

mation of Vegetable Mould through the Action of Worms." Magazines and newspapers of every description from the most profoundly scientific quarterly to the comic weekly have made extracts from or commented upon this work which is the record of observations and investigations extending over nearly half a century. Mr. Darwin believes on evidence which seems very satisfactory to his reader, that each English earth-worm probably passes, on an average, about twenty ounces of matter through its body in the course of a year; but then it brings that quantity of matter to the surface of the earth, and there deposits it, and brings it up in a form very different from that in which the matter existed before it passed into the worm. In the first place, the earth is finely triturated in the gizzard of the creature with the fibrous parts of the leaves on which it feeds, and with which it lines its burrows, so that the mould which results is what we know as vegetable mould, a totally different substance for the purposes of the farmer and the gardener from the substance on which the worm first begins to act. Mr. Darwin says "Worms have played a more important part in the history of the world than most persons would at first suppose. In almost all humid countries they are extraordinarily numerous, and for their size possess great muscular power. In many parts of England a weight of more than ten tons (10,516 kilogrammes) of dry earth annually passes through their bodies, and is brought to the surface, on each acre of land: so that the whole superficial bed of vegetable mould passes through their bodies in the course of every few years. From the collapsing of the old burrows the mould is in constant, though slow movement, and the particles composing it are thus rubbed together. By these means fresh surfaces are continually exposed to the action of the carbonic acid in the soil, and of the humus acids which appear to be still more efficient in the decomposition of rocks. The generation of the humus acids is probably hastened during the digestion of the many half-decayed leaves which worms consume. Thus the particles of earth forming the superficial mould are subjected to conditions eminently favorable for their decomposition and disintegration. Moreover, the particles of the softer rocks suffer some amount of mechanical trituration in the muscular gizzards of worms, in which small stones serve as mill-stones." When we consider that a single earth-worm is not supposed to pass more than twenty ounces of earth through its body in the year, such a total result as this seems almost incredible. But then we must remember that from at least twenty to thirty thousand of these creatures are believed to be at work on every acre of British earth suitable for their activity, and that in Great Britain there are thirty-two millions of such acres. If ten tons of earth pass through these creatures on every one of such acres in the year, three hundred and twenty millions of tons of earth are brought to the surface by them in Great Britain alone, in a single year; and when this large weight of soil is multiplied by the number of years during which their agency has certainly been at work—Mr. Darwin thinks a million years not at all an extravagant estimate—the effect that they have produced in making the vegetable mould of the world can hardly be exaggerated.

The mineral resources of our country are being rapidly developed. A short time ago an American Company bought up the property known as the Harvey Hill Copper Mine a short distance from a point on the Quebec Central Railway and are to commence operations at once. Quite recently another firm purchased some 11,000 acres of land in Hastings County upon which are valuable deposits of Magnetite. Some of the veins are over 100 feet in width. The ore gives from 66 to 68 per cent metallic iron. It is probable that an establishment for the manufacture of Bessemer Steel, will be erected in connection with the development of these mines. A company with a large capital has also been formed in this city for the purpose of manufacturing iron and steel by an improved process. This company intends to acquire mining prop-