# HUDSON AND HIS EXPLORATION OF THE HUDSON RIVER.

The name of Hudson has been given to the Hudson River, not by any means because he was its original discoverer, but because he was the first navigator to explore the river throughout its navigable length, and leave behind a detailed account of his voyage. It will therefore be fitting to preface the present record of Hudson's voyage by a brief refer-

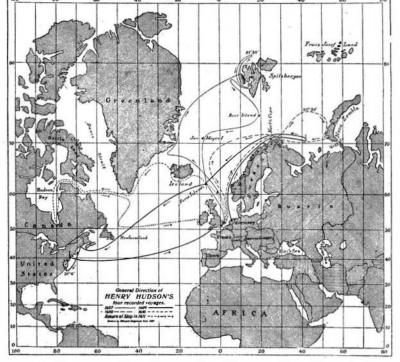
ence to the discoveries of earlier explorers. After the return to Spain of the remnant of Magellan's expedition in 1522, it began to be well understood in Europe that a vast ocean must separate the New World and Asia; and the early navigators forthwith began to search for some route by which they could avoid the long journey from Europe to Asia by way of the southern seas, and find a direct route in more northerly latitudes. The explorers sought eagerly for a northwest passage, gradually laying their courses farther and farther up among the ice floes of the Arctic regions. The eastern coast of North America was carefully searched, and the tiny caravels of those days were sailed into the mouths of great rivers, in the hope that they would prove to be straits or channels opening through into the Western Ocean. Among these early explorers was Lucas Vasquez d'Allyon, who tried for a passage by the James River and through Chesapeake Bay in 1524. In 1525 Estevan Gomez sailed down the coast from Labrador to Florida, making a record of Cape Cod, Narrangansett Bay, and successively of the mouths of the Connecticut, the Hudson, and the Delaware rivers. Early in 1524 Giovanni da Verazano, who was born in 1480 at Florence, crossed the Atlantic with a single ship and a crew of fifty men. He sighted Cape Fear, N. C., and coasted

north to latitude 50 deg. About the last of April, 1524, the "Dauphine," as Verazano's craft was called, arrived off a low point of land, now known as Sandy Hook, where, seeing an inviting harbor, Verazano sailed into the roadstead. The ship's boat was manned and rowed through the Narrows into the Upper Bay, where a hasty survey was made of its islands and inlets, and the mouth of the noble river which flowed into it. He speaks of the river as "a very great river" (una grandissima riviera); and the name Grande River was used by some of the leading map-makers of Europe during the sixteenth century. When the Dutch took possession of this part of the country, the name "Groote" was substituted for the Italian term. Henry Hudson was no doubt induced to explore the "Grande River" by a letter from Capt. John Smith, who wrote that it was a strait connecting with the western sea, which in those days was believed to lie not very far from the Atlantic seaboard.

Of Henry Hudson the man we know comparatively little, and that little is comprised within the years 1607 and 1611. He was born in or near London: but of the exact date of his birth there is no certainty. His first appearance is on April 19th, 1607, when, with eleven companions, he is found partaking of Holy Communion in a little church in London, prior to embarking on his first recorded voyage. Our last sight of him is when he passes from view among the mists of Hudson Bay on June 22nd, 1611, turned adrift with a few companions by the mutinous crew of the "Half Moon." No authentic portrait of the man exists. He came of a seafaring family, had a wife and children, and evidently belonged to a prominent family. He made four recorded voyages, the first, second, and fourth under English auspices, and the third under the Dutch. In 1566 Parliament incorporated "The Fellowship of English Merchants for the Discovery of New Trades," which was better known as the Moscovy Company; and it was in their employ that Hudson, on his first voyage, made an effort to reach China by passing between Greenland and Spitzbergen. At latitude 81 deg. 30 min. he was checked by the Arctic ice and returned home. This voyage lasted from April 23rd to September 15th, 1607. The second voyage, in 1608, lasting from April 22nd to August 26th, had the same object in view. This time he endeavored to pass between Spitzbergen and Nova Zembla. After reaching latitude 75 deg. 30 min. he was driven back by the ice. In 1609 he entered the service of the Dutch East India Company, and made the voyage

