

tiary accumulations are plainly stratiform deposits; and they exhibit the different kinds of lamination and bedding which have been so often noticed before, while speaking of older rocks. The molasse of Switzerland, sandstone of Fontainebleau, and sands of the Isle of Wight, are stratified; sometimes, also, parted by oblique or parallel laminæ: the London clay and Headon marls are partially, the Montmartre marl perfectly, laminated: the marine calcaire grossier, and most of the freshwater limestones, are regularly bedded, and the latter very frequently laminated: gypsum occurs at Montmartre, and elsewhere in France, in a bedded mass.

*Divisional Planes.*—Agreeably to a very general law, which connects the divisional structures with the age of the rocks, and expresses their relative abundance and regularity in terms of their antiquity, we find them less remarkable in the tertiary sands, clays, and marly or chalky limestones, than in any of the older rocks. Joints do certainly exist in them, and especially in the lamellated limestones; and it is probable, from general considerations of the agency of heat in developing these structures, that, near large masses of igneous rocks, as in the Alps, they may be found more numerous. Nor does it appear that many cases of re-arrangement among the particles occur: some oolitic beds occur in the leithakalk; menilite is concentrated in certain marl beds near Paris; flint is collected in nodules in some freshwater limestones; sulphuret of iron gathers round and in the substance of lignite.

*Succession and Thickness of the Strata.*—Difficulties unfelt with regard to the older systems embarrass the history, or rather the classification, of the tertiary strata. The lower boundary of this system is in general very clearly marked by the peculiar mineral character and remarkable organic remains of the cretaceous rocks; but the upper boundary, the line of distinction between the “tertiary” deposits and those which we may agree to call “modern,” is not at all clear. This difficulty arises in various ways: the mineral cha-