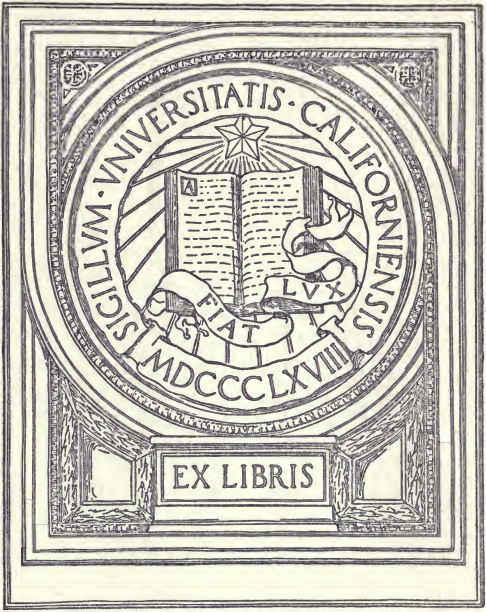
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OF MODERN KNOWLEDGE

MASTER MARINERS

BY

JOHN R. SPEARS

LONDON
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OF

MODERN KNOWLEDGE

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' The American Merchant Marine," etc

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CONTENTS

MASTER MARINERS

CHAPTER I

WORK OF UNNAMED AND FORGOTTEN MARINERS

In the long history of the Seven Seas, the story of the first really great voyage of which a record remains, is told with most unsatisfactory brevity; it even fails to give the name of the heroic captain who led the expedition. Nevertheless, such details as we have are of interest. Niku (Necho), 110, who ruled Egypt from 610 to 594, B.C., determined to open a canal across the Isthmus of Suez to enable his Red Sea war fleet to co-operate readily with the one he maintained in the Mediterranean. A ditch of considerable depth, dug by preceding Pharaohs, already extended from sea to sea, but the

task nevertheless proved too great for Niku's resources. Thereupon, in order to learn whether it were practicable for the Red Sea fleet to sail around Africa to the Mediterranean, Niku " sent to sea " (to quote Herodotus) " a number of ships manned by Phœnicians with orders to make for the Pillars of Hercules [Strait of Gibraltar] and return to Egypt through them and by the Mediterranean. The Phœnicians took their departure from Egypt by way of the Erythræan Sea [Indian Ocean], and so sailed into the southern ocean. When autumn came they went ashore, wherever they might happen to be, and, having sown a tract of land with corn, waited till the grain was fit to cut. Having reaped it they again set sail; and thus it came to pass that two whole years went by, and it was not till the third year that they doubled the Pillars of Hercules and made good their voyage home. On their return they declared—I for my part do not believe them, but perhaps others may—

that in sailing round Lybia [Africa] they had the sun upon their right hand." [1]

In that dimly-seen age, when an abundant supply of food and a kindly climate assisted in the first awakening of the human intellect, it is likely that man at once began to go afloat. For this awakening occurred, it is believed, along the River Euphrates, and the river, as soon as man had observed that logs would float, would offer the path of least resistance whenever the migrating instinct of man was aroused. A Phœnician myth says that one Usôus took a tree, "and having cleared it of its boughs, was the first to venture upon the sea." It also says that Chrysor was "the discoverer of the hook and the bait and the fishing line and the raft, and was the first man to navigate ships." The myth locates these men at the Phœnician city of Tyre, but Tyre, though it was built in 1200 B.C. (per-

[1] "Recently unearthed evidence in Egypt would seem to confirm this story." Johnston, "The Opening Up of Africa."

haps in 2000 B.C.), was established by Phœnician sailors who had already been trading upon the Mediterranean for centuries, and had even gone forth upon the Atlantic as far as the tin mines of Great Britain, it is said.

It appears that the Phœnician people, the first deep-water sailors known to history, originated on the shores of the Persian Gulf, an ideal locality for developing a race of seamen, for when they invented dugout canoes and went paddling across the gulf they found on occasion the waves slopping over the brim; bark or mats were then used to keep out the water, and from that it was easy to go forward to the use of planks, and the building of hulls with keels, frames, and planks. Having boats, the people naturally began to exchange products with other people living along the waterway. Pizarro found the Peruvians transporting goods with rafts along the coast of the Pacific, and Columbus met a big trading canoe on the coast of Central America. We may suppose, there-

fore, that when the navigators of the Persian Gulf ventured forth upon the Indian Ocean they found it a highway with winds that invited them to seek adventures both to the east and the west. A people who noted (as did those on the borders of the Persian Gulf) the course of the planets—"the wanderers"—among the fixed stars were sure to observe and use the monsoons. There are records showing that the coasts of India have been navigated for at least 9,000 years. This is not to say that the navigation was continuous. Because of wars navigation was often interrupted, no doubt, for long periods.

In the coasting trade of the Indian Ocean the Phœnicians learned the arts of the sea. The dawn of history found them already upon the Red Sea and the Mediterranean. There was a Phœnician quarter in Memphis in the year 1200 B.C. Manifestly the Mediterranean trade proved more to their liking than that of the Indian ocean, for they migrated thence and built cities—Tyre, Sidon,

and others—at points that afforded harbours and were easily defensible. The land along shore was also well adapted to the wants of sea traders, for it was first of all fertile, and it was walled in, at no great distance from the beach, by a range of mountains (Lebanon) that proved a discouraging barrier to predatory enemies.

In their new home the Phœnicians enlarged their carrying trade. Spices, incense, precious metals, and jewels were still brought from the East. The precious metals were found, too, in mines along the north shore of the Mediterranean; tin was found in Spain and in Britain, and slaves were to be obtained everywhere.

It was inevitable that these mariners should begin at an early date to add value to their crude metals by manufacturing ornaments and offerings to the gods; but the Phœnician artisans, after they migrated to the Mediterranean, were famous chiefly as shipbuilders and dyers. The mountains

of Lebanon afforded excellent timber for the shipbuilder, while the sea was inhabited by two kinds of shellfish, in each of which was found a substance that served well for dyeing all kinds of woven fabrics. By using these substances separately and combined, and by fixing the dye with an alkali obtained from a common seaweed, the Phœnicians gave to their cloths various colours, and all were so beautiful that kings and princes were willing to pay fabulous prices for them.

One story of the Phœnicians as metal workers is familiar. When the Hebrew king Solomon built his famous temple the metal work was done by Phœnicians. The story of Niku's expedition calls attention to another feature of Phœnician maritime life. The fleets which Niku owned were built and manned by Phœnicians. When Darius and Xerxes made war they depended chiefly upon the Phœnicians for their sea forces, though there were other seafaring peoples in the world at that period. In short, the Phœnicians not

only built ships for export, but they chartered warships, fully manned, to many different kings. To facilitate trade they established trading stations (once called factories) along the various sea routes. Utica, on the north coast of Africa, and Gades (Cadiz), on the Atlantic coast of Spain, were famous trading stations that developed into colonies and cities. Carthage, on the north coast of Africa, was a colony established by the runaway princess Elissar (also called Dido), on a site that had once been used as a trading station (founded 1200 B.C.), from which the colony was called Kart-Hadjat (the New City). Kart-Hadjat was later corrupted into Carthage.

To maintain their trade, century after century, the Phœnicians developed—they were obliged to develop—a high standard of commercial honour. For example, they traded with Africans whom they never saw. Going ashore, they deposited their goods in small parcels on the ground and retired until the

next day. They then found beside each parcel a heap of gold dust. Where the amounts of gold dust were satisfactory they carried them away, leaving the goods. Where they supposed they could get still more gold they left both gold and goods and retired once more, until the next day, when they found additions to the amounts of gold, and the exchanges were thus completed. Probably a Phœnician captain abducted Io, daughter of the Greek king Inachus, or some other beautiful girl. It is certain that many Phœnician captains robbed the ships of other peoples. They also traded glass beads for gold nuggets. Nevertheless the Phœnicians were the leading exponents of the " square deal " in their day. Trade implied the use of weights and measures. Coins—fixed quantities of precious metals—were developed from weights and measures. A knowledge of mathematics was necessary in trade, and some system of bookkeeping was also needed. Finally, the Phœnicians were the first people to develop an alphabet

from the picture-writing in use before their time.

In brief the unnamed and forgotten master mariners of the Phœnician ships, of whom the leader of Niku's expedition was one, carried their weights and measures, their coins, their system of accounts, and their standard of honour from the borders of China to Ultima Thule. While they gave an alphabet to the enlightened Greeks, they taught the most stupid of barbarians at least the use of weights and measures. By the display of their own manufactures they incited each customer to bestir himself in the production of such things as he had to offer in exchange; and while they stood beside their ships making bargains they told their customers the news of the world.

The hulls of ancient ships were much like those of modern wooden lighters. The frame consisted of a keel, or backbone, and ribs; and the ribs were covered with planking. The seams were caulked with fibre (sometimes

with a shell-like mortar), and one city of Phœnicia was noted for the skill of its caulkers. The ends of the planks and the timbers of the frames were bolted through and through with metal bolts which were clinched or riveted. Iron was used for temporary constructions, and brass where lasting qualities were desired. Trenails were in common use. They cut their trees in the old of the moon, thinking thus to obtain timber that would last longer. Cargo ships were of a round construction, warships long and slender. Each ship carried at least one mast, with a crow's nest at the top for the use of the pilot when entering strange waters, because under water reefs were more easily seen from an elevated station. A rectangular sail was hoisted on the mast when the wind served. (Later the Romans spread a triangular sail above the other.) The sails were often dyed or painted in various colours, and sometimes embroidered. The chief motive power, however, was the slave with his oar; and slaves

cost so little that owners had no incentive to invent a better propeller. In the larger ships the oars were thrust in through holes in the sides, these holes being made in banks or tiers, one above another. Ordinarily there were from two to five banks of oars, but ships are mentioned in history that had as many as sixteen. How these oars were arranged and handled (it is said that one ship used 4000 oarsmen), is a question over which modern naval architects have puzzled in vain.[1] Herodotus, in describing the battle of Actium, says Anthony "set fire to all the Egyptian ships except sixty; and of these the best and largest, *from ten banks down to three*, he manned with 20,000 full armed men and 200 archers." The big ships, however, were very

[1] The reader who wishes to see the discussions of two critical modern writers who have considered this subject, can find them in W. S. Lindsay's "History of Merchant Shipping," and John Charnock's "History of Marine Architecture." The two writers hold different views, the chief point at issue the meaning of the word bank—what constitutes a bank of oars, and how were the oars arranged in it.

unhandy—the ship with three banks of oars was the most efficient size. One or two heavy oars on each quarter served in place of the modern rudder.

With 200 good slaves at the oars the three-bank ship—the trireme—could be driven eight miles in an hour, and 100 in twenty-four hours. Miltiades, according to Herodotus, once covered 140 miles in a day. Early Roman triremes were 105 feet long by 11 broad; but Julius Cæsar reduced them to 90 × 10. The fighting men (marines) were stationed on elevated platforms at each end, whence we have the modern poop and forecastle. A gangway was built along each rail (sometimes one only amidships), upon which the boatswain, whip in hand, stalked to and fro to incite the oarsmen to greater efforts. The gangway was developed into a deck over all at the time when Themistocles persuaded the Athenians to build a navy with which to repel the Persians (483 B.C.).

The most important feature of the ancient

warships was the beak. An ancient Phœnician picture shows this beak located under water, while the stern of the ship rises in a way to indicate that the crew always laid her to, with the stern to the wind, when a gale was blowing. It was, no doubt, because of this practice that ancient ships were driven over such long distances by heavy storms. Very often the whole length of the Mediterranean was covered, and they fled sometimes into the Atlantic. It is reasonable to suppose that the Canaries were first discovered by the crew of a storm-driven ship, for in more modern times a Portuguese navigator, bound down the African coast, drifted across the Atlantic in pleasant weather, and so discovered Brazil. When a smooth beach was at hand the ancient sailors avoided storms by dragging their ships out of water, but a description of the tackle used for that purpose is nowhere given. A celebrated pirate named Myoparo gave his name to a swift model which he designed, but all that we know of the form is that it had no

beak. The pirates did not sink their prizes by ramming.

Said Xenophon, in describing what he saw on a Phœnician ship: "I think that the best and most perfect arrangement of things which I ever saw was when I went to look at the great Phœnician sailing vessel; for I saw the largest amount of naval tackling separately disposed in the smallest stowage possible. For a ship, as you well know, is brought to anchor, and again got under way, by a vast number of wooden implements and of ropes, and sails the sea by means of a quantity of rigging, and is armed with a number of contrivances against hostile vessels, and carries about with it a large supply of weapons for the crew, and, besides, has all the utensils that a man keeps in his dwelling house for each of the messes. In addition, it is loaded with a quantity of merchandise which the owner carries with him for his own profit. Now all the things which I have mentioned lay in a space not much bigger

than a room that would conveniently hold ten beds. And I remarked that they severally lay in such a way that they did not obstruct one another, and did not require any one to look for them, and yet they were neither placed at random, nor entangled one with another, so as to consume time when they were suddenly wanted for use. Also, I found the captain's assistant, who is called the lookout man [the modern first mate is also, at times, stationed on the forecastle], so well acquainted with the position of all the articles, and with the number of them, that even when at a distance he would tell where everything lay, and how many there were of each sort, just as one who has learned to read could tell the number of letters in the name of Socrates, and the proper place for each of them. Moreover, I saw this man in his leisure moments examining and testing everything that a vessel needs when at sea; so, as I was surprised, I asked him what he was about, whereupon he replied, 'Stranger, I am looking

to see, in case anything should happen, how everything is arranged in the ship, and whether anything is wanting, or is inconveniently situated; for when a storm arises at sea it is not possible to look for what is wanting, or to put to rights what is arranged awkwardly.' "

Remembering the deep-water voyages made by the Phœnicians we may suppose that this officer was a typical Phœnician sailor, and we see in his work how sea life developed efficiency.

The profits of the early mariners were enormous whenever the ship lived to return to her home port. For example, when Solomon and Hiram, king of Tyre, as partners, sent a fleet of traders to the far East, the profit was so great that Solomon's share amounted to 420 talents of gold.

Among the records of Carthage which have been preserved is the complete story of a voyage made by a master mariner named Hanno along the west coast of Africa (520 or 470 B.C.). The number of mulattoes in

and around the city having increased to a degree which made the rulers fear lest white supremacy be endangered, "it was decreed by the Carthaginians that Hanno should sail beyond the Pillars of Hercules and found cities" of these undesirable citizens. "Accordingly he sailed with sixty ships of fifty oars each"—warships for convoy—"and a multitude of men and women to the number of 30,000" in merchant ships. Settlements were made at intervals as far as the River Oro. Thereafter Hanno explored the coast as far as the south-east extremity of Sierra Leone; and Johnston ("The Opening Up of Africa") thinks it possible that the Carthaginians traded as far as the Gold Coast in later years.

Of all the voyages which mariners of Phœnician blood made, only this one brief story remains. There is, indeed, an account of a voyage made by a captain named Himilco along the European coast while Hanno was on the west coast of Africa. But Himilco's

account is wholly incredible, and it is supposed that he wrote as he did because the Carthaginians feared an accurate account would lead other traders to the coast. Any further account of the Carthaginians as a seafaring people must include much of the sea history of the Romans as well; for the whole story relates to the wars between the two nations. The Romans and the Carthaginians developed during the same period of time, but under very widely differing conditions. Carthage grew into a vast city that ruled many trading stations along the coasts and controlled the trade of the interior behind her stations. She also colonized most of Sicily and Sardinia. The aborigines were all held in subjection by mercenaries. Rome grew great by conquest and assimilation. Conflict arose when Rome reached out to Sicily for more territory.

Although the Etruscans were originally a seafaring people, and in spite of the fact that the imperial city supported a considerable number of merchantmen (there were many

Roman capitalists owning ships), the Romans had no navy, and the patricians ranked mariners as the lowest of all the social classes. But war with Carthage wrought a change. While the Roman armies triumphed in Sicily, Carthaginian ships insolently patrolled the mouth of the Tiber, and interrupted the communications of the Sicilian army. Accordingly, in 262 B.C., Rome decided to build a navy, and 120 large ships (modelled after a stranded Carthaginian battleship) were sent afloat within sixty days, from the cutting of the first tree for timber. And, while the carpenters were wielding axe and adze and maul, the Romans put slaves at work in rowing machines built along the beach, in order to train them to pull together One can imagine the amusement of the Carthaginians when they saw those rowing machines in operation.

Although copied as a whole, the Roman ships had one important original peculiarity. A gangplank, 18 feet long by 4 wide, was

hinged to each forecastle in such a way that it could be dropped to form a bridge reaching to the enemy's ship. As it fell, a sharp-pointed iron was driven into the enemy's deck to hold the bridge in place. The Romans recognised their ignorance of sea tactics, but they had confidence in their short swords.

This green-timber fleet met the Carthaginians, under an admiral named Hannibal* (not the great soldier), off the city of Mylæ. Hannibal, despising these landsmen, swooped down with his ships in a mob-like formation, but the Roman captains, as they met the enemy ship to ship, dropped the broad gangplanks and called away boarders. One history says "the Carthaginians were surprised." The truth is they were astounded. So many of their crews were cut to pieces—literally cut to pieces—that Hannibal himself escaped only by leaping into a small boat, and fleeing for life. This victory, however, created the pride that goes before destruction. The Romans invaded Africa and were defeated.

*All Carthaginians were named Hannibal, Hanno, or Hamilcar

A fleet that was sent to bring off the remains of the army was wrecked by a storm. A second fleet took the soldiers on board, but it, too, was wrecked by a storm. Thereafter the Romans abandoned the sea until 249 B.C., when a fleet sent afloat under Claudius was defeated at Drepana with a loss of 100 ships. It is said that when Claudius consulted the auspices before this battle the sacred fowls refused to eat. Thereupon, in disgust, he said, "Throw them overboard. At any rate they shall drink!"

Very likely this lack of reverence was not without serious influence upon the crews of the Roman fleet. Later, when, with 100 warships, Claudius was convoying a fleet of 800 transports along the coast of Sicily, he refused to heed the pilots who told him that a hurricane was coming. Lacking sea experience, he could not believe them. And when the storm came it wrecked every ship of the command. In the first fifteen years of the war the Romans lost 1,400 ships, but they

were not beaten—they had "not yet begun to fight." To avert an impending invasion of Italy they built, by private subscription, another fleet of 200 warships. It was relentless persistence that made the Romans—that makes all great men—irresistible. When this fleet, under Consul Catulus, met the Carthaginians, in 241 B.C., it inflicted a decisive defeat, and the war came to an end. The Carthaginians paid an indemnity equal to £800,000. The amount is worth noting because the Carthaginians had the gold in hand. Their merchant fleets had been able to keep the sea and earn money to support the war.

The Second Punic war was not notable for naval battles, but it may be noted that the Carthaginians, at the end, paid an indemnity equal to a million pounds, and gave up all their warships except ten, which they were allowed to keep to defend their merchantmen from pirates. After the signing of the treaty, a fleet of 500 warships was towed out of the harbour and burned before the city. The final

war, 149 to 146 B.C., was also decided on land. For four years the Carthaginians endured a siege, and "when resistance ceased only 50,000 men, women and children, out of a population of 700,000, remained to be made prisoners." The rule of the restless master mariners of Phœnician blood over the sunlit seas was ended forever.

If we consider the state of civilization when the Phœnicians first became masters of the sea, their work for the development of civilization, however unconsciously done, is seen to be wonderful. They found the world peopled with isolated tribes of savages, but the waters, which had served as barriers to keep those tribes apart, became, through Phœnician genius, highways over which one people passed easily to another. That blood lust was often the impulse that led the savages to use the highways is all too manifest in history; but at all times the number of ships engaged in enlightening commerce must have exceeded those afloat for war; and that

was and is the sure promise of future peace. It was the work of the Phœnicians to teach each isolated tribe what of good was to be found in other parts of the known world, and they did it well.

Nevertheless, because of one mental defect, the Phœnicians were to give place to a higher order of seafaring men. That defect was at bottom a lack of imagination. Though the Phœnicians were among the earliest workers of metals, and the discoverers of the most beautiful of dyes, they never carved a statue that was other than hideous, or wove a fabric worth preservation. Their jewelry was sought only because it was of massive gold. The metal work on Solomon's temple was famous because of its extent and cost, not for lines of beauty. The Phœnicians never painted a picture; they had no knowledge of real music. Though they were the first to develop picture-writing into an alphabet they never wrote a poem, and the one history credited to them is but a proof that they had

no literature. They never saw the glories of a sunset, and a clear sky at night gave them pleasure only because they were then able to steer their ships by the stars. The one incentive that stirred the Phœnician to action—even him who braved the dangers of the Bay of Biscay—was the love of money*; and wealth was sought solely because it would enable its possessor to live in idleness.

Compare, now, Hanno's story of his voyage down the African coast with that told by the Greeks about Jason. Jason was a prehistoric ship captain who went to the Black Sea for gold, but the Grecian writer says that it was a golden fleece, not the sordid metal, that he sought. The sweaty toils at the end of the voyage were conflicts with supernatural beings. The hero, instead of killing and flaying native women (as Hanno supposed he had done), made love to the beautiful Medea, daughter of the king. After winning her favour it became easy to yoke the fire-breathing bulls to the plough, to overcome the dragon's

* Naturally! the Phoenicians were

brood, and to soothe to sleep the dragon that guarded the fleece. The work of the Phœnicians came to an end because their thoughts never rose higher than a talent of gold. The Greeks continued the work of civilization because they were poets and artists and musicians.

At the dawn of history it is seen that the Greeks had, by aid of their master mariners, established colonies on all the islands of the eastern Mediterranean; along the coasts of Asia Minor; on the shores of the Euxine; in Sicily, and Italy. At Marseilles was once a Greek city to which Romans sent their children to be educated. No comparison of the influence of such a colony with a mere trading station need be made. Though the Greeks were followers, not pioneers,[1] their

[1] It is true that Pytheas, a Greek born at Massilia (Marseilles), who was a contemporary of Alexander the Great, sailed along the coast of Europe as far as Scotland, and named the islands, lying still further north, Thule. Because he said he saw sea water covered with mush ice "like a jelly fish" some writers doubted his story!

work was more thorough as well as of a higher grade in the regions they did reach. Moreover, the Greeks were always pupils as well as teachers. They learned from the Phœnicians to steer by the north star, which they called the Phœnician star. They took religious ideas from Egypt, where elevating religious theories prevailed before the Hebrews were slaves on the banks of the Nile. Lycurgus, Solon, Pericles, Herodotus, and many another Greek, crossed the sea in order to gain wisdom among peoples of different origins. Herodotus, in describing the cities he visited, never fails to mention the works of art "worth seeing." The Cnidian Aphrodite was so beautiful that "pilgrimages were made from remote countries to Cnidus for the sake of looking upon the matchless statue;" and the myth says that this goddess of love was born of the white sea foam. The "Victory" of Samothrace, perhaps the most inspiring of the Greek works of art that have been preserved to this day, was a ship's

figurehead; while Homer's "Odyssey" is the story of the wanderings of one who was a master mariner as well as a warrior of the land. The Grecian people, the people of Greater Greece, grew up in the midst of the sea, and much of the best of their work was inspired by its waters. The decisive battle in the long war against the Persians was that fought afloat at Salamis, where genius prevailed against brute force.

Every spread of a superior race has made for the enlightenment of peoples less gifted. Alexander the soldier gave a tremendous uplift to the peoples he conquered. Though not a seaman he saw the advantages of seaborne commerce. He planned a canal from the Caspian to the Black Sea, and he was preparing to follow where Niku's explorers led when death claimed him. At the time of Alexander only three cities of the world, Athens, Syracuse and Carthage, had populations numbering 100,000. Because of the growth of commerce after Alexander's time,

—a growth due to the spread of Greek civilization,—we find, a hundred years later, four cities with more than 200,000 inhabitants each—Seleukia, Antioch, Alexandria, and Carthage, while Syracuse then contained many more than 100,000, and Rome, Corinth, Rhodes and Ephesus boasted of at least that number. More notable still is the fact that Alexandria, a city founded for the benefit of Greek mariners—for the promotion of trade with India—was famous as a seat of learning. Every schoolboy has read of its library, its University of the East, and of the "Alexandrian Age." A time came when a Roman army, under Lucius Mummius, decisively defeated the Achæan army under the walls of Corinth, and Greece, as a political entity, came to an end; but for a hundred years theretofore, and until the end of the Empire, all Rome bowed to the yoke within the walls of the Greek Lyceum.

