

A pressed leaf specimen is shown on a light-colored, textured background. The leaf is dark brown and elongated, with a thin stem. The background has a subtle, wavy pattern. The title "Rock Deposits of Nebraska" is centered in a dark brown serif font.

Rock Deposits of Nebraska

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There are three main types of rocks; which one is Nebraska composed of?

○ SEDIMENTARY!

○ Examples shown below are sandstone, limestone and mudstone





What do sedimentary rocks indicate about the past?

- They can give you clues about
 - the climate
 - the environment
 - some of the organisms living at the time.

Let's take a look back in time...



126,000 years ago (Pleistocene)

What was going on?

Did it affect Nebraska?



15 million years ago (Miocene)



65 million years ago

A sea begins to creep inland



75 mya - Late Cretaceous

How do you think this might have affected the climate of the area now known as Nebraska?



115 mya - Early Cretaceous



130 mya Early Cretaceous

land locked once again...



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- One thing to remember after looking at these pictures is that this process takes time. A million years is great deal of time!



SO WHERE'S THE EVIDENCE OF
ALL THESE CHANGES?

I'll show you a few examples..

This is an example of sandstone alternated with siltstone(gray). This is big indication of a large estuary or an area near a shoreline.



Starr Pit, SE Nebraska

Rose Creek Pit, SE Nebraska

Home of the first flower, several amber fossils



This area has large black deposit caused by an **ANOXIC EVENT**, an indication of low oxygen in the environment.

This example actually has three main layers of limestone and shale(dark gray). There are also some small volcanic deposits within the shale. What might a layer of limestone indicate about the climate?



Greenhorn Limestone Formation, Cuba, KS

Cretaceous Niobrara Chalk, WEST of previous location...
large ammonites and clams found here



What type of environment would cause this?

Niobrara River area - take a close look at this picture
- do you notice anything odd with the formation?



What do these two pictures have in common?



- They are of the same area! This is a picture of Ash Falls, located in NE Nebraska. It includes an assortment of major fossils! These animals were preserved just like the people of Pompeii by a large eruption that occurred in SW Idaho.

Newest formations - sandhills and loess formations



- Both of these formations are prevalent throughout central and western Nebraska. As the climate became more arid, river systems helped to create the land farmed in most of Nebraska.