



**NWA 7800, R-chondrite**

A meteor shower fell over the Mt Kenya region of Rumuruti on January 28th, 1934. Over the night the skies over Rumuruti were showered with meteors.

These 'Heaven Stones' are known as Rumuruti chondrites, a rare group of meteorite. With only one documented fall out of almost 900 documented chondrite falls. They have a number of properties in common with ordinary chondrites, including similar types of chondrules, few refractory inclusions, similar chemical composition for most elements, and the fact that  $^{17}\text{O}/^{16}\text{O}$  ratios are anomalously high compared to Earth rocks. However, there are significant differences between R chondrites and ordinary chondrites: R chondrites have much more dusty matrix material (about 50% of the rock); they are much more oxidized, containing little metallic Fe-Ni; and their enrichments in  $^{17}\text{O}$  are higher than those of ordinary chondrites. Nearly all the metal they contain is oxidized or in the form of sulfides. They contain fewer chondrules than the E chondrites and appear to come from an asteroid's regolith.

One of the rocks is going for \$2,000 (Sh166,000) on Ebay and it measures only 168mm by 125mm.

At the time of them raining from the skies, they had little commercial value then and one of the stones was picked and taken to the great museum of the University of Humboldt in Berlin where it lay in a collection until 1938 when it was identified as a rare chondrite.

But still there was little study done on it until 50 years later when it was recognised as a very very rare and unique specimen.

Beside this one meteorite of 67 grammes there are no others in the public museums — although it is known that many other rocks, several kilograms at best — were picked from Rumuruti after the meteorite shower.

It is only by luck that the then Rumuruti District Commissioner, H.H. Trafford kept one of these rocks and later donated it to Mr E. Reuning, a collector of African minerals and meteorites who was then at University of Cape Town.

It was Mr Reuning who took this specimen to Berlin’s Museum of Natural History where it stayed among other collections and attracting very little interest.

During the Second World War, this museum was bombed during the 1945 bombings in Berlin. During the evacuation of the specimen some of the tags on the meteorites disappeared but luckily the Rumuruti rock was not among them.

The Rumuruti variety is rare and every year, collectors usually visit this remote Kenyan town hoping to pick a sample of this rare meteorite rock.



From the geological studies done on this rare rock – if you get it you earn money – it was found that the Rumuruti rock is “chemically different” from the other chondrites since they are highly carbonised.

While the Rumuruti type of meteorites have been identified from elsewhere — and which astrophysicists group in what they describe as the R Series — there is nothing similar to the Kenyan rock.

The only near variety was identified by Prof Carlisle Lake — he named them after himself — but which is said to be of a different type.

The most interesting thing about these rocks is that they also interest NASA scientists who are troubled by the rocks from the outer space that could be dangerous to both planes and ships.

Are you interested in meteors? Do you collect them around our continent? Would you like to share your experience with us? Get in touch!