# Scientific American

which resulted in the exploration of the Hudson River. His last voyage, made under the auspices of the Moscovy Company, commenced on April 17th, 1610, had for its object a search for a northwestern route to the Pacific Ocean through what is now called Hudson's Strait; and it was here in the following June that Henry Hudson, John Hudson, and seven others, mostly sick and disabled, were set adrift by the mutinous crew in an open boat, with a gun, some powder and shot, an iron pot, some meal, and a chest of carpenter's tools. The ultimate fate of the great explorer,



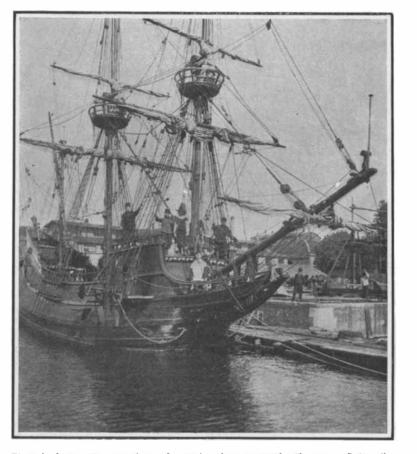
The voyage of 1609, during which he discovered the Hudson River, is shown by a full black line.

#### MAP SHOWING HENRY HUDSON'S FOUR RECORDED VOYAGES, 1607-1610.

whether he died of starvation or drowning, or was frozen to death, is a matter of pure conjecture.

On the 8th of January, 1609, a contract was made between "the Directors of the Dutch India Company of the Chamber of Amsterdam" and "Mr. Henry Hudson, Englishman, assisted by Jodocus Hondius," who was to act as interpreter. In the Dutch copy of the contract preserved at The Hague, Hudson's Christian name is three times spelled "Henry," and he signed the document in the same way; so that in the opinion of the Hudson-Fulton Celebration Commission, "as he was an Englishman, it is a mistake to call him 'Hendrik.'"

The "Half Moon" set sail from Amsterdam April 4th, 1609, with a crew of eighteen Dutch and English sailors. The object of the voyage, as per the contract, was to seek a passage to the north of Nova Zembla, and by an easterly course to reach what is now the



Pacific, in the latitude of 60 deg. On May 5th he rounded North Cape, but, baffled by the ice and by the discouragement of his crew, he determined, instead of returning home, to sail direct to the coast of America at the latitude of 40 deg., where he hoped to find a northwest passage by a strait which his friend, Capt. Jchn Smith, in the letter sent to him from Virginia, informed him led into the Western Ocean somewhere between New England and Virginia. On July 18th he cast anchor in a harbor on the coast of Maine. He touched at Cape Cod; sailed to a point one hundred miles

> south of Chesapeake Bay; and then turned northward again and entered Delaware Bay. Finding the river unnavigable, he ran back to the ocean and sailed up the coast, and on September 2nd was off the New Jersey shore, and anchored probably off what are known as the Navesink Highlands to the south of New York Bay. On the following day the "Half Moon" let go her anchor inside of Sandy Hook. The week was spent in exploring the bay with a shallop, or small boat, and "they found a good entrance between two headlands" (the Narrows) "and thus entered on the 12th of September into as fine a river as can be found."

> The log of this voyage was kept by Robert Juet, who was probably the mate of the "Half Moon." It is written in the quaint English of that period, and is entitled "The Third Voyage of Master Henry Hudson, toward Nova Zembla, and at his return, passing from Farre Islands to New-Found Land, and along to Fourtie-Foure Degrees and Ten Minutes, and thence to Cape Cod, and so to Thirty-Three Degrees, and along the coast northward to Fortie-Two Degrees and one Halfe, and up the river neere to Fortie-Three Degrees."

