

posits. When least altered and disturbed, it appears to consist mainly of thick beds of quartzite and slate, alternating with each other, and presenting but little variation of mineral character, except in the greater or less coarseness of the slates, or the quantity of iron pyrites which they contain. The only evidence I have ever obtained of the occurrence of any calcareous rocks in this series, is a small specimen of impure crystalline limestone, which I saw in the possession of the late Titus Smith, many years ago, but he seemed to have no information as to its extent.

The first gold found in this formation was observed at Tangier, a harbour 40 miles east of Halifax, in 1860; but the excitement consequent on its discovery died away, and was renewed only by fresh discoveries in the spring of the present year. I have not visited Tangier, though I have examined portions of the country both east and west of it, and presenting apparently the same geological characters. Indeed the portion of country between Ship Harbour and St. Mary's River, including this place, is perhaps the part of this coast which has been least visited by geologists. I am indebted to Henry Poole, Esq., a corresponding member of this Society, for specimens of the auriferous rock, which seems to be the ordinary slate of the district, somewhat more soft and fine grained than usual, and associated with dark gray quartzite. I have also seen in the possession of Mr. Richardson, of the Geological Survey of Canada, specimens of the rocks, precisely of the same character with those which occur at Musquodoboit, Halifax, Lunenburg, Northern Queens, and Yarmouth. The gold occurs disseminated in irregular grains and masses in white milky or translucent quartz, often stained by the hydrated peroxide of iron, derived from small quantities of iron pyrites present in the veins. The quartz occurs in small veins traversing the slate, apparently in the direction of its strike, and the gold seems to occur most abundantly at and near the walls of the vein. The gold appears to have been deposited in cavities of the quartz, for in some very rich specimens exhibited in Montreal by the Government Railway Delegation, and in a very fine though small specimen kindly presented to me by the Hon. Mr. Tilley, the gold is impressed by the faces of quartz crystals on which it has been moulded. Mr. Poole has also sent to me specimens of yellow "gossan," or oxide of iron, said to contain particles of gold. This is probably a result of the disintegration of