

sects that have been imprisoned within the exuding resin of old forests, the footprints of birds and quadrupeds, or the trails of worms left upon former shores—these, and innumerable other pieces of evidence, enable the geologist to realize in some measure what the vegetable and animal life of successive periods has been, and what geographical changes the site of every land has undergone.

It is evident that to deal successfully with these varied materials, a considerable acquaintance with different branches of science is desirable. The fuller and more accurate the knowledge which the geologist has of kindred branches of inquiry, the more interesting and fruitful will be his own researches. From its very nature, geology demands on the part of its votaries wide sympathy with investigation in almost every branch of natural science. Especially necessary is a tolerably large acquaintance with the processes now at work in changing the surface of the earth, and of at least those forms of plant and animal life whose remains are apt to be preserved in geological deposits, or which, in their structure and habitat, enable us to realize what their forerunners were.

It has often been insisted upon that the Present is the key to the Past; and in a wide sense this assertion is eminently true. Only in proportion as we understand the present, where everything is open on all sides to the fullest investigation, can we expect to decipher the past, where so much is obscure, imperfectly preserved, or not preserved at all. A study of the existing economy of nature ought evidently to be the foundation of the geologist's training.

While, however, the present condition of things is thus employed, we must obviously be on our guard against the danger of unconsciously assuming that the phase of nature's