

suspended. These amount to about one hundred days in the year. These holidays are a great alleviation to the labour of the slave.

Foreign merchants reside in the country, in the neighbourhood of the city.

During our stay in Rio, George Smith, a seaman, while employed on board of one of the lighters in charge of Midshipman May, fell overboard and was accidentally struck with an oar; Midshipman May, in a praiseworthy manner, jumped overboard to his relief, but did not succeed in saving him, for he sank immediately and was drowned.

The delays in Rio had no effect upon the general health of the squadron, although I was fearful such might be the case, not only from the heat of the climate, but the copious draughts of aguardiente with which the foreigners supply the sailors.

I found it necessary here to increase the crews of the ships, and applied to Commodore Nicolson, commander on the Brazil station, for that purpose. Thirty men were supplied the squadron. They were the most indifferent and worthless set, with two or three exceptions, we ever had on board. They were almost the only persons attached to the vessels on whom it became necessary to inflict punishment.

The markets are abundantly supplied with fish, beef, and poultry. Vegetables are to be had in abundance, and are all sold in the streets.

On the 26th, the Peacock and tenders returned, and brought their work up to the observatory at Enxados Island. Captain Hudson had not been able to examine the St. Thomas Shoal. Having lost five days in consequence of bad weather, it became impossible to accomplish it within the given time.* During his progress, he had lost an anchor, which, when hove up, was found to have been broken off at the shank. Application was immediately made to the government for one, which request was very obligingly and promptly replied to, by desiring us to select one of a suitable size from those in the dock-yard.

By the last of December we had completed all our scientific duties. These consisted of a series of pendulum observations; those for longitude by moon culminating stars; circummeridian observations for latitude; magnetic dip, intensity, diurnal variation; and others, including tides, and solar and terrestrial radiation. We now made every preparation for sea.

* The measurement of the whole distance by sound, when reduced, gave $1^{\circ} 08' 52'' 8'''$ for the difference of meridians. Each distance between the vessels was the mean of about thirty observations. The longitude of Cape Frio Light, deduced from that of Enxados, which had been ascertained by moon culminating stars to be in $43^{\circ} 09' 06'' 67'''$ west of Greenwich, is, therefore, $42^{\circ} 00' 13'' 87'''$ W. For the particulars and a diagram of this work, see Appendix XXIII.