Students who have read the history of the earth and its inhabitants from the beginnings,

as written in the rocks, have seen therein the story of a continuous development—a most wonderful and cheering story. Each geological period afforded an environment suitable for a higher form of life than that of the preceding one, until man appeared. In like manner man himself has continuously evolved. The Phœnician artisan-navigators carried some of the beginnings of civilization wherever their restless keels parted the waters, and when they had reached the limit of their powers the Greeks began to forward the work and prepare for a higher civilization yet to come.

CHAPTER II

MARINERS OF THE DARK AGES

AMONG the barbarian peoples who invaded the Roman Empire during the period of its decay none inspired such terror as the Huns, "a monstrous race of fierce nomadic horsemen from the vast steppes of Asia . . . Their features were hideous, their noses were flat, their cheeks were gashed to render their appearance more frightful." It was the boast of their leader, Attila, that even the grass never grew where his horse had trod. When these Asiatics reached the plains of the Po (A.D. 451), an uncounted number of people from Padua and other near by towns sought refuge in the tide-soaked mud banks at the head of the Adriatic, where they founded the settlement that grew into the city of Venice. Of the characteristics of

these fugitives history says little, but we may feel well assured that most of them already knew something about the Adriatic, for otherwise they would have soon starved in the swamp. Without doubt, too, they had boats, fishing tackle, and kitchen utensils; but in their poverty and distress "they little thought, who first drove stakes into the mud, that their children were to be the princes of that ocean."

We may imagine their early work—how they turned to the sea for fish when hungry, and when salt was needed for their fish how they evaporated the sea water in their kettles, using for fuel the alders that grew on the higher banks. Fish, fuel, and salt, these only the sea provided, but with no other products the Venetians would manage to get on. For when other things were needed—clothing, fish nets, boat timber,—the salt which they produced from the sea could be exchanged at a profit for the products of the firm land at any port.

It was in 451 that this settlement was first established. When Cassiodorus, King Teodoric's chancellor, was travelling in that part of Italy he wrote letters (Weil, " Venice ") in which he praised the tranquillity of life in Venice and " the simplicity of their habits, since rich and poor alike have but one kind of food, namely fish," a somewhat exaggerated statement, one may suppose, but yet descriptive of their poverty. Because they all lived in the same sort of houses they were " above the jealousies and envies " found elsewhere. Moreover they had, he said, a trade in salt that served them better than a gold mine.

They carried salt, in those early days, to all the ports of the Adriatic. When the salt had been discharged they naturally chartered their boats to any one in need of transportation, and because they lived constantly upon the sea a cargo intrusted to their care was more likely to reach its destination than one in the care of any other seamen. Cassiodorus knew them for their seamanship as

well as for their poverty. He wrote a letter to the leading men of the settlement exhorting them " in a tone of mild authority to animate the zeal of their countrymen for the public service, which required their assistance to transport the magazines of wine and oil from the province of Istria to the royal city of Ravenna." Charnock (" History of Marine Architecture ") notes that in these early days the Venetians, " who were among the first people who acquire celebrity as a naval power after the invasion of the Goths, derived their first instruction in " shipbuilding from the people of " Jedara, a town in Dalmatia, on the river Jader, which falls into the Adriatic." The Jadarans were the best shipbuilders on the sea, and the open-minded Venetians went to them for instructions. Gibbon notes, also, that at this time the Venetian ships, which " were constantly increasing in size and number, visited all the harbours of the gulph."

The power of Rome was declining. The carrying trade of the sea was therefore de-

creasing, and " hard times " prevailed afloat. But it is at such times that new blood in any trade wins its way. When Justinian wished to besiege Ravenna, he turned at once to Venice for the transports needed. In 584 the Venetians were invited to form an alliance with the Empire of the East, and secured the right to trade at Constantinople " free " from vexatious tolls and delays." The trade of Asia, with its silks (saleable for their weight in gold), spices, and incense, was now within the grasp of these mariners, who had acquired the habit of thrift and enterprise in the days when they were restricted to a diet of fish, and their sole export was sea salt.

In this story one sees the sort of " luck " that comes to those who are fit to grasp it. After the Venetians had built up a prosperous trade with the Levant, all Europe was stirred by a call for volunteers to free the Holy Land from the dominion of the Mohammedans. The Crusades have been interestingly considered in Davis's " Medieval Europe " and

Perris's "War and Peace"; but it must be said here that in these Christian hegiras thousands of knights and soldiers were to be transported to the Holy Land, and that the Mediterranean afforded the path of least resistance. Genoa and Pisa had merchant shipping at that time, and they carried the earlier Crusaders to the Levant because Venice refused to do it. She believed the war would interfere with trade. But in time it was seen that the Crusaders developed trade, and then Venice grasped the larger part of the traffic.

Thereafter they made every venture yield large profits. While they contributed toward the expenses of an expedition, their freight rates were high enough to cover all outlay and leave them a profit. Sutlers sailed with the forces to magnify and supply the wants of the fighting men. Commercial travellers, to drum up trade in the foreign lands, were found in every fleet. Each charter party signed by the knights was made to

provide that the Venetians should share in the territories as well as the plunder to be gained; and the share always demanded shows that shrinking modesty was not a Venetian characteristic. In the Fourth Crusade the knights were inveigled into a contract to pay more freight and passage money than they could raise, whereupon the Venetians took from them their plate and jewelry; and on finding that even then the price of transportation was not raised they dragooned the knights into sacking the Christian city of Zara, with which the Venetians were at war, and finally to assault and sack the city of Constantinople.

At the height of their power the Venetians traded to all known ports on the Mediterranean and the Atlantic. In each ship making long voyages they sent poverty-stricken young patricians to learn the ways of trade. At the same time the merchants of Europe sent their sons to Venice, not only to learn the arts of shipbuilding and of trans-

portation, but bookkeeping and banking, which had been far advanced in that city. Commercialism in its grossest forms was developed in Venice. The people openly boasted that "We are Venetians, then Christians." They literally betrayed their religion for gain, as Ruskin said. But it is to be remembered, on the other hand, that in their beginnings, when other poverty-stricken Mediterranean seamen took to piracy to secure wealth, the Venetians sought trade and exterminated high-seas robbers. They would plunder Constantinople, but it is not charged that they adulterated their pepper. Shylock demanded his pound of flesh, but he did not tamper with the scales.

Nor is that all, or even the best, that can be said in praise of the Venetians. Like the Greeks they developed from the earliest days a marvellous love of art; and it seems all the more marvellous when we consider their home environment. Inspired by their love of the beautiful, the Venetian ship captains

sought everywhere for works of art. While they loaded their ships with the produce of the world they reserved space for what would adorn Venice—especially for the marbles that might be used in the building of churches and palaces. Though the Venetians lived on land that never produced a tree or an atom of iron or of brass, they built the best ships of the time. Although they lived in the midst of a swamp that created an indescribable " horror of heart " in the soul of an artist (Ruskin), they built homes and churches that in architectural beauty were unequalled. And they began this splendid work while yet they had no other merchandise than salt taken from the sea.

Of the mariners of Genoa, Pisa, and Amalfi, we need say nothing. While each flourished in its day, and cultivated and spread civilization, neither had as great an influence in this respect as Venice: and neither developed any memorable peculiarity of ship or sea commerce.

In the meantime, civilization based more or less on sea traffic had been slowly developing on the north-west coast of Europe. Under the Roman rule (which began about a hundred years after Cæsar's invasion), Britain acquired some of the Roman gloss, and London became a port having a trade with the Continent. The Danish and Saxon invasions followed, and the old histories discuss at length the character of the ships which were used in that day; but in such matters there is nothing of interest here save only as the conquests influenced the native population by intermarriage and by keeping their attention fixed upon the sea. It may be recalled, however, that Britain had then an export trade in wool which continued for centuries, and that Indian and Mediterranean goods were imported.

With the growth of Venice a trade route was opened across the Alps. Because the merchants learned in time that the sea was the path of least resistance for this northern

trade, Venetian ships began to follow the coast of Spain and France to Flanders (Belgium), where Bruges became an important port, with London a convenient port on the way. It was the turmoil of commerce that carried the civilization of the Mediterranean to the north-west of Europe.

Another race of seamen to be considered here was the Norsemen or Vikings. A most interesting people were the Vikings, even before they began cruising. "They understood in their hearts that it was indispensable to be brave. . . . They thought it a shame and misery not to die in battle; and if natural death seemed coming on they would cut wounds in their flesh that Odin might receive them as warriors slain. Old kings about to die had their body laid into a ship; the ship was sent forth with sails set and slow fire burning it, that, once out at sea, it might blaze up in flame and in such manner bury worthily the old hero."

Life among the crags of the fiords was

sustained only by hard labour, and yet the Vikings had a literature, myths, poetry, history, as inspiring as that of Greece. It was a literature that was created beside the blazing logs of the fireplace in the long winter evenings, and with the roar of the surf coming up from the beach hard by. Recall the story of Thor, the thunder god, and his adventures at Utgard. "A great Brobdignag grin of humour is in this" story: "mirth resting on earnestness and sadness as the rainbow on the black tempest." Compare this humour with that of Greece. All the Greek gods, "at the sight of Hephæstus limping across the palace floor, burst into 'inextinguishable laughter.'" They laughed at a limp. The Vikings' "grin" appeared when they recalled how Thor was inveigled into thinking he was draining a horn of good liquor when in fact he was trying to swallow the sea; or how he supposed he was wrestling in the presence of the people of Utgard with a decrepit old woman when

he was in fact grappling with relentless old age.

In A.D. 784 the Vikings came to England. They were called pirates, but one will have hard work to find an ethical difference between their raids and the conquests of more civilized peoples. They also rounded the north of Scotland and came down to Ireland. They ravaged the mainland as far as Gibraltar and entered the sunlit Mediterranean. They entered the Arctic and travelled east as far as Archangel—a fact that seems worth mention, if only to show that plunder was not the sole incentive behind their explorations. In the Viking was an instinct that, above all other influences, stirred his blood, and that was the love of adventure. In 874 the Vikings went to Iceland, where " it was not long before the population exceeded 50,000 souls. Their sheep and cattle flourished, hay crops were heavy, a lively trade—with fish, oil, butter, skins, and wool in exchange for meal and malt—was kept up with " Europe. In

876 a storm drove the ship of an Icelander named Gunnbjörn to the coast of Greenland (theretofore unknown), and it was held in the ice there—no doubt in a fiord—all winter. In the spring the crew rowed back to Iceland. The story of this mishap was told by the firesides until 983, when one Eric the Red killed a man in a fight and was outlawed by the community. Thereupon Eric shipped a crew for his boat, and pulled away to the new land where the storm-tossed Gunnbjörn had wintered. After exploring the fiords from Cape Farewell to the site of the modern Upernavik, he returned to Iceland, where he invited emigrants to go to the new land. Red Eric was the original American " boomer." He advertised the new land under the name of Greenland, not because it was green, but because, as he said, " there is nothing like a good name to attract settlers."

Eric carried away twenty-five shiploads of settlers with their dunnage, and although eleven ships were wrecked, the fourteen that

arrived made a settlement called Brattahlid, on the Igaliko fiord, where their descendants flourished for more than 400 years—literally flourished. The traveller who ventures to the coast in these days can see the remains of the old stone buildings yet standing. From this settlement it was inevitable that journeys should be made to the American coast. The story of those journeys need not be told here, but we will note that in the year the colony was established in Greenland an Icelander named Bjarni, who had been harrying the coasts of Europe, returned to Iceland "to drink the Yuletide ale with his father," only to find that his father had emigrated to Greenland. Nothing daunted, Bjarni followed him. Greenland ice in December amounted to little in the calculations of a Viking, one would say. On the way, however, heavy gales with thick weather carried the boat out of the right track, and when the weather cleared Bjarni saw, instead of the bare rocks and snows of Greenland, a low coast covered with a

heavy forest. Thereupon, having a south-westerly wind, Bjarni put up his helm, " and after scudding nine or ten days with a brisk breeze astern " he reached the Greenland fiord where his father lived. The passage from Iceland to a coast south-west of Greenland and thence to the original destination, was made at a time when there was no compass, nor a quadrant for taking the altitude of the sun, nor any instrument for learning the speed of the ship through the water. That is a statement of facts which helps to an appreciation of the courage and resourcefulness of the Viking sailor.

Meanwhile the Norsemen came down through the British Channel to settle on the adjoining lands—especially in England, where the environment proved congenial. We who speak the English language are a mongrel race, but of all the peoples to whom we look as our ancestors there was not one with a history that stirs the blood like that of the Vikings.

Another race of seamen who were of some note in the Dark Ages was the Saracen. The Saracens dominated the Mediterranean in the eighth century, at which time they also controlled Sicily, Sardinia, and Spain. As followers of Mohammed these Arabs swept over Arabia, and they secured the commerce of the Indian Ocean and the Red Sea. They were able to maintain themselves in it, too, for a time after the Portuguese, Dutch, and English had entered it by way of the Cape of Good Hope. They were pioneers on the east coast of Africa, extending their trading stations as far down as Madagascar. The Emosaid family, " descended from Ali, cousin and son-in-law of Mohammed," were the first to build up that part of the African trade (A.D. 742).

Careless readers, on seeing any mention of Mohammedans, think at once of the then very brutal Turks. But the Saracens were a most enlightened people. The Crusaders found that " the Saracens could teach them lessons

in honour, courtesy and mercy as well as in mathematics and astronomy, medicine and engineering" (Perris: "History of War and Peace"). "The civilization of the peoples under Arabian rule was, when tried by almost any test, and certainly by any economic test, incomparably higher than that of Christendom." Reference to the Turks, as distinguished from the Saracens, is of interest because their appearance upon the Mediterranean had an important influence upon the work of the great mariners who are to be described in the next chapter. To understand this Turkish influence we must remember that, after the Venetians had placed princes of the Western Church upon the throne of Constantinople, the Genoese restored the Greek reign, and then treated a Greek emperor so shabbily that he declared war and called on the Turk to help him. As a result of this appeal the Turks crossed permanently into Europe. By 1365 they had overrun Thrace and Roumania. Adrianople was captured

in that year, and, finally, in 1453 Constantinople itself was taken. Thereafter but one trade route to the East remained open to Christian merchants—that through Egypt—and it, being in Saracen hands, was heavily burdened with tariffs. Worse yet was the burden imposed by the wars between the Christian powers, and the unceasing dangers from Turkish corsairs. While the growth of civilization was increasing the demand for Indian goods, the conditions under which the trade was conducted were becoming so difficult as to approach near to prohibition. Moreover, the Turk was reaching out to grasp Egypt. The total destruction of the trade, so far as Christian powers were concerned, might well have seemed impending.

Nevertheless, it is difficult long to study history without being haunted by the idea of development. It has frequently happened in the evolution of civilization that the evil which seemed most portentous was but an aid to further progress, and it was so now.

With the growth of the burdens upon the commerce of the East men began asking whether the old Greek story about an all-water route to the Indies was not, after all, true; and then a far-seeing Christian prince began a series of explorations that was not only to reveal the route he sought, but was to work such marvellous changes in the world that only those who have given the matter special study are able to appreciate what was accomplished.

CHAPTER III

THE OPENING-UP OF THE ATLANTIC

THE prince who prepared the way for Columbus was Henry the Navigator, of Portugal, son of John I, the "King of Good Memory," while his mother was Philippa, daughter of John of Gaunt. In order to comprehend the work of this prince, the fact must be recalled that while the magnetic needle had been applied to navigation, no way of reckoning longitude was known except by guessing the day's run in miles; and it was the custom of the day for ship captains to sail first of all directly to the latitude of the destination and then east or west along the parallel. Taking the altitude of the sun for latitude was understood, but the astrolab, or instrument used for the purpose, was not accurate within

a degree or so. It is also important to remember that for nearly seven hundred years the people of the Iberian Peninsula had been constantly waging war to expel the Saracens (Moors). Naturally these people received little of the benefit which the Crusaders brought to other parts of Europe. At the same time constant warfare at home deeply affected their ideals. The career of the soldier seemed glorious, that of the producer contemptible. The people of Portugal were freed from the Moors years before those of Spain. Thus the Portuguese were able to devote their capital to industrial uses; and because the Atlantic was free the people turned naturally to sea commerce. In 1294 a commercial treaty was made between London and Lisbon, and at the time of the marriage of King John I and Philippa, a sort of Triple Alliance was consummated between Portugal, England, and Flanders.

A number of early voyages upon the Atlantic are worth mention. In 1270 Lance-

lot Malocello sailed to the Canaries, the Fortunate Islands of the ancients. In 1341 an expedition heading for the same islands reached them in five days. In 1346 Jayme Ferrara, having heard through caravan traders about the Gold Coast, tried to reach it by the sea route, but reached the port of missing ships instead. In 1370 Robert Machin, an Englishman, eloped from Bristol with a sweetheart, and was driven to the Madeiras by a north-east storm. There he and the lady died, but the sailors crossed to Africa in a small boat, where they were enslaved by the Moors. Later, another slave there ransomed them, and one of them carried their story to Portugal, where Prince Henry heard it. In 1400, a Seville captain bound to Oporto was blown to the Grand Canary, and when he returned, the story of life on that island inspired "Jean de Bethencourt, Lord of Gramville, and Gadifer de la Salee, a needy knight," to "conquer in the sea a new kingdom for themselves"—that is, colonize some of

that group. In this they succeeded; it was the first expansion of Europe toward the west since the days of Viking activity. The Canaries became a handy stopping-place for later explorers.

Prince Henry was born in 1394. The career of a warrior opened before him, and he proved that he was a good fighting man; but he chose to build a palace, an astronomical observatory, and a chapel on the extreme point of Cape Vincent, where he devoted his life to a study of the sciences. He gave special attention to geography, gathering around him the ablest navigators of the day, and sending them away to test the theories of the learned by actual exploration. The learned then held two theories regarding the earth as a whole. One was that promulgated (127-151) by Ptolemy, (Claudius Ptolemæus of Alexandria), whose map of the world depicted Africa as a vast continent that extended eastward around the Indian Ocean, and finally connected with a south-east extension of Asia. He also held

that Asia extended for a vast distance eastward, and ended in impenetrable swamps. Aristotle had said that a voyage across the Atlantic would bring the mariner to Asia, but Ptolemy was confident that because of the swamps it was not worth while to make such a voyage. Another theory of the earth, and one that was in favour with Western scholars in Prince Henry's day, was that of Pomponius Mela (A.D. 50), who taught that the earth consisted of continents surrounded by water, and that Asia—India—was therefore to be reached by a passage around Africa. It was this proposition that Prince Henry tried to demonstrate; but in the beginning of his work at Cape Vincent he at first aimed to reach the Gold Coast, with its nuggets, of which he had heard when he was fighting the Moors in Africa.

Contemporary authority says that Henry's vessels were "the best sailing ships afloat." They were partly decked rowboats carrying crews of thirty and upwards each. His

first memorable expedition was made in 1418, when John Gonsalvez Zarco and Tristam Vaz sailed down the African coast, and were caught by a storm that carried them to Porto Santo. The colonization of the Madeiras followed that venture. Thereafter several voyages were made, but nothing was accomplished until 1428, when one of the prince's brothers brought from Venice a map known to historians as the Laurentian Portulano, made in 1351, wherein the cartographer had made a remarkably good guess as to the form of Africa, and on which, too, the Azores were depicted. Henry's sailors soon located those islands a thousand miles out in the Atlantic; but when they were sent once more down the African coast superstitious fears stopped them. A long reef ran out to sea at Cape Bojador, and the tide-rips were fearsome; but the chief trouble in their view was that God did not want them to pass the cape. He would turn them black if they did so—and they were from a white man's country!

Moreover, a little farther down the coast was the torrid zone, where, as they believed, the sun's rays came down in liquid flames; a belief that was shared by men of learning. The fact that Saracens were trading as far south as Madagascar was unknown or unheeded in Portugal. However, in 1434 Gil Eannes, after turning back on a previous voyage, did round the cape, and, to the great surprise of everybody but Henry, found that the water there was "as easy to sail in as the waters at home," and "the land very rich and pleasant." The next year another ship sailed 390 miles beyond the cape. Then exploration dragged until 1441, when Antam Gonsalvez sailed as far as Cape Blanco, and brought home a number of natives captured in a night raid.

This voyage opened the African slave trade upon the Atlantic. Among the Africans captured was a chief who offered to give ten slaves in return for liberty for himself and two boys who had been captured. Henry

accepted the offer, for an interesting reason. He believed and said that if the three returned to Africa their souls would be lost, but on the other hand the ten to be brought back would be saved—a net gain of seven to the glory of God. It is hard now to get the right point of view in this matter, but the fact is that a sincere desire to save souls was united with greed. The slave trade, seasoned later with gold dust, ivory, and pepper, kept the Portuguese nation interested in African exploration long after Henry's death in 1463.

Advances were made slowly. When the Turks took Constantinople, the explorers had gone no farther than the Gambia. In 1460 Diego Gomez discovered the Cape Verde Islands, and two years later Pedro de Cintra reached Sierra Leone. Perhaps the most important feature of this work was the effect upon the Portuguese seamen. In 1471 Joño de Santarem and Pedro de Escobar, turning south in the Bight of Biafra, continued

down the coast until they crossed the equator. For the first time on record since the days of Pharaoh Niku, civilized man entered the region where the sun is to be seen usually at the north of the zenith. Of still greater importance was the fact that the explorers found the coast running to the south, when they thought they would soon reach the entrance to the Red Sea according to the theories of Mela. The discovery was discouraging, for no one could tell how far the route to India would be prolonged, even if there was a route around Africa. Nevertheless, this very disappointment proved to be an incentive to still greater explorations. For Christopher Columbus was one of the seamen in those ships, it is said; and when the unexpected southerly trend of the coast was seen he began to consider the feasibility of making a voyage to India by sailing west across the Atlantic.

In 1484 Diego Cam sailed down to the Congo, and a year later a thousand miles farther. Meantime, the success of the explor-

ers with government ships was arousing the merchants to individual initiative; many private ventures were made, and missionaries were at work on the coast. The success of the missionaries led the black king of Benin to ask King John for a missionary, and the ambassador preferring the request told the king about a monarch in East Africa whose chief fetich was a metal cross. This monarch lived a thousand miles east of Benin, it was said. The tale led to an expedition that found its way around the point of Africa. King John supposed the African monarch with a cross must be Prester (Presbyter) John, a mythical person of the Middle Ages; and, after sending one messenger to seek the far-away court by an overland route, he despatched Bartholomew Diaz with three caravels, in August, 1486, to follow the African coast around the south end, happen what might. At a point 400 miles south of the tropic of Capricorn, Diaz left the coast; and for thirteen days the three caravels were driven

before a northern gale. Then they turned to the east, and, having failed to find land on that course, after a few days they headed north, and reached the African coast near the Gauritz River, 200 miles east of the Cape. Thence they went on as far as Great Fish River (33° 30′ south, 27° 10′ east). Diaz believed the Red Sea was within reach, but the sailors refused to go farther.

We may think those sailors were foolish, for it is now impossible to comprehend their feelings. With all the world mapped, and steamers plying to the farthest ports, how can we take the point of view of men who had been driven for thirteen days before a gale away from an unexplored country that was thousands of miles from home? The route that these men had covered when at last they reached Lisbon was about 13,000 miles long. On the way home, Diaz saw the cape and called it Stormy Cape, but King John II changed the name to Cape of Good Hope.

