includes full-sized brick tryworks, a completely rigged whaleboat, scrimshaw, whale skeletons, and other exhibits.

The Peabody Museum in Salem has a fine display of ship models and a noted collection of scrimshaw and articles made from whalebone.

Michigan

The Dossin Great Lakes Museum in Detroit and the Mason County Museum in Ludington specialize in the shipping history of the Great Lakes.

New York

The Adirondack Museum, Blue Mountain Lake, has excellent examples of guideboats, canoes, small craft, and launches used on the Adirondack lakes.

The Thousand Islands Shipyard Museum, Clayton, has a good collection of antique pleasure boats and motors.

The Whaling Museum, Cold Spring Harbor, displays a fully rigged whaleboat, dioramas of whaling scenes, harbor scenes, whaling gear, scrimshaw, and ship and navigation gear, as well as paintings.

The Suffolk County Whaling Museum, Sag Harbor, features the history of whaling on Long Island.

South Street Seaport Museum, New York City, has an extensive collection of restored vessels. *Wavertree* and *Peking*, two of the largest windjammers, can be visited. Also on display is *Ambrose*, the famous lightship; *Mathilda*, a Canadian tugboat; *Lettie G. Howard*, a fishing schooner; *Major General William H. Hart*, a ferryboat; *Aqua*, a New York Harbor steamlighter; *Pioneer*, a Delaware Bay freight schooner; and many others.

North Carolina

The U.S.S. *North Carolina* Battleship Memorial can be visited at Wilmington.

Ohio

The Ohio River Museum, Marrietta, includes indoor and outdoor exhibits of the history of river life, commerce, and travel. Featured is the steamer *W. O. Snyder, Jr.*

Oregon

The Columbia River Maritime Museum, Astoria, centers on the history of the Northwest. It includes the lightship *Columbia*.

Pennsylvania

The *Gazella of Philadelphia*, an 1883 barkentine, is used for youth training out of Penn's Landing, Philadelphia. Also at Penn's landing is U.S.S. *Olympia*, Admiral Dewey's flagship at the Battle of Manila. The windjammer *Moshula* has been converted to a restaurant and is berthed on the waterfront.

The U.S. brig *Niagara* is a reconstruction of the ship used by Commodore Perry during the War of 1812 for the battle of Lake Erie on 10 September 1813; and is berthed at the Erie Maritime Museum in Erie when not sailing elsewhere around the Great Lakes. There are often training opportunities for volunteer crew members.

Texas

The U.S.S. *Texas*, which played a vital role in two world wars, is berthed at the San Jacinto Battleground, La Porte.

The U.S.S. *Elissa*, which is completely rebuilt, 240 feet long, three-masted, bark-rigged, and steel-hulled, makes two excursions per year from Pier 23, Galveston.

Vermont

Shelbourne Museum, Shelbourne, has exhibits including the Colchester Reef Lighthouse, a vast collection of marine prints, paintings, and scrimshaw, as well as the Lake Champlain steamer S.S. *Ticonderoga*.

Virginia

The Mariner's Museum, Newport News, contains a fascinating series of exhibits. Notable is a collection of half-plank models of exquisite workmanship.

Replicas of *Godspeed*, *Discovery*, and *Susan Constant*, the ships that brought the original settlers to Jamestown, are on exhibit at the Jamestown Festival Park, Jamestown.

Washington

The Museum of History and Industry, Seattle, has excellent exhibits featuring the marine history of Puget Sound and the Pacific Northwest.

Northwest Seaport on Seattle's Lake Union is home port for the schooners *Wawona* and *Zodiak*, the lightship *Swiftsure*, and the tug *Arthur Foss*, and is a center for wooden boats. Washington's tall ship *Big Lady Washington* is based at the Gray's Harbor Historical Museum in Aberdeen.

