



Going Where the Wind Blows...

By Cipperly Good, the Richard Saltonstall Jr. Curator of Maritime History

Sea captains could be very frugal, reusing their nautical charts from one voyage to the next. We recently acquired a collection of Captain William Heagan Goodell's nautical charts, used in the 1870s and 1880s. Through his course markings, we can see the frequent routes used by captains leaving ports in Northeastern United States and northern Europe for ports in the Pacific. An added benefit of these charts is a visual depiction of how the prevailing winds and currents shaped the paths that the sailing vessels took.

Through charts of the North and South Atlantic and North and South Pacific Oceans, we can track three different cargo vessels' paths. Goodell was captain of the bark ROBERT PORTER from 1877–1878, bark GOODELL from 1880–1883, and ship GOVERNOR ROBIE from 1883–1886. On the PORTER, he sailed from Greenock, Scotland to Rio de Janeiro, Brazil in 1877, and from London, England to Java in 1878. On the bark GOODELL, he sailed from New York to Yokohama in 1880, and from Boston to San Francisco to Falmouth, England in 1882. On the ship GOVERNOR ROBIE, he sailed from New York to San Francisco in 1883, from San Francisco to Antwerp, Belgium and back to San Francisco in 1884, and from Liverpool to San Francisco in 1886.



Excerpt from "Chart of the North Atlantic Ocean" published 1877 by Richard Holmes Laurie, William H. Goodell Chart Collection, 2025.11.33

This section of the North Atlantic Chart clearly marks all but one of the voyages— London to Java on the bark ROBERT PORTER— that we will explore in this article. The remaining eight voyages sailed within 1,050 miles of Cape San Roque, Brazil, and about the same distance from the Gambia in Africa. Cape San Roque and Sierra Leone are the closest points of land between South America to Africa—about 1,675 miles apart. Captain William Heagan Goodell’s notations show the length of time to reach this point: 24 days from Boston, 43 days from New York, and 95 days from San Francisco on the bark GOODELL; 20 days from Antwerp, 25 days from New York, 30 days from Liverpool, and 84 days from San Francisco on the ship GOVERNOR ROBIE, and a 47 days’ journey from Greenock, Scotland on the bark ROBERT PORTER.