Among the men on this expedition, was Bartholomew Columbus. To him, as to all the others, the route to India now seemed plain; but he and his brother Christopher, who was then in Spain, thought the route far too long. In their minds the route to follow was that to westward across the Sea of Darkness.

The story of Christopher Columbus never loses interest. He was a boy of humble birth who "made good," and that, too, in an age when social differences were vastly more important than now. Columbus was born in or near Genoa, probably about 1436, of parents who were weavers. His father "was always in debt, and died poor." There were five boys and one girl in the family, and of the boys Christopher and Bartholomew went to sea—"at a very tender age," Christopher said. Although no record of his life before the mast has been preserved, one can get an idea of the conditions then prevailing from a glance at the laws of the sea and the

tales of travellers. Flogging was one of the lightest of the punishments lawfully inflicted. Slitting the ears, cutting off the nose, and branding were methods of punishment legally inflicted at sea; and the admiral of a fleet might cut out the tongue of a sailor who was insolent to his captain. For capital offences, impaling alive was a common punishment.

In their living quarters the sailors were crowded together like hogs in a pen, and their food was often indescribably vile. But, in spite of the hardships and of the mortal diseases that raged in such an environment, Columbus grew to manhood with a rugged body and an alert mind, and he managed meantime to acquire an excellent education. He also became noted as a chart-maker.

About the year 1470, Christopher and Bartholomew Columbus went to Portugal, where they made charts and went to sea in the exploring ships sent down the African coasts. It is believed, as said, that Columbus was with Santarem and Escobar in the voyage of 1471

when the southern trend of the African coast was discovered. At any rate, it was then, when all others were discouraged at the outlook, that Christopher began to consider the possibility of the western passage to Asia. Having married (1473) the daughter of a former governor of one of the Madeira islands, Columbus went to the island, and remained for about a year. While there he devoted himself to study more assiduously than ever. A favourite book at this time appears to have been the story of Marco Polo's life in China—"Cathay." [1]

As Columbus read this volume, he filled the margins with notes. The statements

[1] In 1271 Marco Polo, a lad of seventeen, went with his father and uncle to China, where the elder men had already been on a trading expedition. China was then ruled by Kublai Khan, a benevolent despot who encouraged trade and foreigners. Being useful, the three Venetians were detained until 1292, when they returned to the Mediterranean by following along the Asiatic coast from Chinchow to the Persian Gulf, and crossing thence overland to the Bosphorus. If not a "best seller," the book containing the story of the adventures of these Venetians has had a good sale ever since it was published.

most interesting to him were those regarding ports along the east coast of China, together with those describing Cipango, the island empire offshore now called Japan. Here were statements of fact which, if true, destroyed Ptolemy's theory of an extension of Africa reaching around the Indian Ocean to Asia. Most "armchair" explorers of the day rejected Polo's story; Columbus accepted it implicitly. Another learned man who accepted it was Toscanelli—"Paul the physicist." Toscanelli drew a map of the world, a copy of which was sent to King John II of Portugal with a letter dated June 25, 1474, and later, another copy was sent to Columbus. The map portrayed the coast of Asia according to the Polo descriptions, including many small islands lying far off to eastward well over toward the coast of Portugal; for Toscanelli believed the earth to be a globe, and that the Atlantic washed the coast of Asia. The ocean between Spain and China as depicted on his map was divided into

" 26 spaces each of which contains 250 miles," and " the very great and splendid city of Quinsay " (Hangchow) was placed in the latitude of Lisbon. Cipango was located so far out from the Chinese coast that Columbus believed the distance from the Canaries to the east coast of Cipango was no more than 2,500 sea miles.

According to Toscanelli's letter to Columbus, it appears that Columbus had told him a voyage to Asia had " become not only possible, but certain." The fact was, however, that Columbus made no important effort to get a ship for the voyage until ten years later—in 1484. What he did meantime, however, is of interest. For example, he went to Bristol, and shipped in a vessel that carried him to Iceland (1477). The story of this voyage is confused, but it definitely states that " to this island . . . the English go with their wares, especially from Bristol." Columbus also spent some time at Mina on the Gold Coast, and he wrote later

that he went down the African coast " many times."

Finally, in 1484, he petitioned King John II for a ship for a voyage westward. A long war with Spain had recently come to an end, and Portuguese interest in exploration had revived. It was in this year that Diego Cam sailed to the Congo, taking along one Martin Behain, who had recently invented an improved instrument for taking the altitude of the sun at sea, and who is known as the maker of a globe, yet in existence, which shows the coasts of Spain and Asia much as does the map of Toscanelli. King John II submitted the plans of Columbus to two different commissions of wise men, some of whom made ridiculous objections to the scheme—ridiculous in modern times, that is; but the main reason why Columbus failed to get the ship was the excessively high demands he made for his reward in case of success. He was a common ship's navigator, learned, no doubt, but a mere sailor; and yet in case he sailed

a ship westward to China (a passage no more than 2,500 miles long by his own figures) he wanted to be made viceroy of the vast and wealthy region he was thus to discover, and to receive a tenth of all the revenues of all kinds which the region might afford! The demand seemed absurd. That King John would have granted smaller demands is shown by the fact that, after getting the plans in full, he gave them to one of his captains, who made no demands, and sent him to try the passage from the Cape Verde Islands. When a few days out, this man's heart failed him, and he came back with a tale of impassable water, and air that could not be inhaled.

Disgusted with such treachery, Columbus at once went to Spain, where he was destined to wait eight years upon the pleasure of royalty. The facts of most interest in the accounts of that period are that Columbus persisted, and that he did so because he believed that God had chosen him to do a great

work. Not only was he to show the maritime world a new route to India, but with the wealth he was thereby to acquire he was to equip an army and free the Holy Sepulchre from the power of the Turk. Moreover, in showing the new way to India he was to be the prime mover in a mission work that would bring all the Eastern world within the fold of the Church. It was because of the intense sincerity of the man that he was enabled to persist; and it was his religion, and not greed, that made him demand the immense reward. A time came when even the boys in the street had learned the mission of Columbus at the court of Ferdinand and Isabella; and they tapped their foreheads when they saw him in token of their belief that he was mad. In time, too, if one can believe the story as usually told, Columbus was in such desperate straits that he stopped at La Rabida monastery, near Palos, and begged for food for his son Diego. Whether this be true or not, Juan Perez, prior of that monas-

tery, became his friend, and was able to provide for another appeal to the Court, with men of great influence to support the appeal. And with that the tide turned. For Granada, the last foothold of the Saracen, had then been captured (January 2, 1492), and king and queen were in a mood to grant anything to their subjects. Columbus was somewhat too dignified in the Court view, and his demands for compensation in case of success seemed as absurd as they had seemed to King John II. But Ferdinand and Isabella believed they were God's chosen instruments for the expulsion of the Saracens, and they could seriously consider the claims of a man whose faith was as strong as their own. So, on April 15, 1492, a contract was signed which gave the old sailor all he demanded.

Under this contract three ships were to be provided at the port of Palos—provided by the ship-owners of the port. The city was also forced to contribute a sum that has been estimated as high as £16,000 toward a total

expense which the same estimate places at £417,200—probably much too high. But whatever the sum, the people of the town were exasperated to a point where they were almost ready to mob Columbus when he came to prepare for the voyage. That was not all of their trouble. The Spaniards had had no such experience in high-seas navigation as the Portuguese, and the thought of sailing away on such a voyage filled them with a sickening fear. When the crews were to be shipped, in fact, it was necessary to proclaim a jail delivery to secure the ninety men needed. One of the ninety, by the way, was an Irishman and another an Englishman. The flagship, the *Santa Maria*, was ninety feet long by twenty broad, and had a deck over all. She was commanded by Juan la Cosa, a Biscayan. The other two vessels were the *Pinta* and the *Niña*, both without decks amidships, and much smaller than the flagship. The name *Niña* was descriptive—it means baby. The *Pinta* was commanded by

Martin Pinzon, a wealthy ship merchant of the port, who had aided Columbus materially in securing the royal favour. The *Niña* was commanded by a brother, Vincente.

A half hour before sunrise on Friday, August 3, 1492, the little fleet left Palos and reached away for the Canaries. Not only were the Canaries nearer the hoped-for port in China, but they were on the latitude of "Chipango" where Columbus intended to make his landfall. On the passage, the Pinta's rudder was damaged treacherously, with a view to getting an excuse for returning. While making repairs at the Canaries, there was an eruption of Teneriffe, a most terrifying bad omen, in the minds of the crews. On September 6 the fleet made sail for the passage west. Such light airs prevailed that land was yet in view on the second day out. But when it finally disappeared "the sailors loudly lamented their fate, and cried and sobbed like children." Thereafter, to forestall the fears of the sailors, Columbus kept

two logbooks—one for the men and one for himself. In the public book he put down a day's run of 180 miles as 144, and one of 120 as 108. The event justified the deceit, but on September 13 the fleet crossed the line of no variation, and the magnetic needle, which had theretofore been pointing somewhat to the right of the pole-star, began to swing to the left. Columbus was astonished, and the sailors were filled with superstitious fears, but Columbus invented an explanation that quieted them for three days, and then they reached the Sargasso sea, with its immense beds of floating seaweed. When the progress of the ships was slowed down by the weeds, the sailors once more loudly expressed their terrors.

Then when the ships sailed clear of the weeds the sailors grew frightened because the wind held so steadily in the north-east; for no one in the fleet knew anything about the trade winds. It is hard for us to get the sailors' point of view; but when we do get

it, we must feel a hearty sympathy for them, even though many of them were from the Palos jail. If the wind always held the one course, the sailors naturally believed they never could return. For the sails on those ships were square; there were but two to each mast; they bulged before the wind like meal sacks, and to try to return by tacking was hopeless.

When the fear of the sailors was reaching the explosive point, the wind shifted; but they soon began to grumble again because they thought it time to see land, if land was to be seen, and in this feeling the Pinzons shared. On October 7th, by the public log the ships had sailed 2,200 miles (the private log showed 2,724), and Columbus himself was beginning to feel much as his men did. What he and the Pinzons believed was that they were too far north, and were passing Cipango. Accordingly, the course was altered somewhat to the south. On the original course they would have reached Florida, which was then 720

miles away. On the new course a Bahama island was but 505 miles away, and the difference was worth saving. For the men grew uglier day by day. Columbus had cajoled, made promises, and threatened, by turns, as the occasion seemed to demand, with success; but now the men were becoming desperate. The mutinous spirit had reached a point where the assassination of Columbus was at hand, when, on October 11, impressive and unmistakable signs of land were seen. A "table board" and a carved stick were passed by the vessels. "The carving" was "apparently wrought by some iron instrument." Then "the men in one vessel saw the branch of a haw tree with fruit on it."

As the light of the sun faded away that night, Columbus went to the high poop deck of his ship, and paced to and fro with his eyes fixed on the western horizon until 10 o'clock, when he quietly called Pedro Guiterrez, a groom of the king's chamber, to his side, and asked him if he could see a light

away beyond the bow. Guiterrez at once said he could; and then another official was called who, after a little trouble in getting the direction, also saw it distinctly. "It appeared like a candle that went up and down, and Don Christopher did not doubt that it was a true light and that it was on land." At two o'clock in the morning a sailor on the Pinta, Rodrigo de Triana, also saw a light, and let it be known to all hands.

There was little sleep in the fleet thereafter. With the first light of day (Friday, October 12, 1493), the whole command, standing on the highest points of the hulls and in the rigging, and all wild with excitement, saw an island "rather large and very flat . . . and the whole so green that it is a pleasure to look upon it." It was right under the bows of the fleet. Thereupon Columbus dressed himself in armour, with a crimson garment over all, took the royal standard in his hand, entered a yawl, and was rowed to the shore. The captains, bear-

ing banners ornamented with green crosses and the initials of the king and queen, followed together with nearly all the members of the crews.

And " as soon as the Admiral came to the shore he fell on his knees, and, weeping abundantly tears of joy, he commenced to say *Te Deum Laudamus, Te Dominum confitemur.*"

CHAPTER IV

FROM COLUMBUS TO MAGELLAN

It is important to keep in mind that what Columbus found was a small island, which, as he supposed, was north of but near to the coast of Polo's Cipango. The great cities of Asia were to be found, he believed, ten days' sail to the west. On seeing that some of the natives of this island wore small ornaments of gold, Columbus asked by the sign language where they obtained the metal, and they pointed to the south—thus confirming him in his theory. On sailing south, Columbus found Cuba, which the natives said (as he understood them) was the mainland of Asia, and that Cipango was at the south and east. On following the coast to the east, Columbus found the island later called Hispaniola, now Hayti and San Domingo.

There the natives told of an inland region, where they obtained gold, which they called Ciboa, and Columbus supposed that Ciboa was the native pronunciation of Cipango.

While on the Hispaniola coast, Pinzon, in the *Niña*, deserted Columbus, and a little later the flagship went ashore, while all hands were asleep, and became a total wreck. Having only an open boat left, and it so small that not near all the men could be carried in it, Columbus began to think it time to hasten home to report what he had found, lest further disaster leave them all there to perish. Accordingly, a fort was built on shore, and forty volunteers left in the settlement, which was named Isabella. Then Columbus sailed for home in the *Niña*, overhauled the *Pinta*, passed through a gale off the Azores (where Columbus expected to founder),[1] and finally was driven by another gale into port at Lisbon. King John II

[1] While facing destruction, Columbus wrote an account of the voyage in duplicate, sealed each manuscript in a

invited Columbus to Court to tell about the voyage, which, we may imagine, gave Columbus no little satisfaction. That the king was chagrined is plain from the fact that his counsellors advised the assassination of Columbus. It should be noted here that the acts of treachery mentioned are to be considered, not as indicating especial depravity in the individuals involved, but as portraying the state of civilization of the age. King Ferdinand was accounted the most successful diplomat of his time because of his skilful use of what we would call treachery. The conditions grew naturally out of the prolonged wars with the Saracens, during which the people were taught that breaking faith with Saracens was pleasing to the Deity. What we call treachery was considered a praiseworthy intellectual triumph.

cake of wax, and put each cake in a barrel. One barrel was then thrown into the sea, and the other placed upon the quarter deck of the *Niña* in the hope that if the vessel foundered one or the other copy of the story might fall into civilized hands.

When Columbus reached Palos (March 15, 1493), "all the business of the town was at an end for that day." But the enthusiasm was all local to the peninsula; it was by no means so widespread or so deep as one would naturally suppose from the historical accounts which tell at this point how a new world had been discovered. While giving weight to the fact that a new route to the far East had, as supposed, been opened, the people were chiefly stirred by what they hoped for in future voyages. When they had heard the story of Columbus, the king and queen gave thanks to God with tears; but when their ambassador at Rome, later, spoke of the new discovery in a public oration his words were: "Christ placed under their (the king's and the queen's) rule the Fortunate islands, the fertility of which has been ascertained to be wonderful. And He has lately disclosed some other unknown one towards the Indies which may be considered among the most precious things on earth." Fiske shows that printed

references to the discovery are very scanty outside of Spain until after 1500, and that it was about fifty years later still before any English writer mentions either Columbus or Cabot. The interest temporarily aroused in England when the result of the voyage was first announced was described by Sebastian Cabot as follows: "When newes was brought that Don Christopher Colonus, Genoese, had discovered the coasts of India, whereof was great talke in all the court of King Henry the 7, who then raigned, insomuch that all men affirmed it to be a thing more divine than humane to saile by the West into the East, where spices growe, by a map that was never knowen before—by this fame and report there increased in my heart a great flame of desire to attempt some notable thing."

That "flame" is memorable. In the cities of Spain, and especially in the ports, the voyage of Columbus started a flame of desire in many hearts that were peculiarly inflammable.

The nation was full of men who had won more or less glory and nothing else in the war with the Saracens. They had lost their occupation when the war ended, and they had been reduced to a point where they had to face work or starvation. But now the cities of "Cathay," full of gold and heretics, were to be found just around the next cape beyond the one where Columbus had turned back, and thither these needy *caballeros* would go! When Columbus prepared to sail once more, seventeen vessels were fitted out for the expedition, and into them 1,500 men, bubbling over with joyous anticipations of obtaining beauty and booty, were crowded into them. Meantime, Columbus, with exalted mind, had vowed with all solemnity that within seven years he would use his share of the profit to fit out 50,000 foot soldiers and 4,000 horsemen to free the Holy Sepulchre from the presence of the Turk.

The fleet sailed on September 25, 1493, and on Sunday, November 3, discovered an

island which was named Dominica. Other islands, including Porto Rico, were visited later. The natives of these islands resisted the landing of the Spaniards, and killed several with poisoned arrows. Human flesh, smoked like bacon, was found in their houses, and some, recently killed, cooking in their earthen pots. It was from this people, who were called Caribales and canibales, that the term now applied to people who eat human flesh was derived. Columbus and his men sailed on gladly in anticipation of soon arriving among the more gentle inhabitants of the western islands; but on reaching Isabella found not one of the men left there alive. They had quarrelled among themselves, and then with the natives, over the possession of native women, until all were killed.

Having landed his company, Columbus built a new settlement, explored the interior, where gold mines were found, sent twelve ships home for supplies, and then (April 24) sailed to the west to locate the cities of China.

The south coast of Cuba was explored as far as Cape Cruz, and Jamaica was discovered. Then, because his vessels were not fitted for a longer cruise, he turned back, intending to explore the coasts of the island on which he had built Isabella; for he fully believed it was the rich and populous island Polo had called Cipango. But soon after reaching the coast he learned his error. His alternate periods of anxiety and exaltation of mind now began to undermine his health, and on reaching the east end of the island he "fell into a death-like lethargy which lasted until after the fleet reached Isabella."

Of the work of Columbus as a governor, we need only note that his men were beyond all ordinary control. They had found a wilderness instead of the cities of China. Gold was to be had only by the use of pick and shovel. War having taught them to despise productive labour, they were wholly unfit to establish prosperous colonies. The expansion of Spanish rule in America can

be described in one word which they often used. They called themselves *conquistadores* —conquerors. Spanish expansion was mere conquest. Meantime, where Ferdinand and Isabella had looked for a golden income they found growing costs, and in time it became apparent that the claims of Columbus, however plainly stated in the contract, were inconsistent with the interests of the crown and those of native-born Spanish navigators. If Columbus had reached China or even the partly civilized Mexico, the course of his life might have been pleasant. As it was, he seldom knew what it was to rest in peace. When in June, 1496, he returned to Spain, his reign as a viceroy in the new lands was practically over. He was received in kindly fashion, however, and after a delay of two years (May 30, 1498) he sailed upon the third exploring expedition. Crossing to Trinidad island, he saw the coast of South America, noted the huge volume of water flowing from the mouths

of the Orinoco river, and went on to the Pearl Coast, which was so named because of the presence of the pearl oyster. The current of the Orinoco convinced him that the river came from land of continental proportions, but the actual conditions and extent of the land were undreamed of. On August 15, his health having failed, he headed for San Domingo, a settlement that had been established on the south coast of Hispaniola. The conditions in San Domingo were as bad as possible. Incited by returned settlers who blamed Columbus for their ill-fortune, the king and queen had sent out a commissioner named Bobadilla to investigate. He had sided with those who hated Columbus, and he eventually sent both the admiral and his brother to Spain in irons. Columbus arrived in August, 1500. To add to his woe he found the people much excited by the return of Vasco da Gama from a most profitable voyage around Africa to the far East.

One more voyage was yet to be made. Co-

lumbus sailed from Cadiz on May 11, 1502. He intended to go to Jamaica, avoiding San Domingo by order of the Crown. But on reaching the Windward Islands he found one of his vessels in such ruinous condition that he felt obliged to go to that port to charter another. On arriving he was at once ordered to leave, although, as he protested, a hurricane impended. As he left to seek shelter in a near-by cove, he sent word to the masters of a large fleet, just sailing for home, that they would better return to the harbour, and was laughed at for his pains. The hurricane arrived, however, and twenty of the ships went down with all hands. Bobadilla, the unjust commissioner, was among the lost. A ship carrying a large quantity of gold which belonged to Columbus (a royalty from the mines) was among the few that escaped.

After the storm, Columbus sailed to the north coast of Honduras. Buildings, implements, and fabrics found there indicated a

higher degree of civilization than he had seen elsewhere, and, greatly encouraged, Columbus asked the way to the still more civilized parts of China. The people pointed to the west, but Columbus headed away to the east. His reason for so doing was, first, his determination to go to the Strait of Malacca. To reach that, he argued, he must keep the continent on the starboard side. Then it seems likely that he learned from a pilot named Ledesma, who had already been on that coast, that a voyage to the west would prove fruitless. With splendid fortitude the old mariner faced the easterly gales, named the cape round which he was able to turn to the south, Gracias a Dios, and so came to the Isthmus of Panama. The natives told him of a " narrow place " by which he might go to the south and west, and Columbus supposed they meant a strait, between the continent and an island, through which he might sail to Malacca—possibly it might be the Strait of Malacca itself ! Alas, it was a narrow

strip of land over which he might have crossed on foot. Finding much gold along the coast, Columbus tried to make a settlement. The effort failed, and finally, with the planking of his ships almost destroyed by the teredo, he sailed for San Domingo. A current which he did not perceive carried him to the coast of Cuba, west of Cape Cruz, and there a storm completed the destruction which the teredo had begun. To escape foundering, Columbus ran his vessels, "full of water and unable to sail another league," upon the Jamaica beach (June 23, 1503). A messenger was sent to San Domingo for help, but the governor refused to send relief until the following year. Columbus then went on to Spain, where he arrived on November 7, 1504. The queen, from whom alone he could hope to receive help, was dying. Worse yet, old age had overtaken him, his splendid physique was broken down, the elasticity and strength of his mind were gone. Realizing that he had failed to reach the civilized East Indies, and wholly without

any inkling of the magnitude of the work he had done, Columbus lingered in poverty and neglect for eighteen months, and then died of a broken heart on May 20, 1506.

It is with difficulty that the student of history now sees the work of Vasco da Gama as his contemporaries saw it. Incited to action by the opening of the Atlantic, the king of Portugal ordered three ships under Gama to go to the Indies by way of the Cape of Good Hope. Pedro d'Alembert, a pilot who had been with Bartholomew Diaz, was sent with the fleet. They sailed July 9, 1497, passed the Cape on November 22, and on December 17 arrived on the coast where Diaz had turned back. Keeping on, they named a port, now well known, Natal, because they saw it on Christmas. At Quillimane they stopped to overhaul the ships, which were now much the worse for wear, and that fact is worth consideration because it shows the quality of ships used in the work. All the explorers had to face the storms and reefs of

unknown seas in vessels that would now be considered scarcely well found for inland waters. North of Quillimane a Saracen merchant was found and employed as a pilot, with such success that Mozambique was reached on March 10, 1498, and Melinda on April 29. From Melinda local pilots conducted the fleet to the west coast of Hindustan, " eight leagues from Cananore." The first port entered was Calicut.

The talents required in this voyage were chiefly those of a diplomat and trader, and with those Vasco da Gama was well supplied. The " treachery of the Moors " availed them nothing ; the ships were loaded with the goods of the Indies at a cost that seemed insignificant. Many of the crews died, and the ships were in such bad condition on the last part of the passage home that they were with difficulty kept afloat ; but on September 18, 1499, the Tagus was reached with cargoes in good condition. The ledger account showed that " the return was sixty fold." As the business

men of the day saw the facts, Columbus had discovered what we may call a fine prospect, but Vasco da Gama had "obtained results." Thereafter, to the exasperation of the Spaniards and the wonder of other nations, the Portuguese secured almost an entire monopoly of the profitable India trade. Opportunity thus came to them to join with the Spaniards in spreading civilization as it had been developed in the Iberian peninsula.

