

GEOLOGY AS A BRANCH OF GENERAL EDUCATION.—Nor is it alone the miner, engineer, builder, farmer, landscape gardener, and painter that can turn to profitable account the deductions of geology. The capitalist who speculates in land, the emigrant, the traveller and voyager, the statistician and statesman may all derive assistance from the same source, and bring a knowledge of its facts to bear on the progress of their nations. So also the holiday tourist, the military officer stationed in distant countries, and others in similar situations, if possessed of the requisite knowledge, may do good service, not only to the cause of science, but to the furtherance of our industrial prosperity. Indeed we do not affirm too much when we assert that had one tithe of those who, during the last fifty years, have travelled or settled in America, Australia, New Zealand, India, and other countries, been possessed even of a smattering of geology, these countries, as to their substantial wealth and social progress, would have been in a very different position at the present day. Their gold fields and coal fields, their mines of iron, copper, and other metals, take rank among the most important discoveries of the present age; and as the spirit of civilization is now evolved and directed, no progress can be made without those mechanical appliances to which the possession of coal and iron is indispensable, no facility of commercial intercourse without a sufficiency of gold, which has hitherto formed the most available medium of interchange. The assistance which geology has also conferred, and the new light its deductions have thrown on the other branches of natural science, are not among the least of its claims to general attention. The comparatively recent science of physical geography, in all that relates to the surface configuration of the globe—its climate and temperature, the distribution of plants and animals, and even touching the development of man himself as influenced by geographical position—can only lay claim to the character of a science when treated in connection with the fundamental doctrines of geology. So also in a great degree of botany and zoology; the reconstructing, as it were, of so many extinct genera and species has given a new significance to the science of life; and henceforth no view of the vegetable or animal kingdom can lay claim to a truly scientific character that does not embody the discoveries of the palæontologist. In fact, so inseparably woven into one great system of life are fossil forms with those now existing that we cannot treat of the one without considering the other; and can never hope to arrive at a knowledge of creative law by any method which, however minute as regards the one, is not equally careful as concerns the other. Combining, therefore, its theoretical interest with its high practical value—the complexity and nicety of its problems, as an intellectual exercise, with the substantial wealth of its discoveries—the new light it throws on the duration of our planet and the wonderful variety of its past life, with the certainty it confers on our industrial researches and operations—geology becomes one of the most important of modern sciences, deserving the study of every cultivated mind, and the encouragement of every enlightened government.—*Advanced Text-Book of Geology*, by D. PAGE, F.G.S.

ARTESIAN WELLS.—The artesian well at Charleston, S. C., is tubed to the depth of 1320 feet and supplies 100,000 gallons every 24 hours. Its temperature when it reaches the surface is about 83 degrees of Fahrenheit, its taste slightly alkaline, and it is thought to have medicinal qualities. Glass deposited in it for a few hours receives an iridescent coating similar to that of the artesian well of Grenelle, near Paris. A trough near the well, on one of the great thoroughfares of city, is supplied with this water for the use of horses, which manifest a singular avidity for it, many of them refusing to drink at their stables in the morning in the expectation of receiving their supply at the trough on their way to their stands.

MECHANICAL HORSE-TAMER.—With a philosophical indifference to the lofty teachings in horse taming as practised by Professor Rarey (with whose feats the whole world resounded in 1858), J. G. Bunting, of London, has taken out a patent for what he calls a "Mechanical Horse-tamer." It consists of a post driven into the ground and having at its upper end a stout pin, to which are secured two horizontal poles. Upon the outer end of these are attached axle-arms to carry heavy cart wheels and they are arranged to form a sort of cradle in which the horse to be tamed is fastened by suitable straps. He is unable to plunge by the weight of the wheels, or to lie down on account of the under straps, and he is prevented from running backwards by a prop which is fixed to the hind pole. In this contrivance the unruly animal is coerced into obedience; but as to the extent of his training or how long it takes to *break him in*, we are not informed.