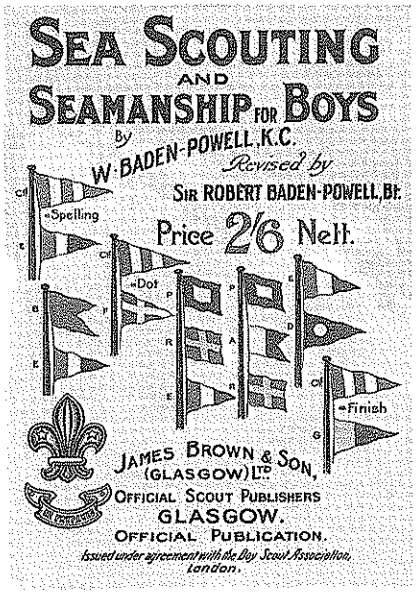
The only remaining clipper ship, *Cutty Sark*, is still afloat and welcoming visitors at her berth in Greenwich, London.

H.M.S. *Victory*, Lord Nelson's flagship at the Battle of Trafalgar, has been restored and is on exhibit in Portsmouth.

England

The History of Sea Scouting

Sea Scouting had its beginning at a campfire in England when Lord Baden-Powell voiced the hope that older Scouts would be interested in learning about boat management and seamanship. He stressed the need for young men to prepare themselves for service on their country's ships. He followed up on this discussion by publishing a pamphlet, *Sea Scouting for Boys*, in 1911.



Soon thereafter, Baden-Powell's older brother, Warington, a famous explorer and canoeing expert, wrote a book called *Sea Scouting and Seamanship for Boys*. It was enthusiastically received by the young men of Britain and soon found its way to the United States.

Sea Scouting came to the United States in 1912. That year, Arthur A. Carey of Waltham, Massachusetts, had Sea Scouts using the schooner *Pioneer*. That same summer, Charles T. Longstreth organized a Sea Scout patrol on his yacht in Philadelphia. Both of these men prepared pamphlets on Sea Scouting, and Carey's *Cruising for Sea Scouts* was the first literature related to Sea Scouting. The following year, Arthur Carey was appointed chairman of the National Committee on Sea Scouting.

The first Sea Scout manual, *Handbook on Nautical Scouting*, was written by the National Committee on Nautical Scouting chairman, Charles Longstreth, and published in 1915. This 25-cent publication provided the first written support to the new program.

Since its beginning, the Boy Scouts of America had been aware of the need for an older-boy program.

From 1912 to 1917, Sea Scouting struggled through a difficult period. And yet, with little or no national guidance, it managed to grow.

In addition, G. V. L. Meyer, secretary of the Navy, in February 1913 encouraged the development of Sea Scouting and extended the cooperation of the Navy Department. This was the beginning of a fruitful period of cooperation for Sea Scouting with the nation's armed services.

Sea Scouting received an important boost in October 1917, when James Austin ("Kimo") Wilder (a veteran sailor, global traveler, artist, and devoted Boy Scout volunteer) was secured as "Chief Sea Scout" (director) of the Department of Sea Scouting of the Boy Scouts of America. For several years, as a volunteer, Wilder worked full time for Sea Scouting.

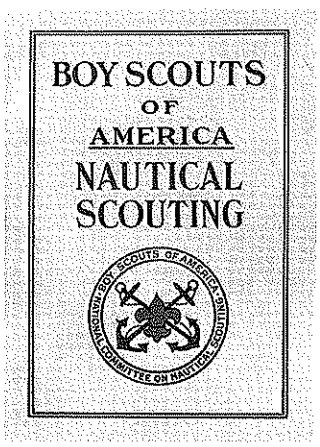
He organized the scattered Sea Scout units into a national organization that generated the first widespread interest in Sea Scouting. Gathering all of the experience and scattered bits of literature used in the program, Wilder supervised the preparation of the first true Sea Scout manual in 1919. In those days Sea Scouting followed a pattern of action that was very similar to that of a Boy Scout troop. For example: boys wore khaki uniforms. In order to register, they had to subscribe to the Scout Oath and Law and pass the Tenderfoot requirements. Membership required that a boy be 15 years of age and weigh at least 112 pounds.

