

CHAPTER X.

THE CONTINUITY OF THE CHALK.

Points of Resemblance between the Atlantic Ooze and the White Chalk.—Differences between them.—Composition of Chalk.—The Doctrine of the Continuity of the Chalk.—Objections.—Arguments in favour of the View from Physical Geology and Geography.—Former Distribution of Sea and Land.—Palæontological Evidence.—Chalk-flints.—Modern Sponges, and *Ventriculites*.—Corals.—Echinoderms.—Mollusca.—Opinions of Professor Huxley and Mr. Prestwich.—The Composition of Sea-water.—Presence of Organic Matter.—Analysis of the contained Gases.—Differences of Specific Gravity.—Conclusion.

APPENDIX A.—Summary of the Results of the Examination of Samples of Sea-water taken at the Surface and at various Depths. By William Lant Carpenter, B.A., B.Sc.

APPENDIX B.—Results of the Analyses of Eight Samples of Sea-water collected during the Third Cruise of the 'Porcupine.' By Dr. Frankland, F.R.S.

APPENDIX C.—Notes on Specimens of the Bottom collected during the First Cruise of the 'Porcupine' in 1869. By David Forbes, F.R.S.

APPENDIX D.—Note on the Carbonic Acid contained in Sea-water. By John Young Buchanan, M.A., Chemist to the 'Challenger' Expedition.

VERY speedily after the first samples of the bottom of the mid-Atlantic had been brought up by the sounding-line, and submitted to chemical analysis and