

of biotite granite intrude thick sequences of pre Ordovician and Ordovician limestone bearing sediments. A greisenized rhyolite porphyry dyke, about 2-4 m thick and 3000 m long (the Cassiterite Lode) ends in a granite cupola in the lower levels. The enclosing limestone contains a stockwork of veins and veinlets of fluorite and of magnetite-fluorite-pyroxene and of fluorite-sericite. The last two groups of veins have fine wrigglite-like texture.

Wrigglite has been recorded at Tin Creek, a locality where a contact of granite and limestone is exposed. The limestone is marmorized, and wrigglite, consisting of fluorite-hornblende-idocrase-plagioclase-magnetite, occurs as interfering pipes and veins.

Kristiania, Norway. Twelvetrees (1913).

Twelvetrees in a report on the Moina area refers to communications with V.M. Goldschmidt and a reference Goldschmidt V.M. (1911) "Die Kontaktmetamorphose im Kristianiagebiet" p.213. Goldschmidt (in Twelvetrees, 1913) says of the Moina skarns: "Rocks similar to this, consisting of fluorite and iron ores, occur also in the Kristiania region, and originate from limestone through pneumatolytic contact-metamorphism. They are genetically related to the skarn rocks."

No other references to the geology and mineralization of the area have been consulted, but the description is consistent with the occurrence of wrigglite in this area.

Southern China. Meng, (1937), Hsieh (1963), Beus (1966).

A large section of south-east China has thick limestone sequences of Devonian to Carboniferous age, intruded by biotite granites. Contact metasomatic deposits containing cassiterite occur as bedded to lenticular bodies, veins, pipes and stockworks. At Hsianghua-ling in Hunan province and Kochiu in Yunnan province, in the immediate roof parts of the limestone in contact with the granite, or in limestone blocks engulfed in granite, small amounts of wrigglite are reported. It is described to have a similar texture to the Moina wrigglite, and consists of magnetite, lithium mica, fluorite, garnet, epidote and spinel.

Iron Mountain, New Mexico. Jahns, (1944).

A thick section of Carboniferous limestone is intricately cut by Miocene rhyolite and aplitic granite plugs sills and dykes. Massive bedded magnetite-andradite skarn and wrigglite are metasomatic alterations of limestone; and calc-silicate rocks are alterations of less pure calcareous rocks. Two types of wrigglite are described: a rarer dark variety, of magnetite-fluorite-helvite, and a lighter variety, of fluorite-biotite-chlorite-idocrase-magnetite-hematite. The rarer variety occurs in marble as thick pods, pipelike masses and tabular masses one to several metres thick.