The next voyage of discovery of interest here was that made by Vincente Pinzon, who sailed on May 10, 1497, with Americus Vespucius as pilot. Vespucius was born in Florence on March 18, 1452. As a merchant he had some part in fitting out the first two expeditions of Columbus, and thus became ambitious to go exploring. It has been denied that Vespucius sailed with Pinzon, but the account in Fiske's "Discovery of America," is convincing. The first landfall was made at Cape Honduras on June 21—the continent was then seen for the first time

—and three days later Honduras Bay was named Navidad. From this bay the expedition sailed north around Yucatan, followed the coast of the Gulf of Mexico to Florida, going thence an unknown distance up the coast to the north. Finally they struck off to the east, touched at the Bermudas, and finding the islands inhabited by a race of cannibals, they took, after a fight, 222 of them to Spain for slaves, and thus secured some return for an otherwise profitless voyage. They reached Spain on October 15, 1498. Ledesma, who, as noted, was pilot with Columbus in his fourth voyage, was on this expedition. And it was because of the work of this expedition that Juan La Cosa, in his celebrated map, drawn in colours on oxhide in 1500, portrayed Cuba as an island. For La Cosa was with Vespucius in the expedition that sailed May 16, 1499, and traced a part of the north coast of South America and, on returning, reported seeing an English vessel in those waters.

In 1499, a Portuguese fleet of thirteen vessels sailed from Lisbon for the East Indies, by the African route, under the command of Pedro Alvarez de Cabral. In crossing the tropics, this fleet bore so far to the west that the equatorial current carried it within sight of the coast of Brazil. After the success of Columbus in opening the Sea of Darkness, Pope Alexander VI had issued a bull which, as modified in 1494, gave to Portugal all the undiscovered lands east of a meridian lying 370 leagues west of the Cape Verde Islands, while Spain was to have those west of it. Cabral took possession of the new land because it was east of that meridian, and sent a ship home to announce the discovery. This lucky landfall shows that Columbus was none too soon in his explorations, for, with the opening of the waters around the Cape of Good Hope, a voyager on the African coast was sure to reach Brazil sooner or later.

On hearing of his new possessions (called Brazil because a tree already in use under the

name of brazil wood was discovered there), the Portuguese king (Emanuel) brought Vespucius from Spain, and on May 14, 1501, sent him to explore it. On August 16, Vespucius reached Cape St. Roque ; Rio Janeiro Bay was discovered on New Year's day, 1502 ; and on February 15 the fleet was at the River Plate. Vespucius saw that he was now within the longitude claimed by the Spanish king ; and he therefore left the coast, heading to the south-east in the hope of discovering more land within Portugal's right. In spite of frightful storms of snow and sleet, he held this course until he reached South Georgia Island, 1,200 miles east of Tierra del Fuego. Then he laid a course for Sierra Leone, and " hit it end on," as a sailor would say, showing that as a navigator his skill was extraordinary.

The important fact about this voyage, however, is that Vespucius had traced land of continental dimensions south of the equator. It had been seen by several navigators ; but none of these had followed the coast as

Vespucius had done. Because all the world believed that the discoveries thus far made by the navigators lay on or off the east or south-east coast of Asia, it was now inferred that Vespucius had traced a continent in a location where everybody had been taught that only the waters of the Indian Ocean were to be found. The continental land that had been traced at the north of this vast breadth was not at that time connected with this that Vespucius had traced, because discoveries had been made so rapidly that the public had been unable to assimilate them.

This brings us to another very important feature of the work of the master mariners of the world. Work of that kind impresses the public now, and it impressed the public then, only as it is and was described in print. On returning home, Vespucius wrote a letter (March or April, 1503) to his friend, Lorenzo de Medici, in which he spoke of the land he had traced as a "new world." "I have formerly written to you at sufficient length

about my return from those new countries which, in the ships and at the expense and command of the most gracious king of Portugal, we have sought and found. It is proper to call them a new world." Early in 1504 one Giocondo translated the entire letter, of which the above is but a small part, into Latin ; and it was then printed as a four-page quarto leaflet. The publisher, with an intuitive foresight of what would " take," gave it the title of " Mundus Novus." Straightway " Mundus Novus " became a " best seller." Eleven editions were sold in 1504 alone, and by 1506 eight editions in German had been disposed of. Now it happened that a German scholar named Waldseemüller, while at work upon a " Cosmographie Introductio " for an edition of Ptolemy's works, received a copy of " Mundus Novus." He added it to his " Introductio," and then, because he had previously considered the earth as composed of but three grand continental divisions, he felt compelled to revise his work. This

he did by saying: "But now . . . another fourth part has been discovered by Americus Vespucius (as will appear in what follows): wherefore I do not see what is rightly to hinder us from calling it Amerige or America, *i.e.*, the land of Americus, after its discoverer Americus." The scholars of the day accepted the suggestion as a just recognition of the work of Americus Vespucius. No one suggested that the name of Columbus be applied to the lands discovered by him, because they were all supposed to be a part of the old continent of Asia. Americus had not discovered the coast of Brazil, but he was the first to trace its coast and *describe in print* what he had seen. Then, his name having been applied, first of all, to a part of the continent, it was retained upon it as from time to time its vast dimensions became known.

An interesting view of the Spanish explorers is found in the story of Vasco Nunez de Balboa. As a settler in San Domingo he had failed and was imprisoned for debt. Then

his friends fastened him up in a barrel (to elude the court officials) and put him on a ship carrying supplies to a settlement established on the mainland. On arriving, Balboa found the settlement at the point of failure, but under his lead it became a success. Here he learned from the Indians about a great salt sea lying a few miles to the south; and on September 1, 1513, he headed an expedition to explore it. Led by the Indians, he reached, late on the 24th, a mountain from the top of which the strange sea was to be seen. Camp was then made for the night. In the morning the command climbed the mountain until near the crest, when Balboa called a halt, while he went on alone, until at last he, the first of all civilized men, was able to look forth across the sunlit waters of Panama Bay.

Francisco Pizarro is also memorable. He was the natural son of an unknown father and a swineherd—of the lowest social grade in Spain. But in Panama he found opportunity. His first expedition to Peru failed.

His second landed on Gallo island, where all but Pizarro became so discouraged that they determined to return to Panama. But as they started toward the ship, Pizarro stopped them, and with his sword drew an east and west line in the sand of the beach. Then, standing on the south side of the line and facing them he said: "Gentlemen! This line signifies labour, hunger, thirst, fatigue, wounds, sickness, and almost every other kind of danger that must be encountered in this conquest until life is ended. Let those who have the courage to meet and overcome the dangers of this heroic achievement cross the line, in token of their resolution, and as a testimony that they will be my faithful companions. And let those who feel unworthy return to Panama; for I do not wish to put force upon any man. I trust in God that, for his greater honour and glory, his Eternal Majesty will help those who remain with me, though they be few, and that we shall not miss those who forsake us." Thirteen, or

perhaps sixteen, crossed to the side of Pizarro; and Peru was conquered. That, as well as the anarchy upon Hispaniola, was characteristic of the *conquistadores*.

Last of all we come to the story of Magellan. "In his portrait, as given by Navarete, with the great arching eyebrows, the fiery black eyes, the firm-set lips and mastiff jaw, . . . the strength is almost appalling." Born in 1480, he sailed to the Portuguese Indies when twenty-five years old, and served there for seven years. On returning (1512), he saw two years' service fighting the Moors in Morocco. Then he began to consider whether it were not possible to reach the Indies by a new western route. The objection to the African route was its length. Magellan, like all others familiar with what had been thus far learned about America, believed that Cipango lay close behind the long barrier continent of America and that China was a few days' sail beyond. With the idea that the continent which Vespucius

had explored must have an end at the south, Magellan asked the king of Portugal to send him with an expedition to find the passage and sail to "Cathay." The king refused, and Magellan went to Spain, where he succeeded. Five ships, "all old and decidedly the worse for wear," were placed under his command. It will help us to understand the civilization of the day to recall the fact that, when King Emanuel heard that the expedition was really in hand, he sent men to Seville to assassinate Magellan. The fleet sailed on September 20, 1519, from the Guadalquiver. Mutiny appeared in the fleet on the way across the Atlantic, and again at Port Julian, where the fleet anchored (March 31, 1520) for the winter; but Magellan suppressed it with a stern hand. One ship was lost on the coast, and after the strait named after Magellan was reached (October 21) another deserted.

When the remaining ships had passed through the strait, the sailors begged Magellan to return, for the food was becoming scarce,

but Magellan replied that he would go on " if he had to eat the leather [chafing gear] off the yardarms." Running up the coast until the middle of December, he then headed westerly across the Pacific, until in March he reached the Ladrone islands. In this passage the bread was all exhausted, and life was at last sustained by eating the chafing gear from the yardarms. But Magellan persisted—he was obliged to do so, then—and finally reached the Philippines, where he lost his life while trying to force the Christian religion upon unwilling heathen (April 27, 1521). Among the great navigators, Magellan unquestionably ranked next after Columbus. He died uncompensated for his labours, as Columbus did; but both gained, after all, the reward which men of such calibre would prize most highly. Magellan was the explorer from whom civilized people first learned the extent of the world upon which they lived. Though he died in the Philippines, beyond the eastern limits of

Portuguese explorations of the day, he was then among a people who were near neighbours of those whom the Portuguese had visited.

After the death of Magellan, one of his vessels was abandoned because it was unfit to go further. The other two went to the Moluccas. There another was left behind, while the last, the Victoria, kept on around the Cape of Good Hope and finally, on September 6, 1522, just thirty years after Columbus sailed on his first voyage across the Atlantic, she reached the Guadalquiver. This voyage was the last made by people of the Iberian peninsula to need consideration here. The Spanish and Portuguese mariners crossed the Atlantic, traced the strange coasts forming a barrier across the course to the Spice Islands, and then opened the way across the broad Pacific. In spite of the hardships they endured, the student of history may well envy them all their eager longing as they stood on deck gazing away beyond the forecastle, and their breathless excitement when they

climbed the shrouds while the lookout cried "Land Ho!"

Last of all among the early explorers, we must recall John Cabot and his son Sebastian. John Cabot was a native of Genoa, who became a citizen of Venice by legal adoption in 1476. In 1490 he removed to Bristol, which was then the most enterprising seaport of England. Its merchants and fishermen made voyages every year to Iceland, and as early as 1480 an exploring expedition had been sent in search of the "island of Brazil to the westward of Ireland." Cabot became greatly interested in the search for that island, and on his initiative several expeditions were sent out, beginning perhaps in 1490. The success of Columbus, no doubt, helped him in this work (the records are vague); but it was not until May, 1497, that he sailed in command of a ship (the *Mathew*, with a crew of 18 men), in which he actually reached land which he supposed was the northeast coast of Asia. The landfall was made on

June 24. It was probably the coast of Labrador. The *Mathew* returned to Bristol at the end of July, and " honours were heaped upon " the explorer.

Accordingly, in April of the next year another expedition was sent away under John Cabot, and a considerable part of the American coast was visited. There is no record to show exactly what part of the coast was seen, nor when the ships (four or five in all) returned to Bristol. Neither is anything said about John Cabot thereafter. In fact, the whole record is so badly confused that it is only in recent years that the fact that John Cabot, and not his son Sebastian, headed the two expeditions has been learned definitely. It is supposed that John Cabot died during the later voyage, and that Sebastian brought the expedition home. Very likely the first expedition sailed from Labrador down the coast to Cape Race ; and it appears that in the second voyage as much as 700 leagues of the coast was seen, including much

of the Gulf of St. Lawrence. Because neither gold nor silver nor any opportunity for profitable trade was found the expedition was considered a failure, but one unconsidered trifle of a discovery became, later, of immense consequence. Such vast numbers of codfish were seen that Cabot's account of them would have seemed incredible but for the fact that his crew, who were nearly all Bristol men, confirmed the story. When those fish were remembered later, the result in the expansion of the English people was stupendous.

Sebastian Cabot occupies much space in history, but it need only be said here that he went to Spain after the death of Henry VII., and there became Pilot Major to the throne. He returned to England in 1548. There he was made governor of a company of merchants organized to trade north about Europe and Asia to China, with the result that a profitable trade was opened with Russia by way of the White Sea. He died in London in 1557, or perhaps a little later.

CHAPTER V

SHIFTING THE CENTRE OF MARITIME ENTERPRISE

First among the influences that shifted the centre of maritime enterprise from the ports of Spain and Portugal to the north was the success of the Hanseatic League, an association of commercial towns along the Rhine and the Baltic littoral. The league originated in the days when merchants had to combine to resist robbers. It grew into a maritime association partly because water routes were the lines of least resistance, and partly because the merchants came to control the fish, naval stores, amber, and other products of the Baltic region. As these goods were prime necessities, the monopolists not only named prices but obtained exclusive advantages in all ports to which they traded during a long period. In London, for example,

they enjoyed great advantages over English merchants as late as 1601.

In time, Hanseatic fortune roused neighbouring peoples to emulation. The Dutch, a mud-flats people who had developed on the deltas of the Rhine, first competed with them successfully. The Dutch were boatmen and fishermen perforce; and it is a curious fact that, like the Venetians, they developed a notable love of art at an early age. The herring swarmed along the Dutch shores; and when a Dutch fisherman (perhaps it was Captain Beukelzoon) discovered an improved way of curing these fish, by which they were kept on the market the year round, Dutch ability to compete with the Hansa towns was assured. For fish, as an article of food, was important to an extent now not easily comprehended. Placing the herring in the market the year round not only brought prosperity to the fishermen, but, by increasing the food supply, it developed the efficiency of the producers of all classes.

While the Dutch were expanding, the Netherlands were brought by political changes, not of special interest here, under the rule of Spain. In the meantime, Martin Luther (1483-1546) divided the Catholic Church, and the Dutch joined in the Lutheran movement. The Inquisition, originally devised for Saracens and Jews, was used in efforts to wipe out this new heresy. At the same time, the Spanish Crown, being in need of funds, began imposing new burdens upon the Netherlanders. These revolted; and the contest was embittered not only by religious prejudices but by race antipathies. On a memorable occasion, when representatives of the Netherlanders were before the Spanish ruler, a Spanish grandee expressed the contempt which he felt by calling them beggars. His manner was more offensive even than his word. This needless insult had memorable results. The Dutch had become sea carriers as well as fishermen, and some had found "easy money" afloat in ways not lawful

even then. These seamen, being intensely patriotic, led the way; and the more peace-loving fishermen soon joined in to form an aggregation of armed sea fighters who adopted the name of Sea Beggars. Every Spanish ship was a good prize; and because it was a religious war the ships of such other countries as were loyal to the Pope were sometimes taken. One "Sea Beggar" only can be remembered here—William de la Marck. "A wild, sanguinary, licentious noble, he, wearing his hair and beard unshorn according to ancient Bavarian custom," until the death of a relative at the hands of the Spaniards had been avenged. With a fleet La Marck scoured the narrow seas; and when he met a Spanish ship within his power he laid his ships alongside, led his men over the rail with axe and pike in hand, and killed every Spaniard on board. The "Sea Beggars" neither gave nor asked quarter.

And yet these "Beggar" ships were often seen with masts draped with flowers in token

of a wedding near at hand ; and it was a bloodless victory that makes La Marck's name especially worth mention here. Having been ordered from the British ports, because Queen Elizabeth was not yet financially able to make open war upon the king of Spain (Philip II.), La Marck crossed the Channel with his fleet (March 31, 1572), and entered the River Meuse (April 1). He had twenty-four small ships and perhaps 400 men, but a friendly ferryman on the Meuse told the inhabitants of Brill, a city that was then loyal to the Spanish king, that the " Sea Beggars " had come with 5,000 men to sack the town. In less than two hours the whole population had fled, wild with terror, and in the capture of Brill, as Motley says, " the foundation of the Dutch Republic was laid."

Holland was a small territory, but during the eighty years through which the Spaniards strove to subdue it, the sea lay open to the Dutch sailors. Their success as privateers, warring on Spanish commerce, was so

great that the owners of ships so engaged united to organize the Dutch West India Company in 1621. This company had some other interests in hand. Manhattan Island in New York harbour was colonized, for example. But when it was proposed to make peace with Spain the directors of the company protested. They said they were engaged in work that was a benefit to the nation, but that the services which the company ought to render "for the welfare of our Fatherland . . . cannot be accomplished by the trifling trade with the Indians, or the tardy cultivation of uninhabited regions, but in reality *by acts of hostility* against the ships and property of the King of Spain and his subjects." Having at all times command of the sea, the Dutch grew rich throughout the war with Spain. They were particularly prosperous after Philip annexed Portugal (1580). The Dutch had been going to Lisbon for merchandise which the Portuguese imported from the East. The conquest of Portugal ended their

Lisbon trade—a seeming disaster—but they at once began sending their ships to the source of supply. Before 1602, sixty-five Dutch ships had made the round voyage to India, and the organization of the Dutch East India Company followed. The important fact is that obstacles, to men of the Dutch characteristics, did but excite to greater efforts, and bring greater prosperity.

Turning now to the English master mariners, we find records showing that before Elizabeth's time England had some shipping, but the most interesting page of Hakluyt's "Principal Voyages" contains this quotation from "An ancient testimonie translated out of the olde Saxon Lawes"; "And if a merchant so thrived that he passed thrise over the wide seas, of his owne craft, he was thencefoorth a Theins right worthie." It was in English blood to honour adventures at sea. Of the policy of Elizabeth when she came to the throne, one writer says: "At her accession civic war or conquest seemed inevitable, and

insolvency was a fact; yet before her death the bond of London 'is,' writes one of the chief financiers of the times (1595), 'the first to-day in Europe'; and she added victory abroad to peace at home" (Bates, "Touring in 1600"). By promoting the welfare of her people Elizabeth proved herself the ablest of English monarchs; and yet, when she employed (to save the unbearable expense of supporting a navy) privateers to make war on the enemy, their work was, and has been ever since, characterized by no milder term than that of "semi-buccaneering" expeditions. Because of their influence upon the spread of English civilization to other lands we must now consider some of those privateer expeditions.

John Hawkins (1532-1595), appears first in English history as a seafaring merchant trading to the Canary Islands. In that trade, "by his good and upright dealing, being grown in love and favour with the people," he learned that the Spaniards in Hispaniola

would be glad to pay him high prices for negro slaves. Accordingly, Hawkins sailed with three ships (October, 1562) to Sierra Leone, where "partly by the sword and partly by other means," he secured "300 negroes at least." Modern English writers have all been greatly concerned over what they call the "guilt" of this action. But in so doing they are horrified solely because Hawkins did not govern his conduct by the modern standard of morality instead of that of the sixteenth century. On the coast of Hispaniola Hawkins exchanged the slaves for "some quantity of pearls," and enough "hides, ginger, sugar," etc., to "lade his own three ships," and "two other hulks" which he purchased there. The "two other hulks" were sent to Cadiz with their cargoes, a fact which proves to all candid minds that Hawkins was not conscious of the "guilt" even of smuggling. At Cadiz the ships were confiscated on the orde of Philip, but it was done merely as the caprice of an absolute monarch,

Hawkins' second expedition needs no description here; but in the third one Francis Drake sailed as owner and captain of the 50-ton *Judith*. In the Spanish point of view this was a smuggling expedition; but the English held that the existing treaty between the two nations gave them the right to trade with Spanish subjects everywhere. Sailing in October, 1567, the ships went to the coast of Africa, and thence to the coast of South America, where most of the slaves were sold—part of them in armed defiance of the Spanish officials. While crossing the Gulf of Mexico, storms strained the ships, and Hawkins went to Vera Cruz (San Juan de Ulloa) to make repairs and sell the remainder of his slaves. He found twelve Spanish ships with a million of treasure in the harbour, all so poorly defended that it would have been easy to take the metal. If he had been a pirate he would have taken it. The next day (September 17, 1568) twelve well-armed Spanish ships, carrying about £1,800,000 in

gold, silver, and jewels, appeared off the port, but did not dare to enter because Hawkins commanded the entrance, which was only "two bow-shoots" wide. This indicates that the Spaniard understood that actual, if undeclared, war existed between the two nations.

Hawkins knew well the Spanish belief that treachery to a heretic was praiseworthy, and he was tempted to keep the Spaniards out of port until he could go out ready to fight; but he supposed that such action would precipitate open war, and he remembered the queen's oft-repeated expression, "No war, my lords." Accordingly a written agreement was made with the Spanish admiral by which Hawkins was to have peace. But when the Spaniards had entered and taken on reinforcements (Hawkins says 1000 men), they opened fire. Two only of the English ships escaped, but they sank two of the big Spanish galleons and burned another before they left. The two reached home in the

following January; but 100 men were landed in Mexico at their own request because of lack of food on the ship.

Hawkins and Drake now applied to King Philip for redress for the damages suffered at Vera Cruz, and were refused relief. This brings to light a feature of the case that has been almost universally ignored. It seems to be forgotten that Grotius was not yet born, that what we call international law had no existence. By the practices of the day might was right, but there was, nevertheless, a sort of custom of dealing between nations which stood for what we call law. Under this custom individuals who were injured, as Drake and Hawkins had been, might make application for relief, as they did. Failure in this left but one course open. They might apply to their own sovereign for a letter of reprisal—letter of marque—commission or permission, with which they fitted out, at their own expense and risk, expeditions for the capture of enough of the goods of the

enemy to recoup all losses and expenses *with interest.* This is precisely what Drake now did.[1]

Francis Drake (1540-1596) was born to the sea, and the money he invested and lost in the *Judith* was made at sea. After taking out a commission for reprisal, he made two voyages (1570-1571), which are worth mention chiefly to call attention to a feature of English enterprise in that day. While the Spanish and Portuguese explorations, with two notable exceptions, were all made at the expense of the Government, the English expeditions were all private ventures. In individual initiative Drake, Hawkins, and others to be considered hereafter, were of the enterprising breed of Bjarni. In 1572 (a year in which Philip made a most earnest effort to have

[1] Charnock (" History of Marine Architecture," II., 110-112) prints a " Form of a License or Letter of Marque and *Reprisals*," and says regarding the practice: " This, the most likely method of compelling an inveterate foe to listen to moderate terms and even sue for peace, should be one of the first objects of every power that " goes to war. He wrote in 1801.

Elizabeth assassinated), Drake captured Nombre de Dios, the port at the north end of a waggon road across the Isthmus of Panama. There he fell in with a band of runaway slaves (called Cimaronnes), who took him to a tall tree on the divide which they used when watching treasure trains crossing the isthmus. On climbing this tree (it had been notched to facilitate climbing) Drake was able to look away to the South Sea. And at the sight he was "vehemently transported with desire to navigate that sea, and implored the divine assistance that he might" do so.[1]

On returning to England, Drake was unable to prepare for a voyage upon the Pacific at once; but in 1577 he fitted out the *Pelican* of 100 tons, and five smaller vessels (one of 15 tons) for the expedition. The fact that

[1] Hale, in Winsor's "History of America," says, "The place from which Drake saw 'the Pacific' was probably near the spot where Balboa obtained his first view." Balboa crossed by the Indian trail leading from the Gulf of Darien to the gulf of San Miguel, far east of the road that Drake followed.

men eagerly volunteered for such a voyage in vessels of that size is memorable—especially in connection with the modern talk about the need for "wholesome" models in yachts. The fleet sailed from Plymouth on December 13, 1577, wintered at Port St. Julian (June 19, 1578, to August 17), and entered the Pacific October 28, 1578; that is, the *Pelican* did, and was there renamed the *Golden Hind*. All the others had either turned back, or had been wrecked. In a 100-ton ship Drake sailed up the South American coast. At Valparaiso and at Arica, rich prizes were taken. At Callao 1,500 bars of silver were secured from one vessel, and it was learned that a treasure ship was bound up the coast to Panama. She had a start of two weeks, but Drake overhauled her. She yielded a "certain quantity of jewels and precious stones," thirteen chests of silver coin, 26 tons of bar silver, eighty pounds weight of gold and some plate. The Spaniards estimated their loss at £600,000.

In the belief that a Spanish fleet would await him at the Strait of Magellan, Drake now determined to return home by the way of the Cape of Good Hope. The ship was refitted at a port on the American coast that may have been San Francisco. He sailed thence on July 23, 1579, and arrived safely at home on September 26, 1580. Drake was the first captain to round the world, and he brought home his ship literally ballasted with silver, gold, and jewels.