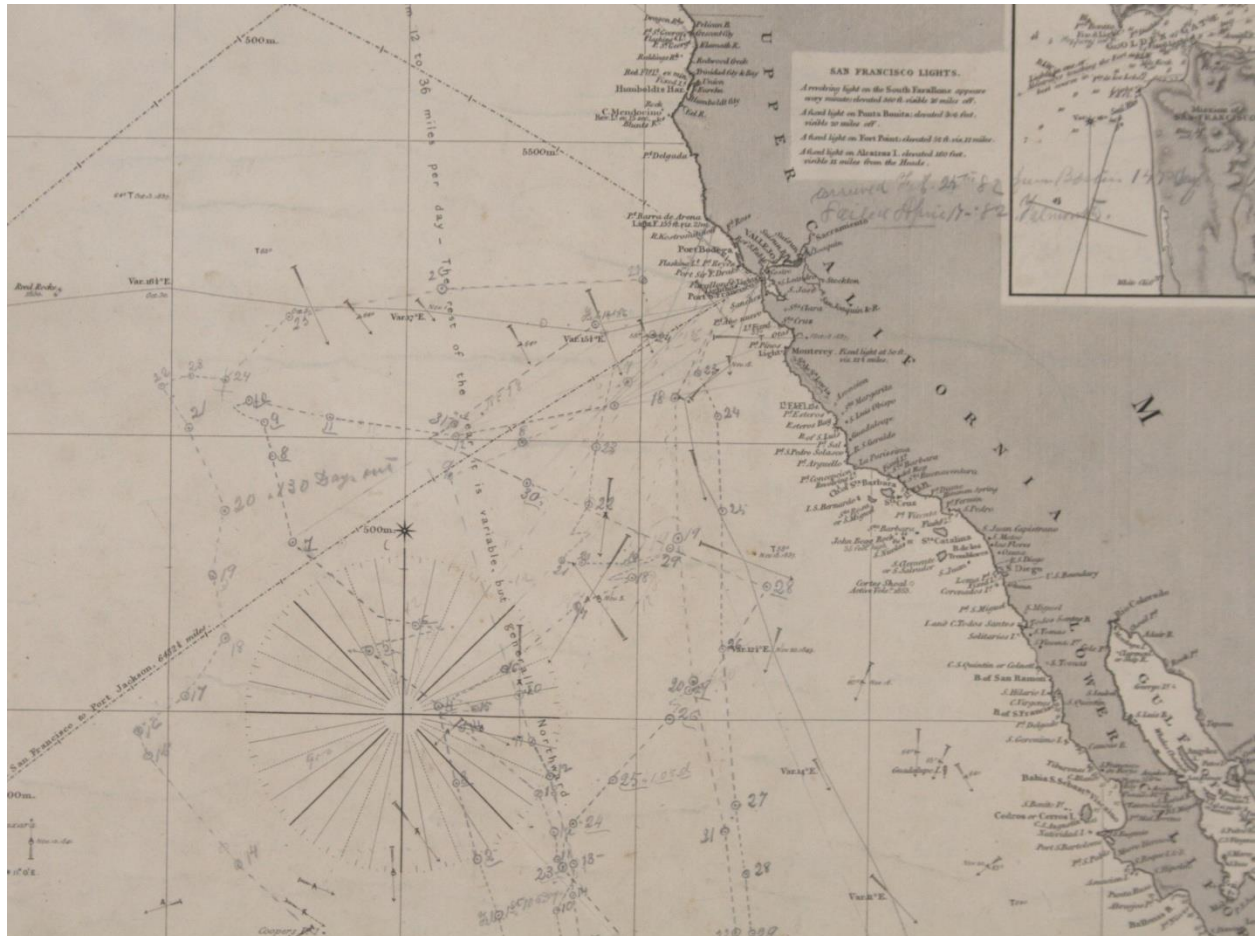
“Chart of the Indian and Pacific Oceans-South America, with its Islands” published in 1876 by Richard Holmes Laurie, William H. Goodell Chart Collection, 2025.11.40.

This section of the South America chart shows what could be the most harrowing part of the voyage—rounding Cape Horn. The ship GOVERNOR ROBIE, on its roundtrip between Antwerp and San Francisco, reports being 62 days from Antwerp and 75 days from New York at this point.



