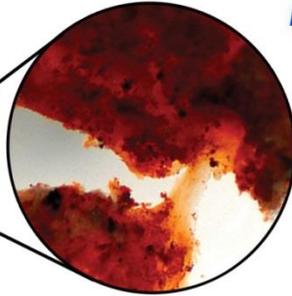


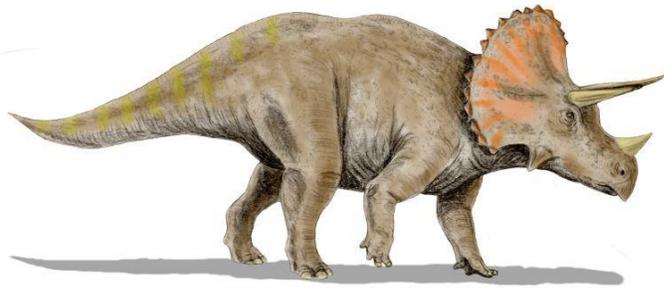
## SOFT TISSUES IN DINO BONES?



*Dinosaur fossils continue to be found with well-preserved soft tissues... why is this big news?*

Image credit: TWO GUYS FOSSILS

### Did Dinosaurs Really Live Millions of Years Ago?

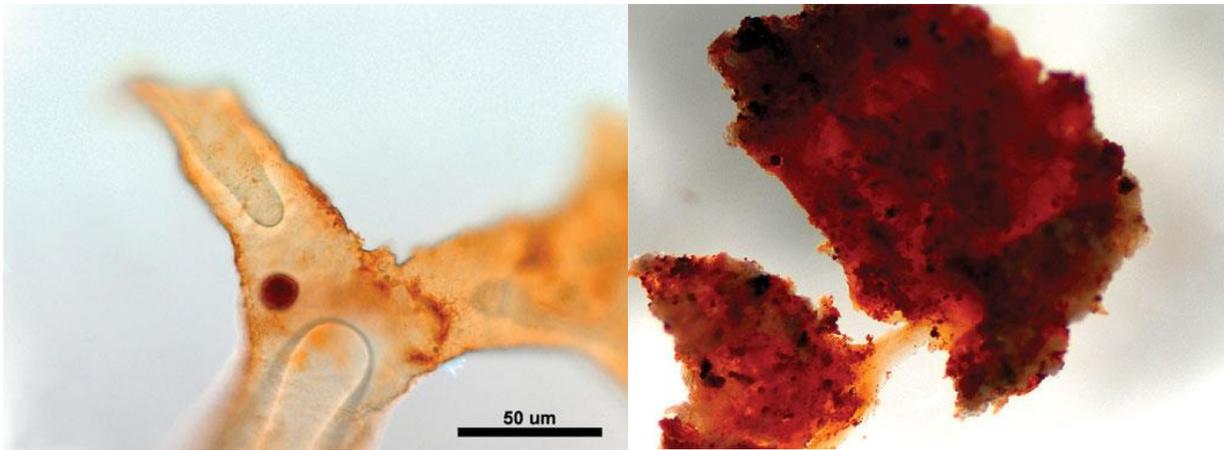


Most modern scientists insist that all dinosaur bones must be at least 65 million years old, and are claimed to be strong evidence for the earth's ancient history. However, a straight-forward reading of the Bible indicates that dinosaur bones are not millions of years old, but that dinosaurs were made miraculously on day 6 of the creation week, and roamed the earth only

thousands of years ago. Now, new scientific findings are revealing amazingly preserved dinosaur bones which contain soft tissues, flexible blood vessels, and intact cells. These new discoveries powerfully undermine the conventional understanding that all dinosaur are at least 65 million years old. These new findings strongly suggest that these bones are only thousands of years old, and so lend scientific credence to the biblical account of natural history.

