

ined the Animikie beds on the south side and the Huronian folded schists on the north side of the Saganaga Lake granite. This belt of folded schists is about six miles in width extending to the other side of Saganaganse Lake, where fifteen miles, or so, of gneiss and granite come in, separating this belt from the Jackfish Lake Huronian belt. The flat Animikie beds on the one side, and the Huronian folded schists on the other, of the Saganaga granite are as distinctly different in aspect, and in the strata composing them, as where they are separated by a hundred miles. I cannot believe it possible that there can be a transition from the one to the other.

LITHOLOGICAL FEATURES.—In regard to the lithological features, I consider the two formations distinctly different, as much so as could be expected of two partially metamorphosed series of rocks. The Huronian are much more altered than the Animikie. Not only are the sedimentary portions of the formations widely different, but also the eruptive masses associated with each. The only eruptive rock found with the Animikie beds is a dark-grey crystalline trap; which, in one of the thin beds east of the Thunder Bay Mine, is porphyritic, but I have nowhere else noticed this character. This trap is never seen, to my knowledge, within the Huronian rocks, except in the form of fissure dykes. This statement may be doubted, but I feel confident of its correctness in as far as the north shore of Lake Superior is concerned, but I do not maintain that similar eruptive trap may not have appeared during the Keweenaw period. With the Huronian rocks, granite, syenite, and different kinds of greenstones are often associated. The Animikie trap beds, like the trap dykes, often alter the strata next below them. In regard to the sedimentary portions, the clay slates of the Animikie are generally black, passing into grey, arenaceous slate. They show a lamellar thin and thick cleavage or rather bedding, and never exhibit the transverse or true slaty cleavage of the Huronian slates. The clay slates of the Huronian are rarely, if ever, black in color, except in the case of an occasional thin stratum of plumbaginous or carbonaceous schist twenty to fifty feet wide. This schist may be seen on Location 14 M. east of Steel River; it is widely different from the black slates of the Animikie. The Animikie clay-stones are often micaceous, the mica showing in silvery-looking scales. In the vicinity of the silver mines, east of Whitefish Lake, and again at Sawyer's Bay, Thunder Cape, and many other places, the scales are small and sparsely distributed over the partings. In other places they are from one quarter to half an inch in diameter and plentiful, as for instance, in the mountain-face, east of Blende Lake in McTavish Township. Here the black, coarse and fine slaty argillites are largely developed, underneath the Nipigon or Keweenaw sandstones. In all these slates the mica is fragmental or derived from another source, while in the Huronian rocks it has been crystallised in place. Another marked characteristic of the Animikie black clay-slates is the occurrence through some of them of irregularly distributed peculiar concretions, described by Sir William Logan and others. These concretions consist of hard, argillaceous, grey masses, generally shaped like a Scotch curling stone, and they are embedded in the black cleavable slates, and these concretions remain solid after the enclosing dark slate has been denuded away. Their size varies from that of an egg to a diameter of several feet, and they are, I believe, peculiar to this formation, never occurring, to my knowledge, in the Huronian schists. They can be seen in many places, as at Silver Mountain, Rabbit Mountain, Porcupine and Beaver