METEORITES NEWLY FOUND IN RUSSIA

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Russia's collection of meteorites received two newly found meteorites in 2017, which are registered in the international Meteoritical Bulletin Database as the Suzemka (Meteoritical Bulletin, 2017_1) and Uakit (Meteoritical Bulletin, 2017_2) iron meteorites.

Suzemka. The Suzemka meteorite was found in Bryansk oblast (territory) near the town of Suzemka on July 18, 2015 (at 52°20.25'N, 34°3.24'E). The weight of the first found fragment is 9.4 kg. Five other small fragments were later found nearby. The meteorite is classed with IAB iron meteorites.

The meteorite was found by the Bitsyuks: *"In summer 2015, my wife Viktoria, son Denis, and myself traveled by car and stopped for awhile in a forested land near the town of Suzemka. We needed firewood and stones to support the grill roaster. I found this "boulder" at a distance of 20–30 m from our camp. Then I held firewood with one of my hands and tried to pick up the rock with the other one but failed. It halfway entered the soil, and I called my son to help me. When he unearthed our find and brought it to the campfire, I was surprised how heavy it was. I realized that this was a meteorite: it was so unusually heavy for its size. We took the meteorite, and later I searched the Internet for information on meteorites. I cut the meteorite, polished and etched it, and conducted its chemical analysis"*.

The meteorite has an irregular ungeometrical rounded shape with numerous pits and ridges, which often end with sharp uneven edges. The surface of the meteorite is partly covered with visible glossy melting crust. The meteorite is rimmed with newly formed minerals: carbonates and iron oxides. This fact obviously indicates that the earthen history of the material is fairly long, likely by dozens of years. Given that it was found practically on the soil surface (the first fragment was one-third buried in soil, and the other smaller fragments were found at depths no greater than 5–7 cm) and partly reserved its

Suzemka meteorite.
Weight 9.4 kg. Found near the town of Suzemka, Bryansk oblast, Russia, on July 18, 2015.
Specimen and photo: V.I. Bitsyuk.

Uakit meteorite.
Weight 3.96 kg. 10 x 10 x 7 cm.
Found in Mukhtunnyiy Stream in the vicinities of the village of Uakit, Bauntovskiy Evenkiyskiy district, Buryatia, Russia, in summer of 2016.
Specimen and photo: O.Yu. Korshunov and others.

melting crust beneath a thin oxide rind, it is reasonable to suggest that the meteorite fell within a century ago. The other five smaller fragments found at the fall site are no larger than 7 cm. All of them are also covered by carbonate and iron oxide crusts. The fragments are flattened, ungeometrical, and their sharp uneven edges make them look like chips.

The identified phases of the meteorite are taenite (30.6 wt.% Ni), kamacite (7.95 wt.% Ni), and inclusions of troilite and schreibersite (microprobe analyses were conducted at the Vernadsky Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences, analyst N.N. Kononkova). The Suzemka is the first meteorite found in Bryansk oblast.

Uakit. The Uakit meteorite was found in summer 2016 on the stream terrace of Mukhtunnyiy Creek, a left-hand tributary of the Uakit River, 4 km west of the village of Uakit, Evenkiyskiy district, Buryatia (found at 55°29'47.50"N, 113°33'47.98"E). The meteorite was found by a group of small diggers (O.Yu. Korshunov and others) at a gold deposit.

The meteorite by weight 3.96 kg (10 x 10 x 7 cm) is almost equant and slightly elongate. The surface of this meteorite is rough, relatively even, with small pits. The meteorite is covered with a thin oxidized brown melting crust with a rind of secondary minerals no thicker than 1 mm. The polished and etched section of the meteorite shows readily visible large (up to 2 cm) kamacite crystals and Neumann lines but no Widmanstätten structures. The meteorite is dominated by kamacite (> 98 vol.%), and its minor minerals are schreibersite (rhabdite), nickelphosphide, taenite, plessite (kamacite + taenite), cohenite, daubreelite, kalininite, troilite, carlsbergite, sphalerite, a VN phase, minerals of the awaruite–nickel series, Ni-bearing magnetite, pentlandite, and heazlewoodite. The secondary minerals are Ni-bearing goethite and other iron hydroxides (which sometimes contain Cl). According to its fabrics and geochemistry, the Uakit iron meteorite is classed with IIAB hexahedrites and is somewhat close to chemical subgroup IIA. In contrast to other meteorites of chemical group IIAB, the Uakit meteorite bears a broad spectrum of exotic accessory minerals: carlsbergite, sphalerite, VN phase, kalininite, and cohenite. It is also worth mentioning that the Uakit was the first meteorite in which naturally occurring phase VN was found and the first one in which kalininite was identified (Ripp *et al.*, 2017).

The bulk of the meteorite sample is kept by its discoverers in the town of Ulan-Ude, Buryatia, Russia. The Uakite is the fifth meteorite found in the Republic of Buryatia.

References

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