quarter of a mile below the parish church, and the other three are on the right. The lowest of them is about two miles below the church; the next about the same distance above it; and the fourth is the Rivière des Plantes, about half a mile farther up, and near the south-eastern boundary of the seigniory. In Vaudreuil Beauce they were discovered on the Guillaume, much further up than previously stated, and on the Bras opposite to it. On this and some of its tributaries the metal was traced to the centre of the township of Tring, a distance of about twelve miles. Three other streams which yield it in Vaudreuil Beauce have heretofore been mentioned: they are the Ruisseau Lessard, Ruisseau du Moulin, and the Touffe des Pins, on which it was first discovered. In Aubert d'Isle it was found on the Famine and traced to Rarbottles Settlement, and beyond the seigniory into Waterford, a distance altogether of about ten miles. Some particles were obtained on the Ruisseau d'Arboise, about a mile above the Famine, and it was followed about three miles up the brook commonly called Pozer's Stream, in Aubert Gallion. On the Rivière du Loup, in addition to its occurrence in a multitude of spots,—in fact almost continuously from its mouth across Jersey and Marlow,—it was found in nearly all its tributary brooks, such as the Ladyfair, the Grande Conde, the Metgermet for four miles up, the Travellers Rest, the Portage, Kempt's Stream, Oliver's Stream for four miles up, and another stream between it and the boundary of the Province. Above the Loup, on the Chaudière, it occurred at successive intervals in twenty places in sixteen miles, as far as the south-western boundary of Dorset Township.

"The localities of its observed presence on the other line of exploration were on Lake Etchemin, and along the Famine in Aubert d'Isle, and Pozer's Stream in Aubert Gallion, towards Tring, and again on the St. Francis, in Dudswell, in Westbury, and near the joint corners of Westbury, Stoke, Eaton, and Ascott, as well as in this last township near Sherbrooke.

"It is not supposed that the limits of the auriferous district have been ascertained, but that it very probably extends much farther to the north-east and attains the valley of the river St. John, while to the south-west it is known to reach Vermont, and to be traceable at intervals through the United States, even, it is said, as far as Mexico. In its breadth, however, it does not appear to cross the range of mountains with which it runs parallel, and no traces of it have been met with on their north-western flank. The deposit in which the gold occurs is part of an ancient drift, probably marine, and supposed to be of higher antiquity than that which, from the extent to which it occupies the valley of the St. Lawrence and some of its tributaries, Mr. Desor, who has recently bestowed much attention on the detrital deposits of North America, is disposed to give the name of Lawrencian. In this, alluded to in various Reports as tertiary and post-tertiary, the remains of whales, seals, and two species of fish—the capeling and the lump-sucker—and many marine shells of those species still inhabiting the Gulf of St. Lawrence, are found. The shells on the Mountain of Montreal attain a height of about 470 feet above tide level in Lake St. Peter, which is the greatest altitude known to me. None of the remains have yet been found in the Canadian gold drift; and as this appears in its lowest undisturbed parts to be at a height of about 500 feet above the sea, it is probable what is now exposed of it had emerged from the ocean before the Lawrencian drift was placed, while in lower levels it would be covered up by it.

