

rock, between the tide gauge and the sea; elevation, 37.55. Low-water datum, from which the height of the tide in the tide tables is measured, 19.56.

*Forteau Bay, Belle Isle Strait.*—Surface of the plate of the diploid-scope, on top of the iron column supporting it; elevation, 100.02. (Originally 100.00, but since raised by frost). Centre of bronze bolt drilled into a vertical face of rock in a reef, at about half tide level; at 78 feet south of the south-east corner of the crib work on which the tide gauge stands; elevation, 84.05. Low-water datum to which the whole series of tidal observations is reduced, 81.00.

*Sydney, N.S.*—The City datum was utilized for the tidal observations. To do this, it was necessary to carry the city levels half a mile further, to the site of the gauge, which was placed at the Intercolonial Railway wharf at Battery Point. A Bench-mark was cut on the Court House, on the corner of Charlotte and Desbarres streets, which is the nearest masonry building to the sight of the gauge. It is cut on the stonework on the south side of the basement doorway, under the main entrance; on the west side of the building.

	Feet.
New Bench-mark cut on the Court House, as above described.	
Elevation above the Sydney city datum . . . . .	57.20
Cap of the wharf at the tide gauge, Battery Point . . . . .	10.43
Highest High Water recorded by the gauge during the observations, continued for one month, from July 4 to August 6, 1901, occurred on July 17 . . . . .	5.35
Lowest Low Water recorded, in the same period; occurred on July 16 . . . . .	0.10
The Sydney City datum. (Intended for Low Water) . . . . .	0.00
Zero of the scale of the tide-gauge; below datum . . . . .	-1.51

*Halifax, N.S.*—Repeated endeavours have been made to ascertain the relation at Halifax, between the Admiralty datum, the Royal Engineers' datum, and the City datum, none of which accord with each other.

The most important of these from a marine point of view, is the Admiralty Low-water datum, to which the soundings on the chart of Halifax harbour are referred. This datum is fixed by reference to a Bench-mark in the Dockyard, and it is defined by the following note on the chart of Halifax harbour:—"The soundings are re-