

Feet.
 117 06
 ion of
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 108 56
 aced.
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 well,
 88 66
 ining
 87 88
 87 81
 Mr.
 87 75

the point known
 This is at 19 miles
 the Bay of Fundy.
 miles further up,
 is a sheet of water
 ts, with a stream
 amongst the bars

eight miles below
 miles above. The

eally corresponds
 is and the follow-
 level of the water
 h slower rate, for
 rival of the bore
 res to account for

et per hour ; but
 ery slow, and the
 two hours before
 ; and it no doubt
 measured shortly

hour.

ugust 4th. The
 It commands a
 as the foreshore
 was well risen
 very slight breeze
 he spring tides,

n 60th meridian
 was very similar
 increased to the
 r ; but there was
 falling into deep

water, even from a moderate height. The bore arrived at the wharf at 23^h 19^m, or eleven minutes after its sound was first heard. The rapidly-flowing layer of incoming tide advanced over the current of the river in the opposite direction, with a front of broken and foaming water, which had a height of perhaps two or three feet. The front edge was by no means straight. The higher part of the bore extended across the waterway, and this was bent back and also heightened in the middle by the opposing current of the river, which is naturally swiftest at the centre of the stream. Beyond this, the bore formed a long sweep where it broke over the flats, retarded and decreasing in height towards the further bank of the river.

The surface current of the water following the main front, has the same speed of flow as its rate of advance ; and after the main front passes, there usually follow a series of others, stepped up a few inches of additional height. These form irregular lines of curve across the surface of the advancing tide, which do not extend far without interruption. These may be due in part to back-wash from the flats, into the main channel. As seen in the day time, the water forming the bore is excessively muddy and reddish-yellow in colour, just as the outflowing water of the river also is. The actual broken water in the front is nearly white, except at the shore end ; but the long edge of the advancing water on the flats appears nearly black in strong sun-light. With a stiff breeze down stream, the sound of the bore cannot be heard till it has approached within a few hundred yards.

During the neap tides, the bore still appears ; and the front edge usually breaks a few inches high. But there are times when it consists merely of a heavy ripple, like the side waves from the bow of a steamer, when they are advancing over still water ; and it then only breaks occasionally, except in passing over the flats.

Rate of Travel of the Bore.—Its rate of advance was timed from a point of observation on one of the upper wharves, which commands a view around the bend of the river ; and the moment of its successive arrival at a series of points was exactly noted. The distances between these points were taken from a plan of the river front at Moncton ; but the distance to the lowest of the points could not be ascertained with certainty ; and it is therefore omitted. The following result was obtained, from observations at the 3rd and 5th tides after the highest spring tide at the beginning of August.

Intervals.	Distance between the points.	On Friday, 5th August.		On Saturday, 6th August.		
		Interval of time.	Speed in miles per hour.	Interval of time.	Speed in miles per hour.	
	Feet.	m.	s.	m.	s.	
From mouth of Hall's Creek to Public Wharf	1,550	1	50	9	61	
From Public Wharf to Sumner's Wharf	1,175	1	45	7	62	
Mean Values			8	61	8	33

General average 8'47 miles per hour.

An endeavour was made to obtain a measurement of the time taken by the bore in passing up the river from Stony Creek to Moncton ; but the simultaneous observations required could not be arranged for.

Form of the Bore.—To ascertain the form of the bore, and its rate of rise, a graduated board 13 feet high, was set up in front of the wharf, at which the tide gauge was placed. It was attached to the corner of the crib-work and brush, set at a low level in front of the wharf for vessels to lie on at low tide ; and it was braced against the current. This current, after the bore passes, appears to have the same surface velocity as the rate of advance of the bore itself, which is given above. In these circumstances, the graduated board had to be renewed from time to time ; but the elevation of its zero was cor-