Drake was of a nation of hero worshippers, and all the nation gathered to applaud. The Queen, who was not the least among those who could appreciate a hero, came down to the *Pelican* and dined at the table that was well supplied with Spanish plate. The dinner over, she commanded Drake to kneel at her feet, whereupon she laid a sword upon his shoulder and said, "Rise up, Sir Francis." Then she added, "Your actions have done you more honour than the title which I have conferred."

The career of Francis Drake as a mariner seeking reprisals was ended; that of Sir Francis Drake as a naval officer was at hand.[1] The year 1584 is memorable here chiefly because one of Philip's hired assassins killed the Prince of Orange, and because Mendoza, the Spanish ambassador to England, was detected in a plot to assassinate, at Philip's behest, Queen Elizabeth, in order to put Mary Queen of Scots on the throne. Elizabeth could not raise money for a war; but she sent Drake with a small fleet to the West Indies, where he captured San Domingo and Cartagena, thus showing how easy it was to cut Philip's communications with the mines in America. For a reply to this Philip entered into another plot to assassinate Elizabeth; but it was detected, and Mary Queen of Scots was executed for participating

[1] The Royal Navy increased from sixteen ships to thirty-four in the next few years after Drake's expedition. The Treasurer received for naval uses £8,424 in 1579, £15,824 1580, and £9,598 in 1581. We may suppose Drake supplied the increase of 1580.

in it (February 8, 1587). The execution of Mary ended the murder conspiracies in England, but the continental Catholics denounced the execution as foul murder. "In Paris the people raved against the perfidious queen; at Rome the Pope proclaimed a crusade against the heretic monarch." To Philip the story came as a solemn call to avenge innocent blood; and it was a call which he would obey as if it had been delivered to him by Deity. "It was God's quarrel and worthy of his greatness." It was now that Philip began to build the Invincible Armada.

The students of history who suppose that Philip was incited to build the Armada because of the raids which Drake had made fail to appreciate what I will venture to call the greatness of this monarch. For Philip was in spirit a true Crusader, born four hundred years too late. He was so sincere and earnest that he would have sent his own son to the stake for heresy, as he himself declared he

would do. He lived and used his power with the one hope of restoring the ancient faith as he saw it; and to build a fleet that would sweep the heretics out of England would not only avenge the execution of Mary, but it would bring a whole nation within the fold. But though great from one point of view, Philip was no match in war for the clear-eyed woman who ruled England. For seventeen years Elizabeth had practised a system of national economy so severe that it has often been called parsimonious. Though her life had been attempted three times by assassins employed or encouraged by King Philip, and the nation had boiled with anger, she had repressed her own indignation and said, "No war, my lords!" in a voice that all would obey. But now that invasion was planned by the dominant king of the world something must be done, and once more Elizabeth turned to Drake. Thereupon a plan for defending the kingdom was evolved that is yet memorable; for Elizabeth saw clearly that the way to

defend the coast of England was to strike the enemy upon his own coasts. An expedition, consisting of four naval ships and twenty privateers, under Drake, was ordered to go to Cadiz and Lisbon and destroy the ships and materials that Philip was assembling for the invasion.

On April 19, 1587, in spite of fortifications and armed ships, Drake sailed into Cadiz harbour, where he destroyed 10,000 tons of shipping and all the war stores that Philip had gathered. Then he went to Lisbon, where he destroyed 100 ships and the accumulated stores. Finally, to the joy of the privateersmen, who had fought as naval heroes, he captured an East India carrack of vast wealth. When he returned home, he said that he thought he had " singed the King of Spain's beard " somewhat effectually. But no disaster could turn aside the monarch who believed that he was the appointed agent of God for the extirpation of heresy in England. The preparations for the Invincible Armada

were begun once more and relentlessly carried to an end. The fleet when ready numbered 132 ships, 124 of which measured 59,120 tons (Shippen's "Naval Battles" says of the fleet "not less than 65,000 tons"), and manned by 30,000 men.

The ships which Elizabeth was able to muster to oppose this fleet measured but 29,744 tons, and the crews aggregated 15,785 men. There were 197 vessels, of which 34 were naval ships and the others commissioned merchantmen. Not only did the Spaniards far outnumber the English; a religious crusade had been preached in the ports of the Mediterranean, and the Spanish ships were manned by men who had come sincerely believing that they, too, were doing "God's work." It is said that they brought with them many sets of instruments used by the Inquisition with which they were to sweep away heresy. On July 29, 1588, lookouts stationed on the Lizard saw the Invincible Armada in the form of a wide crescent sweep-

ing majestically up toward the narrow seas, and lighted fires that carried the alarm to Dover. But a British fleet under Lord Howard of Effingham, with Drake, Hawkins, and Frobisher at the head of the three squadrons of which the fleet was composed, lay in waiting; and on Sunday, July 31, these ships sailed forth to attack the enemy in a running fight.

The Spanish ships were larger, but the English ships could sail around them, and, by attacking in force individual ships, destroy the Armada in detail. Much the worse for the encounter, but by no means defeated, the Armada reached the Calais roads and anchored in close order. Thereupon Drake prepared six fire-ships; and on the night of Sunday, August 10, while the lightning and thunder of a tremendous squall flashed and reverberated across the sky, he drove them among the crowded Spaniards. A panic spread swiftly over the whole Armada. Cables were cut, ship drifted into ship, yards and masts were broken, and, while some ships

sank, others were burned, and the remainder drifted away toward the Netherlands beaches. The next day, after a vain effort to fight with his remaining ships, the Spanish admiral hoisted a signal which said: "Make the best of your way home north about the British isles."

Only fifty-three of the Armada reached home ports, and they were so badly strained as to be unfit for war. Drake, who was the hero of this fight, though not the nominal commander, died off Puerto Bello, on January 28, 1596. His body was placed in a lead casket and lowered into the sea. Many good men have wished that his casket might be found and carried home for burial.

The reader will remember that, at this time, the English were fighting in self-defence—they had as yet no thought of fighting for the supremacy of the sea. One more story to illustrate how they cultivated their infant sea power may be given. In August, 1591, an overwhelming Spanish fleet surprised a num-

ber of English ships at the Azores. All escaped except the *Revenge*, Captain Sir Richard Grenville, and he might have done so if he had not refused to abandon a shore party. When his skylarking sailors came on board, Grenville headed for the centre of the Spanish line, determined to fight his way through. But, as the *Revenge* drew near, the sails of the *San Philip*, a three-decker, took the wind, and then five Spanish ships came, two on each side and one across the bows. Each of these ships carried 200 soldiers besides the crew, while the *Revenge* had only 100 men able to fight; but, nothing daunted, Grenville manned the guns, and at three o'clock in the afternoon began a fight for life. Within three hours, the big *San Philip* "shifted herself with all diligence, utterly misliking her first entertainment." A fresh ship came to take her place, however, and thereafter the battle raged without cessation the long night through. In that time, fifteen different Spanish ships were alongside the *Revenge*, and uncounted efforts

were made to carry her by boarding. Every pike in the ship was broken in repelling those assaults, and the last barrel of gunpowder was expended in battering the hulks that had come alongside. Forty men lay dead, every living soul was wounded, and Grenville was dying. When he was asked to surrender, he called the master gunner to his side and ordered him to "split and sinke the shipe." And this would have been done but for some of the other members of the crew, who prevented him because they could obtain honourable terms of surrender.

The naval officer, with his mind fixed upon the broad features of war at sea, says that single ship actions do not decide the event. But the ethnologist who studies the evolution of the English people sees clearly that such battles as that waged by Grenville, and such adventures as those of Sir Francis Drake, have had a deeper influence upon the national character than the strategy even of a Nelson. For not all of the naval men

have had any adequate idea of the strategetic features of England's wars. But to this day the English-born shepherd upon the deserts of Patagonia, and the Cornwall miner delving in the heart of the Rockies, and the clerk in the warehouse at Hong-Kong, all feel the blood leap in their veins as they read the story of Grenville and the *Revenge*. It is the hero story that breeds a heroic people.

Moreover, in all the turmoil which Hawkins and Drake and Grenville raised, we see the first answer made by English seamen to the question (then just looming into view) which found eloquent expression in Carlyle's "History of Frederick the Great": "Shall half the world be England's for industrial purposes, . . . or shall it be Spain's for arrogant-torpid, sham-devotional purposes, contrary to every Law?"

CHAPTER VI

THE OPENING UP OF NORTH AMERICA

From a broad view of the work of the master mariners described in the last chapter, it is seen that the people of Europe were, during the reign of Elizabeth, rapidly developing in certain ways, and that the inexorable law of the survival of the fittest was as manifest in that evolution as in the evolution of plants. War was the final test of fitness, and because of the situation of England and Holland, the test was made at sea. Philip sent his Armada to the Channel in order to extend the territory of Spanish civilization. William de la Marck, Hawkins, Drake, and Grenville, however unconscious they may have been of the fact, fought with all their might to maintain the civilization of the North. Because they succeeded, the

Northern civilization continued its growth with such vigour that a time was to come when it would no longer fight for mere existence—when it would, in fact, begin an aggressive expansion in which Northern master mariners were to do much work. But, before considering the expansion of English and Dutch civilization across the seas, it will be helpful to recall some of the peculiarities of the ships that were used.

The hulls of the ships built for use on the Atlantic had in general the lines of the Mediterranean galleys, but because a long, slender model would be racked to pieces by heavy seas, the new hulls were only about three times as long as they were broad. The elevated structures erected on the galleys for the use of soldiers in battle were retained on the sterns of the Atlantic merchantmen because officers and passengers found them comfortable. The old high forecastle was soon omitted because its weight strained the ship, the great surface it presented to a con-

trary wind prevented progress, and it was in the way of men who had to handle the sails. Of course, these objections were equally applicable to the high poop; but it was not until England ruled the seas that the poop was reduced to reasonable dimensions. In Drake's day, the old pole mast was cut in two, and the parts were overlapped in a way that enabled the crew to lower the topmast to the deck when a gale came on. When, in time, more sail area was wanted, a third part, called the topgallant mast, was added, with topgallant sails above the topsails and royals above the topgallant sails. The yardarms were lengthened with booms to which studding sails were spread, and in the nineteenth century skysails and other "kites" were set above the royals. In the meantime, the bowsprit and jibboom came into use, because sails well forward were helpful in steering. The square sails at first used on the bowsprit soon gave way to the much more effective modern jib.

To trace now the expansion of the English

across the Atlantic, let us recall first that before the day of Columbus they were at the extremity of a commercial route the centre of which was in Italy, and yet they showed some sea enterprise of a promising character. Bristol ships went to Iceland for fish, and Bristol ships had gone in search of a mythical island called Brazil before 1492. When Cabot discovered the American continent, no Englishmen tried to take possession of it, but, as said, one observation which Cabot made led to results. There were so many fish in the Newfoundland waters, he said, that they sometimes impeded the progress of the ship, and the fishermen took notice. The date of the first voyage to the Newfoundland banks is not known, but the Portuguese went there as early as 1500. The English soon followed, and thus prepared the way for the first oversea expansion of the nation. Consider the character of these fishermen.

Throughout the sixteenth century, during all of which war, open or undeclared, prevailed

continuously between the four leading nations of Europe, scores and hundreds of English, French, Portuguese, and Spanish fishermen sailed every spring to those banks. In 1577 no less than 350 fishing-boats gathered there. Their route lay across a breadth of sea known as the "roaring forties." Many of the vessels were but half decked, and the hulls were of such rude construction that they sometimes wound ropes around them to keep them from falling apart. Black fogs shut them in, fields of ice assaulted them and hurricanes from the unknown wilds beyond came to overwhelm them. Worse yet—far more terrifying—were the demons born of the imagination that came shrieking on the gale to carry their souls away to eternal torment. Men worked in the spray until they were covered with sea boils, and their hands dripped blood as they hauled in the lines. Food brought from home spoiled. They slept in the open air, or at best in unwarmed, leaking forecastles. Discipline was main-

tained by methods that now seem frightful. It was a trade in which there were no weaklings, because the weaklings were quickly eliminated.

Although war prevailed continuously, the ships of the four nations anchored side by side on the banks. The crews built their curing flakes side by side on the beaches. And when a ship opened her seams as she wallowed in the gale, the crews of the ships within reach lowered their boats to rescue the unfortunates. They developed for themselves a form of international law that provided fair play. The fact that many small vessels were employed is memorable, because many captains and mates were required. The openings for ambitious young seamen of lowly birth were many, and young men developed individual initiative and resourcefulness. This was particularly true of the Englishmen, and the effect of this upon English character is well illustrated in the story of Drake. For while Drake served his country well in many

ways, none was more important than that rendered when he demonstrated that a foremast hand could rise by good work to knighthood and fortune.

The banks fishermen received a share of the catch instead of wages; they were partners in the business, and they usually made enough to enable them to sit "with their toes in the ashes"—by the fireside—during the winter. There they told to the many who came to listen to them stories of adventure in that far-away region "beyond the Western Ocean"—stories that were mingled, too, with those of adventures with Hawkins and Drake and others who "singed the King of Spain's beard." For, because of their resourcefulness and courage, the banks fishermen were always carried in the forecastle when an expedition of importance was in hand.

It was a time when the people were emerging rapidly from the torpor of isolation that prevailed during the Dark Ages. They were as restless as the Vikings had been, and it

cannot be doubted that these tales of the sea—the most interesting topics of thought in that day—made a deep impression upon the whole nation. It is to be remembered, too, that the stories of the wealth gained by Spaniards and Portuguese in their oversea voyages were told and retold in England. Hawkins and Drake not only proved that the much-feared prowess of the Spaniards was a myth, but they confirmed the stories of the quantities of treasure gathered in the new lands beyond the sea. The efforts of Sir Humphrey Gilbert and Sir Walter Raleigh to establish colonies in the new-found world need not detain us; for while Gilbert bravely sacrificed his life, and Raleigh spent more than £40,000 in the work, neither made a definite success.

On April 10, 1606, however, King James chartered two companies, the London and the Plymouth, that were organized to make settlements in America between Cape Fear and Halifax harbour. An expedition was sent by the

London company (from the Downs, January 1, 1607) to colonize Virginia. The company consisted of forty-eight gentlemen, twelve labourers, and four carpenters, besides a number of servants to wait on the gentlemen and some soldiers to defend all hands—the total number being 105. Happily one of the gentlemen was the son of a farmer—Captain John Smith.

Smith (1579-1632) had been apprenticed to a trade in his youth, but he ran away to fight with the Dutch against the King of Spain, and later he went to Hungary to fight the Turk. There he was taken prisoner and enslaved; but he escaped and returned to England in time to go out with the colony of 1607. Because of his personal characteristics, and not because of wealth or influential friends, he was appointed one of the governing council of the colony, much to the scandal of the other governors, who would not let him serve at first. Nothing abashed, Smith explored the Chesapeake, made an admirable map of it, secured corn from the Indians

when food failed, managed to interest the gentlemen in agriculture, was chosen to head the council, and when the colony was reinforced by a lot of "the riffraff of London," he preserve order in spite of the vicious tendencies of the newcomers. But life was too strenuous under such a leader. He was never popular, and in 1609 he returned to England. The one story of his life which everybody has read is that of his capture by the Indians, when Pocahontas saved his life. The two facts really worth recalling, however, are, first, that his work in Virginia maintained the life of the Virginia colony until John Rolfe (who married Pocahontas) made a profitable crop of tobacco (1612), and so placed the colony on an independent footing; and, second, on his return to England, his writings kept the public so deeply interested in America (especially in the fisheries) that colonies were established and maintained in what we call New England. He did this by relating stories that could be verified. For example,

he told of one ship of 200 tons burden that with a crew of thirty-eight men brought home fish that sold for £2,100—" so that every poore sailor . . . had his charges and sixteen pounds ten shillings for his seven months' work." The owners, he said, very often cleared the cost of the ship in a season.

It was while Smith was thus keeping the reading public interested, and while the forecastle sailors from the fisheries were telling in all English ports what " big money " was to be made on the American coast, that the Pilgrims came to Plymouth Rock. Of their history it is sufficient to recall these facts: They were dissenters, and in their efforts to justify by arguments their peculiarities of belief they had developed the habit of thinking—a result of all dissent worth consideration. Because of persecution the Pilgrims had gone to Holland, the land of a people who declared upon their coins that their " way was upon the sea." In Holland the Pilgrims acquired much of the business

acumen for which the Dutch were celebrated. They came to America in the hope of building homes and getting on in the world. To this end they came in a ship (the *Mayflower*) the captain of which had been a Greenland whaler and the mate had had experience in the fisheries of the American coast. When the ship anchored under Cape Cod (November 11, 1620), they noted first of all the fact that the harbour seemed to be "a place of profitable fishing." They were to face many hardships at Plymouth, but they survived all, because they planted corn and went fishing. And when they accumulated a surplus they used it in building two shallops, with which they extended their profitable operations afloat. The sea saved and gave character to the settlement.

Of equal, if not superior, interest is the story of the next colony planted on that coast. A number of Puritans who, in spite of their disabilities as dissenters, had accumulated capital in England, sent a fishing expedition

to the coast (1623), in which were a number of men who formed a fishing settlement at Cape Ann. They worked the inshore fisheries, traded with the Indians and gathered food for the crews that came out from home each year. The home end of the business was badly managed, and the most of the settlers returned to England, but a " few of *the most industrious* resolved to stay." They moved to Salem harbour, where, by their descriptions of life in the new world, they induced sixty or seventy more Puritans to join them in 1628. Friends at home procured for them the next year a charter which was entitled " The Governor and Company of Massachusetts Bay." A reinforcement of 200 came across the sea with the charter. Among them were shipbuilders, who, on July 4, 1631, launched a sea-going vessel named the *Blessing of the Bay.* These men did not cross the sea under any delusion about the character of the country. They were not expecting to find either placer gold diggings or beds of pearls. They came to

build homes in the wilderness and catch fish. Of the *Blessing of the Bay*, Governor John Winthrop wrote: "The general fear of want of foreign commodities . . . set us on work to provide shipping of our own," and that was a statement accurately descriptive of the character of these colonists. A "want" —any want—*set them on work.*

Recall now the stories of the navigators who established the Dutch and the French colonies in America. Henry Hudson appears in history first as the captain of a ship that was sent (1607) to sail across the north pole to China—perhaps the first instance of great circle sailing. He went to Greenland, followed the ice barrier to Spitzbergen, and saw Jan Mayan on the way. The next year he made an equally futile attempt to sail along the north coast of Europe and Asia. This discouraged the company of London merchants who had paid the expenses, but the Dutch East India Company took up the work. Hudson sailed to try once more for a

north-east passage. His ship was the celebrated *Half Moon*, and another, the *Good Hope*, was in company. The ice in the north so discouraged the sailors that they mutinied.[1] The *Good Hope* returned home, but Hudson persuaded his men to sail to the American coast to examine a passage to the Pacific which was said to exist near latitude 40. He was the more easily able to do this because he had received a letter from Captain John Smith, then known to all seafaring Europeans, which declared that such a passage probably existed there. A number of explorers had seen the opening in the land at Sandy Hook, but no one had ever explored the estuary behind it.

On September 4, 1609, the *Half Moon* entered New York bay. The one practical result of this work was the observation that valuable furs could be obtained from the Indians in exchange for trifles. It is said

[1] It is a curious fact that, in spite of the severity of the punishments then inflicted upon sailors for mutiny, all the great navigators suffered from the offence.

that this feature of Hudson's report, on his return to Holland, created "the wildest excitement," and that fur buyers came regularly thereafter to the river. In 1610 Hudson came once more to the coast seeking a passage to the Pacific, and entered the bay which bears his name. There he spent the winter, but in the spring his men cast him adrift in an open boat, in which he sailed, at last, to the port of missing ships.

As early as 1581, the Dutch had considered the feasibility of conquering Spain by attacking her American possessions, and the subject had serious consideration in 1606; but it was not until 1626 that Peter Minuit bought Manhattan Island for five pounds' worth of trade goods, and New Amsterdam was founded, as a convenient port for West India cruisers. Of far greater importance in its results was the work of Samuel de Champlain (1567-1635). Of the French explorers who came to America before his day little need be said. Jacques Cartier (1494-1552),

a Breton sailor, had explored the St. Lawrence as far as Montreal, and a fishing station was maintained most of the time at Tadoussac.

Champlain, the father of New France, was born at Brouage, was taught the arts of navigation in his youth, served in the army as quartermaster, and travelled in Spanish America from New Granada to Mexico. With this experience he had, at the age of thirty-five, the enthusiasm of youth combined with courage and resourcefulness in a degree rarely found in men of his day. And it was then that he became interested in colonizing America. Champlain's first expedition was of small moment; but in November, 1603, he sailed with Sieur de Monts, who founded two small settlements while he explored the coast from the St. Lawrence to Martha's Vineyard. On September 3, 1607, the settlers left the country, but Champlain came back with another company, and on July 3, 1608, founded Quebec. The histories describe the enmity of the Iroquois Indians and the severe climate as the

causes of the failure of the French in New France, but the chief trouble is to be found in the fact that they developed the fur trade instead of any productive industry requiring them to labour. When Nantucket folks saw whales in the offing, they sent for an expert to teach them how to go whaling. When the people of Quebec saw whales in the waters below the city, they applied to the king for a subsidy with which to hire whalers to do the whaling for them.

Only a glance at the Americas during the seventeenth century is needed to see that Spanish America was a country depending chiefly upon slave-worked mines and half-wild cattle for support. The mines were productive, but the king's share—one-fifth—absorbed the profits of the business. There could be no progress under such conditions. Although the enterprise of La Salle had filed a good claim upon the basins of the St. Lawrence and the Mississippi, the French lost their title through failing to do the development work

required by natural law. Even the Dutch failed to develop their territory around New Amsterdam thoroughly. As late as 1658 the people there confessed that they were " not as yet in condition to build " a galliot. On the other hand, tobacco—the result of productive labour—was so profitable in Virginia that ships were seen three deep at the landings waiting many weeks for the crop to mature. In New England the colonists were catching fish in boats of their own construction—including dugouts which a man with an axe could make for himself. They were combining their little accumulations of capital with their own labour, and building ships up to 300 tons burden to carry their fish and some forest products to market. They were even building ships for sale in Europe. Thus, while the conditions in the American colonies of other powers promoted a dislike for physical toil and a dependence upon a more or less paternal home government for every sort of initiative work, the English colonists governed

themselves to a degree that astonished the world; they necessarily acquired the habits of individual initiative and self-reliance, and they accumulated wealth by actual physical toil. They understood very well that "The All of things is an everlasting conjugation of the verb *To Do*." It was for this—for the evolution of colonists of this quality—that the Elizabethan master mariners cruised along the Spanish main, and the Elizabethan fishermen swarmed across the "roaring forties" to where the black fogs shut them in, and the ice fields from the north and the whirling storms from the west came to assault them.

A part of the work of the opening of the American continent was done in the Arctic. The first expedition of the kind was sent out by the Merchant Adventurers' Company of which Sebastian Cabot was governor. Three ships were built for the work, and Sir Hugh Willoughby was placed in command with Richard Chancellor as second. When the

expedition started down the Thames on May 20, 1553, the people alongshore and even the Court came to the banks and "shouted in such sort that the skie rang again with the noyse." Chancellor alone reached Russia (by way of the Arctic and the White Sea), but trade relations then established proved so advantageous that the English were encouraged thereby to finance many of the voyages to other parts. One object in view when Drake sailed for the Pacific was to search for the western end of a north-west passage around America to China. While he was away, Sir Martin Frobisher sailed for Labrador (June 7, 1576) in the 20-ton ship *Gabriel*. He discovered Frobisher's Strait and the entrance to Hudson's Bay. John Davis followed in 1585, and entered the strait that bears his name. William Baffin was the next Arctic explorer to make a real advance. He was sent by the Muscovy Company of London to find a north-west passage (March 16, 1616), and, sailing through Davis Strait, he reached

an altitude of 77 degrees 45 minutes, which remained a record in those waters for 236 years. The water north of the Davis Strait was named Baffin's Bay in his honour. His explorations demonstrated that no practical north-west route existed.