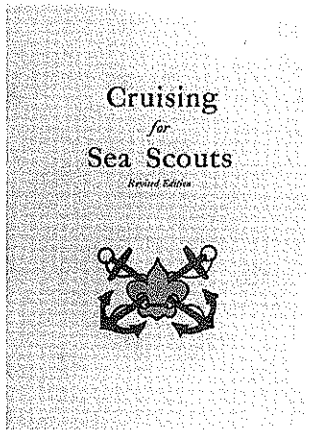
For many years the Sea Scout program was aimed at older boys who had graduated from Boy Scout troops. Sea Scout units began to be called ships, though early terminology for leaders included "Seascoutmaster" and "Portmasters."

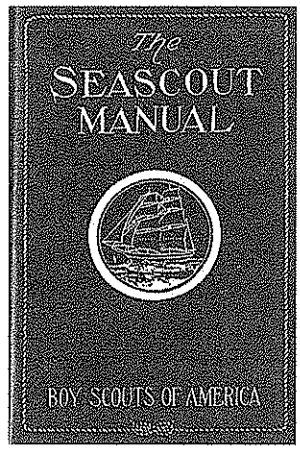
On July 15, 1920, the well-illustrated fourth edition of the *Sea Scout Manual* was printed and sold in large quantities. Then came a period of two or three years in which Sea Scouting struggled to be recognized and understood. Although membership declined, the program proved healthy enough to withstand this period of adjustment. Finally it began to grow again as more councils gave it enthusiastic support.

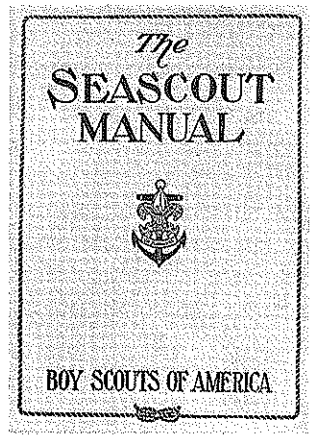
Over the years, the individual most responsible for the development of Sea Scouting was Comdr. Thomas J. Keane. Between 1922 and 1925, he completely revised Sea Scouting. He wrote the new requirements for advancement and changed the Boy Scout nature of Sea Scout uniforms into the seagoing uniform that Sea Scouts still wear today. As a result of his fine leadership, the *Sea Scout Manual* was completely revised and published in 1924.

Keane served as acting director of the Sea Scout department in the national office from 1923 until January 15, 1927. His annual report of 1925 indicates









that there were 85 registered Sea Scout ships. A similar report in 1926 revealed an increase of 38 ships for a total of 123 ships.

In 1927 Keane was appointed the national director of Sea Scouting, its first full-time professional director. In the years that followed, there was a marked increase in the number of units and boys registered in Sea Scouting. By 1930 the membership had reached 8,043 young men. In the 1930s, with the cooperation of other departments in the national office of the Boy Scouts of America, he developed training courses for leaders, new registration procedures, and more acceptable Sea Scout equipment and uniforms.

Sea Scouts were much in evidence at the first national Scout jamboree, held in Washington, D.C., in 1937. A separate subcamp for Sea Scouts was built with contingent ships from all 12 BSA regions. Highlight events included a visit to the U.S. Naval Academy in Annapolis, Maryland, and sailing on the Potomac River and Chesapeake Bay.

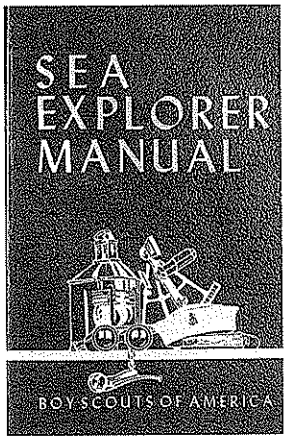
A major revision of the manual was made in 1939 by the national committee. The new version was written by Carl D. Lane, an outstanding Skipper and author of many books and articles about small ships and the sea.

