

CHAPTER IV.

Loss of the *Thetis* – Causes of her wreck – Approach to Rio de Janeiro – Owen Glendower – Disturbance in Rio Harbour – Observations – Chronometers – Return to Bahia – Deaths – Macacu – Malaria – Return to Rio de Janeiro – Meridian Distances – Regatta – Fuegians – Lightning – Leave Rio – Equipment – Santa Martha – Weather – Santa Catharina – Santos – River Plata – Pamperoes – Gales off Buenos Ayres – Monte Video – Point Piedras – Cape San Antonio – River Plata – Currents – Tides – Barometer – Absence of trees – Cattle.

AMONG the shipwrecks which have taken place during late years, perhaps none excited so much astonishment, or caused so much trouble and discussion, as the loss of that fine frigate the *Thetis*.¹

Had any seaman been asked, on what frequented shore there was least probability of a wreck, I almost think he would have answered on that of Cape Frio. Yet, against the high cliffs of that bold and well-known coast did she run 'stem on,' going nine knots. One may conceive the shock and general consternation as she crashed against the rocky cliff, and all her masts fell inboard.

As some who turn over these pages may not have read the proceedings of the Court-martial² held after the return of her officers to England, I will insert a short account, derived chiefly from those of old friends and shipmates, who were on board her at the awful time of her wreck.

The *Thetis* sailed from Rio de Janeiro on the 4th of December 1830, and worked to the southward all day, against a southerly wind and thick foggy weather. At 1h. 30m. A.M. on the 5th, she saw Raza Island for the last time, bearing N.W. by W., and distant eight or nine miles. The weather was still hazy, indeed at times very thick, and the wind southeast. She stood off on the larboard tack until seven A.M., and then the wind having increased, and a cross sea getting up, she wore to the eastward. Soon afterwards the wind drew to S.S.E., and the ship was kept by the wind on the / starboard tack until 1h. 30m. P.M., when it was considered that Cape Frio bore about N. 40° E., distant thirty-eight miles. The position at noon, by dead reckoning, gave the Cape bearing N. 43. E., distant forty-one miles; all the calculations giving results between that and N. 51. E., fifty-three miles; but by dead reckoning only, as neither sun, moon, or stars

had been seen. At 1h. 30m. the wind being scant, the ship was steered E. by N., and at two, a cross sea checking her way through the water, the course was altered to E.N.E. At two, when the course was thus changed, she had run nineteen miles since noon, and at four, twenty more miles had been made on the E.N.E. course; at which time, four P.M. (under the idea that she was almost abreast of Cape Frio, supposed to be then distant about twenty-four miles), seeing a large ship, 'courses down,' in-shore of her, steering west or W. by N., with all sail set; and the weather clearing, for an interval, without any land being seen; it was concluded that the *Thetis* was still further from the shore than had been estimated, and her course was altered to N.E. by E. At five, the crew was mustered at quarters, after which the reefs were mended, and the fore top-gallant sail, jibs, spanker, and reefed fore top-mast studding-sail were set. From four o'clock to six she ran, by log, twenty-one miles; after six the weather became very thick and rainy: and when the look-out men were relieved at eight o'clock, it was so dark, and rained so fast, that nothing could be distinguished half a ship's length distant. Soon after eight one of the look-out men, named Robinson, said to another man on the fore-castle,* 'Look how fast that squall is coming' (this was the cliff looming indistinctly through the rain and darkness), and next moment, 'Land a-head,' 'Hard a-port,' rung in the ears of the startled crew, and were echoed terribly by the crashing bowsprit, and thundering fall of the ponderous masts.

The *bull* did not then strike the rocks, having answered the helm so fast as to be turning off shore when the bowsprit broke; but the lee yard-arm irons (boom-irons) actually struck fire from the rocky precipice as they grated harshly against it, the boom ends snapping off like icicles.