"In the localities in which the gold occurs, the coarser materials of the drift are made up in a large degree of the debris of rocks similar to the clay slates and interstratified grey sandstones on which it rests; but these are accompanied by fragments and pebbles of fine conglomerate, talcose slate, and serpentine, which with magnetic, specular, chromic, and titaniferous iron (none of them absent when the gold is present), are derived from the mountain range, bounding it on the north-west; pebbles and fragments of white quartz are abundant, which may be derived from veins of the mineral prevailing in the mountain range, or from others on the south-east of it. With these materials there occasionally occur in the valley of the Chaudière and its tributaries large boulders of limestone conglomerate, similar to the beds of St. Giles and St. Mary; and more rarely of gneiss, identical in character with known kinds of the rock on the north side of the St. Lawrence. Not only is the gold absent from the drift on the north-west flank of the mountain range, but also are the chromic iron and the serpentine, notwithstanding that the two have been traced in association 135 miles, constituting a marked band accompanying the range from Potton to Cranbourne. On the north-west flank, however, boulders of northern gneiss are frequent; and a few of limestone have been met with even pretty high up on the hills; showing by their fossils their derivation from the Trenton limestone, the nearest exposures of which are on the north side of the St. Lawrence. In fact, in respect to the drift of the whole country, it may be said, that on southern foundations are found resting the ruins of northern; but no northern rocks are met with overlaid to any extent by debris derivable exclusively from southern. The auriferous drift shows no exception to this; and there is little doubt that causes connected with northern currents, when the rocks were beneath the surface of an ocean, have placed the whole. Ever since the surface however has risen from beneath this ocean, causes similar to those now in operation in the district have been working in a contrary course. The rivers of the district emptying into the St. Lawrence, flow north: in so far, therefore, as their forces modify the distribution of the drift, the materials of which it is composed are carried in that direction. This, no doubt, has some effect on the finer and lighter materials, and occasionally, with the assistance of ice and great freshets, on some of the coarser and heavier; but the streams, washing away the former in larger proportions than the latter, concentrate these in the valleys and channels; the gold, being the heaviest substance, is moved the least. It may occasionally be pushed along the bottom when this is smooth, but it seeks every hole and crevice in its course, and when it has once obtained shelter there it remains protected. Where the edges of the slates come to the surface, the plates have all been moved by superficial forces, and they therefore lie more or less loosely on one another, and the fine particles of gold gradually work themselves down between them, reaching sometimes as deep as three feet.

"Although it is probable the whole of the drift on the south-east of the mountain range—both that in high and that in low places—may be auriferous, it appears certain that the metal will be most concentrated in the valleys and the channels of streams; and the larger the stream,—the more frequently it has broken down its banks,—the oftener and more extensively it has changed its course,—the more important the auriferous deposit is likely to be; and it is probably only in some such situations, if any where, that it will be worked to advantage. From the combination of the materials associated with the gold in the drift, there appears a strong probability that the metal is derived from quartz veins situated in the mountain range, through the agency of some southward-moving causes; and even if traces were found north of this range in the channels of the main streams, such as the Chaudière and the St. Francis, the circumstance would not militate against the supposition, as traces in such positions may be expected from the fluviatile remodification of the drift; but with the exception of one vein in talcose slate near Sherbrooke, no auriferous quartz veins have yet been discovered; and in this one there was merely a trace of the metal, so that the facts of this gold district as yet offer no contradiction to Sir Roderick I. Murchison's theory that the gold, when it was originally placed in the veins, occupied only that part of them which was towards the then existing exterior of the earth's crust; and that this part, having been subsequently worn down by various destructive causes, the productive portion of the veins has been wholly or in a great degree removed, leaving only their more quartzose continuation behind in situ; while the gold, the vein stone, and the rock enclosing it have been carried away to form the drift. In this way it is his opinion that the drift will always be more productive than the veins; but whether this is to be borne out by the facts of California and Australia, remains yet to be proved.

"The object of this examination has not been so much to ascertain the quantity as distribution; but an effective experiment being now in operation on the Rivière du Loup, under a letter of license from the Government,—one condition of the lease being that a correct return shall be made of the quantity obtained,—I am in hopes by the end of the present season to have a few such facts as will afford some criterion to determine whether there is reasonable ground for supposing the deposit in that vicinity can be worked advantageously."

Mr. Murray's investigations, during the latter part of 1850, were carried on over a very large area. The determination of the boundaries of the several formations by which the Western Peninsula is underlaid, their geographical distribution in the interior, and the nature of the economic materials the various deposits contained, were among the chief objects of his laborious investigations.

Mr. Murray considers the whole of the Western Peninsula to be equal, if not to surpass, in its capabilities of soil and climate, any other part of British America, "as the rapidity with which it has been settled, the annual increase of its products, and the growth of its numerous towns and villages abundantly testify." Valuable economic materials are abundantly distributed throughout the part of the country visited by Mr. Murray, namely, the valley of the upper portion of the Grand River, the Speed, the Saugeen, &c., and their affluents. In the seventh concession of Nassagaweya there is a vertical precipice of encrinal limestone, varying from eighty to one hundred feet in height; and in Eramosa a branch of the Speed runs between vertical