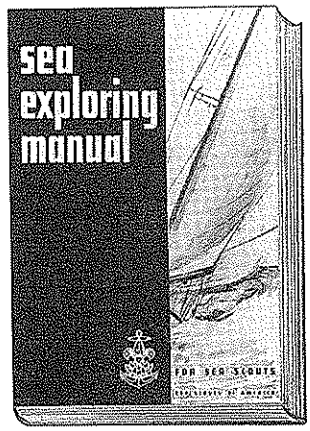
With a membership of more than 27,000, Sea Scouting served its country well in World War II. Keane was recalled to active service in the Navy and resigned his position as national director of Senior Scouting. At the outset of the

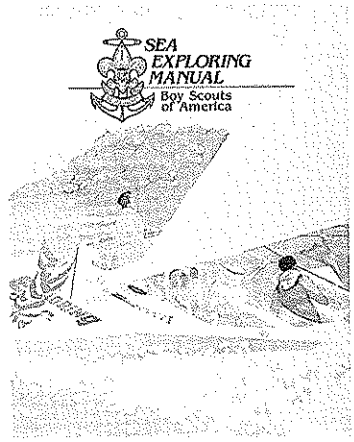
war, the secretary of the Navy, Frank Knox, issued an appeal for all Sea Scout leaders to join the service as commissioned officers. Thousands did, so many that entire ships ceased to exist for the duration of the war. Sea Scouts made a tremendous impression on Adm. Chester W. Nimitz, who sincerely believed that Sea Scouts were better trained and better equipped to help the Navy win out over the enemy and the elements.

Throughout the rest of the 1940s, Sea Scouting continued to serve the boys of America who were interested in the lore of the sea. Sea Scouts all over the nation participated in flood relief and community service. Sea Scout ships across the country held competitive and social events known as rendezvous and regattas.

Based on the written report of ship activities—the ship log—from 1929 to 1947 the national committee selected the ship with the most outstanding record to be the national flagship. Quite surprisingly, one year this honor was achieved by a Sea Scout ship located in the plains state of Kansas. Its Skipper was Dr. William C. Menninger, one of the early greats in Sea Scouting. Menninger co-wrote *The Kansan's Skipper's Aide* in 1932, which was used in 1934 as the basis for the first *Handbook for Skippers*.







In May 1949 the National Executive Board made sweeping changes in the older-boy program, as a result of a study made by the BSA Research Service. This revision of Senior Scouting recognized as Explorers all young men who were 14 years of age or older and registered with the Boy Scouts of America.

So, on September 1, 1949, the Sea Scouts officially became Sea Explorers. This was primarily a change in terminology since the old Sea Scout program continued much the same as it had in the past.

In 1954 the National Executive Board of the Boy Scouts of America authorized the University of Michigan Research Institute for Social Service to make a study of adolescent boys. This survey revealed the needs, desires, and concerns of 14- to 16-year-old boys across the nation. This resulted in a new Explorer program focused principally on vocational exploration, and was put into effect in 1959. This did not, however, immediately change Sea Exploring, where changes were postponed until there had been sufficient time to observe it alongside the new vocational Explorer program.

After five years the decision was made to revise Sea Exploring, especially in the advancement requirements. The object was to incorporate some of the new vocational Exploring elements into Sea Exploring, while preserving the integrity of traditional Sea Exploring.

After extensive field testing, the Exploring Division put the revised Sea Exploring program into effect in May 1966 with a new edition of the *Sea Exploring Manual*, written by Arthur N. Lindgren.

In 1968 the national Exploring Division placed new emphasis on Sea Exploring by naming William J. Lidderdale as the first full-time director of Sea Scouting since 1935. A new National Sea Exploring Committee, chaired by Morgan F. Fitch Jr., was formed to give new national volunteer emphasis to the promotion and support of Sea Exploring. A new *Handbook for Skippers* was written by Lindgren and published in 1971 for Skippers, mates, ship committee members, and other adult leaders.

Sea Scouting leaders across America were saddened by the death of Thomas Keane in 1984. His pioneering efforts on behalf of Sea Scouting extended over 60 years. The rich tradition and long tenure of many Sea Scout ships are a tribute to his career.

In 1998, the Exploring program was reorganized to bring back its traditional, Scouting-oriented programs into a new Venturing Division. Sea Exploring returned to its traditional name, "Sea Scouting," and became one of Venturing's five special-interest clusters, along with outdoors, sports, arts and hobbies, and youth ministries. This manual was written to reflect the changes in Sea Scouting that came with this reorganization.