After Baffin's time most of the explorations of the Arctic were encouraged " from motives as disinterested as they were enlightened; . . . from a steady view to the acquirement of useful knowledge and the extension of the bounds of science," as Sir John Franklin said. The first great advance was made by William Edward Parry, who left Yarmouth on May 12, 1819, reaching 113 degrees 48 minutes west longitude, in latitude 74. He received a reward of £5,000 offered by Parliament for the ship first to reach 110 west longitude on the north side of America. Sir John Franklin is, perhaps, the best known of the Arctic explorers. On May 18, 1845, he sailed from England in the ships *Erebus* and *Terror* with 129 men all told. Whalers

at the entrance to Lancaster Sound saw the ships on July 26, and then they disappeared forever from the eyes of civilized men. In all, thirty-nine expeditions, private and public, were sent from England and the United States to search for the missing crews. Finally Leopold McClintock, in the yacht *Fox*, sent out by Lady Franklin in 1857, found papers and other relics of the expedition. The papers showed that Franklin wintered first at Beechy Island, and in the next year sailed west until September 12, at which date the ships were twelve miles north of King William Land. There the ice nipped them, and they never escaped. Franklin died on the *Erebus* on June 11, 1847. Captain F. R. M. Crozier, the second in command, continued exploring the neighbouring regions while waiting for the ice to release the ships, but a scarcity of provisions compelled him to abandon them on April 2, 1848. The company, numbering then 105 men, tried to walk to civilized parts of the country, but all died of starvation or disease.

An Eskimo woman who saw a remnant of the company on the march told McClintock that " they fell down and died as they walked." McClintock found one of the skeletons lying face down.

In a sledge journey on which he started on February 17, 1859, McClintock reached the magnetic pole on March 1. Eskimos were located at the point, and it was through their aid that he learned the facts about the Franklin company. One of the expeditions sent to look for Franklin was under Captain Robert McClure, in the *Investigator*. He arrived at Bering's Strait July 31, 1850. With a party on foot McClure then reached the north-east point of Bank's Land, where he looked out across the waters upon which Parry had sailed in 1819, and thus proved the existence of a navigable channel across the north end of the continent. The route across the north side of Europe and Asia was first travelled by Nils Adolf Eric Nordenskiold, a Swedish explorer. On July

21, 1878, he sailed from Tromsoe in the steam whaler *Vega* and he wintered in Kolyuchin Bay. The ice drove him out of his way on July 18, 1879, and two days later, with guns booming a salute in honour of the occasion, Nordenskiold reached Bering Strait.

After many daring voyages, among which that of Fridjof Nansen was most notable, the North Pole was at length reached by Commander R. E. Peary, a naval civil engineer. On August 17, 1908, he left Etah on the steamer *Roosevelt*, and reached Cape Sheridan on September 1, where the party wintered. On February 15, 1909, a move was made to Cape Columbia, the most northern point of Grant Land—in all, sixty-six men, 140 dogs, and twenty-three sledges. On March 1, Peary started out across the ice-covered sea for the pole, 475 miles away. Open water leads delayed the party, but snow houses were built at intervals and supplied with food until they were within 140 miles of the goal, when the last of the supporting parties turned back,

and Peary, with a coloured servant and three Eskimos, driving five sledges drawn by forty dogs, made the final dash. The pole was reached on April 6, 1909. Five miles away a deep-sea lead carried out 1,500 fathoms of line without finding bottom. In all Peary spent more than £100,000 in the work before he reached his goal. The United States Congress promoted him to the rank of rear-admiral on the retired list in appreciation of his prolonged labours.

In the meantime the south polar continent had attracted attention.[1] In 1911 no less than five expeditions were at work, but fortune favoured Captain Roald Amundsen. Amundsen left Norway in June, 1910, in the *Fram*, a vessel driven by an oil motor, and landed at Bay of Whales on the ice sheet covering Ross Sea. The final start inland was made on October 20, 1911. The route

[1] See "Polar Exploration," by Dr. Bruce, leader of the "Scotia" Expedition, in the "Home University Library."

lay along glacial streams that flow down through valleys and gorges between mountains rising from 15,000 to 18,000 feet above the sea, until a plateau was reached across which the explorer travelled for 140 miles to the pole. This was reached on December 15 and 16, 1911. The high mountains appear to be an extension of the Rocky Andean system.

Criticisms are sometimes made of Arctic exploration because the explorers have never secured any "practical" results. But we may believe the work was worth while if only to demonstrate that other motives than mere greed incite men to endure frightful privations with risk of life itself.

CHAPTER VII

WHEN THE DUTCH AND THE ENGLISH CLASHED

A PSYCHOLOGIST, after a study of modern international relations, says that "war finds its natural condition when the wholesome growth of two rivals has reached a point at which there is no longer any room for the expansion of both." And he adds: "A true respect for the historic energies by which the destinies of the nations become fulfilled demands that the spectators value the noble ambitions on both sides instead of posing as judges who decree that one side is just and the other unjust" (Hugo Munsterberg). In any view of the wars between the Dutch and the English it is particularly necessary to value the noble ambitions of both sides instead of posing as judges. Expansion is like migration, in that both are the work

of a natural instinct. The English and the Dutch were developing along natural lines; their contact was unavoidable, and with contact came friction—war—as a natural result in the state of civilization prevailing.

The trouble began in India. The English merchants were first incited to engage in the direct Indian trade when Drake (1587) captured a Portuguese East Indiaman off the Azores. Hakluyt says that the "taking of this carack wrought two extraordinary effects in England: first that it taught others that Caracks were no such bugs but that they might be taken; . . . and secondly in acquainting the English Nation more generally with the particularities of the exceeding riches and wealth of the East Indies; whereby themselves and their neighbours of Holland have been encouraged . . . to share with" the Portuguese in that trade. The "great admiration" of the nation found expression in an expedition of three "tall ships" which sailed on April 10, 1591, for Sumatra and

Malacca. The expedition was a commercial failure, but Captain James Lancaster, the second in command, learned the route, which was a matter of importance.

In 1599 an association was formed in London to send ships to India, and a charter was issued (December 31, 1600) to "the Governor and Company of Merchants of London Trading into the East." The exclusive right to engage in that trade was given them. The capital was £72,000. The first expedition included five ships which varied in size from the *Dragon* of 600 tons to the *Guest* of 130. In spite of his hard luck on the first voyage, Captain James Lancaster[1] was given the command. Acheen, Sumatra, was reached on June 5, 1602, and trade treaties were made with the local potentates. Full cargoes of spices, etc., were obtained and then Lan-

[1] In October, 1594, Lancaster sailed with three privateers to Brazil. He captured twenty-nine Spanish vessels and, landing at Pernambuco, secured such quantities of India goods left there by a Spanish carack that he was able to freight fifteen vessels, all of which reached England safely.

caster " was fortunate enough on his way home to fall in with and capture in concert with a Dutch vessel, a Portuguese carack of 900 tons, richly laden."

The Dutch East India Company was chartered on March 20, 1602, with a capital of £550,000. The extent of this capital shows that the Dutch appreciated the needs of the trade better than the English did; perhaps, too, that they had more capital at command. To illustrate Dutch aggressiveness, we may relate that in 1602 a Portuguese fleet of twenty-five warships appeared off a Java port and found five small Dutch traders within. The Dutch sailors numbered less than the crew of one Portuguese ship, but they attacked the Portuguese in " Sea-Beggars " fashion, and after capturing some and sinking others sent the remainder flying for life.

In 1612 the English secured a station at Surat, and at about that time a foothold, which was abandoned later, was obtained in Japan through an English sailor named

William Adams, who had gone to that country in a Dutch vessel, and had made himself useful to the natives. A new charter for the company was obtained with increased powers in 1609; and King James helped to launch two fine ships for the trade—one of 1,200 tons. In 1617 the company's stock was selling at 203. The feeling between the Dutch and the English thus far was cordial enough to lead the Dutch to suggest amalgamation of the two companies, but underlying conditions led to war.

Thus, because of the extent of their lead in India, the Dutch looked upon English expansion as an encroachment. Meantime they also had such a lead in Europe that fifteen Dutch ships entered English ports where one English ship entered a Dutch port. The English were naturally jealous of the Dutch. Then the English entered the Greenland fishery in opposition to the Dutch, and failed. Thereupon the Dutch, who were naturally already arrogant, began to say to the English,

"We will make you wear our old shoes." As Mahan says, insults are worse than injuries, and an injury was to be added to the insults. The Dutch had agreed to divide the trade of Amboyna with the English, and each company had a station on the island. In 1623 the Dutch commandant there became convinced that the Englishmen were going to destroy the Dutch station by treachery. Gathering in the Englishmen (who were few in number), he put some to the torture, under which they confessed their guilt. Some were then executed and all the others sent from the island. No war followed,—James I was king,—but the English could not forget the tragedy. Fifty years after the event, Dryden wrote a play named "Amboyna, or the cruelties of the Dutch to the English Merchants."

After Charles I came to the throne, the troubles over the king's prerogative and those due to the Puritan faith occupied English attention chiefly, but Charles revived interest in the sea by his efforts to levy "ship money."

With a war fleet of sixty vessels to support his demand, he induced the Dutch to pay £3,000 a year for the privilege of fishing upon the English coasts and to strike their flag in the presence of a British man-o'-war anywhere within certain limits of the narrow seas. The willingness of the Dutch to strike the flag while they controlled the traffic of the high seas, and that the English should exact the honour, are impressive facts. The Dutch, at that time (May, 1635) were yet at war with Spain. A truce had been proclaimed for twelve years, beginning in 1609, but the Dutch had renewed the war for the sake of the profit in it. In carrying on the war, however, they fell foul, more than once, with the English. For example, in 1639 a Spanish fleet of sixty-seven ships carrying 2,000 soldiers entered the strait of Dover. Admiral Martin Tromp, with sixteen ships, overwhelmingly defeated the Spaniards, and drove a remnant of their ships for refuge to the Downs. Tromp followed, but was warned off by the

English. Then he sent home for orders and got reinforcements, with which he cleaned the anchorage.

The sympathy which the Prince of Orange showed for King Charles as the Civil War developed in England was " in the last degree irritating " to Cromwell. In 1648, the Long Parliament passed an Act under which no produce could be exported from any port of Britain or the colonies in a foreign ship. It deprived the Dutch of a valuable carrying trade from America. The famous " Navigation Act " followed in 1650. It provided that no goods produced in Asia, Africa, or America should be carried to any part of the British domain in a ship not under the British flag whereof the master and more than half the crew were not British subjects. The importation of European goods was also confined to British ships or to ships belonging to the countries wherein the goods were produced or from which they were usually shipped.

This act was unquestionably an expression

of British animosity against the Dutch, but under all was a new foreign policy born of the work of the Elizabethan seamen. The English believed it would give them a large share of the India trade at the expense of the Dutch, and in this belief the Dutch concurred. To add to the exasperation of the Dutch, the English began to enforce the agreement regarding the striking of the Dutch flag in the presence of an English warship, an agreement that had not been enforced for some time. Early in May, 1652, an English officer in a small vessel fired on a Dutch squadron for failing to strike its flag. Thereupon the Dutch sent Admiral Tromp to sea, with forty ships, under orders to support the dignity of the flag. On meeting Admiral Robert Blake, in command of an English fleet, Tromp answered a demand for a salute by firing a broadside. A battle that lasted four hours followed, and then Tromp withdrew.

The most interesting figure in the war that

ensued was this Admiral Martin Harpertzoon Tromp. When eleven years old, he saw his father, a naval officer, killed in battle. At forty years of age he was a vice-admiral (1637). When he attacked Blake, a Dutch envoy was in London trying to secure peace; but after hearing about the fight the mob would have killed the envoy but for a military guard. War was declared on July 8. Before this (June 28), Blake had gone north with a fleet to capture the Dutch herring fleet. Tromp, after a demonstration on the English coast, followed Blake; but a storm kept him from attacking, and damaged his fleet so much that he had to return to port. Blake followed him and "insulted the Dutch coasts with impunity." Though Tromp was in no way blamable, the Dutch had been accustomed to instant victory, and they became so angry that they drove Tromp from the service. That is a memorable fact, if contrasted with the English conduct under similar or even more trying circumstances.

For the English were later known to celebrate defeats as if they had won. Jan De Witt, notable as a statesman only, took command, and with Michael De Ruyter, as second, met Blake's fleet off the North Foreland on September 28, when they were defeated for a reason that is of interest. The Dutch Republic was a loose conglomerate of States, not a nation. The fleet was an aggregation of ships belonging to the States, and the officers gave allegiance to their States first, and not to the admiral or the republic. Moreover, the officers and seamen, as well as all other men of the republic, were divided into two factions that hated each other cordially. Tromp was of one faction, while De Witt was of the other. At the end of the first day's fighting, twenty of the Dutch ships, manned by friends of Tromp, hastened home to announce that the fleet was sure to be defeated the next day. When De Witt returned, defeated, to Flushing he was mobbed. The deserters were not mobbed.

Tromp was now restored to command, and

showed his mettle by going in search of the enemy in December—a thing then unheard of. As he was not expected, the English were not prepared, and Blake had but half as many ships as Tromp. Nevertheless he went out to fight on December 10. It was a battle between sea mobs. The ships gathered in bunches, and blazed away until night came, when Blake was obliged to retreat, leaving Tromp to sail the narrow seas with a broom lashed at the masthead, where Dutch skippers were wont to lash huge bunches of flowers when a wedding impended. It was not in British blood to endure that kind of a spectacle, however; and on February 18, 1653, Blake, with eighty ships, met Tromp, who, with seventy-three ships, was convoying a fleet of merchantmen. The battle lasted four days. The fighting, at times, was picturesque. Tromp swooped down on the *Triumph*, Blake's flagship, and nearly wrecked it aloft with two broadsides. Admiral Penn (father of the founder of Pennsyl-

vania) came to the rescue with a number of vessels, and then several Dutch vessels joined in, with the result that a fighting vortex was formed, in the midst of which one ship sank, another burst into flames, and the crews of others were seen clambering to and fro over the rails in fierce efforts to win by hand-to-hand conflict. When this group separated three of the hulks floated about helpless, while one went adrift, with only the dead and the wounded who could not escape on board.

There was little change in methods or conditions on the second day until night came, when several of the Dutch captains sailed away. It was not that they were cowards; they were over-economical. The Dutch had lost eight ships in the battle; the deserting captains inferred, therefore, that the Dutch would be whipped. Why, then, should they waste more good powder and risk their expensive ships in further fighting? It appears that the Dutch who remained for

he third day's battle fought more desperately than ever, but all in vain, as was the fighting on the fourth day.

Once more the Dutch gathered a fleet of about a hundred ships, and sent them forth under Tromp. He found the English (June 2) not far from Yarmouth roads—104 ships against 105. The decisive feature of the battle occurred about four o'clock in the afternoon, when the crew of Tromp's ship boarded that of Admiral Penn. The English not only repelled them, but came back over the rail with such fury that Tromp thought his ship lost, and fired the magazine. The deck was blown off, killing most of the two crews, but Tromp escaped, little hurt, and made his way to another ship in a small boat. In the meantime, however, the report that Tromp had been killed in the explosion spread through the fleet, and the Dutch skippers, disheartened, fled.

One more battle only remained for the brave old admiral. With unsurpassed fortitude he

assembled another fleet, and met the English under Monk (Blake was sick), near the Texel. For two days the ships manœuvred for position, and then Tromp swooped down. The firing was so deadly that masts began to fall at once all along the line; and within a short time several ships were seen sinking, while others burst into flames. Then a cloud of smoke fogged in the fleets until not a spar could be seen from the outside—a cloud that was several times illuminated with a vast flash followed by a volcanic outburst which told where a ship's magazine had exploded. In the midst of the battle Tromp saw the British flagship, and drove his ship toward her; but as he drew near a musket ball pierced his breast, and he fell and expired instantly. Thereupon the crew took the ship out of the fight, and the other ships, seeing her leave, followed. More than thirty ships had been wholly destroyed or so badly wrecked as to be helpless before the firing ceased. Monk's victory was decisive.

The Dutch had lost 1,700 ships of all kinds in the course of that war; and they sued for peace in 1654.

We may here turn aside for a moment to note that on October 23, 1655, Cromwell declared war on Spain chiefly because the Spanish Inquisition was burning English Protestants at every opportunity. The Spaniards could not believe that he had a just cause of war, for they were not burning them as Englishmen but as heretics. The war is memorable because Admiral Penn went to the West Indies and added Jamaica to the British possessions, and because it was then that the British Government first began the practice of seeing that, come what might, every British subject should have justice, no matter where he might be found—a practice that, more than any other, has made the English flag respected by the half-civilized and fanatical, as well as by the civilized and treacherous peoples of the world, as no other flag is respected.

Of Admiral Blake it may be said that, while he divided his fleet to meet a divided enemy, when good tactics demanded that he should use his force to crush the enemy " by parcels," as Cromwell wrote, he nevertheless created an *esprit de corps* that was most marked because of its contrast with the spirit among the Dutch. He also cultivated the habit of putting his ships alongside the enemy's, rail to rail. British prowess in that kind of a fight gave the British seamen a contempt for strategy and tactics, as if anything but hand-to-hand fighting showed in some sort a lack of courage. This feeling is not always desirable in war, of course; but the influence of the habit in the development of the character of the people unquestionably made for a growth of the national spirit. Blake died on August 17, 1657, as his ship was entering Plymouth, after having destroyed a Spanish treasure fleet at the Canaries.

The next clash occurred on the coast of Africa, where the Dutch had taken over the

lucrative trade established by Henry the Navigator. The English had also chartered an African company (1631), and the Dutch made trouble for this company in revenge for the Navigation Act. An English fleet reinstated the company, and then Ruyter went down and restored Dutch supremacy. Still another fleet was sent from England (1664), and this not only cleaned the African coast, but crossed to America and added New Amsterdam to the British domain under the name of New York.

In the meantime (1663) the Navigation Act had been strengthened. The open declaration of the next war was made in 1665. The first battle occurred off Lowestoft, and was lost by the Dutch because a Dutch admiral was killed, and the crew of his ship took it out of the fight in a panic. The battle of real interest is known as the "Battle of Four Days," June 11-14, 1665. It is of special interest because the fleets were handled "in line ahead closehauled," that is to say, an effort

was made to introduce and maintain some sort of system or order to replace the mob style previously in vogue. The Dutch having at last found an enemy able and willing to fight as well, ship to ship, as they could, were compelled to consider tactics. Ruyter commanded the Dutch fleet of 100 ships, Monk the English fleet of sixty. The English were eventually reinforced by a division of twenty ships, but it was then too late. The Dutch lost four ships and 2,000 men in the four days of fighting; the English seventeen ships with 5,000 men killed and 3,000 taken prisoners. In the next battle (August 4) the English won, but the victory was more than offset in June of the next year, for Ruyter, with sixty ships, came to the Thames at a time when the English were napping, and the people of London saw the smoke where the enemy were burning the shipping in the river.

In the meantime, London had suffered from the great plague and from the great fire. The English trade as well as that of

the Dutch had suffered severely. In France Louis XIV, with Colbert to tell him how, was developing sea power as well as home industries, hoping thereby to secure a domination in Europe that would be dangerous to other nations. The treaty of Breda (July 31, 1667) was welcomed by both nations. The Dutch had peace with honour, the English peace with honour and New York. The final conflict of the period was forced upon the Dutch by Louis XIV in his efforts to secure the Spanish Netherlands. England should have sided with the Dutch, but Louis bribed Charles with large sums of money, and promised to take care of the English in the division of the spoils. Moreover, it was agreed that the British admiral should command the allied fleets. The Dutch in vain offered every reasonable concession. On March 23, 1672, the English raided a fleet of Dutch merchantmen, and on the 29th declared war. Louis had declared war on the 28th. These acts united the Dutch, for once, and when

Ruyter went to sea he commanded a fighting unit.

On meeting the allied fleet in May, Ruyter retreated among the shoals on the Dutch coast in a way that deceived the allies into thinking he dared not attack them. They therefore sailed to Southwold Bay, where they began taking in water, and there Ruyter surprised them on June 7. In the hurry to get out of the pocket, the English headed toward the north on the starboard tack, while the French turned toward the south-east on the port tack. Thereupon, Ruyter contemptuously sent a small squadron to amuse the Frenchmen; and, having thus a force at least equal to the English, he attacked them with a fury showing that the Dutch knew why they were fighting. But the English were equally determined; and "the battle, considered simply as an engagement," was "indecisive." Ruyter withdrew, but "the honours and the substantial advantages all belonged to him. Ruyter showed a degree of skill combined

with vigour which did not appear upon the seas after his death until the days of Nelson " (Mahan).

The next fleet battles occurred on June 7 and 14, 1673. In each the allies far outnumbered the Dutch (eighty-one to fifty five on the 14th), and the Dutch withdrew, but in each instance Ruyter really won. For the English had assembled an army for the invasion of Holland, and the allied fleets were striving to make way for the invasion; but Ruyter foiled the attempts. On August 20, the allies were searching for Ruyter once more, and they found him among the shoals because they had the wind. The next day, the wind shifted, and Ruyter, with all sail set, swooped down with seventy ships. The English had sixty and the French thirty. One can imagine the feelings of the old Dutchman when he ordered a squadron of ten ships to hold the French in check while he, with the sixty, attacked the English, ship for ship.

Two features of the battle seem especially

memorable. The little squadron of ten Dutch ships not only held the Frenchmen in check, but eventually sailed through the French squadron and ran down to aid Ruyter in his conflict with the English. In the meantime, Rear-Admiral Spragge, of the English fleet, hove his squadron to in order to wait for the Dutch squadron under Cornelius Tromp (son of the old admiral). Charles II. had a personal grudge against Tromp, and Spragge had promised to bring Tromp's head ashore, or die in trying. But the sturdy Dutchman fought with such energy that he shot two ships from under the Englishman—literally wrecked two ships bearing Spragge's flag; and when the Englishman was going in a small boat to a third ship Tromp sank the boat, and Spragge was drowned. As night came on, the French came down as if to take part in the battle, and Ruyter withdrew. But the battle was decisive in favour of the Dutch. It incited the German empire and Spain to declare war upon Louis. Thereupon the

English made peace with the Dutch (February 19, 1674), and Louis, also, while continuing the war upon the others, came to terms with them. By good fighting, Ruyter saved his country in a war with two nations, each of which was far more powerful in the numbers of its fighters than Holland.

Two years of life yet remained for Ruyter, the greatest of the sea fighters of the seventeenth century. In 1675 the Spanish asked the Dutch for the loan of a fleet for use in the Mediterranean. Ruyter was sent with an inadequate force. He joined the Spaniards, and soon learned how the English had felt while the French were their allies. He took part in two battles, which are described in detail in Mahan's "Sea Power." One sentence of that description will serve admirably for the whole. "The Spanish centre kept at long range, leaving the brunt of the battle to fall upon the Dutch van." Another quotation will complete for us the life-story of Admiral Michael de Ruyter: "In this sorrow-

ful yet still glorious fulfilment of hopeless duty, De Ruyter, who never before in his long career had been struck by an enemy's shot, received a mortal wound." The Comte de Guiche, after meeting Ruyter, wrote this: "I never saw him other than even tempered; and when victory was assured, saying always that it was the good God who gave it to us. . . . He has something of the frankness and lack of polish [alas! alas!] of our patriarchs. The day after the victory I found him sweeping his own room and feeding his chickens."

Any review of the wars between the Dutch and the English shows that they were really waged for supremacy on the high seas. To secure that end the Navigation Acts were passed, but they achieved their end only as they led to war. The Dutch came out of the wars greatly exhausted. Their shipping was yet profitable, but there was a too scanty support for it in their agriculture and manufactures. The Dutch had "pyramided,"—

the foundation upon which they had reared their sea power was too small to support it. This feature of Dutch history might well receive the careful consideration of those Governments that are now taxing their peoples to the last gasp in order to build more and greater war fleets. An increase of taxes was never known to increase the efficiency of a people. England came out of the wars in condition to expand her sea trade with increasing vigour. She was ready to continue around the Seven Seas the work which the Phœnicians, Greeks, and Venetians had done along shore in the Mediterranean.