### Exceptionally Well-Preserved Dinosaur Tissue – An Evolutionary Enigma

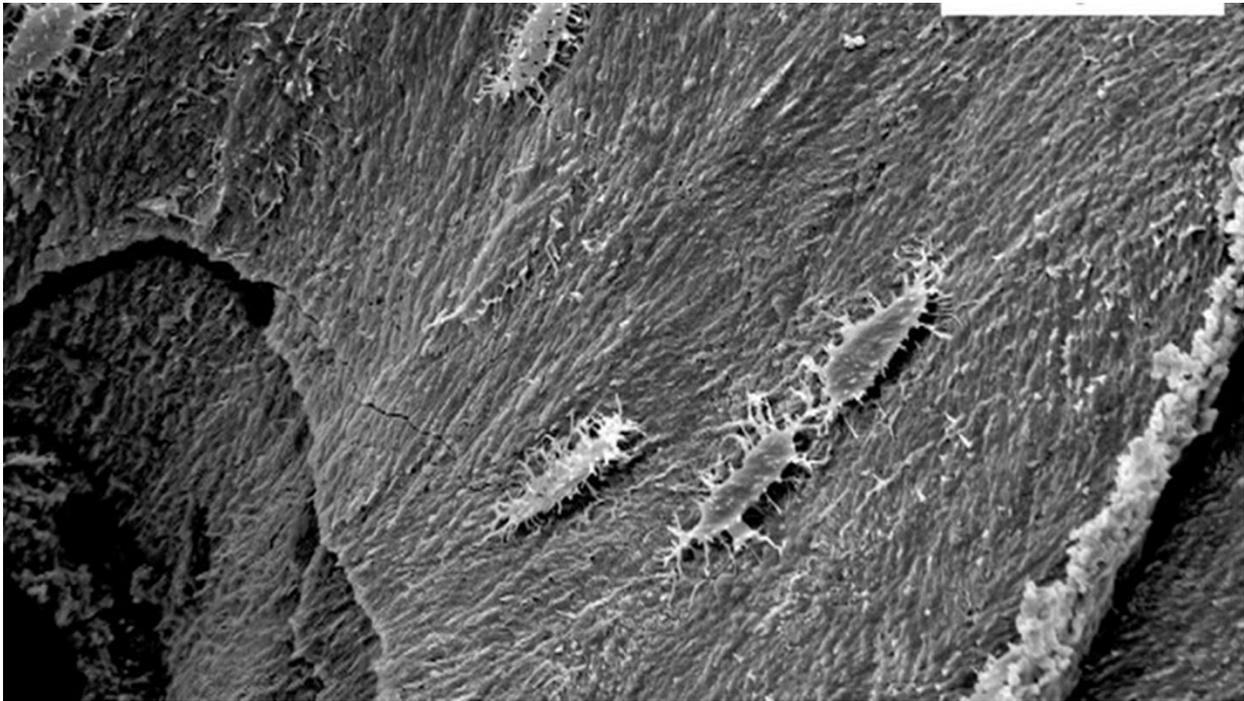
In 2005, Dr. Mary Schweitzer of North Carolina State University published a ground breaking discovery. She and her team of researchers dissected a fossilized *Tyrannosaurus rex* femur to find inexplicably preserved bone marrow.<sup>1</sup> Two things made this unearthing astounding. First, if the fossils are really millions of years old, they should be completely fossilized by now. Fossilization is the process in which original boney material is replaced by hard minerals. However, in this case, the soft inner parts of the bone were found unfossilized with intact bone marrow. The marrow consisted of soft tissues and intact blood vessels that maintained their elasticity (Figure 1). This is incredible! How could soft, stretchy tissues be preserved in dinosaur remains that evolutionists claim are no younger than 65 million years old? Even in the best state of bone preservation, the soft inner parts should have completely rotted away long ago.



**Figure 1:** Mary Schweitzer's micrograph images of preserved blood vessels including intact red blood cells (Left) and soft stretchy tissue (Right). Image credit: *Science*, 2005.

Dr. Schweitzer's breakthrough publication almost a decade ago has set the stage for additional investigations by many other scientists.<sup>2,3,4</sup> Since then, the discovery of soft tissues in dinosaur bones has become fairly common (even among different dinosaur species) demonstrating these are not just rare exceptions or anomalies. The latest dinosaur soft tissue finding was from a *Triceratops* specimen found at the Hell Creek formation of Montana by well-published Microscopist and former instructor at California State University, Mark Armitage and his colleague Dr. Kevin Anderson of Arkansas State University.<sup>5</sup> Their analysis of a *Triceratops*' horn showed that it contained original bone, soft tissue, and even complete and exquisitely preserved "bone-building" cells called osteocytes.

As in the case of Schweitzer's *T. rex* fossil and other dinosaur soft tissue discoveries like it, all the original tissue both hard and soft should have wholly disappeared due either to decay or to mineral replacement if these bones were millions of years old. The original bone has, however, been preserved down to the most minute detail, as has the soft tissue running through it, including intact blood vessels. As with Dr. Schweitzer's findings, Armitage found that the tissues remained elastic and flexible. His research produced breath-taking, high resolution micrographs of osteocytes – the tiny cells which, when living, repair and maintain the bone. These detailed micrographs are comparable to those taken of modern bones (Figure 2).



