

# FITZROY'S HYDROGRAPHIC SURVEYS.

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It is not generally known either how much hydrographical surveying Capt. FITZROY and his staff carried out during their five years' voyage from 1831 until 1836 or how long this work has stood.

First, it may be mentioned that in 1825 France and England undertook to survey the coasts of South America. The French examined the coasts of Brazil the English those of Patagonia, Tierra del Fuego, Chile and Peru.

The surveys carried out by the officers of the *Adventure* and *Beagle* from 1826 to 1831 embraced part of eastern Patagonia south of the Gulf of St. George, the greater part of the Strait of Magellan, Tierra del Fuego, and the west coast between Magellan Strait and Golfo de Penas. Thirty-three charts and forty-five plans of this work were received in the Hydrographic Department.

At the end of 1831, as we know, the *Beagle* again sailed from England to continue the survey and then to run a chain of meridian distances through the Pacific, Indian, and Atlantic Oceans, the ship being supplied with twenty-two chronometers for the purpose.

In 1832 three track charts (Cape Verde Islands to Bahia, etc.) and four plans (ports in the Azores, St. Paul's Rocks, etc.) were received at the Admiralty from the *Beagle*.

In 1833 seven charts of the south-east, south, and southwest coasts of Tierra del Fuego and two plans of parts of the Gulf of Penas were received of surveys made in 1832.

In 1834 nineteen charts and eight plans, also forty views of the surveys carried out in 1833, were received. These embraced the east coast of Patagonia from the south shore of the Rio de la Plata to the Gulf of St. George, including all ports.

In 1835 eleven charts two track charts and twelve plans were received, the areas of the surveys being mainly the east coast of Patagonia from the Gulf of St. George to Magellan Strait, the east coast of Tierra del Fuego and the Falkland Islands, with plans of the ports and anchorages.

In 1837, after the conclusion of the *Beagle's* voyage, Capt. FITZROY forwarded eighteen charts of the coast of Chile and thirty-four plans, eleven charts of the coast of Peru and eleven sheets of plans, embracing the whole coast from the Chonos Archipelago, 47° S., to the Guayaquil River, 3° S., and including all the ports and anchorages along the coast; also six charts and eight plans of the Galapagos Islands and three charts and one plan of other islands in the Pacific Ocean.

It will thus be seen that during the period of this voyage no less than eighty-two coastal sheets, eighty plans of harbours and forty views were received in the Hydrographic Department of the Admiralty from FITZROY's surveys.

These surveys of the coasts of South America were used for the production of the Admiralty charts and are mostly still the foundation of the present-day charts of this area.

The Argentine Government surveys have superseded them between the Rio de la Plata and the Gulf of St. George, but the charts of the east coast of Patagonia southwards, with the exception of the plans of the ports, still incorporate these surveys. The charts of Tierra del Fuego are also largely founded on the *Beagle's* work. In Magellan Strait the larger portion of the *Beagle's* work has been superseded, the Main Strait being taken from later British and foreign governments surveys, but the adjacent waters are still partly from the *Beagle's* surveys.

For the west coast of South America from Magellan Strait to about latitude 40° S., that is, including all the Chonos Archipelago, Chiloe Island, etc., our Admiralty charts are compiled from the Chilean Government charts, and thence northwards to Valparaiso — approximate latitude 33° S. — FITZROY's surveys have been modified by later Chilean and other work; whilst only a few of our plans of Chilean ports and anchorages are now produced from the results of FITZROY's work.

However, northwards from Valparaiso to the River Guayaquil, all the Admiralty charts of the Chilean coast and of all the Peruvian coast are from Capt. FITZROY'S surveys, and almost all the plans of Peruvian ports likewise.

This very large amount of work must have called for the greatest energy and zeal on the part of Capt. FITZROY, his officers and ship's company, more especially when one bears in mind the fact that these surveys were all carried out either from boats or from the ship under sail and with appliances which nowadays we would consider most crude.

Finally, as regards the chain of meridian distances round the world, it is recorded that these exceeded twenty-four hours by thirty-three seconds only, in a period of five years.

