METEORITES FROM MONGOLIA INCLUDING NEW ONE IDENTIFIED AS ORDINARY CHONDRITE

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Introduction : Fourteen and more meteorites have been known in Mongolia(Table 1). Most of them have been displaying in the National History Museum in Ulanbaatar and two meteorites are in the museum of Mandalagovi Mandalgovi. Fifteen specimens have been reported as so-called meteorites in Mongolia. 1. Adzhi-BogdoI (LL3-6,br.)~910 g, 2. Adzhi-BogdoII (Iron) 582 kg, 3. Alaschan (Doubtful), 4. Jalanash (Ureilite) ~700 g, 5. Kerulensky(kherlen) (Doubtful) 27.78 kg, 6. Khruteisky (Stone?) 402.1g, 7. Manlai(Manlay) (Iron) 166.8kg, 8. Matad (Stone?) 189.5g, 9. Noyan-Bogdo (L6?) 220g, 10. Sargiin Gobi (Iron) 17.5 kg, 11.Tamir-Tsetserleg (Stone?) 173kg, 12. Tugalin-Bulen (H6) ~10 kg, 13. Khan Khogshi (Iron ?), 14. Nartiin had (LL) 1,946 g, 15.Tengeriin Dush (Iron?) ~10kg. Only six of them except No. 14 are true meteorites, and have been identified and classified as 3(No. 2, 7 and 10) irons and 3(No.1,4 and 12) stones including one achondrite ureilite Jalanash followings.

New Meteorite - Nartiin had Chondrite : Recently more one stone is identified as chondrite meteorites in October 2003. Saynshand Museum kept one of stone specimen and display in the museum together with wood fossiles as one of terrestrial rock specimens. October 8. 2003, Japan-Mongol Joint Expedition of Search for Meteorites in Govi Desert, Mongolia visited Saynshand Museum, and the joint member including author recognized the new meteorite specimen Nartiin had . Nartiin had meteorite, 1,946 g in weight, is complete rounded stone covered by black fusion crust showing light grey interior, and classified as LL6-7 chondrite tentatively(Fig. 1). Nariin had meteorite is listed in fourteenth so call meteorite in Mongolia, and identified as seventh meteorites in Mongol. Before several ten years ago, Nartiin had meteorite fell in Nartiin had, N45 40' E108 40', Dalanjargolou Dornogovi, 135km northwest of Saynshand city. The meteorite specimen was collected by nomadism people after fall. Location of Nartiin had is granite exposed area widely, unfortunately we could not collected any more specimens and any useful information during the expedition members visited the area at October 15 and 16. 2003.

Jalanash Ureilite-only achondrite in Mongolia : Jalanash(Nuzhgen in Mongolian name) meteorite is the sixth fall and collected in Mongolian Peoples Republic in recent year. Jalanash meteorite fell in Olgiy(49 N,90 E) of the western Mongol at 14:00, August 15. 1990 and it was collected by nomadism people at just after fall. It was believed more meteors to fall at that time, and about 1kg of the fall in weight was only collected. Jalanash meteortie is showing coarse grain, massive and fragile, nevertheless it shows very fresh because it had been collected just after fall. Jalanash meteorite consists mainly of coarse grained olivine and pigeonite with interstellar carbon, so Jalanash meteorite is classified to typical ureilite(Fig. 2). There is lot of fine Fe-Ni metals in grain boudaries. Mineral compositions are very homogeneous: olivine average Fo80.6 and, range Fo91.8-78.6. Pigeonite average En75.1Fs17.2Wo7.7 and range En75.8-74.3Fs17.9-16.6Wo8.3-7.1. Major chemical compositions are followings: SiO_2 39%, TiO_2 0.08%, Al_2O_3 0.9%, FeO 16.2%, MnO 0.5%, MgO 38.3%, CaO 0.82%, Na_2O 0.09%, Cr_2O_3 0.7%, FeS 0.8%, Fe 2.1%, Ni 0.1% and Co under 30ppm. Jalanash ureilite is quite differ from 12 Antarctic ureilites in its texture, but it similar to those mineral compositions.

Fig. 1. New meteorite "Nartiin had" LL chondrite 1,946g.

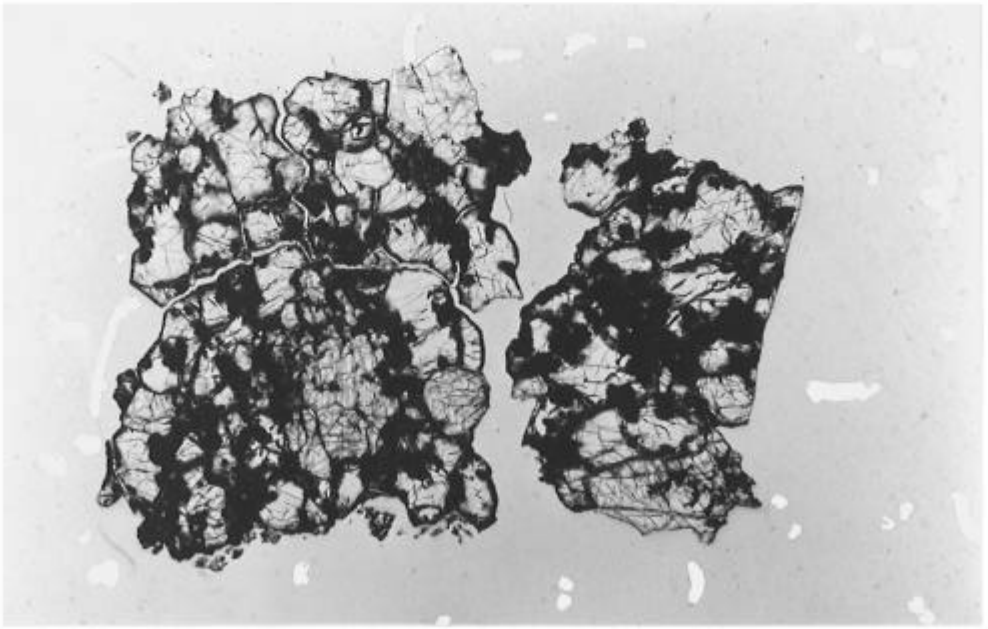

Fig. 2. Photomicrograph of Jalanash ureilite, field view 10mm.