Customs and Courtesies

Sea Scouting brings to its members a wealth of customs and courtesies based on the lore of the sea. Much like the international code flags on a ship, these customs and courtesies are very colorful, but as you consider them more closely, you find they are much more than just decorative. They carry a message of appreciation and respect for the great and wonderful achievements of the seafarers and adventurers of the past.

Customs and courtesies also furnish the background for Sea Scouting ceremonies and formalities. Their purpose is not only to add atmosphere, but to point out the value of respect among shipmates for the rights of others, for their own duties, and for the value of teamwork. Respect developed in this way helps a Sea Scout bridge the gap between authority and responsibility. Summed up, this is the Sea Scouts' respect for authority and, in turn, the Sea Scout leader's respect for his or her responsibility to the members.

These traditions of the sea cannot be effective unless the members and the ship's petty officers get into the spirit as they conduct these ceremonies. Some ships establish a landship with enough equipment to create the proper atmosphere.

One word of caution might be helpful. In building tradition and an atmosphere with customs and courtesies, do not overdo them. A little ceremony goes a long way; too much can become boring to those who take part, and ridiculous to those who watch.

To create the most satisfactory atmosphere, try to have a happy ship. Except in ceremonies, the ship members salute their adult officers only the first time they meet them during meetings. All ceremonies are executed with snap and order, for it is better not to have a ceremony at all than to have one carried out in a sloppy manner.

No one barges aboard a Sea Scout ship. Permission is always requested from the duty officer by anyone—visitor or member—to board. Keep in mind that it is

the custom of the sea for visitors and adult officers of the ship to come over the starboard gangway, while Sea Scouts use the port gangway, if the gangways are on opposite sides of the vessel. If both gangways are on the same side, adult leaders and visitors use the after gangway, while Sea Scouts use the forward gangway.

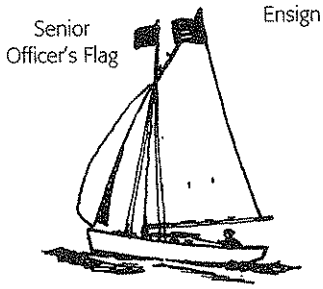
Boat Etiquette

Your conduct aboard a boat, the terminology you use, the flags you fly, your knowledge of customs and courtesies, the way you hail or salute others, all identify you to the informed observer as a knowledgeable boatman or a novice.

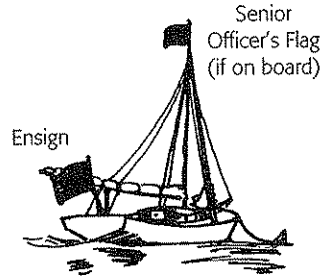
The rules of etiquette at sea are many and important. For example, nothing betrays unfamiliarity with prescribed practice quite so publicly as the unrestrained display of flags. Only a few are recognized, and they should be displayed at the proper time in the proper location.

At Anchor

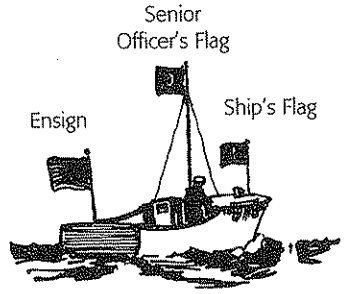
Under Way



Sloop or Cat

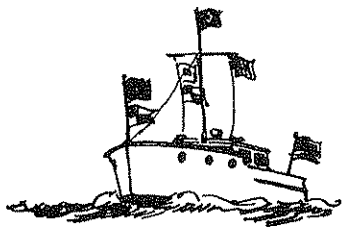


All Sailing Vessels at Anchor

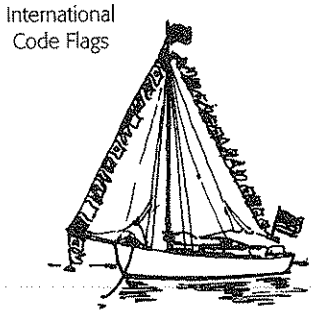


Under Way—With a Signal Mast

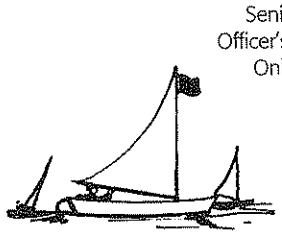
These are not ensigns and are proper only on yachts—never on Sea Scout ships.



