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THE IMPERFECTION OF THE PALÆONTOLOGICAL RECORD.

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As I have pointed out shortly in a former communication, the series of the stratified formations is an incomplete one, and is likely ever to remain so. The causes of this "imperfection of the geological record," as it has been termed by Darwin, are various; but they are chiefly to be ascribed to our as yet limited knowledge of the geology of vast areas of the earth's surface, to denudation, and to the fact that many of the missing groups are buried beneath other deposits, whilst more than half of the superficies of the globe is hidden from us by the waters of the sea. The imperfection of the geological record necessarily implies an equal imperfection in the "palæontological record;" but, in truth, the record of life is far more imperfect than the mere physical series of deposits. The object, then, of this communication is briefly to consider some of the main causes of the numerous breaks and gaps in the palæontological record.

I. *Causes of the Absence of certain Animals in Fossiliferous deposits*.—In the first place, even if the series of stratified deposits had been preserved to us in its entirety, and we could point to sedimentary accumulations belonging to every period in the earth's history, there would still have been enormous gaps in the palæontological record, owing to the different facilities with which different