

Hendrick Brouwer and the Circumnavigation of Staten Land

In 1520, the Portuguese explorer Magellan discovered the long and tortuous strait connecting the Atlantic and Pacific Oceans. The high land south of this dangerous fairway was thought to be part of Terra Australis Incognita, the mythical southern continent. However, in 1578, after passing through the "Strait of Magellan", the English circumnavigator Francis Drake was driven south by a north-western gale and saw more sea than land. This gave him the impression that the two oceans might be connected here. Nearly 40 years later, in 1616, while searching for a western route to the Spice Islands, the Dutch explorers Le Maire and Schouten proved that such a connection exists. They named it "Strait le Maire" and the mountainous mainland (as they thought it to be) stretching east-by-south "Staten Land". Finally, in 1643, Admiral Hendrick Brouwer discovered that Staten Land was not a peninsula of a southern continent but an island with a wide and relatively safe seaway south of it.

An account of Hendrick Brouwer's voyage has recently been published by the Foundation Netherlands' Cape Horners. A summary of this publication is given here.

In January 1643, the Dutch West Indies Company assembled five ships and 600 soldiers in Recife (Brazil) for a military expedition to southern Chile. This force was to join the revolting Araucano Indians and oust the Spaniards from their southern districts. Thus, the way would be opened to build Dutch forts and trading posts in Chiloé and Valdivia. Although this operation failed, a number of discoveries of note to hydrographers were made during the voyage.

After setting out from Dutch Brazil (the Dutch held a number of colonial outposts on the east coast of Brazil in the first half of the 17th century), a south-eastern course was steered to give a wide berth to the Abrolhos, a series of islands and reefs extending far into the Atlantic. These were rumoured to have insetting currents and paralysing calms. After having passed 20° south latitude and being well past the feared range of reefs, Admiral Brouwer ordered his fleet to change course to south-by-west.

Three days later, the course was changed to south-west. Standard operating procedure was for all ships of the fleet to compare observed latitudes, but at this juncture estimated longitudes were also compared. Unfortunately, the reckoning of only one of the ships has been found. This gave a longitude of 1° 26' based on a prime meridian passing through Cape San Augustine (south of Pernambuco). Dutch cartographer Georg Markgraf working in Brazil did not know with certainty their difference in longitude with respect to any earlier established prime meridian and so chose this cape from where longitude was counted in an easterly direction (and counted backward from 360° in the westerly direction).

Cape Augustine is a conspicuous promontory, very near to the place where, in 1500, the first Iberian, Vicente Pinzon, landed in Brazil. It was long thought to be the most eastern point of South America (known now to be Ponta do Seixas (Brazil) at latitude 07° 09'19"S and 34° 47'33"W), a notion probably born in the time that magnetic variation was not yet taken into account. Cape San Augustine became a preferred point of departure and landfall for ships traversing the Brazilian coast. Its direction and estimated distance were noted on Brouwer's flagship as a last bearing when leaving the coast on 16th January.

Brouwer's ships also compared observations of magnetic variation. Variation was established by taking a bearing of the sun at (or just after) sunrise and one at (or just before) sunset, the bisection giving the magnetic direction of true north. About every 10 days, at the Admiral's orders and at a given hour, the compass cards on all ships were lifted from the magnetic needles and then placed back in such a way that they showed the same true directions. This procedure facilitated better parallel sailing in bad visibility or during dark nights.

The magnetic variation was also compared with the variation observed by other ships on previous voyages in the same area. This could give an idea of the ship's longitude, especially on much frequented tracks such as the crossing of the Indian Ocean eastward along the parallel of 38° south (a route Hendrick Brouwer pioneered in 1611). A variation of 21° east indicated to the navigator that it was about time to change his course to the north-east for the Sunda Strait.

In 1643, however, Brouwer was not heading for the Sunda Strait but to a point a little north of Tierra del Fuego in order to feel his way south along the coast. With the prospect of running into higher latitudes, the Admiral had his navigators redraw the 'plane' chart of the southern ocean on a Mercator projection and make copies of it for all ships. Sufficient predrawn Mercator grids on parchment had been supplied for this purpose by the chartmakers of the Dutch West Indies Company.

After one and a half months of sailing, land was spotted by the vanguard, the scouting yacht (the term 'yacht' is used in the old Dutch sense of a small, fast reconnaissance vessel) *Dolphin*. A dispute arose between the yacht's navigators and those of the flagship. The

yacht assumed the land to be Patagonia, the Admiral's skipper thought it was the Sebald de Weert Islands (Falklands). Their difference in estimated longitude is mentioned as 100 German miles (= 400 nautical miles), which even in that time was considered much.

Soon, soundings proved the yacht to be right. After heading SSW during the night, the three blunt hills of Cape Virgin (entrance to the Strait of Magellan) came into view the next morning, giving great relief at a properly identified landfall. The fleet continued south-east along the coast of Tierra del Fuego with a fresh breeze from the starboard quarter. When the yacht, sailing nearest to the coast, saw the entrance to Strait Le Maire, it hove to. The flagship, however, continued her way and with a gunshot ordered the yacht to resume its position between the Admiral and the shore of Staten Land. Thus, the entire squadron had to follow the leader and sailed 25 miles further to the east. In one of the reports, an irritated captain stated that due to inattention on the flagship they all had to work back against the wind and lost much time.

The loss of time, however, was compensated for by a discovery. Just before the Admiral's decision to return, the flagship and yacht came into a position from where they – with clear weather and a sharp horizon – could see that Staten Land is finite as opposed to being a peninsula of the imagined southern continent. It ends abruptly with an eastern cape. Doubling this cape to look behind it would have been against their instructions and endangered the whole squadron. Besides, fresh water and firewood were urgently needed, and these were to be found in Good Success Bay in Strait Le Maire, which is where they went.

Even today, it is not certain that the continued run eastward along the coast of Staten Land was a mistake. From a secondary source, a letter from the governor of Dutch Brazil, it appears that Brouwer had voiced the opinion that Staten Land might well be an island prior to this voyage. As a result he might have postponed his decision to turn back on his course until he would have had a better view.

The confirmation of the first observation and general impression followed soon and unintentionally. No one on the flagship had ever been in Good Success Bay, and so the admiral sent two boats with 17 able-handed seamen to sound for the best holding ground to anchor. However, an unexpected current and sudden adverse wind carried the ship off to the south-east. There were insufficient men left to properly handle the topsails. Without the necessary sailing power to resist current and wind drift, the ship was fast set to the east along the south coast of Staten Land. Within two days she had passed the newly discovered cape (which was now named 'Brouwers Kaap') and headed north-west. With a speed of only two knots, a two-knot east-running current, and a near-gale from the south-west, however, the ship drifted north-east for another four days. She passed through a stretch of open water, which was baptised 'Brouwers Golf'. When the wind abated, the skipper and mates, seeing land birds, concluded that they were near the Sebald (Falkland) Islands. With the wind shifting to the north, Brouwer's ship was able to return to Strait Le Maire along the northern coast of Staten Island, which had now been circumnavigated disproving the concept of "Staten Land" and a southern continent at this location.

The voyage from Good Success Bay to Chile is not of much hydrographical interest, but the return voyage of the fleet from Chile to Brazil was made to everybody's satisfaction by the newly discovered, wide and safe seaway south and east of Staten Island (Isla de los Estados).