In his passage up the river, Hudson made progress according as wind and tide were favorable, the time from sundown to sunrise being always spent at anchor. On Monday, the 14th, he passed through a "very high and mountainous" country, probably

the Highlands. On the following day, mention is evidently made of the Catskills, when the log records that they "came to other mountains which lie from the river side." On Saturday, the 19th, the little ship had reached the northerly limits of its trip, and anchored off what is probably now the northern section of the city of Albany. Further exploration of the river was made in the shallop, in the expectation of finding deeper water beyond the shoals. This was a vain hope, however, and the conviction must finally have come to the heart of the intrepid adventurer that once again he was foiled in his repeated quest for the northwest passage. On Wednesday, the 23rd, the "Half Moon" started on her return trip down the river. On the 29th she was at the northern entrance to the Highlands, having reached "the edge of the mountaines or the northermost of the mountaines." Detained by a heavy gale until October 1st, Hudson

weighed anchor on that day and reached Stony Point. Finally, on Friday, the 2nd, the "Half Moon" cast anchor off "a cliffe that looked of the colour of a white greene," which is considered to have been undoubtedly "the green serpentine outcrop" at Castle Point, Hoboken.

Evidently the "Great River" made the same pleasing impression upon Hudson as it has done on the many millions who have voyaged between its banks in the intervening three centuries. Says he: "It is as pleasant a land as one need tread upon. The land is the finest for cultivation that I ever in my life set foot upon." With a few exceptions, he found the native Indians to be friendly disposed. Dressed in skins and with the characteristic decoration of feathers, wearing copper ornaments on their necks and carrying bows and arrows, they smoked large red or yellow copper tobacco pipes. To the little ship they brought tobacco, dried currants, grapes, corn, pumpkins, and beaver and otter skins, which they bartered for knives, hatchets, and trinkets. The country appears to have been quite populous with the Indians, who lived in domeshaped huts, built of saplings and covered with bark. 'They existed chiefly on corn, which, together with beans, was dried for their winter use. Fish and birds also formed part of their diet, and mention is made of salmon, mullets, rays, and sturgeon. At the various places where Hudson landed he was usually received amicably and with no little ceremony. It is evident that Hudson's treatment of the Indians was kindly, and the voyagers made a good impression upon the natives, which was destined

The raised superstructure forward contains the quarters for the crew. Below the bowsprit, furled on its yard, is the curious square sail known as the "blind sail." The sailors are dressed in the costume of 1609.

### THE REPLICA OF THE "HALF MOON": PHOTOGRAPH TAKEN JUST BEFORE SHE WAS SHIPPED TO AMERICA.

to have a beneficial and lasting effect on the subsequent lustory of this State.

It was while at Albany that Henry Hudson decided "to trie some of the chiefe men of the countrey whether they had any treacherie in them"; and accordingly he "tooke them down into the cabin and gave them so much wine and aqua vitae that they were all merrie, and one of them had a wife which sate so modestly, as any one of our countrey women would do in a strange place. In the end one of them was drunke."

Not always was the intercourse of this convivial character. After the return of the "Half Moon" to the lower harbor, and when John Coleman and four others were exploring in the shallop, they were attacked by the natives, and Coleman was killed. This was on September 6th. Other conflicts occurred on the 9th and the 15th of September, and on October 1st, the log records how an Indian who had climbed up the rudder to the cabin window was caught stealing and shot. The following day the Indians attacked in force, and were driven off with a loss of eight or ten killed. On the 4th of October the "Half Moon" sailed down the harbor and out to sea, and "on the seventh day of November," according to the log, "being Saturday by the grace of God, the 'Half Moon' safely arrived in the range of Dartmouth in Devonshire in the year 1609."

#### THE "HALF MOON."

When the replica of Henry Hudson's "Half Moon" was lifted by the floating crane at the Brooklyn navy yard from the deck of the "Soestdyk," on which she was brought over from Holland, and lowered into the water, there was a general expression of surprise at her diminutive appearance; for she was actually no larger than a small harbor tug. On rowing over to the craft and

going aboard, however, it was at once evident that what she lacked in size, she more than made up in general staunchness and strength of construction. Eluff of bow and high in the poop, as was the fashion in naval architecture of three hundred years ago; built of heavy oak timbers, and planked and decked with the same material, the "Half Moon" was well calculated to stand the buffetings of long deep-sea voyages. Moreover, her underwater model is such, with its long clean run, that, although it must have been slow work beating to windward, it is certain that with the wind free and sheets started the little craft must have been good for say six knots, and possibly-under favorable circumstances—a little more than that. All the same. in view of the diminutive size and exceedingly cramped quarters of the "Half Moon," one is filled with admiration for the daring and resourcefulness of the men who struck boldly to the northwestward in such a cockle shell of a boat, on voyages of many months' duration and in a quest for a northwest passage, which must needs lead them on to dangerous coasts and amid treacherous shoals, of which there was no

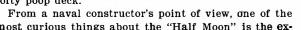
chart, beacon, or buoy, to give them friendly guidance.

