gress in obtaining a knowledge of the terrestrial fauna of the coal, since the reptiles above enumerated seem to have been all amphibious. Negative evidence should have its due weight in palæontological reasonings and speculations, but we are as yet quite unable to appreciate its value. In the United States about five millions of tons of native coal are annually extracted from the coal-measures, yet no fossil insect has yet been met with in the carboniferous rocks of North America. Ought we then to conclude that at the period of the coal insects were unrepresented in the forests of the Western World? In like manner, no land-shell, no Helix, Bulimus, Pupa, or Clausilia, nor any aquatic pulmoniferous mollusk, such as Limneus or Planorbis, is recorded to have come from the coal of Europe, worked for centuries before America was discovered, and now quarried on so enormous a scale. Can we infer that land-shells were not called into existence in European latitudes until after the carboniferous period?

The theory of progressive development would account readily for the absence of Chelonian and Saurian reptiles, or of Birds and Mammals, from the Coal-Measures, because the condition of the planet is supposed to have been too immature and unsettled to permit creatures enjoying a higher development than batrachians to find a fit domicile therein. But this same theory leaves the scarcity of the invertebrata, or the entire absence of many important classes of them, wholly unexplained. When we generalize on this subject, we must not forget that the eighteen or twenty individual insects and land-shells met with in the coal (and most of these very recently found), are scarcely double the number of the carboniferous reptiles which have been established within the last ten years on the evidence of bones and footprints. Yet our opportunities of examining strata formed in close connection with ancient land exceed in this case all that we enjoy in regard to any other formations, whether primary, secondary, or tertiary. We have ransacked hundreds of soils replete with the fossil roots of trees,—have dug out hundreds of erect trunks and stumps, which stood in the position in which they grew,—have broken up myriads of cubic feet of fuel still retaining its vegetable structure,—and, after all, we continue almost as much in the dark respecting the invertebrate air-breathers of this epoch, as if the Coal had been thrown down in mid-ocean. The age of the planet, or its unprepared state to serve as a dwelling-place for organized beings, cannot explain the enigma, because we know that while the land supported a luxuriant vegetation, the contemporaneous seas swarmed with life—with Articulata, Mollusca, Radiata, and Fishes. We must, therefore, collect more facts, if we expect to solve a problem, which, in the present state of science, cannot but excite our wonder; and we must remember how much the conditions of this problem have varied within the last ten years. Meanwhile let us be content to impute the scantiness of our data chiefly to our want of skill as collectors and interpreters, but partly also to our ignorance of the laws which govern the fossilization of land-animals, whether of high or low degree.