

Occasionally the gypsum has formed stalactites as clear as icicles and reaching five inches in length.

The hairy formation has been found only in one place and extended along the drift for about ten feet. The other formations have been found in several of the old drifts but only sparingly.



FIG. 1

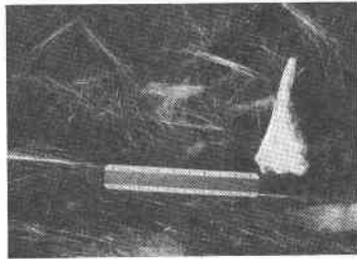


FIG. 2

Quite recently another ancient drift, disclosing an entirely different crystalline formation, has been cut. This drift is sufficiently open to permit entrance for about 40 feet. Both ends terminate, as usual, in cave fills. This gallery has its top, bottom and sides lined with a clumpy formation of hydrous iron and copper sulphates. The crystals are in such complex masses that it is not practicable to separate clean crystals for determination, but an off-hand observation discloses the following minerals as possibilities: coquimbite, melanterite, phillipite and chalcantinite. The coquimbite predominates as amethystine tinted crystals. Whether the beautiful purple, blue and green colors will be retained in free air remains to be seen. All of the formations are soluble in cold water. I note that Dana gives phillipite as soluble in water but unaffected by exposure to air. When the drift was first opened it was devoid of oxygen, but after a few hours a light would burn. An antique clay lamp was found in this drift.

The recent mine workings occasionally disclose bunches of nearly pure chalcantinite. On exposure to the air these turn white.

THE LARGEST METEORS

A seventy-ton meteor is reported to have been found at Otjihaene, near the head of the Grootfontein railway in the northeastern part of Southwest Africa, imbedded in soft limestone. Its approximate size is ten by ten by four feet. Though this is said to be the largest meteor ever actually discovered in the world, it is probably dwarfed by the one which many years ago caused the famous Meteor Crater in Arizona. This is the opinion of Dr. George P. Merrill, of the U. S. National Museum. The great meteor which fell in the Yenissei Province of Siberia on June 30, 1908, was also probably much larger, but as yet the main part of neither of these meteors has been located. Another huge crater, caused by a meteor that fell at some time in the past, was discovered in the Pamir, in Central Asia, near Afghanistan. This latter crater is a conical pit 260 feet in diameter and 33 feet deep.

The 1908 Siberian meteor is probably the largest that has ever struck the earth. The region of the fall is marshy and more than a mile in diameter. The ground is pitted with deep funnels from 50 to 100 feet in diameter, so that probably the meteorite, with a weight estimated at half a million tons, burst to pieces, bombarding the earth with fragments. At the towns of Kerensk and Ilimsk, 250 miles away, great detonations were heard and pillars of smoke and fire were seen. Railroad officials at Kansk, 400 miles distant, felt the air wave and heard a roaring sound, while the seismographs at Irkutsk, 900 miles away, detected the vibration of the earth when it hit.

Though no human beings happened to be in its path, one herd of 1,500 reindeer belonging to a farmer was annihilated. Only a few scorched carcasses remained. Houses were badly damaged and metal utensils were melted. Trees on surrounding hills were scorched and knocked over; they can still be seen with their tops pointing away from the center. An expedition sent out by the Soviet Government studied the general character of the region. Later borings will be made for pieces of the actual meteorite. This is the first authenticated time that a meteorite did damage to man or animals. It is fortunate that it fell in such a sparsely settled region and not in a large city like New York or London.

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E. E. HESNARD

Emile E. Hesnard, a charter member of the Mineralogical Society of America, died February 17, 1929, at his home in Keystone, South Dakota, at the age of 61 years. With his passing the Black Hills lost its most diligent collector and science an earnest mineralogist. Not having had an extended classroom education in geology and mineralogy, Mr. Hesnard was hesitant about publishing articles on the minerals occurring in his vicinity, but the visitors to the region could not help but be impressed by the depth of his knowledge of Black Hills mineralogy. Mr. Hesnard worked for many years at the Etta mine, and in recent years had been superintendent of mining operations at the nearby Hugo and Peerless pegmatites. Many field superintendents have an uncanny skill in distinguishing the mineral species with which they come in contact, but Mr. Hesnard went very much farther and by ceaseless reading and personal observations became extremely well acquainted with the genetic theories and their local application. Anyone interested in the processes of mineralization of the Keystone pegmatites found inspiration through acquaintanceship with Mr. Hesnard. During his many years in the district he gathered together an imposing collection. He sold specimens to the mineral-distributing firms, but being a true mineral lover he much preferred to trade with collectors from other localities. In addition to his keen mental ability, Mr. Hesnard was an extremely likeable gentleman and was loved by all who knew him.

Mr. Hesnard was born at Flers, France, November 14, 1867. Upon graduating from a local academy at the age of fifteen he accompanied his father to the United States, going directly to Dakota territory and settling near the present site of Hermosa. During the next few years, he lived the life of a pioneer, breaking in the soil and raising cattle. However, he soon became interested in mining and moved to Keystone, where he worked and lived for the greater part of his life. He leaves a wife and three grown children.