The work of the "Sea Beggars" and the Elizabethan seamen transferred the centre of maritime enterprise from Cadiz and Lisbon to London and Amsterdam; but natural influences at once brought on war between London and Amsterdam in which the fittest necessarily survived. And no one now declares that civilization was set back by that inevitable result.

CHAPTER VIII

WARS BETWEEN ENGLAND AND FRANCE

NAVAL development will receive separate consideration in the Library; but the influence of certain events of the wars between the English on one side and the French and Spanish on the other, which raged between 1676 and 1815 upon the development of the sea habit, is of especial interest to us here. For example, recall the battle of La Hougue (or La Hogue). Although the French were defeated with much loss, the way in which Admiral Aimé Hilarion de Cotentin, Comte de Tourville, handled his fleet has compelled naval writers to give him the highest praise. Mahan says that no higher proof of military spirit and efficiency could be given by any navy. And yet this battle is memorable here chiefly for what it did not do—because it did

not and could not rouse the enthusiasm of the French people. The effect of the stories of good sea fights upon the English has been repeatedly noted. But in France, though Louis wrote to Tourville that the story of the battle gave him "much joy," the navy was allowed "to dwindle away."

The work of the famous French privateers has a similar interest. Jean Bart was a most brilliant seaman. Few Englishmen have done any work better adapted to develop a love of the sea than he did. He not only brought much wealth into port, but he showed that he would neglect opportunities to win wealth when he had a chance to make a good fight. But neither the gallant privateer nor the sturdy naval seaman was able to turn the ambition of the French nation toward deep water. The war in which Tourville gained fame is known as that of the League of Augsburg. The treaty of peace (1697) is memorable because the English and the Dutch demanded and received commercial

concessions which would build up their shipping at the expense of the French. The Dutch and the English were constantly on the outlook for expansion in sea power; the French were indifferent.

The same habit of thought is seen in the next war when Sir George Rooke went to Toulon to destroy a French fleet, and on arriving found the fleet had been so far reinforced that an attack seemed impracticable. Thereupon, as "he was ashamed to go home without doing something," he captured Gibraltar (August 4, 1704). The key to the Mediterranean has been in England's hands ever since. In the acquisition of Newfoundland and Nova Scotia, together with the right to supply the Spanish West Indies with slaves, at the end of the war, we see at once the English ambition for expansion and the English confidence in their shipping. The Treaty of Utrecht was dated April 11, 1713. Thereafter England was supreme upon the sea beyond dispute. Campbell ("Lives of

the Admirals"), in speaking of "the popularity of every step taken to increase our maritime power," adds: "I doubt whether the credit of the English nation ever stood higher than at this period, or *the spirit of the people higher.*" Agriculture and manufactures were growing—John Bull was learning to cultivate his land intensively—but the prominent feature of the development of civilization in England was the cultivation of the sea habit.

The next war was begun with Spain in 1739, and the French sided openly with Spain in 1744. The trouble between England and Spain grew, to a large extent, out of the contraband trade which English merchants maintained with the Spanish colonies. Religious prejudices had then less influence than formerly; but we may suppose that certain easily recognized habits of the two peoples—differences which often excited intense anger on one side and half-amused contempt on the other—had developed a willingness to

fight on both sides. The intense anger created by half-amused contempt was exhibited by a Spanish naval officer who hacked off the ear of Captain Jenkins, as he peacefully sailed the high seas. The great indignation of the whole British people helped to precipitate the war that would have come on in time without this incident. Perhaps we should recall, too, the fact that in the course of the war the officer who did the hacking was captured, and recognized. The revenge taken upon him was characteristic—he was released with expressions of contempt only.

In this war the most interesting master mariner was Lord Anson. His name appears in the register of his first ship (the *Ruby*, February 2, 1712, when he was fifteen years old) with that of an ordinary seaman above it and that of a cabin servant below. At that time life in the navy was so hard and the pay so low that few were found to ship voluntarily; and we are therefore to assume that Anson shipped through a love of adventure

only. In those days, too, rank was supposed to belong by divine right to the high born. Nevertheless Anson, the apprentice, was able by good work to secure promotion until he was ordered to take a fleet of six ships to the west coast of South America to raid Spanish settlements and shipping. He sailed September 18, 1740.

One quotation from Pascoe Thomas's story of the voyage will give a comprehensive idea of the sufferings of the crews when in the Cape Horn region. "I have seen 4 or 5 dead Bodies at a time some sown up in their Hammocks and others not, washing about the decks for Want of Help to bury them in the Sea." On December 7, 1741, only 201 men remained with Anson out of 1,872 that had left England. Only the flagship *Centurion* completed the voyage. And yet in November, 1741, Paita was captured, and the boats were engaged for three days in carrying off plate and coin. Moreover, having determined to return by way of the East

Indies, Anson had the luck to fall in with a galleon from Acapulco (June 20, 1743), from which he secured "1,413,843 pieces of eight and 35,682 oz. of virgin silver," besides other valuables. The *Centurion* reached Plymouth on June 15, 1744, and her log for July 2 contains this entry: "Fresh gales and cloudy, sent away treasure in 32 waggons to London with 139 Officers and Seamen to guard it."

Anson was made a lord on June 13, 1747. From 1751 until his death, on June 6, 1762, except for one year, Anson was the "very competent and energetic First Lord of the Admiralty." In the British navy an ambitious apprentice might, by efficient work, obtain such honours as Anson gained. We will remember, too, that the story of Anson's voyage around the world, as told by the fleet chaplain, Richard Walter, is yet "one of the most popular of the English books of voyages." So Anson still turns the thoughts of English boys toward the sea.[1] On the

[1] "Books. The value of these consists . . . B. In

whole, the French had the best of the fighting; and when they were ready to overrun Holland, England was glad to make peace in order to recuperate before fighting further.

The Seven Years' War followed. It was then that the French and English in America determined which civilization was fittest for the evolution of a new world. As it is now desirable to give special consideration to a peculiarity of French naval policy, we may recall a minor event of the war—the capture of Minorca from the English by the French land and sea forces early in 1756. Admiral Galissonière carried the expedition to Minorca. Admiral Byng, sent from England too late, arrived off Port Mahon and was met by Galissonière. Our interest in the battle lies in the fact that Galissonière, instead of making every effort to gain control of the sea, chose to fight on the defensive, risking his ships as little as possible so long as he prevented the

their power of exciting vital or noble emotion and intellectual action."—Ruskin, "Essays on Political Economy."

relief of Port Mahon. That is, he chose to make his fleet a mere adjunct of the army, and nearly all French historians commend that course of action. What Mahan calls "circumspection, economy, defensive war" was then and thereafter the "fixed policy of the French navy."

By way of contrast with this policy, consider now the story of Hawke at Quiberon Bay. The French contemplated invading England with a large force, and to this end they endeavoured to unite two squadrons of battleships, one of which had been assembled at Brest and the other at Toulon. Hawke, commanding a British squadron, overhauled the Brest division off Quiberon Bay late in the afternoon of November 20, 1759. Quiberon Bay is formed by a peninsula that is extended by a long half-drowned reef. Beyond the reef and right in the mouth of the bay, lies a rocky island. The English had no charts of the coast nor was there a pilot in the fleet who knew those waters. Moreover, a

gale was blowing from the west, the half-drowned reefs were alee, and night was not far away ; but when Conflans was seen running for the bay Hawke ordered his fleet in chase. " Forty odd tall ships, pursuers and pursued, drove furiously on; now rushing headlong down the forward slope of a great sea, now rising on its crest as it swept beyond them ; the helmsmen straining at the wheels upon which the huge hulls, tossing their prows from side to side, tugged as though themselves feeling the wild rapture of the strife." Then " the leaders mingled with the French rear ; the roar and flashes of guns, the falling spars and drifting clouds of smoke now adding their part to the wild magnificence of the scene." One French captain ventured to open his lower ports to give the English a broadside with the heaviest guns, but the ship rolled to the send of a sea, the water flooded in and down she went. Hawke ranged alongside another, gave her a broadside, and sank her with all hands. Two

French ships were captured among the reefs, and two were driven ashore. The remainder escaped into the harbour or down the coast. The English anchored to keep off the rocks, and at daylight were able to work clear of danger.

Because war was then the supreme test of national efficiency, the effect of the French policy of "circumspection," as compared with Hawke's dash among the reefs, upon the evolution of a people is notable. For these fights kept the thoughts of the people constantly upon the sea. Moreover, they drew thousands of men afloat. In both navies these men were trained in the technique of ships; but while the French seamen learned also the policy of "circumspection," the British were inspired by an aggressiveness which not only won wars but prepared them for those commercial conflicts of peace which spread British civilization around the world.

Before leaving the period of the earlier European wars that have been described a

brief space must be given to the buccaneers. The buccaneers were developed by the social, commercial, and political conditions prevailing in the West Indies region in the middle of the seventeenth century. The profit in sugar created a demand for labour so great that white men as well as negroes were enslaved, the former for limited periods only. Naturally many white slaves ran away, and they were encouraged to do so by the fact that men who could handle an axe could make good wages cutting logwood in the forests on certain coasts of the mainland. Because of isolation, the hardships of the location, and occasional attacks by Spaniards the logwood cutters lived savage lives, but the savage life was attractive to many. The half-wild cattle of the Spaniards afforded another opportunity by which the venturesome of the region might make money. The meat of the cattle, when dried, found ready sale under the name of boucan. Many men engaged in the work of making boucan; and they came

to be known as "boucaniers," and then buccaneers. Logwood cutters often became boucan makers. It is a fact that the buccaneers were the first "lumber Jacks" and "Cowboys" of America. As nearly all these men were also able seamen, we can believe that the buccaneers were particularly alert in mind as well as body. It is a matter of record that many of them were educated and read the classics as a pastime; and we may imagine that every one of them would have understood the oft-quoted expression from the Roman poet "Nunc est bibendum."

In the seventeenth century all merchant ships carried arms. Governors of colonies were authorized to issue letters of marque in time of war, and some of them did so in time of peace. "There is no peace beyond the line" accurately described conditions in out-of-the-way parts of the ocean, and the difference between pirates and privateers was but poorly defined.

With these conditions in mind it should be

remembered that, while the Spaniards were weaker than in the days of Drake, they were as arrogant as ever in the treatment of adventurers who entered waters they considered their own. Many stories of ill-treated seamen were told beside the campfires of the logwood cutters, and the stories of the Inquisition were yet exasperating to Protestants in a way we can scarcely understand. Other stories popular beside the campfires told of the wealth gained by Hawkins and Drake.

We may suppose that the stories of this class inspired an early buccaneer leader called Pierre le Grande—"Big Pete," as a modern cowboy would say. Pierre knew that at certain seasons of the year the Spanish treasure ships (called the *flota*) sailed from the Isthmus of Panama for Spain, carrying millions of "pieces of eight" (silver dollars), besides gold and silver in bars. Going afloat with twenty-eight men in a ship's long boat, Pierre lay in wait for the *flota* off Cape Tiburon, and happened to see the vice-admiral of the

flota come within reach. Rowing alongside, the buccaneers scuttled their boat and climbed on board. Then they divided into two squads, one of which quickly took possession of the magazine, and the other captured the officers in the high-poop cabin. "Jesus bless us," said one of the prisoners, "are these devils, or what are they?"

The savage cruelty with which the buccaneers tortured their prisoners was by no means as shocking to contemporaries as to the modern reader. Torture of witnesses and of suspected criminals to compel them to tell the truth was the custom of courts in all nations. Of course, the cruelty of the buccaneers was greatly intensified by race prejudices, a matter quite within the comprehension of those white Americans who in the twentieth century have burned negroes at the stake.

Cruelty, however, was but one of several impressive characteristics of the buccaneers. For nothing were they more noted than for their audacity, which shone forth in all their

expeditions to the Spanish main, and especially in that to Panama. With a few hundred men, who almost died of starvation on the way, Henry Morgan captured the gateway from the Pacific to the Atlantic. The buccaneers who first crossed the old Darien route went afloat on the bay of Panama in dugout canoes (the bongoes of modern Panama), and then supplied themselves with something better by capturing the armed ships the Spaniards sent against them.

While Henry Morgan, who was afterwards knighted and made governor of Jamaica, is perhaps of all the buccaneers best known to the average reader, William Dampier was really a greater master mariner. After years of adventure, he returned to England and was employed by the Government as an explorer, in which capacity he surveyed the coasts of Australia and New Guinea. He sailed around the world four times in all, published two volumes describing his travels, and a valuable "Discourse on the Winds." It was through

the books which Dampier and the other writing buccaneers (Esquemeling, Sieur Ravenau de Lussan, and others) published that the buccaneers made a lasting impression upon the world. Those books were among the " best sellers " of their day, and they are yet read with interest. One who has perused them with open mind finds it difficult to resist the conclusion that the buccaneers, on the whole, advanced the cause of civilization. They were all explorers, after a fashion —men who were led on by eager curiosity as well as rampant greed. In one view, their work was a righteous protest against pig-headed commercial exclusiveness. But more important than all else, their deeds, which now most deeply impress the reader, showed wonderful courage, enterprise, fortitude, and persistence.

CHAPTER IX

FROM THE DAYS OF BOUGAINVILLE TO THE DEATH OF NELSON

It might be interesting to relate in some detail the work of the sailor men who were afloat during the period of the American Revolution, for the little fight on Lake Champlain led to the surrender of Burgoyne at Saratoga, while the timely arrival of a French fleet under Comte de Grasse gave the Americans the victory at Yorktown, and thus determined that two English-speaking nations should have part in the evolution of civilization. Certain features of the next two wars had such vast influence upon the maritime affairs of the world that they must have more extended consideration here. One of these features is found in the aptitude for sea life

which the English people exhibited, and the lack of it shown by the French.

The first sea fight of the war of the French Revolution illustrates this point. In May, 1794, a British fleet sailed from the Channel to intercept a convoy of 180 ships carrying food to the starving French. Lord Howe was in command. A French squadron of approximately the same force was met on June 1, the lines clashed ship to ship, and the English won. Not because their ships were in any way better; the French were then the better naval architects. They did not win because they had had in that battle more or better training in the technique of the sea; for most of the British crews had been recently swept up from the streets by press gangs; indeed, one of the ships had only thirteen men forward who could steer. They did not win because they had greater courage, fortitude, or enthusiasm; for when one French ship sank with two hundred men on board they shouted "Vive la République!" till the

brine bubbled on their lips. The one defect in the French personnel was inborn, hereditary—the result of the manner in which the nation had developed. They had no sea traditions, or rather instincts, to inspire or guide them in time of need.

The English had been saturated with hero tales of the sea for two hundred years; the French had been saturated with Boccaccio. In a dim way the French authorities had realized that they lacked a sea literature, and had sought a remedy by publishing and distributing upon the ships a history of the great deeds of the French navy. But all they thereby accomplished was to demonstrate that the sea instincts are not to be developed in a week or a year. And we may add that they cannot be developed in one generation. The sea instincts that had spread English civilization from the Mississippi to the Ganges were now equally efficient in strangling the French republicans as they strove to grope their way.

Perhaps the most important service rendered by the British navy in the wars with the French was that of blockading the French ports. A few handy frigates were stationed close in to the rocks, and literally between the reefs, at places, while ships of the line sailed to and fro within easy signalling distance off shore. For about twenty years during the later wars, but for sixty, if we include those of earlier date, the navy did this work. Month after month and year after year, the watch was maintained. Nelson himself at one time remained with his ship for two years. In fair weather the men endured the utter monotony of life with such patience as they could command; in foul weather they reefed down and fought the storm winds with the flash of the surf upon the half-drowned reefs in sight alee. During most of this period the French ships were at anchor in port. It often happened that, while the British sailors were upon the yardarm in a sleet-laden gale, struggling with the iron-hard canvas, the French

sailors were sipping wine and smoking their pipes in resorts on shore. The contrast made the British crews curse their fate; but the effect of that prolonged offshore training upon the English people can be traced, not only in the story of their supremacy upon the seven seas, but in the development of the most important characteristics of the whole race, whether at home or in the colonies.

Of the careers of the naval men who won fame in those wars, little need be said here; but it is worth while to remember that Nelson in his youth served in the lowest rank of the merchant service. Horatio Nelson (of Viking descent, as his name proves) began his career when, as a lad of twelve, he went to sea (1770) on the 64-gun ship *Reasonable*, of which his uncle, Maurice Suckling, was captain. He was rated as a midshipman, but after spending five months in her he joined a West India merchantman named the *Dreadnought*, as a servant to the captain. "I returned" from this voyage "a practical seaman with a horror of the

Royal Navy," wrote Nelson later, " and with a saying then constant with the seamen, 'Aft the most honour, forward the better man.'" In 1773 Nelson made a voyage to the Arctic with " Mad Anthony " Wayne as a shipmate; and then, after voyages of no interest here, he secured a berth as acting lieutenant in the navy. The stirring days of the war with France gave him opportunity; and at 21 years of age he was made a post captain. It was possible then for a British youth of ambition to work his way from the berth of a servant on a merchant ship to the commission of a post captain in seven years—a fact that needs no comment. Then, when Nelson first gained fame, he made his own opportunity by an act that was technically a violation of orders.

It was in the battle of Cape St. Vincent. The British line (under Jervis) was heading south between two divisions of the enemy's fleet, while the division at the west was heading to the north parallel with the British

line. After a time, Nelson saw (his ship was near the rear) that the enemy was rounding the British rear in order to joint the ships to the eastward, and he thereupon left his line, in violation of the signals on the flagship, and headed off the enemy. He did this with a 74-gun ship, although the enemy had a number of first-raters. That he captured two ships of superior force is known to all; the feature of his work to be emphasized here is his ability to see the need of the moment and his determination to make the stroke when he knew that failure would cover him with lasting disgrace.

Of the effect of Nelson's last battle upon the war we need say nothing, but we note that the memorable signal, "England expects every man to do his duty" yet stirs the blood. Of equal influence, perhaps, was the order saying that no one "can do very wrong *if he places his ship alongside an enemy.*" Last of all, recall the scene when the British fleet, with Nelson on the *Victory* in the lead, sailed into the crescent which the enemy had

formed. Nelson's subordinates urged him to avoid the extraordinary danger to which he was exposing himself, but, seeing his duty more clearly than they did, he replied with words that were little short of jeers. Then the storm of shot came. The studding sail booms were sheered away. Great breadths of the sails were ripped from the yards. The bulwarks were splintered, and the sides were pierced; but the *Victory* held her way until she was able to swing across the stern of one of the enemy. The other British ships eagerly followed; the time had come when every man would do his duty as England expected him to do it. But while Nelson was pacing the deck at the height of the conflict he was struck down by a musket ball fired from the enemy's ship *Redoubtable*, which was alongside.

A great victory was, indeed, won, but at a price that put a whole nation in mourning. Nevertheless, if Nelson's death be rightly seen, he served his country better when he took

the risk and lost than he had ever done in any other battle. For the destruction of the allied fleet, however needful it may have been, was in a broad view, only a secondary feature of Trafalgar. The important fact is that *the battle brought to an end in a blaze of glory the story of the life of a nation's hero.* It was necessary that this mariner, whom his countrymen would set up as an example for all time, should die fighting afloat in the manner pleasing to the god of his ancestors—that he should show, as those ancestors did, that he understood in his heart that it was *indispensable* to be brave.

A most interesting chapter in the maritime history of the eighteenth century is that relating to the explorers, and especially those who sailed through Australasia. The names of some of these explorers—Bass, Flinders, Hartog, and Vlamingh, for example—are now known only to those who have made a special study of the subject. Men like Byron, Wallis, Vancouver, and Carteret are remembered in

a way. Their deeds were notable in their day, and the stories they told had an influence in developing the sea habit. A few, among whom Captain Cook is a leader, are well remembered by all, and these shall now have consideration.

Louis Antoine de Bougainville was the first French explorer to circumnavigate the world. Bougainville began his public career as a soldier. He was then made secretary to the French embassy in London, where his attainments as a mathematician led to his election as a member of the Royal Society. Later, he fought under Montcalm in Canada. When the French Government considered the advisability of colonizing the Falklands, Bougainville carried a number of settlers there at his own expense. Spain protested, and Bougainville was placed in command of two ships with orders to remove his colony, and then go exploring in the Pacific. Leaving Nantes in November, 1766, the expedition sailed westward around the earth, and returned

at the end of two years and four months. While no discoveries of importance were made, the account of the voyage which Bougainville published was and is yet one of the most interesting books of travels of the period, and thus has had a wide influence.

The French expedition of two ships which sailed from Brest under command of Jean François Galaup de la Pérouse, August 1, 1785, in order to search for a passage from the Pacific north about to the Atlantic was of unique interest. The ships reached Alaska in June, 1786, but, being driven away by storms, they crossed the Pacific by way of Hawaii and the Philippines, and then discovered Sanger and Perouse straits, thus outlining Saghalien and Yezo Islands. In December, 1787, the ships were among the Navigator Islands, where eleven men from one of them were massacred by natives. Later, they were at Botany Bay, but when they sailed thence they disappeared; and nothing was learned about their fate until

1825, when the remains of both ships were found on a reef of Vanikoro, an island lying north of the New Hebrides. They had been stranded with the loss of all hands.

Turning now to the important explorations of Australasia, it will be remembered that in ancient time the learned had a vague idea that land of continental proportions was to be found south-east of the Indian Ocean. The idea found crude expression in Ptolemy's map. Polo heard about it in China. Perhaps the idea came from a tradition from those prehistoric days when mankind spread across the Pacific from the Asiatic mainland. In modern times, the first authentic record of Australia was made by the Portuguese in the sixteenth century. In 1606, Torres sailed through the strait that bears his name. Dirk Hartog was on the coast in 1616. Abel Janszen Tasman discovered Tasmania in November, 1642, New Zealand in the month following, the Friendly Islands in 1643, and explored a part of the coast of Australia in 1644. Dam-

pier was first on the Australian coast in 1688, and he returned to extend his explorations two years later. Thereafter nothing was done in the region that is of interest here until Cook appeared.

The story of Captain James Cook is of perennial interest because of the worth of the man, the extent of his work, and the manner in which he lost his life. He was born on October 28, 1728, at Marton, Yorkshire, where his father was a farm labourer. At thirteen he was apprenticed to a haberdasher, but soon ran away, and on shipping aboard a collier found his career opening before him, for he was a born navigator. In 1755 he entered the navy, where he soon attained the rank of master, and then found opportunity for scientific studies. He was in the St. Lawrence when Quebec was captured, and made the first accurate charts of those waters. Thereafter, he was employed for several years in charting important waters. Finally he was commissioned as lieutenant,

and placed in charge of an expedition to observe a transit of Venus from a station in Tahiti, and then explore unknown waters in Australasia. When the astronomical work was done, he spent six months on the coast of New Zealand. He then went to Botany Bay, and took formal possession of Australia in the name of the Crown. Finally, after touching on the coast of New Guinea and at Batavia, he returned to England, June 11, 1771.

On July 13 of the following year, Cook sailed with the *Resolution* and the *Adventure* to explore a specified region beyond Good Hope. Finding no land within the limits he went on to New Zealand and the Pacific, where New Caledonia was one of the islands he discovered. Returning to England he was made a post-captain, elected captain of Greenwich Hospital, and received a gold medal from the Royal Society, of which he became an honoured member.

