

that obtained by triangulation. The results will be found in the table.

Not having time to complete all they desired, some of the party remained over night to complete the interesting observations. Lieutenants Emmons and Underwood, on their first trip, obtained many interesting botanical specimens, among them Bromelias, Tillandsias, &c.

On the 16th, the Peacock, with the two tenders, sailed for the purpose of measuring the distance between Cape Frio and Enxados observatory. I had first determined to measure the distance by rocket-signals, as the distance, lying nearly east and west, rendered this method very applicable; but the duties I was engaged in, and the difficulties I might encounter from delays, prevented me from having recourse to it. I therefore adopted that by sound, wishing also to satisfy myself with what accuracy a length of this distance could be measured in this manner.

Captain Hudson was also ordered to examine the St. Thomas Shoal, to the northward of the Cape.

The manner of accomplishing the former duty was as follows. The three vessels were anchored in a triangle, with the light-house in sight, two vessels being in range with it, nearly east and west, towards the harbour of Rio. Each vessel firing four guns, the times of the flashes and reports of which were noted in the others. The angles were simultaneously observed between the objects, and the astronomical bearings taken. This gave the data to connect the survey with the light-house.

The vessels now changed their positions alternately, anchoring in range, and on astronomical bearings proceeding westward, until they reached the island of Enxados, where they again formed a triangle in connexion with the observatory.

Our repairs in Rio were extensive, particularly those on the Peacock. Among other things, the head of the mizzen-mast had to be cut off eighteen inches, in consequence of a defect in it, which it appeared had been filled up with rope-yarns and putty, and painted over, at her outfit. The defects about the vessel were so glaring that in going to the high latitudes, it would have been impossible to secure the crew from great suffering and exposure. Even in the state in which the squadron was now put, I had every apprehension of the greatest disasters. The Peacock, particularly, was wholly unseaworthy with respect to such a cruise.

My object in giving these details is not to impute blame to any one, however satisfied I may be of the great neglect in all the outfits, but