

amount of mechanically suspended silicates (clay) was found to be as follows:²⁸⁵

	In 14 litres of water		Per cubic mile of water
Atlantic Ocean, lat. 51° 20', long. 31° W.....	0·0052 grm.	=	1604 tons
German Ocean, 30 miles E. of May Island.....	0·0063 "	=	1946 "
Mediterranean, centre of Eastern basin.....	0·0065 "	=	2031 "
Baltic Sea, salinity 1005·5.....	0·0105 "	=	3200 "
Red Sea, off Brothers Island.....	0·0006 "	=	264 "
Indian Ocean, lat. 15° 46' N., long. 58° 51' E.	0·0006 "	=	264 "

Near the land, where the movements of the water are active, much coarse detritus is transported along shore or swept further out to sea. A prevalent wind, by creating a current in a given direction, or a strong tidal current setting along a coast-line, will cause the shingle to travel coastwise, the stones getting more and more rounded and reduced in size as they recede from their source. The Chesil Bank, which runs as a natural breakwater 16 miles long, connecting the Isle of Portland with the mainland of Dorsetshire, consists of drifted rounded shingle.²⁸⁶ On the Moray Firth, the reefs of quartz-rock about Cullen furnish abundance of shingle, which, urged by successive easterly gales, moves westward along the coast for more than 15 miles. The coarser sediment probably seldom goes much beyond the littoral zone. Returning to the subject of the depth to which wave-action extends (ante, p. 736) we may take note that it has been observed by the fishermen at Land's End

²⁸⁵ Murray and Irvine, Proc. Roy. Soc. Edin. xviii. 1891, p. 243. These authors regard the silica thus mechanically suspended in sea-water as the probable source of most of this substance secreted by marine plants and animals.

²⁸⁶ On the Chesil Bank, see J. Coode, Min. Proc. Inst. Civ. Engin. xii. p. 520. J. B. Redman, op. cit. xi. p. 201; xxiii. p. 226; Nature, xxvi. pp. 30, 104, 150; J. Prestwich, Min. Proc. Inst. Civ. Engin. xl. p. 115; H. W. Bristow and W. Whitaker, Geol. Mag. vi. 1869, p. 433; O. Fisher, op. cit. 1874, p. 285; G. H. Kinahan, op. cit. 1874. A. R. Hunt, Proc. Roy. Dublin Soc. iv. 1884, p. 241. The general transport of littoral detritus in the English Channel is from west to east; Prof. Prestwich, however, thinks that at the Chesil Bank this direction is locally reversed.