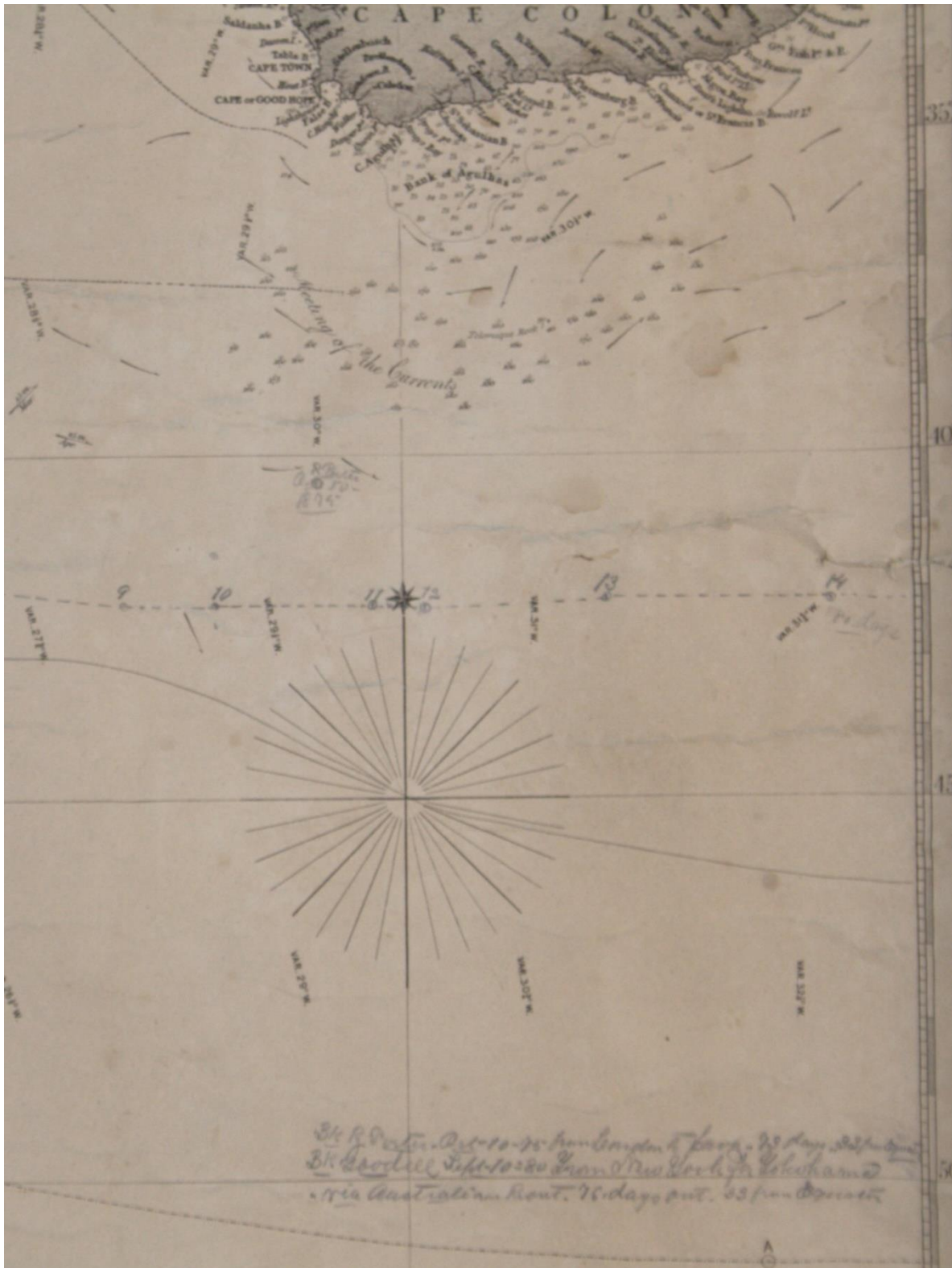
Chart of the West Coast of South America from Valparaiso to Truxillo, published in 1874 by J.W. Norie & Wilson.
William H. Goodell Chart Collection, 2025.11.32.

This section of the “Chart of the West Coast of South America” shows course tracks off the coast of Chile from Valparaíso to Iquique. Here we follow along the tracks of the ship GOODELL 100 days from Boston and the ship GOVERNOR ROBIE 85 days from New York in 1883 and 80 days from Antwerp in 1886.



*“The North Pacific Ocean- The Coasts of California, Oregon, & c.”, published in 1875 by Richard D. Holmes Laurie.
William H. Goodell Chart Collection, 2025.11.36.*

This section of the North Pacific Ocean chart shows the February 25, 1882 arrival in San Francisco of the bark GOODELL from Boston after 147 days. Another note signals the April 17, 1882 departure of the ship bound for Falmouth, England. Although not labeled, the other course tracks show the completion of the voyages we followed throughout these charts: ship GOVERNOR ROBIE’s January 1885 trip from Antwerp and August 1885 trip from New York.



"Chart of the Ethiopic or South Atlantic Ocean" published in 1876 by Richard Holmes Laurie.
William H. Goodell Chart Collection, 2025.11.34.

This section of the South Atlantic Chart shows the bark ROBERT PORTER and bark GOODELL rounding Cape of Good Hope at the tip of Africa. The bark ROBERT PORTER was on a voyage from London to Java, at that point being 73 days from London and 33 days from the Equator. The bark GOODELL was 75 days from New York and 33 days from the equator on a voyage from New York to Yokohama via the Australian Route.

The wind patterns on planet Earth follow a general pattern. In Maine, we can rely on prevailing Westerlies to blow our square-rigged ships to Northern Europe. The wind patterns shift at the Tropic of Cancer, the Equator, and the Tropic of Capricorn, creating the dreaded Doldrums at each change.

