Modern Attainments in Geology.

as only there, where our outposts are, can we see in what direction further advance is being made. Whether I shall be successful, I do not know; but the subject is such a comprehensive one that I must not permit myself a longer introduction.

Let us first glance at the road already trodden. One may say that the geology of to-day started at the great Mining School of Freiberg in the last century. There it was, under the lead of Werner, that deep study was given to the manner in which different rocks were deposited, and where continuous districts were systematically inves-But not till Cuvier had pointed out in the first tigated. decade of this century that the remains of mammals found in the gypsum of Paris really belonged to extinct species; not till the Englishman Smith showed that in the different layers of stratified rocks different fossils occurred and that hence it was possible to classify these strata according to the fossils contained in them; not till Leopold von Buch had given a tremendous impulse to the investigation of the structure of mountains, could one recognize what an extraordinarily wide new field was opened to human investigation.

Further great advances were made in the first half and the middle of the present century. In Freiberg geology was originally studied for the purpose of tracing ores of the noble metals which occurred there in the form of veins. Later it was found that coal and iron possessed a much greater value for a state, and finally people were convinced that a much more insignificant portion of our earth—the soil—was of supreme importance for the wellbeing of a country.

Thus we have gradually come to the conclusion that the investigation of the geological structure of a country is an important preliminary to the advancement of its agricultural development; and it has therefore come about that not only the countries of Europe, but many coun-

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