

ring near the locality where the northern and southern tidal currents meet and form high tides, there is occasioned at certain stages of the tide a heavy overfall and a current running from four to eight knots per hour. It is exceedingly dangerous to try and run through this race in a fog. Fortunately there are anchorages at either approach of this gorge, which is called the *Seymour Narrows*, where a vessel may anchor until a favorable time. In the *Race Passage* on the south side of Helmcken Island we measured the flood current from the northwest, running seven miles per hour for an hour and a half, and no available position on either shore for an anchorage. Here the scenery is grand, for the mountains close on the southern or Vancouver shore rise to an elevation of over four thousand six hundred feet; on the north shore, on Hardwicke Island the mountains rise two thousand six hundred feet above the water. Thence westward the Johnstone Straits increase to two miles in width and the tidal currents run from one to three knots with a mid-channel depth of one hundred and seventy-six fathoms, no bottom, while the high mountain range on the Vancouver shore rises abruptly to five thousand feet. In Broughton Strait the channel is wider and has less depth, but is filled with islands which decrease the available width, so that the currents reach a velocity of five knots per hour. In this vicinity, however, are numerous places for anchorage. Thence westward, through the eastern part of Queen Charlotte Sound,* the current is from one to three knots per hour.

Towards the north end of Vancouver Island the mountains directly on the coast decrease in elevation, but the mountains on the mainland to the north and northeastward attain heights over six thousand feet above the sea and are snow-clad in July and August. In running northward across the entrance of Queen Charlotte Sound to Fitzhugh Sound from the Shadwell or Bute Pass, the outside dangers to the westward, stretching from a position four miles off Cape Mosman † to a position twenty miles south-southwest from the cape, are readily detected and form a dangerous ground that must be avoided. The islets and rocks making off the entrance to Smith's Inlet‡ are also readily recognized and avoided in good weather; but in foggy or thick weather it is perhaps best to run from the Shadwell or Bute Pass for Cape Caution, a rocky point of small elevation covered with dwarfed spruce, &c., and then for a position one or two miles west of Egg Island, which is two hundred and fifty feet high and easily recognized, but has two islets and a sunken rock half a mile south and south-southwest from it. Leaving Egg Island, a course can be laid for Cape Mosman. This cape, forming the southernmost point of Calvert Island, presents a broad face east and west of low rocky shore line, covered with a thick growth of spruce, hemlock, &c., but backed by mountains two thousand to two thousand nine hundred feet high to the north-

*Named by Captain S. Wedgeborough, of the Experiment, in August 1786.

†Named by the United States Coast Survey in July 1867. See view called Cape Calvert, on Admiralty Chart No. 1923, published in December 1867.

‡Named by Captain James Hanna in 1786.