further descrip copper pyrites ; native copper and specular iron were also observed by Professor Silliman sl. i, chap. 9. in the Tangier gold district, and molybdenite and antimony glance are said to have been eing of Jurassk observed in other localities. Though the metallic sulphurets generally accompany the those of Nov gold, they are sometimes absent from specimens of quartz very rich in the precious metal. the same peeu Small portions of calcarcous spar and of a ferriferous decomposing spar containing a large rstratification oproportion of carbonate of iron, and sometimes enclosing gold, are also observed.

an one observer. As already remarked, however, the metals are not confined to the quartz lodes; gold, on the Geology both in thin plates and in grains of considerable size, is not unfrequently found in the As already remarked, however, the metals are not confined to the quartz lodes; gold, cre asserts tha day slate, and even in the quartzite. Professor Silliman cites an example where s, and that the visible gold having been observed in a band of quartzite mixed with slate at Montague, , however, con there was obtained from several tons of the rock more than an ounce of gold to the ton, in regular quart and in many other instances gold in paying quantities is said to have been found in bands npanying strata of slate. The slate underlying the quartz lodes, contains in many cases, mispickel in crys-the gold-bearing tals or imbedded masses, sometimes many pounds in weight, and generally rich in visible at other time gold. A single mass of gold weighing twenty-two ounces was, according to Professor times white an Silliman, found imbedded in mispickel from the wall of the Belt lode in Montague, and ne; all of thes mispickel rich in gold has also been found in Tangier, Oldham and Waverley. In the latter hey contain dis district grains and crystals of the mineral are found imbedded in the quartzite.

us metal. It i The gold of Nova Scotia is remarkable for its great purity, different assays showing that the peculia a fineness of from 966 to 982 thousandths, so that its value is about twenty dollars the l named by his ounce.

ina, as in Nov With regard to the distribution of gold in the lodes of Nova Scotia, Mr. Michel re-ad that beds o marks as follows: "In sinking a shaft upon a lode we must expect to pass through some limentary origit portions rich, and others poor and even barreu. The arrangement of the metal in the lodo ten mechanicall also offers great variations; sometimes it is disposed in a single layer in the middle, and the gold of the st other times in several layers parallel to the walls. These layers of disseminated gold the surface in are limited in their extent, and it is often only at some distance from their limits that we ts of the accounter with other similar layers. I observed in very many cases that the visible gold was generally most abundant in the portions of the lode adhering to the slate, which is generally otia, we find the the foot-wall, and often itself highly auriferous."

ers.

the borders, or

more productive his description (

In the greate "If the results obtained during the last few years in Nova Scotia show that the veins gillite, and over are irregular in richness, they demonstrate their continued richness in depth. I saw vorable to minin specimens rich in visible gold, extracted from depths of 105, 156, 180 and 215 feet ressix feet or eve pectively, in the districts of Mount Uniacke, Reufrew, Wine Harbour, and Sto Feet res-six feet or eve pectively, in the districts of Mount Uniacke, Reufrew, Wine Harbour, and Sherbrooke, t the thickness c and I am aware that a shaft on the Tudor vein at Waverley yields at the depth of 185 feet is subject to con quartz affording more than an ounce of gold to the ton. Such veins as these just mentioned, veral cases lode which, with a great regularity of form and position have presented alternations of poor and is quartz to the durits of the distribution of the found to affor similar position to the found to a feet as the second to the ton. rich quartz to the depths already cited, will probably be found to offer similar variations to partz in differen much greater depths. To abandon a working on account of a momentary impoverishment sist of crystallin of the lode, as has too often been done in this region, is therefore, unwise; and in a large particles, which enterprise, where mining is carried on in several veins at a time, the richness of some of and class hedesic these may always be counted upon to compensate for the temporary poverty of others. I see parallel to the mof the opinion that an unnecessary discouragement has had as much to do with the enclusion of the opinion that an unnecessary discouragement has had as much to do with the are which is see failure of certain gold-mining enterprises in Nova Scotia as the want of scientific know-The color of th ledge and the neglect of proper preparations, and that many of those now abandoned as y rather than vi unprofitable, will be again taken up with advantage."

ALLUVIAL GOLD.

The absence of any considerable amount of superificial soil from a great portion of the che other of the surface of the gold-bearing rocks of Nova Scotia, has already been noticed, and is doubtless the blue and oil due to the force of the denuding agency which has borne away into the Atlantie a great portion of the matters derived from their abrasion. Sable Island, distant about liman, the quart innety miles from the coast of Nova Scotia, is apparently nothing more than a belt of they were the according to Mr. Campbell, abounding in gold. The general direction of the denuding force over this region, as shown by the grooved and striated rocks, is about fifteen degrees er which may be to the east of south. Lie adds that in nearly all the depesits of glacial drift or boulder-tarely galena an elay on the south ecast, more or less gold is met with; but its extraction is rendered diffi-The absence of any considerable amount of superficial soil from a great portion of the

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