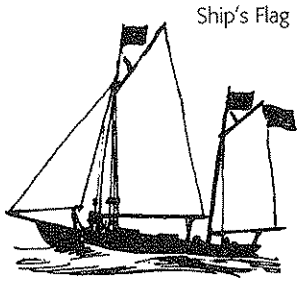
To fly all flags in the locker is poor form.



Dressing Ship



While Racing



Yawl, Ketch, or Schooner

Small craft should fly flags of the proper size. The standard rule is: Ensigns should be one inch on the hoist for each foot of waterline. Club, private, and ship flags should be $^1/_2$-inch on the hoist for each foot of waterline length. U.S. government vessels, merchant ships, and yachtsmen have carefully prescribed codes.

Colors are made at 0800 ashore or at anchor and flown until sundown. When under way, colors must be displayed day and night. In the event the vessel is in foreign waters and of U.S. registry, display of the U.S. ensign is required. The ensign is always raised (smartly) before other flags and lowered (slowly) last.

The U.S. yacht ensign is never displayed on Sea Scout vessels. Our national ensign is never dipped as a salute except by government vessels in reply to a dip. But your ship's flag may be dipped. As soon as flags are lowered, the appropriate lights are displayed.

The only flag ever flown above the national ensign on the same hoist is the church pennant, flown only when divine services are in progress on board ship.

The salute to a senior dates from Roman times when visors were lifted to reveal identities and prove peaceful intentions, just as the double salute stems from the days when shrines were located amidships and national colors aft. Making the double salute to God and country is a part of our tradition. Today these honors are paid as a mark of respect and recognition of leadership—never as a sign of inferiority.

For quick identification of boats and people and to show proper respect and consideration the following applies:

When a boat approaches a ship, it should be hailed by "Boat ahoy." The reply should identify any officer aboard the boat by stating his title, such as "Skipper," "mate," "commodore," etc. The boat then proceeds to the starboard gangway. The reply allows the proper number of side boys to be provided.

Salutes Between Boats

When distinctive flags are not flown and under ordinary circumstances, the salute generally consists of a friendly acknowledgment rendered while the boats pass.

One boat, however, may salute another, but this pertains mostly to special occasions. For instance, the crew of a boat rowing more than four oars may toss its oars, or the person in charge may salute the boat carrying an adult senior officer.

The officer of the senior boat in every case returns the hand salute, while continuing underway. Standing salutes are given only when consistent with size and stability of the boat.

Passing Boats and at Landings

Boats carrying adult senior officers are given precedence at a landing. Regardless of rank, common courtesy afloat calls for maintaining your place in line and requesting permission to pass or change position when such change may affect the other boat.

Entering and Leaving Boats

Adult senior officers enter a boat last and leave it first. As a general rule, seniors take the seats farthest aft; juniors should leave such seats for their seniors.

In ceremonies in large boats, Sea Scouts who are passengers rise and salute when a commissioned naval or Coast Guard officer enters or leaves the boat.

Good boat behavior is a mark of a good ship. At sea, in the harbor, and at landings, a good ship should always have in mind the convenience and movements of others.

Colors

At morning or evening colors, boats passing reasonably near a flag ceremony should stop engines or lay on oars or, if under sail, let fly the sheets. If the size of the boat and other conditions are favorable, available members of the ship should stand, face the colors, and salute.

On special occasions when a ship parades a guard or otherwise salutes an officer in a boat that is passing, the same procedure as above is followed.

Sea Scouts should render these courtesies when a special occasion or a ceremony creates a favorable atmosphere for special courtesy, and not merely to be "navy." Generally, a friendly greeting, a sincere smile, or a firm handshake are much more appropriate expressions of courtesy.