lead, is essentially a crystalline form of carbon, although its occurrence in that form is practically unknown. It has a specific gravity of from 2.09 to 2.29, according to the percentage of impurity almost invariably found with it; is steel-grey to black in color; feels greasy; lustre, in the crypto-crystalline form, metallic; laminæ thin, flexible and inelastic. The impurities referred to above are usually some form of iron or calcite, while in an ore mined at Calabogie, Ont., the foreign substance is almost invariably one or other, as yet undetermined, of the chlorite group. For commercial purposes and those of this paper the mineral may be divided into three groups, viz., anthracite, amorphous and crystalline, the last being again divided into "vein" and "disseminated" ores. Of the anthracite variety there is a comparatively large deposit near Lepreau Harbor, on the Bay of Fundy, N.B., while the amorphous is found at a number of points in Nova Scotia, New Brunswick and Ontario. The last and most important variety is found, in commercial quantities, to a very great extent in the Archæan rocks lying to the north of the Ottawa River, and to a smaller extent in these rocks in Eastern Ontario. Although widely distributed over large areas of both these Provinces, the most important deposits of economic value in Quebec are confined to the Counties of Labelle and Argenteuil, while in Ontario the Counties of Lanark and Renfrew show a considerable development.

As to the relative value of disseminated and vein ores the writer has always held that the advantage has lain with the former variety by reason of its uniform character and continuity of deposit. Experience in the mining of both has proved this, and the writer is upheld in his opinion by the late H. G. Vennor, who, in the Report of the Geological Survey, 1873-4, writes: "Pure as is this vein-form of graphite, my experience shows that it is to the bedded deposits of this mineral that we must look for our chief supplies, and in this opinion I follow Sir William E. Logan, who, in the report already cited, says: 'The veins of this mineral hitherto found in the rocks of this country, although affording a very pure material, appear to be too limited and too irregular to be exclusively relied on for mining purposes, which should rather be directed to making available the large quantities of graphite which, as we have seen, are disseminated in certain beds.' Such beds are particularly well developed in the portion of Buckingham examined, as well as in the contiguous Township of Lochaber."

Distribution.—It has not been thought necessary for the purpose of this paper to go very deeply into the geographical distribution of this mineral, as very good descriptions of most of the known deposits may be found in the reports of the Geological Survey of Canada; nor is it necessary to go into its geological history for the same reason. Speaking generally, the only deposits of value are confined to rocks of pre-Cambrian age, the mineral being found usually in the Grenville series, or upper beds of the Laurentian system. Certain less important deposits of amorphous ore are occasionally met with in rocks of Devonian or lower Carboniferous age.

It may not be amiss to quote here a brief but very interesting description of the occurrence of graphite in Ceylon. This description constitutes part of the report of Mr. Joseph Hyde Pratt on Graphite in the "Mineral Resources of the United States" for 1904:—"The bulk of the world's supply of the crystalline graphite is obtained from the Island of Ceylon. These deposits are located in the western and southwestern portions of the island, the mineral area in which the graphite occurs being approximately 95 miles long in a north and south direction, with a width of 5 miles at its northern and of 43 miles at its southern end. The commercial graphite deposits occur in veins which traverse a garnetiferous granite rock. These veins vary in width from a few inches to 8 feet, and one has been followed to a depth of 720 feet; but from all accounts such a depth is exceptional. Horizontally the veins are very irregular and limited, and well-defined veins constantly pinch out. There does not seem to be any evidence of a main lode or series of lodes in any part of the district, but there appear to be two zones of the country rock, 4 miles and upward in width (the widest part being 20 miles), which seem to contain the veins that carry the graphite. These deposits have been described in some detail by Mr. George S. Stonier in a paper presented before the Insti-

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