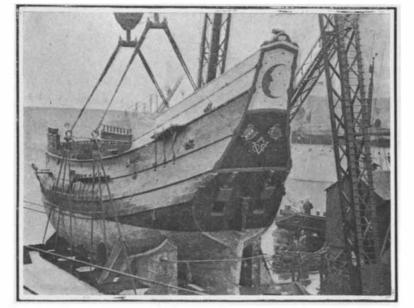
The "Half Moon" must be seen to be appreciated. Of 80 tons displacement, she is only 80 feet in length over all, 63 feet on the waterline, 16 feet 11 inches beam, 10 feet 1 inch molded depth, and 71/2 feet draft of water. She was built by a committee of patriotic Dutch citizens, who provided the necessary funds, her plans being drawn from original sketches and documents prepared by the late instructor of shipbuilding in the Dutch navy. In the parade up the Hudson River she will be manned by officers and a crew from the Dutch ship of war "Utrecht," all dressed in the quaint costumes of three hundred years ago. Forward is the raised forecastle, the sleeping place of the crew, provided with five berths. Forward of this and below the bowsprit is the galley, an extraordinarily exposed and wet position, where, says tradition, the sailors were placed for punishment. At the after end of the boat on the main deck was the position for the steersman, whose head projected through the steeply-sloping quarter deck above him and was protected by a curious canopy. In front of the steersman were a compass, a sand glass, and a log glass. Upon the main deck and covered in by the steeply-sloping deck, known as the quarter deck, is the captain's cabin. Under his berth, in an artistically bound chest, are the books which comprised the captain's small library. Upon the diminutive table is a sea chart, a faithful reproduction of the one existing copy, mentioned by Shakespeare, which is in the British Museum. On the table also is a copy of the contract with Hudson for his notable voyage, dated Janu-

# Scientific American

ary 8th. 1609. Here also are the primitive dividers and measuring scales for plotting the course. The cabin contains a Jacob's staff, the primitive sextant with which Hudson determined, with a fair amount of accuracy, his latitude. All of these articles are faithfully copied from prototypes in the Netherland Museum. Above the captain's cabin is a smaller one for the accommodation of the mate; and above this is the lofty poop deck.

most curious things about the "Half Moon" is the ex-

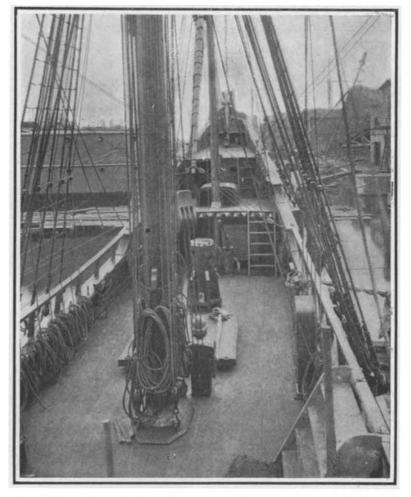




Note the steel cradle in which the boat was carried on the deck of the "Soestdyk." The transfer was made by the floating crane.

