elaborately ornamented and protected as any of the modern lizards, and this, let it be observed, constitutes another and important departure from that batrachian type to which these animals are supposed to conform. I may add here that subsequently portions of skin were found, which from their size probably belonged to *Dendrerpeton*, and that these also were scaly and had lappets, though they did not appear to have the horny tubercles and fringes. It may be asked why such advanced characters should be found in Nova Scotia alone. The answer is that the circumstances of preservation in the erect trees were peculiar, and that only animals of purely terrestrial habits could find access to them, whereas the remains of reptiles found in the Carboniferous elsewhere are in aqueous beds in which aquatic forms were more likely to be preserved, and in which all the soft parts were certain to perish.

It is evident from the remains thus described, that we have in *Hylonomus Lyelli* an animal of lacertian form, with large and stout hind limbs, and somewhat smaller fore limbs, capable of walking and running on land ; and though its vertebræ were imperfectly ossified externally, yet the outer walls were sufficiently strong, and their articulation sufficiently firm, to have enabled the creature to erect itself on its hind legs, or to leap. They were certainly proportionately larger and much more firmly knit than those of *Dendrerpeton*. Further, the ribs were long and much curved, and imply a respiration of a higher character than that of modern Batrachians, and consequently a more highly vitalized muscular system. If to these structural points we add the somewhat rounded skull, indicating a large brain, we have before us a creature which, however puzzling in its affinities when anatomically considered, is clearly not to be ranked as low in the scale of creation as modern tailed Batrachians, or even as the frogs and toads. We must add to these also, as important points of difference, the bony scales with which it was armed below, and the ornate appa-