All three masts fell aft and inward, strewing the deck with killed and wounded men. An immense black barrier impended horribly, against which heavy breakers were dashing with an ominous sound; but the ship's hull was still uninjured. Sentries were placed over the spirit-room; a sail was hoisted upon the stump of the main-mast; the winches were manned; guns fired; rockets sent up, and blue-lights burned; the quarter-boats were cleared away to be ready for lowering; and an anchor was let go; but the water was so deep, that before she brought up, her stern drifted upon a more shelving part of the rock. Several men then tried to land; but, in jumping ashore, many slipped, and were drowned in the surf, or crushed against the rocks. The stern and lee quarter boats were dashed to pieces, as the surf hove the ship against the cliff, and no boat was then available; for the others were either stove, or so covered with wreck, that they could not be used. Finding that the anchor, which had been let go, did no good, but seemed to keep her tailing upon the rocks, the cable was slipped, after which her head fell off to the westward. It was then found that the water was gaining, and the winches

* Borsworthick. Both these men afterwards sailed with me in the *Beagle*.

were worked. Successive waves threw her starboard quarter upon the rocks; and the effects of repeatedly striking were soon but too apparent, as the water burst open the spirit-room hatches.

At this moment a small opening appeared, into which the ship providentially drove. It was at first thought that this was the opening into Cape Frio Harbour; but it proved to be only a very small cove, or indentation of the rocky cliffs. While drifting close along the rocks into this cove, a hawser was passed ashore, by which afterwards several persons landed. The ship struck heavily in the cove, gave some tremendous yawns, and sunk. As she then lay upon the rocky bottom, each succeeding wave broke over and just covered her. By a violent surge, the rock to which the hawser above-mentioned had been made fast, was torn away; and, for a short time, all / hope of further communication with the land was suspended. Every effort that could be made to convey a rope to the shore was attempted in vain, until Mr. Geach, the boatswain, went out on the stump of the bowsprit, and by the help of two belaying-pins, succeeded in throwing the end of a small rope to the rocks, by which a large one was immediately hauled ashore, and then kept as much stretched as the strength of the men who had landed would allow. On this larger rope each man was slung, in his turn, and hauled by the small one through the surf to a rough craggy rock. Mr. Geach and John Langley, the captain of the forecastle, were among the last to leave the ship, having almost exhausted themselves in slinging their shipmates.

As day-light broke, the last man was hauled ashore. Many were terribly bruised and lacerated by the fall of the masts, or during these struggles for life, and twenty-five persons perished. Some of the officers made their way to a small village near Cape Frio, and obtained horses, and a guide who conducted them to Rio de Janeiro, where the melancholy news was communicated to the commander-in-chief. The captain, the other officers, and the crew, remained near the place of the wreck, waiting for assistance.

An adequate cause for so great an error in the reckoning of only nineteen hours as that which occasioned the loss of this fine ship and twenty-five souls, besides the personal property of those on board, and a large freight of treasure, is not difficult to find, even without supposing the compasses to have been in error, or affected by local attraction, which, by the way, would in this case have operated in the ship's favour.³

The vicinity of Cape Frio, one of the most salient promontories on the coast of Brazil, cannot be supposed exempt from currents; set in motion either by temporary causes, such as strong or lasting winds; or by the varying pressure of the atmosphere upon different portions of the ocean:— or from tidal streams, more or less strong.

Presuming that the *Thetis* was carried out of her supposed position, by the former cause, about twenty-four miles; surely rather more than a mile an hour is

no surprising current during nineteen hours. But if a stream of tide also affected her, in that time she would have had one whole tide either in her favour or against her.

There was no reason to suspect the existence of much current near Cape Frio, when the *Thetis* was lost, except on such general grounds as those just mentioned, because no pilot, as far as I know, was aware of such a fact. With strong southerly winds ships of large size do not often leave Rio de Janeiro – coasting vessels never – therefore few persons could have experienced its effect when sailing from the port; and when approaching Rio in similar weather, vessels sail before a fair wind, steer by sight of the land, and take little notice of the log: besides which, they then employ but three or four hours in passing through that space of sea where the *Thetis* was detained nineteen.

In all probability, such a current as that which drove the *Thetis* on the rocks is only to be found during southerly winds, and in the summer season of that climate, when the general set of the current is along the coast, towards the south and west.

If a man of war is accidentally lost, a degree of astonishment is expressed at the unexpected fate of a fine ship, well found, well manned, and well officered; and blame is imputed to some one: but before admitting a hastily-formed opinion as fact, much inquiry is necessary. As in the case of the *Thetis*, an English man-of-war may incur risk in consequence of a praiseworthy zeal to avoid delaying in port, as a merchant-ship would probably be obliged to do, from her being unable to beat out against an adverse wind, and, like that frigate, may be the first to prove the existence of an unsuspected danger.

