Tektites

The origin of tektites is interesting, if not amazing. Their origin was a mystery for many years but, today, the terrestrial* origin of tektites is accepted by scientists.

Tektites are any of a class of small, natural glassy objects found on the Earth's surface. They look like volcanic black glass but are not found near volcanoes. They are the result of meteorite impacts but they are not meteors.

Extremely high temperatures and enormous pressures are generated when a large meteorite, comet or asteroid hits the Earth. The collision melts the rocks at the impact site, producing masses of molten droplets that are blasted into and out of the Earth's atmosphere. The droplets cool quickly to a glassy form and then fall back to the Earth. They are often found in strewnfields†, often near meteor rocks.

Tektite 'rain' is thought to have happened several times in the Earth's history. The last major fall of tektites was about 10 million years ago.

The chemical compositions of tektites differ from those of ordinary terrestrial rocks, almost certainly as a result of their very-high-temperature history.

Tektites vary in colour from black to dark brown to green, and occur in large masses, but are mostly small to microscopic in size. However, a few as large as footballs have been found. They are very brittle with very wavy layers in thin slices. Australian tektites are usually black.

Five major groups of tektites are known:

- North American, 34 000 000 years old
- Czechoslovakian, 15 000 000 years old
- Ivory Coast, 1 300 000 years old
- Russian, 1 100 000 years old
- Australian, 700 000 years old.

The Western Australian field contains millions of tonnes of tektites, but they are strewn across a massive area of the state.

The North American, Ivory Coast and Australian tektites also occur as minute tektites. On land, virtually all of the tektites are found mixed with surface gravel and stones that are younger than the age of the tektites.

* relating to Earth
† an area scattered with matter

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