Public interest in the discovery of a passage

across the north end of America having been revived, Cook volunteered to head an exploring expedition to make a search for it. He sailed from the Nore on June 25, 1776, in command of the *Resolution* and *Discovery*. After some time spent in the South Pacific, Cook headed to the north in January, and discovered the Hawaii group, now belonging to the United States. The American coast was reached in March and followed to Bering's Strait, where an unbroken ice-field barred the way. Thereupon the expedition returned to Hawaii, and remained until February. On the night of the 13th, the natives carried away one of the *Discovery's* boats. To recover it, Cook landed next day, intending to capture the king and hold him until the boat was returned, an expedient that had served well on former occasions of the kind. But on this day, February 14, 1779, the natives fought with such courage and vigour that Cook and his command were compelled to retreat. At the edge of the surf Cook placed himself

behind his men in order to protect them as they entered their boat, when the natives closed in with overwhelming numbers. The command all escaped, but the brave captain was knocked down and killed

CHAPTER X

SOME LATTER-DAY MARINERS

Most picturesque among the sailors of the sail were the whalers. When and where man first went afloat to slay the monstrous mammals of the sea is, of course, unknown, but the red men of America did so in prehistoric days—the stone age of civilization—and it is reasonable to suppose that other aborigines were equally enterprising and courageous. In historic time, the hardy Basques were the first to make records as whalemen. The whales were first found in the southern seas; but, as they grew scarce, the fisheries were moved northwards; and many differences arose between the different nations with regard to the various "grounds," which are now looked upon as unrestrictedly international. The Dutch, who appear to have been the first

people to pursue the industry to any large extent, discovered the accessibility of Spitzbergen waters; but, after a while, the whales were driven off, and the fisheries were carried to the Greenland quarter, the blubber being thence sent direct to Holland. In 1680, there were 266 Dutch ships and 14,000 sailors whale hunting; and for many years Europe drew her oil supply from Holland. Towards the latter part of the eighteenth century the Dutch whale fishery began to diminish.

The English colonists in America, and especially those on Nantucket Island, had now taken up the pursuit. Nantucket, as described by an Indian myth, is but a moccasin full of sand which a god, while asleep on Cape Cod, kicked away to sea. In itself it is and was devoid of resources of importance. The white men who settled there were Quaker farmers seeking a refuge from Puritan persecution. There they tilled the soil until the returns obtained from selling oil from dead whales that drifted into the surf tempted

them. Then (1690) they sent to Cape Cod for an experienced whaleman to teach them his arts. It was in this period that the people of Quebec became animated by a similar desire, and applied to their king for a subsidy with which to hire Basques to kill whales for them.

At first the Nantucket whalers went afloat only when they saw whales in the offing; but in 1712 Captain Christopher Hussey and his boat's crew were blown away to sea by a heavy gale in the midst of which a sperm whale—a kind that rarely came in shore—was seen. Because sperm sold at an immense price, the crew forgot their peril in the killing of the whale, and the profit thus secured led to deep-water cruising. In 1730 Nantucket had twenty-five ships in deep-water whaling and the take sold for £3,200.

These vessels were owned by men who had united their savings and labour to build or buy them, and the owners manned their own ships. The catch was divided so that while the greater part went to the ship (*i.e.* the owners),

each member of the crew also received a share instead of wages. This co-operation bred enterprise which astonished the world. In 1730 American whalers were at work among the ice-fields of Greenland. In 1763 they were on the coast of Guinea. In 1767 no less than fifty went south of the equator " by way of experiment." In 1770 Nantucket owned 125 whalers of the average size of ninety-three tons, and they sold 14,331 barrels of oil for £71,640. Thereafter the whalers worked their way over all the vast expanse of the Pacific, passing through Bering's [1] Strait in 1848. In one of the volumes of the American State Papers is a list of more than 400 islands which the whalers discovered in the Pacific. In 1846 there were 680 ships and barks in the American whale fleet, besides fifty-six smaller vessels. In 1854 the sales of oil and bone reached £2,180,500. With the discovery

[1] Vitus Bering was a Dane, in the employ of Russia, who, between 1728 and 1741, explored the eastern coasts of Siberia and the coast of Alaska.

and utilization of petroleum the whale fishery declined rapidly, and the Civil War beginning in 1861 destroyed most of the American shipping that had been engaged in it. Meanwhile, the British whale fishery struggled on. In 1815, when it was at its zenith, there were only 164 ships engaged. In 1828, the number of ships had dwindled down to eighty-nine, forty-nine of which were equipped in Scottish ports. During that season, 1,197 whales were taken, which yielded 13,966 tons of oil, and 802 tons of whalebone. At the present time the chief British whaling ports are Dundee and Peterhead, and the number of ships employed is not more than thirty. By far the largest cargo ever secured by a Scotch whaler was that of the *Revolution*, of Peterhead, in 1814; forty-four whales were captured, giving 299 tons of oil, worth £9,568. This sum, together with the bounty then allowed Greenland whalers, made a total of £11,000. Allowing a ton to each whale, the whalebone in our day would have realised £110,000.

About this time, the Germans began to fit out expeditions, seventy-nine vessels sailing from Hambourg alone; and they continued to make voyages to the Spitzbergen waters until 1873. In recent years the people of the Scandinavian peninsula have made good profits in various parts of the world by using steam whaleboats with guns that fire bombs into the whales, and by utilizing the bone and meat for fertilizer as well as the blubber for its oil.

But it is not because of the profits made that the whalemen are memorable here. All whales were monsters of strength, and some were devilish in their ferocity. The right whale, when angered, swept the sea with its flukes, and when successful crushed its tormentors with one mighty blow. The sperm whale was not only able to use its tail in this manner, but with its powerful jaws it picked the harpooner from the bow of the boat and bit him in two before the eyes of his mates, or it crushed the boat with the men on the

thwarts. It sank ships by ramming, and it pursued the whalemen in the water with relentless ferocity. And yet to meet and conquer these monsters was not only the business of the whaleman, but his pride and joy. A small wooden peg used at the bow of the boat to keep the warp in place was worn by the harpooner on public occasions as a badge of honour, and as a badge of honour it was recognized in all ports. Boys were known to wade barefooted through the snow to "get a chance" on a whaleship, because they knew well that in her promotion waited on ambition and energy. Clear-eyed the whaleman faced the hurricane's blast, threaded his way through reefs never before seen by civilized man, and when whaleships disappeared the whalemen remained to perpetuate among the race the qualities which are summed up in the word manhood.

The hunt for the fur seal was still more picturesque. These seals were first hunted at the Falklands, where they were seen in

vast herds as early as 1774 when whalers visited the islands. The seal islands were commonly shrouded in the blackest fogs, they were washed for the year round by ice-laden seas, and the fiercest gales swept over them. But the undaunted seal hunters not only anchored among the reefs, but they sometimes waited for the heavier storm winds before launching their small boats, because the highest waves were needed to lift the boats up to a point at which the men could leap forth to the tops of the rocks where the seals lay. The men were continually drenched; the winds pierced them to the bone; they were cut and bruised by the ice and the rocks; some fell helpless into the sea and were drowned. But they took their chances without flinching.

The industry is now carried on in certain parts where the fishing is restricted by a special code of laws. Most of the fishing was formerly confined to the North Atlantic, in the ice fields on the eastern side of Newfoundland and

Labrador. In 1870, after Russia had transferred Alaska to the United States, the American Government leased the Prebylov Islands to the Alaska Commercial Company, who also rented the Commander Islands from Russia. For this privilege the company paid the United States a rent of 50,000 dollars per annum, and an additional tax of two dollars on each skin taken from the islands. In 1891, the British Government and that of the United States agreed to send a joint commission of experts to the seal islands to examine into the question of the seal slaughter, so many having been killed that it was feared the regulations on the breeding islands were inadequate to prevent the extermination of the species. The court of arbitration, which was composed of representatives of Great Britain, United States, France, and Norway and Sweden, met in Paris in 1893, came to a settlement with regard to the questions in dispute, and agreed upon a series of articles which effectually regulated the seal taking.

A curious chapter in the history of the American merchant marine is that relating to the Barbary pirates. The Barbary coast gets its name from the Berbers, a remarkable people described in "The Opening Up of Africa." After the Saracen conquest of that coast the outlaws of Europe found there a safe refuge. Taught by these outlaws, the rulers of the region inaugurated remarkable systems of blackmail. Each maintained that he was perpetually at war with all Christian nations except such as paid him tribute. The war consisted in raiding the shipping of the "enemy." All ships captured were confiscated and the crews enslaved. Thousands of Europeans were thus held in slavery, but any slave who could secure enough money from home could buy his liberty. Even the most powerful nations endured this system of warfare and paid tribute until the early part of the nineteenth century. In the state of civilization then prevailing statesmen believed they were benefiting their own ship-

ping when they encouraged these pirates to prey on the shipping of rival nations.

The American Government was among the tribute payers. But when in the early days of the nineteenth century the pirates demanded an increase of tribute a war followed in which a number of young naval officers found opportunity. They made heroic stories—the story of the burning of the frigate *Philadelphia* in Tripoli harbour, for example—which were of influence in cultivating and preserving the sea habit in America.

The American master mariner thrived on aggressions. During the long wars between the French and the English the skill of the American seaman grew and the number of American ships increased. The ports of Europe were actually or nominally blockaded for years at a stretch, and not only swift warships but swift, unscrupulous privateers swept the seas looking for vessels that might be in fact, or by twist of law, good prize. On salt water might was yet right—the day

when men would see that the injury of one nation was the concern of all was yet far away. But through all that time human needs and human fancies made calls for the oversea exchange of products, and offered the carrier rich rewards—£9 per ton for a transatlantic voyage, for example. To earn such freights the ships of the belligerents sailed in fleets convoyed by warships, but the Americans had no navy. Therefore the American master mariner built a hull that was shaped to skim rather than plough through the seas, and above it he spread an extraordinary breadth of canvas. With schooner or brig he often dodged and sometimes outsailed the clean-lined frigates of the warring Europeans; and when one of his vessels was captured her spars were always cut down, because European sailors were unable to handle such a rig. In the decade immediately preceding the war of 1812 the American merchantman was the most efficient ship of the world.

Between the war of 1812 and the advent of the iron screw steamer, a number of shipowners began to send their vessels from New York to Liverpool on specified days of the month, regardless of whether the hold were filled with cargo or not—they organized a packet service, that is to say, under the name of the Black Ball Line. Regularity was so advantageous to shippers that profits increased. Then rivals appeared, thus calling for greater speed of ships and more luxury in the cabins. As late as 1824 the finest of the packets measured but 500 tons, as compared with ships of 45,000 tons in 1912. By 1838 there were packets of 1000 tons, and the newspapers described in detail the "Wilton carpets," the "scarlet merino" drapery and the "solid silver tableware" carried. But most of all the reporters were interested in speed. There was the *Sheffield* that crossed "five times in succession in an aggregate of ninety-one days," or eighteen days for each passage to Liverpool. The *Independence*, the *Monte-*

zuma, the *Patrick Henry* and the *Southampton* all crossed in less than fifteen days at about that time—between 1835 and 1838.

The queen of the ships trading to Liverpool was the *Dreadnought*, Captain Samuel Samuels. Though only a "semi-clipper" (rather full in model), Samuels was able in one passage to drive her from Sandy Hook to Rock Light, Liverpool, in thirteen days and eight hours (1859). In 1860 he ran from Sandy Hook to Queenstown in nine days and seventeen hours—the sail record of the Atlantic. "She was on the rim of a cyclone most of the time," said the captain in describing the passage to the writer.

In the meantime the China tea-trade clippers had been making records for speed. The *Rainbow*, 750 tons, Captain John Land, made her first voyage to Canton (1843) in ninety-two days, and returned in eighty-eight. Captain Palmer, the old sealer, in the *Russell* sailed 7,622 miles in thirty consecutive days and 318 in one of them. Captain "Bob"

Waterman, in the *Water Witch*, sailed from Canton to New York in seventy-seven days and covered 358 in one of them. Captain Lacklan McKay, in the *Sovereign of the Seas* (2,400 tons, the largest and sharpest ship of her day), "in twenty-four consecutive hours ran 430 geographical miles." The undisputed record for a day's sail (436 sea miles) was made by an English crew in the *Lightning*, built by Donald McKay, of Boston.

Writers have talked much about the models of these clippers. They had a peculiar model, but modern yacht builders have demonstrated that it was not the best. The clippers made their records in spite of it. Indeed Captain Waterman first made fame by driving the full-lined and notably slow coaster *Natchez* from Canton, 13,955 miles, to New York in seventy-eight days, or only one more than his record in the *Water Witch*. Where, then, did the ships get their records for speed? It was from the man on the quarter deck, who had been evolved by something more than

200 years of merchant-marine work among the rocks of the South Shetlands, or on the whaling grounds of the Pacific, or among the pirates and privateers of the Atlantic. When the wind served the captain remained on deck day and night to keep her going. The sheets and halliards were made of chains, and were locked so that frightened sailors could not let them fly. Studding sails were spread to the zephyrs on the equator, and kept stretched when the trade winds made the rigging scream.

But the clipper owner was living in a fool's paradise, unable to see the revolution in shipping that was to strand the ship of the sail. The day of the steamship had dawned before the Black Ball Line was organized, but early evolution was slow.

Two of the most interesting names in the early history of the steamship are those of Robert Fulton (1765-1815) and Henry Bell (1767-1830), who achieved fame by their success, the one in America and the other in Scotland. Fulton studied for some time in

Paris (1797), and there experimented largely with torpedo boats and submarine torpedos. With Chancellor Livingstone, he built a steam ship on the Seine (1801-2), but the engine was too heavy. Recovering the engine, which had gone down with the boat, Fulton had it placed on a larger and stronger vessel. He tried again on the Seine, August 9, 1803; but the result was not successful, for the boat was never able to attain any great speed. On returning to England in 1804, Fulton ordered and had built an engine which he and Livingstone intended to use in America. He sailed in the October of 1806, the engine following; and in the August of 1807 it was placed on board the *Claremont*, which Fulton had had specially built. She made her first trip between New York and Albany, a distance of 142 miles, in thirty-two hours, and made the return journey in thirty hours. The *Claremont* was the first steam navigation boat to be used with any success. Henry Bell designed the well known *Comet*, which was

launched from the Glasgow docks in 1812. Her length was 42 feet, her breadth 11 feet, and she drew 5½ feet of water. Her engine, built by John Robertson, was of three-horse power. She journeyed from Glasgow to Helensburgh, and across to Greenock, doing 5 miles an hour. As time went on, and her successors began to make longer voyages in shorter time, the *Comet* was lengthened to 60 feet, fitted with a new engine and side paddles, and reached a speed of six miles an hour.

In England the steam engine had been developed more than twenty years earlier for land use, leading to an immense growth in the number of engineers who were employed in the factory system of manufactures. When steam was applied to navigation there the steamship owners had not only a well-developed body of engineers from which to draw the needed personnel, but the steamship was from the first adapted to the stormy waters of the channels and then was sent across the Bay of Biscay to Bordeaux—1,600 miles. Thus,

after this natural development or preparation, it was an English company that sent the steamer *Sirius*, Lieutenant R. Roberts, R.N., commanding, from Cork bound for New York on April 4, 1838. She arrived in the morning of April 23, and thus demonstrated the feasibility of transatlantic steam navigation. In confirmation of her work, the steamer *Great Western*, built by the Great Western Railway Company for the oversea trade, left Bristol on the 7th of April and reached New York on the 23rd, a few hours after the *Sirius*.

While England had more shipping, the American packet lines were then in undisputed control of the New York-Liverpool trade; the American sailor of the sail was beyond dispute without an equal in efficiency. But when those two British steamers anchored in New York, the supremacy of the British in all trades was assured because the British engineer (a Scotchman, he) was of unequalled efficiency in his line. It is demonstrable that in building smooth-water engines the American

engineer was unsurpassed, but his habits of thought and traditions were against him when he tried to build engines for the deep-water ships.

The *Sirius* was a ship driven by paddle wheels, and wheels of that kind were in use on the Atlantic for many years; but beginning in 1836 John Ericsson proved the superiority of the screw; and at about the same time it was demonstrated that iron was a better material for building the hulls of ships than wood. Since then British shipping has risen gradually, steadily, irresistibly to her present primacy in all the seas of the world.

The historians of the sea, in dealing with the steamship era, give their space, save only for brief references in general terms, to the great packet lines—lines that depend for profits chiefly upon the passenger traffic and what is called express freight. Naval architects have from the first given their chief attention to the evolution of the class of ships used by these lines. The first compound engine placed

upon a deep-water ship was built for a vessel owned by a company trading around the Horn (1856). Beginning about the year 1874 the compound engine was developed in line ships until the steam received four expansions in the cylinders. The use of two propellers in merchantmen came with improved liners, and, finally, the value of the turbine engine for the development of tremendous speed was demonstrated in the liners where great speed was wanted. From the twelve or thirteen knots per hour of fifty years ago we have seen the sustained speed of these ships rise to more than twenty-five. And, along with increase of speed, we have seen such an increase of luxurious furnishings that lifts and tennis courts and swimming pools and hot-house gardens are considered matters of necessity. The captain has developed into a society leader. But while, with unthinking enthusiasm, we applauded these innovations, we remained oblivious to the fact that the modern packet hull is not as safe as that of the Great

Eastern until appalling disaster brought the truth home to us.

The great liner thus fills the public eye; but the greater part of the world's work on salt water has been done by the ship bearing the name of tramp, and it is the tramp captain who is the real hero afloat. Fifty years ago boiler pressure ranged from ten to twelve pounds per square inch, and the boiler shells were known to burst inward because of unexpected condensation within. "I mind the time we used to serve a broken pipe with tow." A steam-driven passage was far more expensive then than now, for it took from seven to nine pounds of coal on the grate to produce a horse-power hour of work. Nevertheless, the tramps got the cargoes, because they could deliver them punctually "And those were the days of clippers, and the freights were clipper freights." Steadily but without noise these transient ships have grown in efficiency. Hatches and holds were early adapted to many kinds of cargo, and the engines were improved

until " we came with our nine-knot freighters, and collared the long-run trade."

The tramps have been the latter-day pioneers and explorers. With her captain on the bridge, the tramp has anchored in the harbours of Africa and Brazil, where the fever-laden mosquitoes swarmed off to destroy the crew. It has anchored in the ports of Asia, where the rats brought the plague-bearing fleas on board. It is found taking on guano between the coral reefs of an island of the Pacific, or lying in wait for it where the water is a thousand fathoms deep just off the rocks. And in the next charter the same ship may go to a fiord in Greenland for a load of cryolite. By her low rates of freight, and her ability to deliver the goods when they are wanted, the transient steamer enlarges the trade she discovers until in out-of-the-way ports regular sailing days are found convenient and the line traffic is adopted in addition to that of the tramp.

But it is not alone in the trade of obscure

ports that the tramp thrives. The hurrying liner docks in all her majesty, overshadowing a score of humble tramps lying here and there taking on cargo—perhaps grain or heavy machinery for the very port from which the liner came. Moreover, there is no route too long for the tramp—not even the grain route from Oregon to Europe, or the lumber route from the same coast to Australasia. For, though smoky and blunt, the cargo ship can carry a ton freight a mile on the heat developed by a half ounce of coal on the grate. As Kipling wrote,

> "The liner she's a lady, but if she wasn't made
> There still would be the cargo boats for 'ome an' foreign trade.
> The Man-o'-War's 'er 'usband, but if we was n't 'ere
> I wouldn't 'ave to fight at all for 'ome an' friends so dear."

It was the superior efficiency of the British iron screw cargo boat that drove the American clipper ships from the sea, and it is the same class of ships that now controls the deep-water trade. The domination of the British on all

seas did but illustrate the survival of the fittest. And in these days, when the rivalry upon deep water is once more becoming intense, and men are even talking about a yellow "peril," that is a fact of the utmost importance. For the law is inexorable; in the future, as in the past, the people who are best fitted to carry on the trade will, in spite of all opposition, rule the Seven Seas.

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THE reader who wishes to make a more extended study of the commerce of the sea and of the men who promoted its growth can find a comprehensive bibliography in Clive Day's *History of Commerce* (Longmans, Green), an admirable introduction to this subject. The list of books cited includes many issued on the Continent as well as those from England and the United States. W. S. Lindsay's *History of Merchant Shipping* (issued in 1876 and now out of print, but obtainable in large libraries) is devoted chiefly to the history of British shipping, but it gives much space to ancient navigation, the laws of the sea, and the life of sailors at sea. John Charnock's *History of Marine Architecture*, issued in London in 1802, is the best authority on the early history of English ships and shipping, giving especial attention to the navy. A large amount of space is devoted to ancient shipping of the Mediterranean, however; and with Charnock and Lindsay in hand the student will be well prepared for further investigations. Lindsay quotes a number of ancient writers, the most interesting and perhaps the most important of them all being the *History of Herodotus* (Everyman's Library, Dent, is a convenient edition).

Plutarch's *Lives* contains some nautical matter. Rawlinson's works, and especially the convenient *Phoenicia*, in the Stories of the Nations series (Putnam), are necessary. Rawlinson places stress upon the geographical influences in human development, a matter overlooked by many historians. Johnston's *Opening Up of Africa* (Home University Library) gives a remarkable summary of the development of the Mediterranean peoples of the earliest

times. Holm's *History of Greece* (Macmillan) and Mommsen's *Provinces of the Roman Empire* are recommended for the study of Greek and Roman navigation. Volumes 1 and 2 of Mommsen are all that will be needed. For the medieval period leading down to the time of Columbus one should study C. R. Beazley's *Prince Henry the Navigator*; volume 1 of John Fiske's *Discovery of America*; Helen Zimmern's *Hansa Towns*; J. E. T. Rogers's *Holland*; *Travels of Marco Polo*, and for a general view of Europe during the period, H. W. C. Davis's *Medieval Europe* (Home University Library). Weil's *Venice* and Ruskin's *Stones of Venice* may very well be read for side lights. Ruskin's portrayal of the Venetians at their best and worst is unequalled.

For the opening up of the Atlantic three works will be found entirely satisfactory—Fiske's *Discovery of America*, Justin Winsor's *History of America*—a work that is particularly valuable for its references and maps; Sir Arthur Helps' *Spanish Conquest of America* (Lane), which gives an intimate view of Spanish life in America. In the meantime one should have read J. L. Motley's *Rise of the Dutch Republic*. Hakluyt's *Principal Navigations* is not always absolutely trustworthy, but in no other work can one find the point of view of the merchant and the sailor of the day so well set forth. E. J. Payne's *Voyages of Elizabethan Seamen* (Clarendon Press) is a compilation of the narratives of the men who did the work and therefore indispensable. Lindsay, mentioned above, is interesting in the study of the Elizabethan period, and Charnock's lists of ships and statements of fact regarding the sizes and construction of the ships are necessary if one would comprehend the work done by the seamen of the period—something that is difficult at best. The story of Lord Anson's voyage around the world is another helpful work. Cunningham's *Growth of English Industry and Commerce* (Macmillan) sets forth the development of agriculture as well as of manufacturing and shipping. Seeley's *Expansion of England* and Mahan's *Influence of Sea Power*

are already famous. J. R. McCulloch's *Dictionary of Commerce*, printed in a number of editions in England and the United States during the first half of the nineteenth century, although chiefly a mass of commercial statistics, contains some most valuable papers having a direct bearing upon the work of the master mariners. The discussion of the Navigation Laws may be cited as an example.

The chief original sources of the history of American shipping are found in the colonial documents of Massachusetts and New York. Weeden's *Economic History of New England* is by far the best work written from these documents and it contains much matter from the papers of colonial merchants. In my own *American Merchant Marine* (Macmillan) I gave special attention to the influences of environment upon the development of American ships and sailors. Steam navigation received as much space as the size of the book permitted, but that branch of sea history is treated at length in Fry's *History of North Atlantic Steam Navigation* (Scribner). A file of London *Engineering* and the New York *Scientific American* will yield many facts in connection with the development of ships during the last sixty years or more. In *Master Mariners* it has been impossible to do more than suggest the influence of race peculiarities in the evolution of sea power. I have been unable to find any work that deals with the subject, but in Davenport's *Principles of Breeding* (Ginn) is a discussion of " bathmic influences " which will serve very well for a start in a study of the matter.

INDEX

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