Those who never run any risk; who sail only when the wind is fair; who heave to when approaching land, though perhaps a day's sail distant; and who even delay the performance of urgent duties until they can be done easily and quite safely; are, / doubtless, extremely prudent persons:– but rather unlike those officers whose names will never be forgotten while England has a navy.

Of the measures taken for recovering the treasure sunk in the *Thetis*, much has appeared in print;⁴ therefore I will not add a word to that subject of controversy.

Weather such as that which caused the loss of the *Thetis*, is only at times met with off Cape Frio; a clear sky, with a hot sun, and but little wind, is more usual; and as my first approach to Rio de Janeiro, on board H.M.S. *Owen Glendower*, in 1819, made much impression upon me, I will endeavour to describe it's[sic] circumstances.

High blue mountains were seen in the west, just after the sun had set, and with a fair wind we approached the land rapidly. The sea was quite smooth, but a freshening breeze upon our quarter carried us on, nearly thirteen knots an hour. Though dark as any cloudy tropical night, when neither moon nor star

relieves the intense blackness – astern of us was a long and perfectly straight line of sparkling light, caused by the ship's rapid way through the water; and around the bows, as far forward as the bowsprit end, was dazzling foam, by whose light I read a page of common print. Sheet lightning played incessantly near the western horizon: and sometimes the whole surface of the sea seemed to be illuminated. As the moon rose, and the breeze decreased, the contrasts of light and darkness, of swift change of place and apparent tranquillity, lost their effect. Next morning we had a dead calm: high land towered over the fog-banks, which were slowly drawn upwards and dispersed by the heat of a powerful sun; and the sea was smooth as a lake. Numbers of that beautiful fish, the dorado, often called a dolphin, were caught; and the vivid, various colours displayed, as they lay upon our deck, exceeded description. Well I remember too the trouble we middies had with the sun at noon on that day; not with the sun above our heads, but with its image reflected by our quadrants. As he was almost vertical over us, we were dispersed round the ship, each thinking he had brought the reflected image down to the proper point of the horizon, until, startled by hearing 'twelve o'clock,' reported by the master, we found too late, and much to our annoyance, that it would have been wiser to have looked at the compass before observing the altitude.

Soon after mid-day black curling ripples stole along the hitherto glassy surface; sail was made, the sea-breeze freshened, and we steered towards the entrance of that magnificent harbour, Rio de Janeiro.

Often as it has been visited and described, I cannot expect any one to require another sketch, but will merely remark that I know no port equal to it in situation, security, capacity, convenience, and abundant supply of every necessary, as well as in picturesque beauty. A day or two after the *Owen Glendower* anchored, a party of her midshipmen were allowed to take a boat and enjoy a day's excursion in the beautiful harbour, or rather gulf. We landed on an island, which seemed to me like an immense hot-bed, so luxuriant and aromatic were the shrubs, and so exotical the appearance of every tree and flower. Years since elapsed have not in the least diminished my recollection of the novelty and charm of that first view of tropical vegetation.

To return to the *Beagle*. On the 3d we were near Raza Island, but detained by calms. The light-house lately erected there showed a bright revolving, or rather intermitting light. On the following day, when the sea-breeze set in, we steered for the harbour. The sun shone brightly, and there were enough passing clouds to throw frequent shadows over the wooded heights and across vallies, where, at other times, the brightest tints of varied green were conspicuous: yet I did not think the place half so beautiful as formerly. The charm of novelty being gone, and having anticipated too much, were perhaps the causes; and it is possible that

so much wood has been cleared away in late years, as to have diminished sensibly the rich and picturesque appearance which it certainly once possessed.

