# FIELD MUSEUM OBTAINS FIRST IRON METEORITE EVER REPORTED FROM STATE OF IOWA

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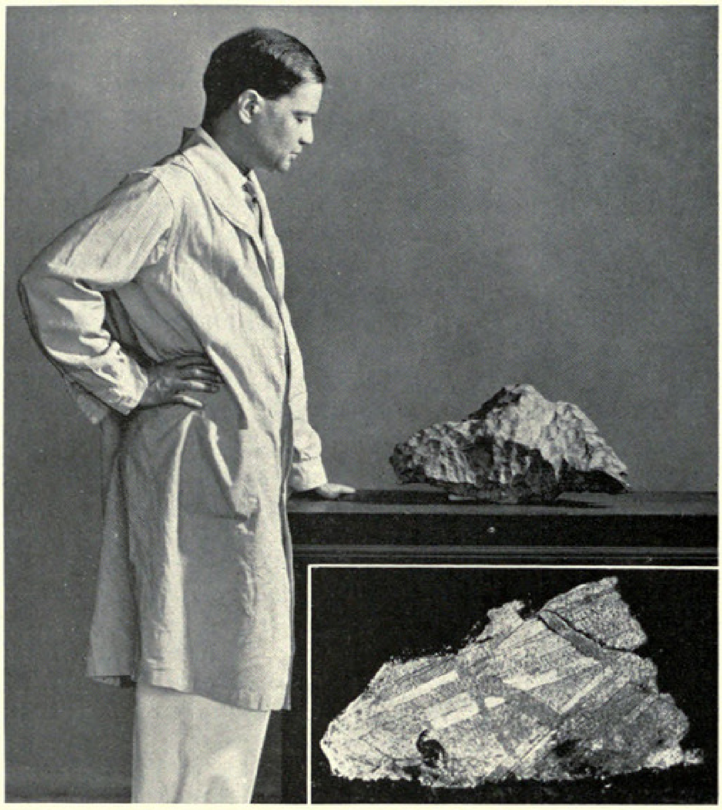
A new siderite, or iron meteorite, to be called the Mapleton meteorite, was recently purchased by the Museum from Mr. Harvey Meevers, of Mapleton, Iowa. This is the first iron meteorite to be reported from that state.

Previous to the discovery of this iron, four other meteorites were known from Iowa, three of which were aerolites or stone meteorites, and one a meso-siderite (or variety of iron-stone meteorite).



**The Mapleton (Iowa) Meteorite**
Mr. Sharat K. Roy, Curator of Geology, inspecting recent addition to Field Museum's meteorite collection (which in number of falls represented is the world's most comprehensive). This celestial visitor, despite its comparatively small mass, weighs 108 pounds, due to its composition of iron (stone meteorites are much bulkier in proportion to weight). Inset shows an enlarged section of a fragment, etched with acid in the laboratory to bring out Widmanstätten figures proving it is of extra-terrestrial origin—the earth's iron does not react the same way.

The meteorite just acquired was accidentally found by Mr. Meevers on June 17, 1939, in his cornfield. It was said to have been struck by his cultivator. The location of the find is in Cooper Township, Monona County, Iowa, on the east side of a rather steep hill, a little less than four miles east-northeast of Mapleton.

The date and time of the fall of the meteorite are not known. However, it is well to point out here that the meteorite, although it has suffered oxidation which has considerably altered and destroyed the fusion crust, is remarkably well preserved, and because of this excellent state of preservation it may be assumed that the fall took place in recent decades. Ordinarily, iron meteorites, particularly those rich in chlorine, when exposed to the atmosphere, oxidize and disintegrate very rapidly. The source of chlorine is the mineral lawrencite, a compound of iron and chlorine which is present in small quantities in many iron meteorites.

Apparently the meteorite does not represent the original mass. It appears to have been broken, but the disruption must have taken place at a considerable altitude while it still had high velocity. This is evidenced by the presence of elongated furrow-like depressions or pittings on the broken side which could not have been formed under reduced velocity. In its present state, the meteorite, which probably does not represent much more than one-half of the original mass, weighs 49 kilograms (108 pounds). Its greatest length, breadth, and height are 17½ inches, 9⅞ inches, and 6¼ inches respectively. The general shape, as preserved, is difficult to describe, for it does not conform to any of the characteristic forms of meteorites. Roughly, it has a sub-semicircular outline and may be said to have the appearance of a low conoid cut vertically near the center. One side of it is plano-convex, the other a very low truncated cone with the apex slightly away from the center.

The point of this reduced cone is not present and presumably was broken off during disruption of the mass, for it does not show the usual smooth surface, but is pitted. The slopes of the cone are unequal and considerably damaged and deformed. The pittings of the plano-convex side, some of which are merged into one another, are larger and more circular, but shallower than those of the opposite side. This is to be expected, for the plano-convex side is the rear of the meteorite and was thus less exposed to heat and friction of the atmosphere. The conical side or the front of the mass has many elongated pittings, more or less radially arranged on the slopes and edges of the cone, evidence of the passing of air currents from the apex of the cone during its passage through the atmosphere.

### STRUCTURE IS STUDIED

The structure of the meteorite was brought to view by etching the polished surface of a small fragment of the mass. In most iron meteorites etching brings out certain octahedral figures, called Widmanstätten figures, after their discoverer. These are made up of thin plates or lamellae parallel to the faces of an octahedron, such as might be formed by putting two Egyptian pyramids base to base. The lamellae are composed of two different nickel-iron alloys, named respectively kamacite and taenite. Angular interstices called fields, between intersecting lamellae, may be filled with a third kind of nickel-iron alloy known as plessite. Meteorites made up of nickel-iron which exhibit these three alloys are known as octahedral meteorites or simply octahedrites. The octahedrites are subdivided into three main groups, fine—medium, or coarse—depending on the thickness of the lamellae, which vary from a fraction of one to several millimeters. The Mapleton meteorite contains all three alloys mentioned above and exhibits medium-sized lamellae. It is, therefore, a medium octahedrite.

The information given here is the result of preliminary examination only.

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## CHINESE MONEY BELTS

A collection of Chinese money belts, beautifully embroidered with glass beads of various colors in intricate designs, mounted on leather, is on exhibition in Hall 32 (Case No. 30). The beads are of cut glass, and each is sewed on separately. The belts thus exemplify not only fine artistry, but the exercise of extreme patience in delicate hand work. The designs are all characteristically Chinese, consisting of flowers, birds, deer, bats, goldfish, carp, and butterflies. In a few there are human figures. The magpie, a bird of lucky omen to the Chinese, appears frequently. Ornamental forms of the character "shou," Chinese symbol of longevity, are conspicuous, indicating the universal desire among the Chinese to attain long life.

The belts are provided with silver buckles which have embossed figures of lions and dragons, and sometimes a gold-plated central panel. On the inside of the belts are their reason for being—pockets for the safe carrying of money. Most of the specimens were made during the last hundred years, and come from the south of China. The collection contains also spectacle cases, ornaments for beds, and slippers, all of which are ornamented with the same type of bead work. This material was acquired by the Museum in a gift from the late Mrs. George T. Smith, of Chicago.

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A single crystal of beryl which weighs a thousand pounds is displayed in Stanley Field Hall (Case 18).

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Diamonds, specimens of the rocks in which they are found, and minerals associated with them, form an exhibit in Hall 36.