

SPESSARTITE IN PEGMATITE AT MOUNT ANTERO, COLORADO

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Although more than a dozen papers have appeared since 1887 on the minerals of the Mount Antero region in the Sawatch Range, Colorado, garnet has been mentioned only once.¹ No description of it was published, and it was not included in the most recent article² on the locality. After the writer had returned from a nine days' study of the region in July, 1938, two members of his party, Mr. Chester R. Howard and Mr. Jerome Hurianek, found there some attractive garnet crystals. Most of them came from a pegmatite among the steep cliffs about a thousand feet north of the trail, and the same distance above it, in the canyon of Little Browns Creek, which separates Mount Antero from Mount White.

The crystals occur in cavities in dike- and lens-shaped pegmatites in a post-Cretaceous granite stock, which is part of the somewhat earlier (late Mesozoic or Tertiary) Princeton quartz monzonite batholith. The garnet has grown on the typical pegmatite minerals quartz, microcline, and muscovite. The crystals are reddish brown, translucent in spots when fractured, and range in diameter up to 12 millimeters. The trapezohedron is the dominant form, and small dodecahedron faces are also present. On some crystals the trapezohedron is striated parallel to the dodecahedron and shows rhomb-shaped etch figures. A chemical analysis by the writer shows the garnet to be the manganese-aluminum variety, spessartite.

Spessartite is common in the pegmatites of Maine and elsewhere, but this seems to be the first identification of such an occurrence in Colorado. It is found in rhyolite and rhyolite porphyry in a number of places in the state. Interestingly, spessartite is abundant at Ruby Mountain and two other rhyolite hills at Nathrop, directly across the valley of the Arkansas River from Mount Antero. There, in lithophysae in the rock, it occurs as small transparent red crystals of gem quality. The hills, which are dikes intruded into pre-Cambrian granite and gneiss, may be early Tertiary in age, if they can be correlated, as seems likely, with similar bodies in and south of the Tenmile district, near Leadville and Climax. Thus the spessartite may have formed at about the same time in both localities.

¹ Over, Edwin, Jr., Further explorations on Mt. Antero: *Rocks and Minerals*, 10, 28 (1935).

² Switzer, George, Granite pegmatites of the Mt. Antero region, Colorado: *Am. Mineral.*, 24, 791-809 (1939).