

1,700,000,000
years ago

1,800,000,000
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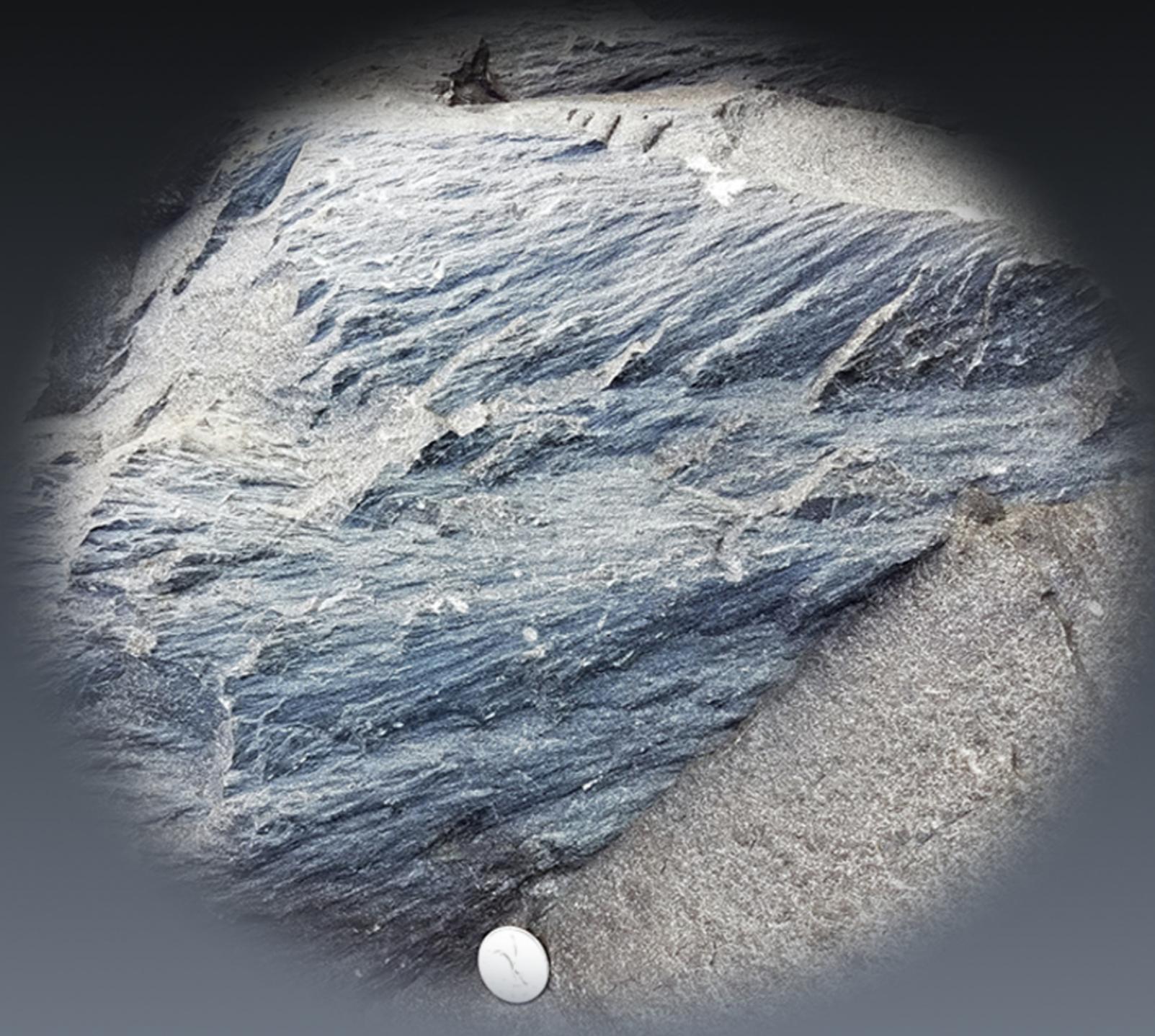
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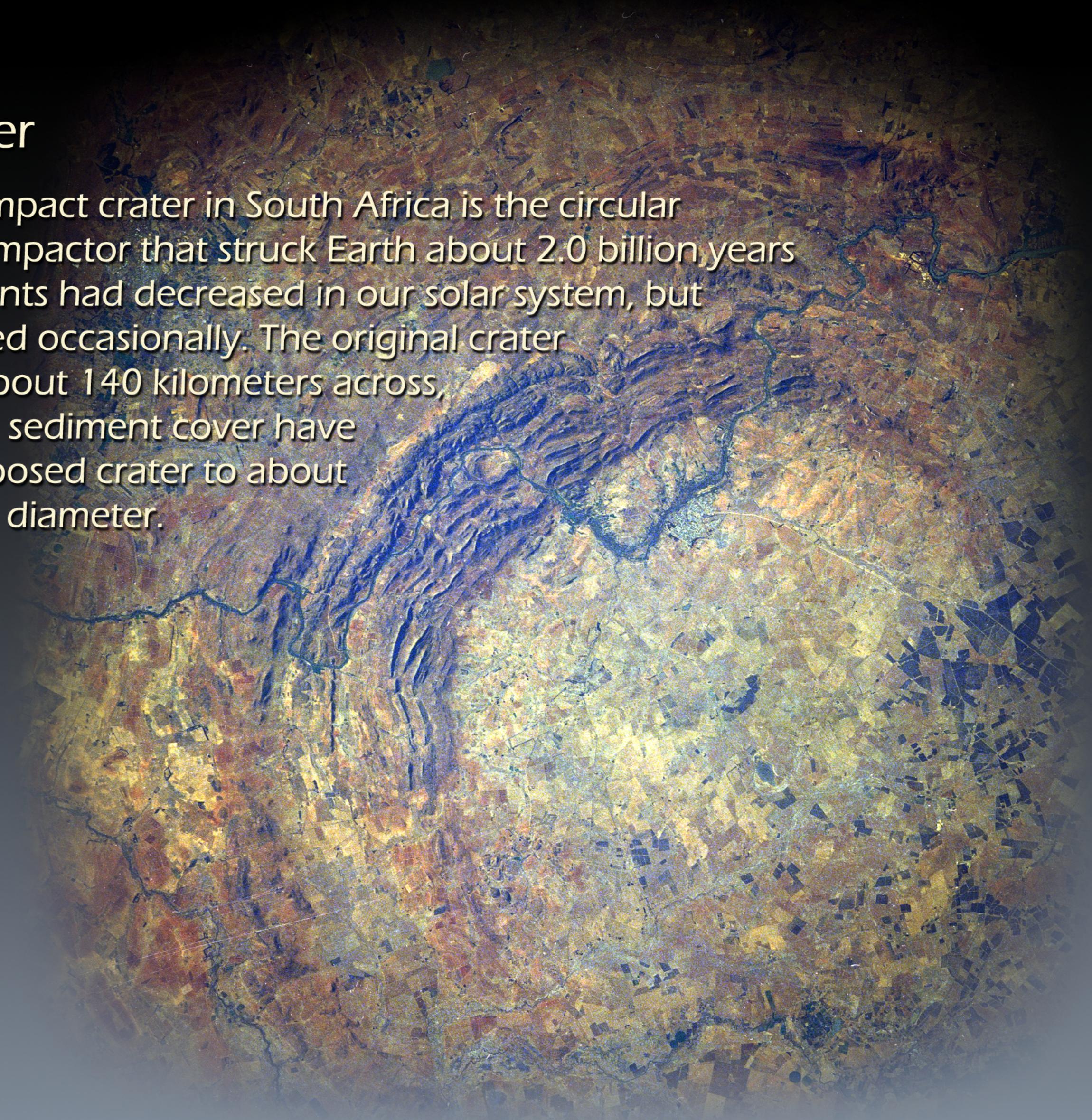
Sudbury Impact

An asteroid ~12 kilometers in diameter impacted the Canadian Shield 1.85 billion years ago. The impact left behind shatter cones and produced one of the Earth's oldest and largest impact structures, the ~200–250 kilometer-wide Sudbury crater in Ontario. The crater hosts one of the world's richest nickel, copper, and platinum group element deposits.



Vredefort Impact Crater

The Vredefort impact crater in South Africa is the circular remnant of an impactor that struck Earth about 2.0 billion years ago. Impact events had decreased in our solar system, but they still occurred occasionally. The original crater was probably about 140 kilometers across, but erosion and sediment cover have reduced the exposed crater to about 80 kilometers in diameter.



A New Type of Cell

The first eukaryotes were single-celled organisms with distinct nuclei. Today, eukaryotes have evolved into complex organisms, including fungi, protists, plants, and animals. Prokaryotes, like bacteria, have a small amount of DNA, contained in single, round chromosomes. Eukaryotes have DNA organized in multiple chromosomes and contained in both a nucleus and mitochondria. These organisms can reproduce by exchanging DNA between cells, resulting in greater diversity and more rapid evolution.



1700 million years ago

1800 million years ago

1900 million years ago

2000 million years ago

2100 million years ago