

the Direction Islands and abreast of Iceberg Sound, several small pieces of ice were passed and it was found that the surface temperature had decreased from  $57^{\circ}$  to  $44^{\circ}$ , and the specific gravity to 1.004. Soon after passing Iceberg Sound, the temperature again increased to  $56^{\circ}$ . At 6.30 P.M. the ship anchored in Gray Harbour in 17 fathoms; in entering, a cast of 7 fathoms was obtained on the 9 fathom patch in the centre. The day was very fine throughout, with an almost perfect calm, and the scenery as the vessel steamed through the Messier Channel was magnificent.

The ship remained at anchor in Gray Harbour until 10.30 A.M. on the 4th, parties exploring the neighbourhood and obtaining observations. The shooting parties were not very successful, but at the head of the harbour is a large lake where plenty of small fish having the general appearance of a Trout (*Haplochiton zebra*), and belonging to a family representing the Salmonoids in the Southern Hemisphere, were caught. The weather being remarkably fine on the 3rd,—the black bulb thermometer exposed to the sun recorded  $111^{\circ}$ ,—the ship's company were landed to wash their clothes and have a run on shore, but they lit fires all over the harbour, which spreading, set fire to the woods. Unfortunately, Dr Wild, one of the civilian staff, did not return with the boats at 6 P.M., and as it was feared that he would get lost or burned, searching parties were sent after him; however, he turned up all right at 8 P.M.

On the 4th January, at 10.30 A.M., the ship left Gray Harbour and proceeded through the English Narrows to the southward for Port Grappler. The vessel took the channel west of Mid-channel Island, rounding that island just before noon, being abreast of Zealous Island at noon. No difficulty was experienced in twisting the Challenger through the narrow part, it being slack tide, but there is no doubt the mail steamers, some of which are 400 feet in length, would find it difficult even at slack water, and almost impossible with the stream against them. At 1 P.M. the ship passed Olland Island, and at 1.30 P.M. the Gorgon Rock, which was then showing about three feet above water. At 2 P.M. Toro Island was passed, and at 2.20 P.M. Crossover Island; there were numerous Fur Seals round the ship, and also on the rocks south of the Covadonga Islets. At 3 P.M. the vessel stopped in the fork at the north end of Saumarez Island, and a sounding and trawling were obtained in 147 fathoms, with the left extremity of Foot Island N.  $5^{\circ}$  W., the left extremity of Broome Island N.  $33^{\circ}$  W., the left extremity of Escape Reach S.  $2^{\circ}$  E., the left extremity of Stony Bill Point S.  $66^{\circ}$  E., and Hayman Point S.  $76^{\circ}$  E. From these bearings it appears that the chart is considerably in error, although of course there is no difficulty in determining which route to take or in fixing roughly the position of the ship. At 4.30 P.M. the trawl was hove up and the ship proceeded for Port Grappler, anchoring there at 5.40 P.M. The first part of the day was fine, but the afternoon was cloudy and the evening rainy, the wind being light.

The steam pinnace left Gray Harbour at 4 A.M. with several naturalists and officers, and joined the ship in the evening at Port Grappler. On the way landing was effected