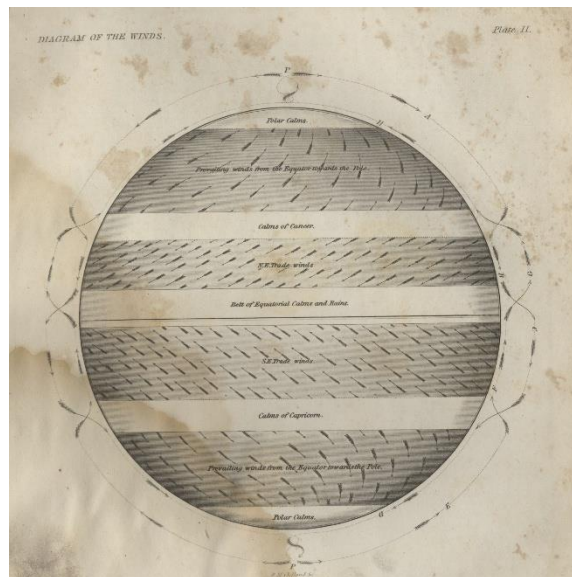
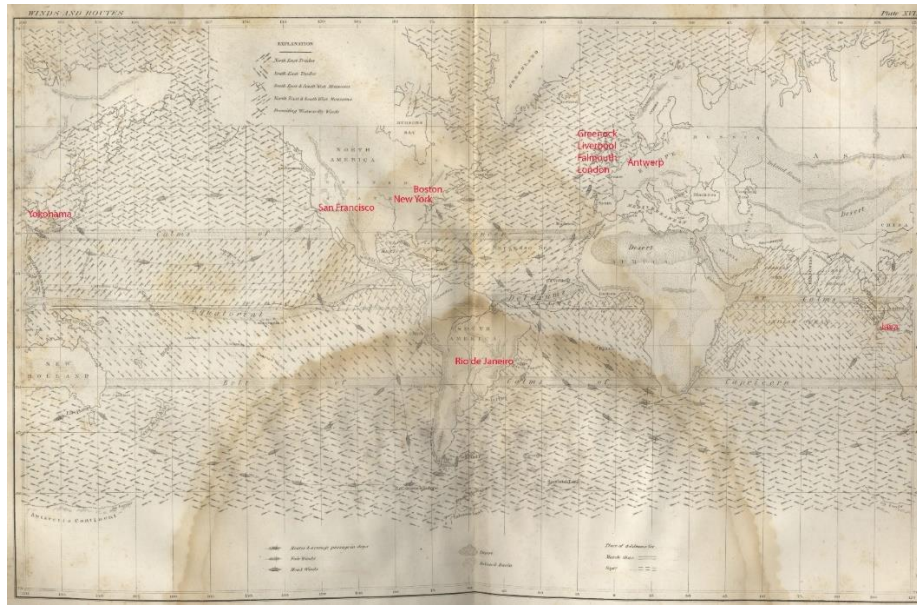


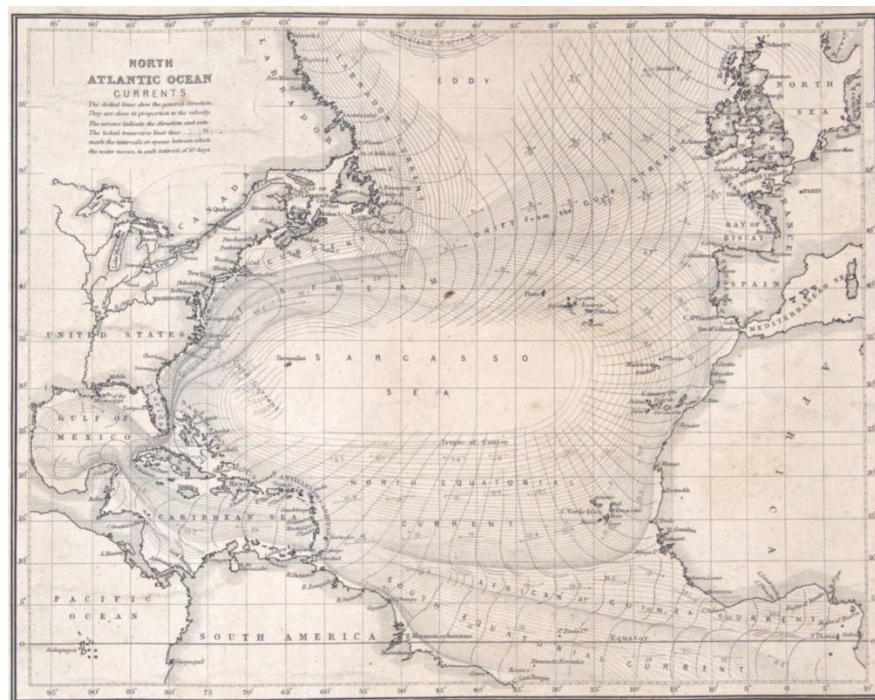
Plate II "Diagram of the Winds" in Matthew Fontaine Maury's *Sailing Directions*, 7th edition, July 1855.