**Figure 2:** These high resolution micrograph images were taken by Dr. Armitage of nearly perfectly preserved bone-building cells recovered from a Triceratops horn from the Hell Creek formation of Montana. These bones are supposedly from the dinosaur-era. However, if this were true we should certainly not expect to find fragile cells or elastic tissue. This suggests dinosaurs lived recently only thousands of years ago – not millions.

Evolutionary scientists whose worldview requires that dinosaurs lived millions of years ago were initially very eager to dismiss the evidence of soft dinosaur tissue. They proposed that the observed soft tissue was just “biofilm” (a group of microorganisms whose cells stick together forming a stretchy sheet).

Those claims have not withstood the test of time. There is now overwhelming evidence that soft dinosaur tissue is real. This evidence is coming from many different scientists who are studying a diversity of dinosaur bones and publishing in numerous, prestigious scientific journals. Now that it has become nearly impossible to deny, evolutionary paleontologists fully acknowledge soft tissue discoveries. Unfortunately, they have not been willing to consider the straightforward implications that dinosaurs might have lived recently. Their unwillingness to consider this very reasonable possibility is not because of a lack of evidence, but is because of their ideological commitment to the evolutionary history of life. Paleontologists are well aware that taken at face value, soft tissue preservation suggests dinosaurs lived recently. This would call into question not only the “age of reptiles” and the geologic timescale, but the evolutionary theory as a whole. For this reason, evolutionary scientists are currently presenting far-fetched theories trying to explain how soft-tissue could remain so well-preserved over millions of years.

The latest attempt was by Schweitzer, who suggested that iron was able to act as a preservative over millions of years by crosslinking the soft tissue proteins to preserve its structural integrity.<sup>7</sup> However, she has only shown that hemoglobin can be preserved for up to two years – even in a highly concentrated iron solution that we would not expect to find in the natural environment of the fossils.<sup>8</sup> A point worth mentioning is that if iron acted as such an incredible preservative, why is it not used in place of other more expensive chemical preservatives – such as formaldehyde used in embalming the dead?

Very recently, scientists have even detected intact DNA from “ancient” dinosaur bones. In 2012, Schweitzer and her team conducted three separate chemical tests, which detected dinosaur DNA for the first time ever.<sup>10</sup> For those who accept the evolutionary timescales of dinosaur origins, this makes their problem much worse. DNA is a highly degradable molecule. Even in healthy *living* the DNA is continuously degraded through normal chemical activity within the cell and must constantly be maintained by DNA repair enzymes. Evolutionists in their own peer-reviewed publications acknowledge the difficulty of preserving DNA over time even in the best state of preservation imaginable. In a recent study on DNA survivability the researchers concluded,

“However, even under the best preservation conditions at  $-5^{\circ}\text{C}$ , our model predicts that no intact bonds (average length = 1 bp [base pair]) will remain in the DNA ‘strand’ after 6.8 Myr. This displays the extreme improbability of being able to amplify a 174 bp DNA fragment from an 80–85 Myr old Cretaceous bone.”<sup>10</sup>

Notice the researchers describe finding detectable amounts of DNA in dinosaur bones as an “extreme improbability.” They understand that even when kept permanently frozen, no DNA should last 6.8 million years. When considering a more realistic state of preservation at 15-25 °C, complete degradation of DNA should have occurred in less than 22,000 to 131,000 years ago.<sup>9</sup>

Schweitzer and a number of other evolutionary researchers have published numerous discoveries of dinosaur tissue preservation but have not been severely punished by their universities. However, when the aforementioned Microscopist, Dr. Mark Armitage, found similar results of soft tissue in a triceratops horn, he was treated very differently. Armitage was bold enough to go against the grain of standard evolutionary thinking and came to the conclusion that dinosaurs lived recently as suggested by his research, and on the basis of the Genesis account of the Bible. Although his research was well done and published in a respected scientific journal, he was summarily fired from his position at California State University the day after his work was published online.<sup>5</sup> His paper never mentioned God or the Bible and was purely a scientific paper that was readily accepted by the peer-review process. Nevertheless, he was fired and shunned from the scientific community because it was learned that he was a Bible-believing

Christian. Although this is sad news, we are thankful for Dr. Armitage's hard work and faithfulness to God. We urge you to please take a moment to pray for him.

Christians who trust in the Bible should not be surprised by data that suggests dinosaurs lived in the relatively recent past. Soft tissue preservation in dinosaurs is just another example of how good science affirms Scripture!

By Dr. John Sanford, Christopher Rupe, & Chloe Pappano  
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## FURTHER READING

[Fresh Tissues Show That Fossils Are Recent](#)

[Dinosaur Soft Tissue and Protein—Even More Confirmation!](#)

[Tyrannosaurus rex: a big chicken?](#)

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