Name of Mineral	Weight in Grams	Percentages (corrected to 100%)
1 magnetite with little hematite and limonite	80.0174	40.81
2 garnet	40.5902	20.69
3 schist	22.1110	11.27
4 pyrite and marcasite	20.1994	10.30
5 quartz	18.2652	9.31
6 wolframite	9.7780	4.99
7 scheelite	4.1868	2.13
8 feldspar	0.3116	0.16
9 cassiterite	0.2110	0.11
10 ilmenite	0.1550	0.08
11 pyrrhotite	0.1090	0.06
12 zircon	0.0816	0.05
13 galena	0.0718	0.04
	196.0880 grams	100.00%

A large percentage of the minerals was sub-angular to angular in shape, signifying that the sand had not been transported any great distance.

No minerals of economic importance in commercial quantities were detected. Minerals of economic importance not in commercial quantities, that were found are: cassiterite, wolframite, and scheelite—the main tin and tungsten ores of the world. There was only 0.11% of cassiterite and 7.12% of the tungsten minerals. These minerals cannot be extracted from sands at profit, but the presence of these minerals points favorably to lodes of the same minerals at a not far distant point.

The writer has not had the opportunity to visit the region of the headwaters of Nome Creek, but various reports of the United States Geological Survey, dealing with the Mineral Resources of Alaska, state that intruded into the pre-Ordovician schists of this region are various granitic rocks. It is in these intrusives at the headwaters of Nome Creek that the writer would place the source of the tungsten minerals found in the black sands.

Alaska, and the United States as a whole, are not favored with an abundance of tungsten minerals or of cassiterite. The Alaskan prospector knows gold, silver, copper and lead when he sees them, but few of the prospectors know cassiterite in its various forms, and fewer still know the tungsten ores. The Alaska School of Mines twice a year trains prospectors in various essential fields, including an extensive training in recognizing minerals and methods of determining unknown minerals.

It is the hope of the writer that the attention of the prospectors of Alaska will be drawn to other minerals of importance while on their untiring search for gold. The rare minerals are here in Alaska. Some of them have been found and others will be found in the future. A mineralogical examination of numerous black sands from numerous parts of the Territory would not be entirely amiss.

DUMORTIERITE IN RIVERSIDE COUNTY, CALIFORNIA

F. Mac Murphy, *California Institute of Technology, Pasadena.*

An occurrence of dumortierite, heretofore undescribed so far as known, is in the vicinity of the Cajalco tin mine, property of the American Tin Corporation, approximately 13 miles southwest of Riverside, California. Apparently the mineral is rather widespread in the region, as suggested by a specimen collected by Charles Anderson from a point four miles northeast of Corona.[1] The dumortierite occurs in a granodiorite country rock whose chief constituents in apparent order of abundance are: orthoclase, oligoclase, quartz and biotite. The rock is hypidiomorphic granular, coarse textured and rich in quartz. Accessory minerals are titanite, magnetite and apatite. The rock generally carries more or less tourmaline, especially near each of the numerous well-defined tin-bearing tourmaline-quartz veins on the property.

Dumortierite was noted in several localities, scattered through the rock in rose-lavender or orchid splotches. Occasionally fine rosettes of dumortierite can be seen in the hand specimen but usually the splotches have more the appearance of rose quartz. Microscopically, it is evident that a small amount of dumortierite gives the rock a pronounced coloration. Quartz is the predominant constituent in the dumortierite rock and generally forms a coarse grained mosaic. Other minerals occurring in varying proportions are: tourmaline, zircon, apatite, corundum (?), muscovite, sericite, and either cassiterite or rutile. Quartz is often crowded with inclusions of apatite, quartz, radiating fibres of dumortierite and a few shreds of apparently primary biotite. Structurally the dumortierite is in fanshaped radiating masses, spherulitic aggregates, fibres, or prismatic crystals. Commonly the rosettes have been altered to sericite with only a fringe of dumortierite remaining. In this occurrence the structural arrangement of the sericite plates coincides with those of the dumortierite. In some cases, however, it appears that these minerals are contemporaneous.

