

of rock under which it originally consolidated. The fact that, wherever extensive denudation of an ancient series of crystalline rocks has taken place, a subjacent granitic nucleus is apt to appear, does not prove granite to be of primeval origin. It shows, however, that the lower portions of crystalline rocks very generally assume a granitic type, and it suggests that if, at any part of the earth, we could bore deep enough into the crust, we should probably come to a granitic layer. That this layer, even if general round the globe, is not everywhere of the highest geological antiquity, or at least has consolidated at widely different periods, is abundantly clear from the fact that in many cases it can be proved to be of later date than fossiliferous formations the geological position of which is known; that is, the granitic layer has invaded these formations, rising up through them, and possibly melting down portions of them in its progress. Granite invades and alters rocks of all ages up to late Mesozoic and Tertiary formations. Hence, it does not belong exclusively to the earliest nor to any one geological period, but has rather been extruded at various epochs, and may even be in course of extravasation now, wherever the conditions required for its production still exist. As a matter of fact, granite occurs much more frequently in association with older, and therefore lower, than with newer and higher rocks. But a little reflection shows that this ought to be the case. Granite, having a deep-seated origin, must rise through the lower and more ancient masses before it can reach the overlying more recent formations. But many protrusions of granite would, doubtless, never ascend beyond the lower rocks. Subsequent denudation would be needed to reveal these protrusions, and this very process would remove the later