As we shortened sail under the stern of our flag-ship, I was surprised by finding Sir Thomas Baker, the Commander-in-chief,⁵ / giving directions for the positions to be taken forthwith by the ships of his squadron then present, and orders for the boats to be prepared for landing marines. This was in consequence of one of those disturbances almost usual in South America, especially in Brazil. Some outrages had been committed in the town, and a mutiny had broken out among the troops. Under old and established governments, revolt and mutiny are events which so seldom occur that their shock is not only felt at the time, but transmits vibrations through succeeding ages. In these unsettled states, however, they recur so frequently, that even on the spot they cause little sensation, and excepting by those personally concerned, are scarcely remembered afterwards.⁶

Few strangers visit the metropolis of Brazil without being disappointed, if not disgusted. Numbers of almost naked negroes, hastening along narrow streets – offensive sights and smells, an uncivil and ill-looking native population – indispose one to be pleased, even with novelty; but impressions such as these soon wear off. In the environs of the city are many good houses, in beautiful situations; and while enjoying delightful rides amidst the richest and most varied scenery, or resting in the shade of a veranda, refreshed by the sea-breeze, and overlooking a prospect hardly to be surpassed in the world, the annoyances and the nuisances of the town are forgotten.

With respect to astronomical observations, I was extremely unfortunate at Rio de Janeiro, except in those simple ones for time and latitude, which depend upon sextants and artificial horizons. Being the rainy season, but few nights were favourable for observing the transits of stars with the moon, and those few were too near the full moon to be available. But had the weather been otherwise, I doubt whether I should have obtained satisfactory results, because the transit instrument employed was of an inferior construction,⁷ and still more, because I was unaccustomed to its use. So much time was employed, to the prejudice of other duties, in adjusting and re-adjusting this imperfect instrument, and ineffectually watching for intervals of clear sky, that I resolved to set up the transit no more, until I had an interval of leisure, and a prospect of some cloudless nights.

Having so many good chronometers on board; being practised in observations such as they require; and placing great confidence in their results; I felt inclined to give attention and time to them rather than to perplex myself, and cause much delay in moving from place to place, by attempting series of observations which would give occupation to an astronomer, and could not be undertaken by me, while actively engaged in coast-survey, without interfering with other duties.

In the Appendix it may be seen how far results obtained by the chronometers agree with those of a higher class, especially with the recent ones of Captain Beechey,⁸ to whose determinations, resulting from moon-culminating observations, I conclude that a high value will be attached, because he is a well-practised and able observer.

As I found that a difference, exceeding four miles of longitude, existed between the meridian distance from Bahia to Rio, determined by the French expedition under Baron Roussin, and that measured by the *Beagle*; yet was unable to detect any mistake or oversight on my part; I resolved to return to Bahia, and ascertain whether the *Beagle*'s measurement was incorrect. Such a step was not warranted by my instructions; but I trusted to the Hydrographer for appreciating my motives, and explaining them to the Lords of the Admiralty. In a letter to Captain Beaufort, I said, 'I have not the least doubt of our measurement from Bahia; but do not think that any other person would rely on this one measure only, differing widely, as it does, from that of a high authority – the Baron Roussin. By repeating it, if it should be verified, more weight will be given to other measures made by the same instruments and observers.'

We sailed with the ebb-tide and sea-breeze, cleared the port before the land-wind rose, and when it sprung up steered along the coast towards Cape Frio. Most persons prefer sailing from Rio early in the morning, with the land-wind; but to any well-manned vessel, there is no difficulty whatever in working / out of the port during a fresh sea-breeze, unless the flood-tide should be running in strongly.

On this passage one of our seamen died of a fever, contracted when absent from the *Beagle* with several of her officers, on an excursion to the interior part of the extensive harbour of Rio de Janeiro. One of the ship's boys, who was in the same party, lay dangerously ill, and young Musters seemed destined to be another victim to this deadly fever.

It was while the interior of the *Beagle* was being painted, and no duty going on except at the little observatory on Villegagnon Island, that those officers who could be spared made this excursion to various parts of the harbour. Among other places they were in the river Macacu, and passed a night there. No effect was visible at the time; the party returned in apparent health, and in high spirits; but two days had not elapsed when the seaman, named Morgan, complained of headach and fever.

The boy Jones and Mr. Musters were taken ill, soon afterwards, in a similar manner; but no serious consequences were then apprehended, and it was thought that a change of air would restore them to health. Vain idea! they gradually became worse; the boy died the day after our arrival in Bahia; and, on the 19th of May, my poor little friend Charles Musters, who had been entrusted by his father to my care, and was a favourite with every one, ended his short career.