When the continental landmasses are added to the picture, a circular wind and current pattern develop in the oceans between. In the Northern Hemisphere, the winds form a clockwise pattern and in the Southern Hemisphere as a counterclockwise pattern. The generally reliable wind patterns became known as the Trade Winds as ships followed the edges of the continents to achieve the corresponding latitudes to cross back and forth across the broad ocean to their trading destinations.



Maury's Winds and Routes diagram shows why Goodell's course tracks were zigzagging as his barks and ships crossed the wind shifts at the Tropics of Cancer and Capricorn and the Equator. Plate XVIII "Winds and Routes" in Matthew Fontaine Maury's *Sailing Directions*, 7th edition, July 1855.

As the circular wind pattern hits various parts of the continental landmasses, localized currents, such as the African or Guinea Current before entering the South Equatorial Current, formed and impacted the ability for ships to make way in a desired direction.



A note on the North Atlantic chart in Guinea Current region reads: "Current east 35 miles for day." Inset of "The North Atlantic" published 1877 by Richard Holmes Laurie. William H. Goodell Chart Collection, 2025.11.33



Captain Goodell's circumnavigation of South America on a suite of nautical charts published by Richard D. Holmes Laurie between 1875 and 1877. Upper Left: "The North Pacific Ocean- The Coasts of California, Oregon. & c.". Upper Right: "Chart of the North Atlantic Ocean". Lower Right: "Chart of the Ethiopic or South Atlantic Ocean". Lower Left: "Chart of the Indian and Pacific Oceans-South America, with its Islands".

William H. Goodell Chart Collection, 2025.11.36, 2025.11.33, 2025.11.34, and 2025.11.40 respectively.

On the North Atlantic Ocean chart, we see Goodell leaving ports in the Northeastern United States and Northern Europe and maneuvering through the prevailing Westerly winds to the Tropic of Cancer stretching from the West Indies to Africa. At the Tropic of Cancer, the prevailing Easterly winds pushed his vessels toward South America. After crossing the equator (and onto the South Atlantic chart), the prevailing Easterly winds continued to push his vessels along the coast of South America until reaching the Tropic of Capricorn. Here, we see his voyages to Java and Yokohama peel off towards the Cape of Good Hope, carried by the prevailing Westerly winds. His course tracks to San Francisco begin to zigzag as he tacks to try to stay as close to South America and not lose headway. When he reaches Cape Horn, he struggles as he sails directly into the prevailing Westerlies. After successfully rounding the 'Horn, he moves onto the South Pacific chart where we see some courses fighting the Westerlies out to the middle of the Pacific, while on other voyages he

used the Westerly wind to his advantage to sail closer to South America. Halfway up South America on this chart, at the Tropic of Capricorn, we can see the vessels angling to the Northwest carried by the prevailing Easterly winds. At the equator, Goodell switches to the North Pacific chart, and continues to take the prevailing Easterly winds in a northwesterly direction parallel with Central America. Around Baja California, he crosses the Tropic of Cancer and follows the prevailing Westerly winds into the port of San Francisco.

Captain Goodell is not the only captain whose suite of nautical charts we own. We invite researchers to delve into other captains' collections of charts and follow their vessels around the world on their trading voyages. In the age of engine power, cargo ships are not at the mercy of the trade winds, but it comes at the cost of carrying fuel aboard to steer straight into the prevailing winds. Sailing with the wind and currents requires being in tune with the natural elements, but the fuel efficiency cannot be beat.