As many arid regions of the world Nambia has had a rich crop of meteorite finds. Apart from the Gibeon Meteorite Shower, which is the most extensive known on Earth, it also hosts the Hoba Meteorite (largest single meteorite), as well as the Roter Kamm, an impressive impact structure, which however has yielded no remains of the projectile that created it. While the removal of meteorites from their site of impact is prohibited by law, some of the largest fragments of the Gibeon Meteorite Shower can be seen at a permanent display in Windhoek's Post Street Mall and at the National Earth Science Museum. And the Visitor Centre on Farm Hoba west of Grootfontein was established by the National Monuments Council to provide interesting information about the famous relic from outer space.

Most meteorites disintegrate, when entering the Earth's atmosphere, and only some 500 ranging in size from marbles to basketballs do reach the surface each year. Of these only ca. one percent are recovered, mostly in the arid (Sahara, Australian desert, Namibia) or cold regions (Antarctica) of the world, where a slower rate of chemical weathering aids their preservation. Few meteorites are big enough to create impact craters, the shape of which depends on size, composition, degree of fragmentation, incoming angle and terminal velocity of the impactor.

Meteorites are extraterrestrial bodies that survive impact with the Earth's surface. Traditionally they are divided into stony meteorites (mainly consisting of silicate minerals), iron meteorites (mostly composed of metallic iron-nickel), and stony-iron meteorites (consisting of both metallic and rocky material); because iron meteorites due to their composition are more likely to survive atmospheric entry than other types, they are the most common.

Gibeon meteorites (National Earth Science Museum, Windhoek)

The Hoba Meteorite near Grootfontein impacted Earth about 80 000 years ago (inset: Widmannstätten structures)

Surprisingly, no crater or altered rocks have been found at the impact site of the 60 t Hoba Meteorite, which together with the fact of its survival as a single mass, suggests a low angle of atmospheric entry and a low terminal velocity to make a "soft" landing. During its passage through the Earth's atmosphere melting caused the shallow pits and depressions on the meteorite's upper surface. The Hoba Meteorite consists of 82,4 % iron, 16,4 % nickel and 0,76% cobalt, as well as traces of carbon, sulphur, chromium, copper, zinc, gallium, germanium and iridium. Intergrowths of the main minerals kamacite and taenite (Ni-Fe alloys) form typical Widmann-stätten structures. *In situ* oxidation has created a 30 cm thick layer of dark-brown iron shale composed of limonite, magne-tite and trevorite [$NiFe_2O_4$] at its base. Early plans to recover nickel from the Hoba Meteorite soon were abandoned as uneconomic; in 1955 it was declared a National Monument.

Used by the early Nama people for the manufacture of tools and weapons, the Gibeon meteorites consist entirely of taenite and kamacite. Besides iron, they contain an average of 8 % nickel, 0.5% cobalt, 0.04% phosphorus, small amounts of carbon, sulphur, chromium, copper, zinc, gallium, germanium and iridium. To date some 120 specimens with a compound weight of ca. 25t have been recorded. The „original" Gibeon meteorite is thought to have measured ca. 4 x 4 x 1.5 m, and to have entered the Earth's atmosphere at a low angle of 10° to 20° from the horizon. This body fragmented while still high in the atmosphere, so that the fragments themselves suffered extensive alteration by melting before being embedded in rocks of the Karoo Supergroup and Kalahari calcrete.