

THE FIRST TURKISH ANTARCTIC METEORITE SEARCH EXPEDITION.

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Introduction: Antarctica provides the best conditions for meteorites. Samples are protected and preserved in a cold environment with less weathering [1]. Recovered meteorites provide invaluable information and insights towards understanding the formation of our solar system. Blue ice fields of East Antarctica have been searched for meteorites in the past (e.g., Japanese Antarctic Research Expedition JARE, Belgian expedition SAMBA, etc...) and many samples have been recovered. As part of the Turkish Antarctic Expedition TAEIII and with the logistical support of Belgium's Princess Elisabeth Antarctica (PEA) Station, the first Turkish Antarctic Meteorite Search Expedition (TAMSEI) took place in East Antarctica during the 2018-2019 season. Through this expedition, reconnaissance visits to several places within the Sør Rondane Mountains were organized in an effort to plan for future meteorite search expeditions. During the season, a daily trip to the Nansen blue ice fields (~120 km away from the PEA station) was also organized, which resulted in the recovery of 3 meteorites.

Descriptions and Findings: TAMSEI was meant as an observational preliminary trip to East Antarctica. Several blue ice fields, mountains, and moraines were visited to finalize our meteorite search and recovery protocols for future expeditions. Nevertheless, a total of 3 meteorites were recovered during our preliminary search in the 2018-2019 Antarctic season near the Nansen blue ice field. Upon recovery, they were given preliminary identification numbers of 190109286, 190109287, and 190109288. Their weights are 7.52 g, 50.68 g, and 6.24 g, respectively. Out of the recovered meteorites, one is a whole stone (190109287) with several cracks on the surface and rusty edges. The other two meteorites are broken samples with missing parts up to 50%, revealing their interior to atmospheric conditions. As a result, the interior of the broken samples was rusted and degraded until the recovery. The three meteorites found are currently undergoing initial investigations at NASA's Johnson Space Center for classification and characterization. Once classified, they will be given permanent names and will be assigned an official name and number according to the guidelines set by the Nomenclature Committee of the Meteoritical Society. The Turkish Meteorite Working Group has established a protocol to store and curate the recovered meteorites upon request after their necessary investigations.

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