Asia which have been minutely investigated,—the Cape districts and the Himalaya mountains. A series of entirely new and very peculiar animal forms have become known to us from the rocks of these localities. But we must bear in mind that the vast bottom of the existing oceans is at the present time quite inaccessible to palæontological investigations, and that the greater part of the petrifactions which have lain there from primæval times will either never be known to us, or at best only after the course of many thousands of years, when the present bottom of the ocean shall have become accessible by gradual elevation. If we call to mind the fact that three-fifths of the whole surface of the earth consists of water, and only two-fifths of land, it becomes plain that on this account the palæontological record must always present an immense gap.

But, in addition to these, there exists another series of difficulties in the way of palæontology which arises from the nature of the organisms themselves. In the first place, as a rule only the hard and solid parts of organisms can fall to the bottom of the sea or of fresh waters, and be there enclosed in the mud and petrified. Hence it is only the bones and teeth of vertebrate animals, the calcareous shells of molluscs, the chitinous skeletons of articulated animals, the calcareous skeletons of star-fishes and corals, and the woody and solid parts of plants, that are capable of being petrified. But soft and delicate parts, which constitute by far the greater portion of the bodies of most organisms, are very rarely deposited in the mud under circumstances favourable to their becoming petrified, or distinctly impressing their external form upon the hardening mud. Now, it must be borne in mind that large classes of