

by Sir William Thomson in 1870 was a still further improvement, and, indeed, since the commencement of submarine telegraphy, the process of taking deep-sea soundings has been rapidly perfected. Many submarine telegraph ships, surveying vessels, and even private yachts, have now been fitted with the most improved apparatus for sounding; so that, when it is desired to know the depth only, this can be ascertained expeditiously and with great accuracy.

During the past thirty years the ocean has been sounded in all directions, and we have in consequence a very correct notion of the general form and relief of all the great ocean basins and enclosed seas. Not only in a knowledge of the bathymetry of the ocean, but in an acquaintance with all the other conditions of the deep sea, there has been a rapid and important development, thanks to the investigations of the Challenger Expedition, as well as the previous and subsequent expeditions of this and other countries.

This Report being limited to a consideration of the sedimentary deposits of the deep sea, it seems desirable to indicate the views that have at different times been held with reference to marine sedimentation.

Herodotus¹ discussed the formation of alluvium at the entrance of the Nile, and the relations subsisting between land and sea, but on these it is unnecessary to dwell.

Plato,² in the myth of Atlantis, supposes a great extent of land situated in the external sea to have disappeared in one day and one night beneath the water of the ocean. Since that time, he adds, the Atlantic Sea has ceased to be navigable; its waters have become muddy and charged with clay derived from the engulfed land.³

Skylax of Coryanda,⁴ in speaking of the sea which bathes the west of Europe, limits his remarks to saying:—"Beyond the Pillars of Hercules there are many Carthaginian commercial stations, much muddy water, high tides, and open seas."⁵

Aristotle⁶ has no new views with regard to the great external ocean, which, he states, in accordance with the ideas generally admitted in his time, is muddy and little agitated by the winds.

Polybius⁷ points out that in the Sea of Azov the rivers bring down considerable quantities of sediment. He estimates the time it will take for this fluvial alluvium to fill up, not only the Sea of Azov, but also the Euxinus or Black Sea. The ideas of Polybius, from a geological point of view, are most reasonable, but the rate of encroachment has been much slower than he supposed during the 2000 years which separate us from the time when he wrote. The modifications in these seas have not been very appreciable.

Strabo⁸ says: Running water works profound modifications on the surface of the

¹ 484-408 B.C.

² Born 429 B.C.

³ Plato, *Timæus*, c. 5, 6, and *Critias*, c. 3, 8.

⁴ Flourished in the middle of the fourth century B.C.

⁵ Skylax, *Periplus*, 1.

⁶ 384-322 B.C.

⁷ 204-122 B.C.

⁸ Born about 60 B.C.