The following optical determinations were made with the Leitz Universal stage. An approximate basal section was placed truly perpendicular to the axis of the microscope, giving therefore the acute negative bisectrix, α. The axial angle (2 H) was then measured directly with a glass segment of index 1.649 as 40°, and from this 2V was calculated as 39°. The thickness of the section was accurately determined on adjacent quartz grains as 0.022 mm., and by compensator $(\gamma-\beta)$ was determined as 0.0034.

On sections parallel to the side pinacoid $(\gamma-\alpha)$ was determined as 0.026. From these values for the differences of the indices and the Mallard formula, 2V was calculated as 39° 30′ (−). With the ordinary stage and a near basal section $2H_a$ by conoscope is 44° 30′, measured in cedar oil ($n=1.516$). From the values of H in cedar oil and the glass hemisphere, β was calculated as 1.685 (average). The more accurate value by immersion was found to be 1.690. The conoscope value of $2H_a$ (44° 30′) gives $2V=39.6°$, and the segment value (40°) gives $2V=39°$.

On the section normal to Bx_a the axial plane lay in the longer diagonal of the four prism planes bounding the base, i.e., γ was parallel to the longer crystal axis $\breve{b}$ and not $\breve{a}$. This is contrary to the published optical orientation where γ is said to be $=\breve{a}$.

Pleochroism tested with the ocular dichroscope on a section of about 0.022 mm. thickness gives parallel alpha (c), eosine pink, amaranth pink or light rosolane purple (Ridgway's colors); and parallel to β and γ colorless.

Professor John E. Wolff has contributed the study by the Universal stage.

[1] Dumortierite, *Bull. of the Mackay School of Mines Staff, University of Nevada*, Vol. **XXII,** p. 10, 1928.

According to figures compiled by the Minerals Division of the Department of Commerce, the manufacture of motor cars and trucks in 1928 absorbed 18 percent of the domestic production of rolled steel, 14.6 percent of the production of copper, 25.6 percent of the lead produced from domestic ores, 24.1 percent of the tin deliveries, 27.7 percent of the production of aluminum, 4.5 percent of the zinc, and 28 percent of the domestic consumption of nickel.

The production of German potash in 1928 was equivalent to 1,690,000 tons of K_2O, an increase of 11.4% over that of the previous year. Of this amount 38.8% was exported and 61.2% was consumed at home. The sales for 1928 showed an increase of 14.7% over 1927.

Analyses by the U. S. Geological Survey of the cores of two test holes drilled in Texas showed several beds of polyhalite of potential commercial value and in addition, in the twelfth hole, other salts such as carnallite ($KCl \cdot MgCl_2 \cdot 6H_2O$), sylvite (KCl), langbeinite ($K_2SO_4 \cdot 2\,MgSO_4$), and kieserite ($MgSO_4 \cdot H_2O$). These minerals have also been found in New Mexico but thus far only polyhalite ($K_2SO_4 \cdot MgSO_4 \cdot 2\,CaSO_4 \cdot 2\,H_2O$) has appeared in public tests in Texas. At present it is not clear whether one continuous formation extends into both States or whether the area in Texas represents a separate deposit.

Horace Bushnell Patton, professor emeritus of the Colorado School of Mines, died July 15, 1929, age 72 years.

E. K. Gedney and Harry Berman have recently described in *Rocks and Minerals* an unusual occurrence of large beryl crystals in a feldspar quarry at Albany, Maine. The crystals occur in radial aggregates in some cases attaining a length of 17 to 18 feet and a diameter of from 3 to 4 feet. It is estimated that approximately 100 tons of beryl are now exposed. This occurrence undoubtedly represents the largest single deposit of this mineral as yet found in this country.

Mr. Samuel G. Gordon of the Philadelphia Academy of Natural Sciences has spent three months in Bolivia collecting minerals; sixty-three cases of specimens have already arrived at the Academy. He will likewise spend considerable time in South Africa, mainly in the Congo.

A Correction. In the September 1929 issue of the American Mineralogist page 340, the chemical formula of the new mineral tanteuxenite was erroneously given as Yt_2TaO_8. It should be $YtTi_2TaO_8$. Dr. E. S. Simpson has kindly called attention to the error.

PROCEEDINGS OF SOCIETIES

NEW YORK MINERALOGICAL CLUB

Minutes of the November Meeting

A regular monthly meeting of the New York Mineralogical Club was held at the American Museum of Natural History on the evening of Wednesday, Nov. 20,