### "HALF MOON" BEING LIFTED FROM STEAMSHIP TO DOCK AT THE BROOKLYN NAVY YARD

aggerated, upward slope of the after part of the main deck and of the quarter and poop decks above it, the effect of which was to give great elevation to the poop. Curious indeed to our eyes is this lofty structure; but it must have been an excellent position from which to navigate the ship. About four feet below the main deck is the "tween deck" or the "derdeck," where the head room is so limited that the crew must have at times performed some of their duties on all fours. Here are the two old-fashioned cannon, the primitive kitchen and berth for the cook, a bread room and berth for the steward, and a gunner's room in which the powder was stored. Below is the hold, in which were stored the provisions, drinking water, cable, and cargo. The "Half Moon" carries three masts and a bowsprit. Below the latter is a curious square sail known as the "blind sail." On the foremast are a foresail and a topsail, on the mainmast a mainsail and a main topsail, and on the mizzen is a lateen sail. The shrouds, stays, spars, and in fact the whole of the rigging, standing and running, is exceedingly strong,



and well set up. The old Dutch East India Company, whose chief office was in Amsterdam, placed on all its vessels the initial letter of the port from which they sailed. This accounts for the large letter A on the stern of the "Half Moon." Other signs painted on the vessel are a starry heaven, a comet, planets, and a half moon. Below these are the name of the vessel and the arms of Amsterdam and of the company.

#### .... THE FOUR PERIODS OF HUDSON RIVER HISTORY.

For the lovers of history, none of the pageants of the Hulson-Fulton Celebration will equal in interest the great parade of Tuesday, September 28th, which will tell the story of the past three hundred years of Hudson River history, in a procession of over half a hundred floats, representing the successive periods of Indian, Dutch, English, and Ameri-

> can occupation. Henry Hudson, during his exploration, found the river occupied by two great branches of the aboriginal Indians, the Algonquins at the mouth and in the lower river, and the powerful league of the Iroquois, or Five Nations, at its head. With a few slight exceptions, Hudson's reception was friendly, and both he and his crew appear to have treated the Indians with consideration. It is certain that such conflicts as occurred were insignificant in comparison with the battle fought between the Canadian Indians under Champlain on the shores of Lake Champlain and a party of Iroquois Indians-a conflict which occurred only a few days before Hudson sailed into New York Harbor. "The contrast between the French and the Dutch and English treatment," says the Hudson-Fulton Commission, "led to the formation of the famous Covenant Chain of friendship between the Indians

and the latter, and prevented the French from ever obtaining a permanent foothold in the State of New York."

The Dutch, who succeeded the Indians as owners of what is now New York State, were in 1609 the leading commercial nation of the world, and Amsterdam, from which Hudson set sail, was its leading port. The interest aroused among the early Dutch traders by Hudscn's voyage led to the erection, as early as 1613, of traders' huts along the Hudson River. The first permanent settlements were made at Fort Orange (Albany) in 1624, and at New Amsterdam (New York) two years later. The colonial history of New Netherland began with the landing on Manhattan Island of Peter Minuit, as the first Governor-General, in 1626 Under New Netherland was included the territory between the Connecticut and Delaware rivers. The English took possession in 1664; surrendered to the Dutch in 1673; but once more gained possession, this time destined to be permanent, in 1674.

Henceforth New Netherland was to be known as New York, New Amsterdam as New York city, and New Orange as Albany; but the Dutch origin of New York is still commemorated in such names as Brooklyn, Harlem, and Staten Island. Regarding this momentous change, the Commission is of the opinion that the merger of the Dutch and English régimes was accomplished more completely and naturally than a change of jurisdiction could have been made between almost any other two mations in the world; for the Dutch were more closely allied to the old Anglo-Saxon stock from which the English are descended than any other living European people. Intense rivals in commerce, England and Holland had worked hand in hand for years for the liberties of Europe. and there were radical bonds of sympathy between them, which contributed materially to the progress of the colony of New York.

The American or United States period began, of course, with the Declaration of Inde-

View looking aft, showing the lofty poop. containing the steersman's position and the cabins for Hudson and his mate.

## DECK VIEW OF THE "HALF MOON."

pendence on July 4th, 1776. The geographical position of the Hudson River, which forms part of the great highway of travel from the Atlantic seaboard to the Great Lakes and Canadian territory, rendered it strategically of the very highest importance, and, therefore, the main object of contention between the opposing forces. The British realized that if they could establish complete possession of the Hudson Valley they would cut the colonies in two; and by establishing a route of communication between Canada and New York, they would be able to defeat the colonies in detail. The vast range of incidents connected with the Hudson River Valley has rendered it necessarv for the Commission to confine the floats to the representation of events more immediately connected with New York city.