

When a river enters upon the delta portion of its course, it assumes a new character. In the previous parts of its journey it is augmented by tributaries; but now it begins to split up into branches, which wind to and fro through the flat alluvial land, often coalescing and thus inclosing insular spaces of all dimensions. The feeble current, no longer able to bear along all its weight of sediment, allows much of it to sink to the bottom and to gather over the tracts which are from time to time submerged. Hence many of the channels are choked up, while others are opened out in the plain, to be in turn abandoned; and thus the river restlessly shifts its channels. The seaward ends of at least the main channels grow outward by the constant accumulation of detritus pushed into the sea, unless this growth chances to be checked by any marine current sweeping past the delta.

These features are nowhere more strikingly displayed than by the great delta of the Mississippi (Fig. 137). The area of this vast expanse of alluvium is given at 12,300 square miles, advancing at the rate of 262 feet yearly into the Gulf of Mexico at a point which is now 220 miles from the head of the delta.¹⁸² On a smaller scale the rivers of Europe furnish many excellent illustrations of delta-growth. Thus the Rhine, Meuse, Sambre, Scheldt, and other rivers have formed the wide maritime plain of Holland and the Netherlands. The Rhone, which has deposited an important delta in the Mediterranean Sea, is computed to furnish every year (by the Petit Rhône) about four millions of cubic metres of sediment to the shores.¹⁸³ The upper reaches of the Adriatic Sea are being so rapidly shallowed and filled up by the Po, Adige, and other streams, that Ravenna, originally built in a lagoon like Venice, is now 4 miles from

¹⁸² Humphreys and Abbot, *op. cit.*; see also C. Hartley, *Min. Proc. Inst. Civ. Engin.* xl. p. 185. The tide has a mean rise of 15 inches every 24 hours at the Mississippi mouths.

¹⁸³ For this delta and its lagoons, see the paper by Ansted, quoted *ante*, p. 675. Reclus, "*Geographie Universelle*," tome ii. (France), chaps. ii. and iii., and A. Guérard, *Min. Proc. Inst. Civ. Engin.* lxxxii., 1884-85, p. 305.