My chief object in now mentioning these melancholy facts is to warn the few who are not more experienced than I was at that time, how very dangerous the vicinity of rivers may be in hot climates. Upon making more inquiry respecting those streams which run into the great basin of Rio de Janeiro, I found that the Macacu was notorious among the natives as being often the site of pestilential malaria, fatal even to themselves. How the rest of our party escaped, I know not; for they were eleven or twelve in number, and occupied a day and night in the river. When they left the ship it was not intended that they should go up any river; the object of their excursion being to visit some of the beautiful islets which stud the harbour. None of us were aware, however, that there was so dangerous a place as the fatal Macacu within reach. I questioned every one of the party, especially the second lieutenant and master, as to what the three who perished had done different from the rest; and discovered that it was believed they had bathed during the heat of the day, against positive orders, and unseen by their companions; and that Morgan had slept in the open air, outside the tent, the night they passed on the bank of the Macacu.

As far as I am aware, the risk, in cases such as these, is chiefly encountered by sleeping on shore, exposed to the air on or near the low banks of rivers, in woody or marshy places subject to great solar heat. Those who sleep in boats, or under tents, suffer less than persons sleeping on shore and exposed; but they are not always exempt, as the murderous mortalities on the coast of Africa prove. Whether the cause of disease is a vapour, or gas, formed at night in such situations, or only a check to perspiration when the body is peculiarly affected by the heat of the climate, are questions not easy to answer, if I may judge from the difficulty I have found in obtaining any satisfactory information on the subject. One or two remarks may be made here, perhaps. – The danger appears to be incurred while sleeping; or when over-heated; not while awake and moderately cool; therefore we may infer that a check to the perspiration which takes place at those times is to be guarded against, rather than the breathing of any peculiar gas, or air, rising from the rivers or hanging over the land, which might have as much effect upon a person awake, as upon a sleeper. Also, to prevent being chilled by night damp, and cold, as well as to purify the air, if vapour or gas should indeed be the cause of fever, it is advisable to keep a large fire burning while the sun is below the horizon. But the subject of malaria has been so fully discussed by medical men, that even this short digression is unnecessary.⁹

To return to the narrative. Mr. Bynoe consulted with the best medical advisers at Bahia, and afterwards at Rio de Janeiro, and he and I had the melancholy satisfaction of knowing that the best had been done for his patients. /

The affectionate kindness of Mr. Bynoe on this, and indeed every occasion where his skill and attention were required, will never be forgotten by any of his shipmates.

slavery. Yet FitzRoy here rehearses the standard anti-slavery arguments of his day here and elsewhere in the *Narrative*; he is better described as favouring a gradualist solution to slavery in South America rather than immediate abolition.

28. *gneiss or sandstone*: This enters into the debate on the foundations of coral growths, which Beaufort had instructed FitzRoy to investigate. Darwin's paper on the development of coral islands in 1837 to the Royal Geological Society was an immediate scientific triumph; he published on the subject in full in *Structure and Distribution of Coral Reefs* in 1842.
29. *being similarly circumstanced*: FitzRoy here quotes the opening lines to William Shakespeare's play *The Tempest*.

Chapter IV

1. *frigate the Thetis*: This event came very close to home: both Fitzroy and Sullivan as well as some of the seamen on the *Beagle* had previously served in this ship, Fitzroy as junior lieutenant from 1824 to 1828, before joining *Ganges* as flag lieutenant; and Sullivan as a midshipman, 1824 to 1828, leaving the *Thetis* at Fitzroy's request to join him in the *Beagle*. Over two dozen lives were lost, including a young midshipman Henry Bingham, son of the captain under whom Fitzroy and Sullivan had served.
2. *Court-martial*: it was standard for the captain and officers of shipwrecked vessel to face a court martial; for the *Thetis*, the court martial was held on board the *Wellesley* in Plymouth Harbour in March 1831. Captain Burgess and the officer on watch at the time of the wreck both lost some seniority and Burgess was reprimanded for relying too heavily on dead reckoning in his navigation.
3. *the ship's favour*: Fitzroy here supports Captain Burgess's explanation for the wreck, presented to the Admiralty at the court martial a few months later in England. The 'treasure' was gold and silver, which was shipped for merchant interests by the royal navy in return for a commission for the officers.
4. *appeared in print*: the wreck and the salvage operations received much press; Captain Thomas Dickinson (1786–1854) of the *Lightning* worked for over a year with a diving bell to recover the gold; after conflict with his commanding officer (see following note on Baker), he was replaced by Captain John F. F. De Roos (1804–61) in *Algerine*, who continued salvage for several more months. Controversy regarding the size of salvage award and the respective portion due to both crews continued for many years. Dickinson published a dramatic account of the difficult salvage operations with Longman in 1836. See further reading, Driver and Martins (2006).
5. *the Commander-in-Chief*: Sir Thomas Baker (1771–1845) commanded the British naval forces in South America from 1829 to 1833, replacing Fitzroy's patron, Robert Otway.
6. *remembered afterwards*: Brazil was in the early stages of the regency of Pedro II after his father, Pedro I, had abdicated in his favour a year earlier; there was violent street fighting between royalist and republican factions in Rio in the month of April 1832.
7. *inferior construction*: see Appendix, Volume 4, p. 450, for further discussion of the instrument.
8. *Captain Beechey*: Frederick William Beechey (1796–1856), another of those who had trained with Smyth in the Mediterranean, took observations at Rio en route to explorations in the Bering Strait and MacKenzie River in *Blossom* from 1825 to 1828. Beechey and Fitzroy later worked closely together when the Meteorological Department was formed in 1854 as part of the Board of Trade, as Beechey directed Marine Department there from 1850.

