

Mafic and ultramafic associations of ophiolite (possible Tethyan ophiolite) in the Panlin-Pyaunggaung area, Mogok, Myanmar

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The Panlin-Pyaunggaung area is situated within the Mogok Metamorphic Belt (MMB) in Myanmar. The MMB extends for over 1,000 km along the western part of Shan-Thai Terrene (also known as Sibumasu Terrene) from the Andaman Sea as a narrow linear belt, then sharply bends east-northeastward through the northern part of Mogok including Panlin-Pyaunggaung area toward the China-Myanmar border and finally further northward into the East Himalayan Syntaxis. It comprises a sequence of regionally high-grade metamorphic rocks, representing the amphibolite-granulite facies grade belt intruded by granitoid rocks of various ages. Metamorphic rock units exposed in the area are marbles, calc-silicates and gneisses. Igneous rocks are peridotite, dunite, serpentinite, gabbro, granite, leucogranite, syenite and pegmatite. The ultramafic rocks (Pyaunggaung peridotites) mainly occur in the northern part of Mogok

and have been considered as tectonites. Ophiolite sequence which consists, from bottom to top, of upper mantle peridotites/dunites, layered ultramafic-mafic rocks, layered gabbros, and felsic dikes occurs in the area indicating the typical lower part of ophiolite suite. The present ultramafities are mainly dunite-peridotite (harzburgitic or dunitic composition). Magnetic susceptibility of ophiolites reflects the highest point ($39.75 \cdot 10^{-3}$ SI units). It is found that the chromite spinel observed in ophiolites and it contains high Pm, Cr, Ni & V. These criteria suggested that ophiolites in the area were deep seated origin coming from the upper mantle source. Panlin-Pyaunggaung Ophiolites in the area fall within the field of the Alpine-type peridotite. High Ni–Low Al content corresponds to the suprasubduction zone (SSZ) ophiolites and might have a similar tectonic setting of Tagaung-Myitkyina Ophiolite Belt in Myanmar.