

**Yale.**—At a point about three miles south-west of Grande Prairie, fine specimens of molybdenite have been found accompanying chalcopyrite in a gangue composed of a massive clove-brown andradite associated with a light greenish fine-grained pyroxene. Fine specimens of molybdenite have also been found near the headwaters of the south fork of Spuzzum creek.

**Lillooet.**—Molybdenite has been observed in the neighbourhood of Lillooet river.

**Coast.**—Molybdenite has been found in association with copper ore near the head of Salmon arm, Jervis inlet; it has been noticed in the neighbourhood of Knight inlet; reported from the upper part of Cowichan river, Vancouver Island; small quantities have been found in quartz veins in an obscurely stratified hornblende granitic rock at a point just east of Carrington bay, Cortez Island, and on Texada Island, molybdenite has been observed at the Malaspina copper mine, associated with copper- and iron-pyrites in a vein consisting of calcite and quartz, with andradite, tremolite and chlorite as accessory minerals.

**Notes on Molybdenite.**—Mr. C. W. Willimott, of the Geological Survey, contributes the following:

"As the demand for molybdenite has increased very much within the last year or two, more attention is being paid to the search for this mineral, and reports of new finds are reaching us from all parts of Canada. In Ottawa and Pontiac counties, its occurrence may be said to extend, at intervals, over a length of one hundred and fifty miles. At Eardley, in Ottawa county, it has also been found. In the township of Hull, it is first met with at Eaton chute, near Kirks Ferry, where it occurs sparingly in felspar in small scales. A few yards east of this place, on the bank of the Gatineau river, I observed a number of loose pieces of quartz holding molybdenite in foliated masses. On the west side of the river, a large mass of this mineral was thrown out of one of the pits, while excavating for mica. The next place where I observed this mineral was in the township of Wakefield, but in very small quantity.

"On the east side of the Gatineau in the township of Masham, molybdenite has been met with at a number of places. Four miles west of the village of North Wakefield, this mineral occurs in veins and was tested by Mr. Henry, of the Molybdenum Company of Cooper, Maine, U.S., who stated that it ran three and three-fifths per cent of molybdenite. At another place in the same township, I observed beautiful hexagonal crystals, about an inch in diameter, on the face of a protruding rock.

"In Oldfield, the next township in Pontiac county, a band of grayish pyroxene has been penetrated in several places to a depth of fourteen feet. At the surface, in one of these openings, some very fine crystals of molybdenite were found several years ago. More recently an attempt was made to work this locality, but without satisfactory results. The mineral became very scarce at the depth of a few feet. Among the debris of the pits which had been sunk, I noticed

two zeolites, chabazite and stilbite, associated with scapolite.

"In the township of Allyn, in the same county, molybdenite, in small scales, is distributed throughout the country rock. The latter is intersected by felspathic veins that sometimes hold a considerable quantity of molybdenite. In the same township, this mineral is often turned up by the plough. From this locality to a point forty miles north of Maniwaki, it would be safe to say that molybdenite is found at frequent intervals over a wide range of country. I have seen specimens, said to have come from the townships of Allyn, Wright and Bouchette.

"At Mount Cerf, Egan, there is a band of ferruginous pyroxene which is, for the most part, covered with a peaty soil. At one small outcropping on this band, molybdenite makes a considerable showing, and foliated masses and plated crystals of the mineral, sometimes weighing five pounds, were met with. From two shots I obtained thirty-nine pounds of the pure mineral. I sent two hundred and fifty pounds of the enclosing rock to the museum, which was later examined by Prof. Porter, of McGill University, who found it still to contain 2.8 per cent, making a total percentage of 15.92. (See Summary Report of the Geological Survey Department for 1900, page 10.)

"Molybdenite was also found in loose pieces in the soil about twenty yards off at right angles to the strike. I was shown some very fine specimens of this mineral by an Indian, who stated that they came from the Tomasine river, but I had not an opportunity of visiting the locality.

"In the township of Litchfield a number of pits have been made in prospecting for mica. During the progress of this research a noticeable quantity of molybdenite was met with in all the pits. From one small pile, I picked out a piece that measured five by four inches and was a quarter of an inch thick. I was informed by the owner of the property that he had seen pieces as large as a dinner plate. This property has been recently well exploited with a view to finding a place that might afford some encouragement to start mining the molybdenite, but so far, I believe, no such spot has been found. From one little pocket I extracted about two pounds of the mineral.

#### TUNGSTEN.

Owing to the similarity of the applications of molybdenum and tungsten in the arts, it has been thought not inadvisable to add here a few notes regarding the latter metal, and to collect together in convenient form, such information as is available, regarding its occurrence in Canada.

The addition of tungsten to steel produces properties almost identical with those produced by the addition of molybdenum. For this purpose, though, it is necessary to add the tungsten in very much greater amount than is the case with molybdenum: 9 per cent of the former produces about the same effect on steel which is obtained with 4 per cent of