9. *is unnecessary*: malaria was viewed using miasma theory of infection for most of the nineteenth century; it was identified by French and British doctors as a parasite infection transferred by mosquitos at the end of the century.
10. *as Massey's lead*: he refers to a lead for sounding, and an log, an instrument that trailed behind the ship for a given period of time, after which it was retrieved and its dials read to record ship's speed.
11. *like a regatta*: the day of races seemed designed to boost morale on the *Beagle* prior to the severe tests of further south, but there were also elements of competition between these three captains, Talbot, Waldegrave and Fitzroy. Charles Talbot (1801–76), was a rising naval star, an officer with similar aristocratic connections to Fitzroy, who had been captain of *Algerine* during an earlier encounter with Fitzroy and King; and he was now commanding the flagship of the South American forces. William Waldegrave (1787–1859) was an aristocrat, the younger son of an earl, and married into a prominent Whig political family.
12. *near Botafogo bay*: Earle and Darwin also stayed in a cottage rented here during this interval.
13. *at the mast-head*: Fitzroy's comparisons to lightning and phosphorus gives a good idea of the puzzling range of electrical atmospheric phenomena in the period, well-known but not fully understood.
14. *on his back*: Samuel Hood (1724–1816) was a British admiral renowned for his role in the American and French revolutionary battles.
15. *jack-ass penguin*: probably *Spheniscus demersus*.
16. *severely, in 1829*: see King's description of the pampero, Volume 1, pp. 161–2.
17. *by Mr. Johns*: Johns invented a diagonal planking for boats; see John Chancellor's discussion of the *Beagle* and her construction ('Fitzroy's *Beagle*', 2007).
18. *de los marmeros*: i.e., the hell of sailors.
19. *extremely hospitable*: Fitzroy seems here to refer to republican political sensibilities of Montevideo; see the comment shortly after about the "steady government" of Spain that the republics abandoned.
20. *to Monte Video*: Fitzroy writes in vague terms of the episode here, but the insult involved not just cholera regulations, as at Teneriffe, but live and empty shot at the *Beagle's* riggings from an Argentinian warship. Fitzroy was enraged and manouevred the *Beagle* ready for a broadside to the Argentinian ship on his way out of the harbour in a show of strength.
21. *for Buenos Ayres*: Captain Gawen William Hamilton (1785–1835), of the *Druid*, sailed to demand an apology for the insult to the British forces.
22. *prevented bloodshed*: Darwin was one of the volunteers in this party and described the incident colourfully (Mellersh, *Fitzroy*, p. 85).

Chapter V

1. *lagoon, called Marchitquito*: the region is now a United Nations biosphere reserve (1996), Parque Atlántico Mar Chiquita.
2. *country of the Devil*: Huecuvu or guecubu is the Araucian word for 'evil spirit'; in the mythology of the people, huecuvu can take many forms, and causes disease and trouble for humans.
3. *to be tosca*: the white chalk and clay soil of the region, also called albero; Fitzroy earlier compared it to cheese, p. 78n.