Dinosaur Soft Tissue, Blood, and DNA

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In 2005 professor Mary Schweitzer at Montana State University reported finding unfossilized soft tissue in a leg bone of a Tyrannosaurus Rex. This T-Rex bone was not entirely fossilized. It was largely hollow and not filled up with minerals as would normally be expected for a dinosaur bone. Scientists applied chemicals (EDTA) to remove the mineral content. This is a standard procedure for removal of minerial. This procedure would not create soft tissues of this kind. This would normally leave nothing left, for a dinosaur fossil. When a bone is totally fossilized the bone is replaced with mineral, a process known as permineralization. But, in this case there was flexible connective tissue, branching blood vessels, and cells that looked like red blood cells. There were also what looked like osteocytes, which are bone cells. These cells were dead but still cells, not turned to rock. Some of the structures were still transparent and elastic! Dr. Schweitzer subjected the materials to multiple cycles of dehydration and rehydration to be sure that they were really preserving their elasticity, which they did. Dr. Schweitzer said it was like a slice of modern bone. This was surprising to evolutionists. How could such materials survive for over 65 million years? This made a huge stir in the scientific community.

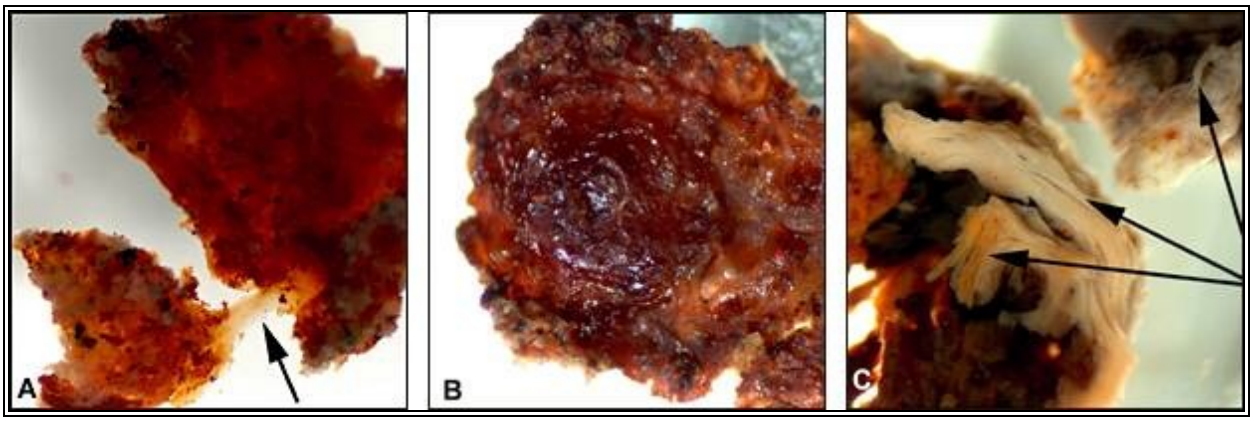

Figure 1 Picture A shows stretchy material from a T-Rex bone. Pictures B and C show the fresh appearance of the soft tissue, including the white fibrous material in C. These materials look like the dinosaur had just died recently.

Dr. Mary Schweitzer is reportedly a Christian but is not a young-age creationist. Creationists have written about this finding from her research. Schweitzer does not agree with young age creationists' interpretation of the significance of this. She accepts evolution and an old age for the Earth. But even from an evolutionary perspective it does shake things up. There have been a couple of responses to this from the scientific community. One reaction has been to say these structures are not what they appear to be, that is, real soft tissue from dinosaurs. That view would say they are actually from some other effect, such as perhaps contamination from some form of bacteria or some other process that got into the fossil after it was buried. The other response from scientists has been just to say something to the effect of "well, I guess blood cells can last millions of years in a fossil,

given the right conditions." The first response does need to be considered but I think the evidence is convincing that these materials are really unfossilized soft tissue from dinosaurs. There are many cases of other kinds of materials such as unfossilized wood being found with fossils or in rock that raise similar questions. But tissue like blood vessels and apparently blood cells surely would be especially fragile and thus unable last tens of millions of years. Another recent study carefully measured the rate of decay of the DNA from bones of an extinct Moa bird that lived in New Zealand. They found that in 10,000 years there would be almost nothing left of it. So dinosaur DNA should only last several thousand years at best.

Dr. Schweitzer continued her research and obtained even stronger similar evidence from hadrosaur bone that is thought to be about 80 million years old. How could soft tissue, blood, and other organic soft material survive so long? The evolutionary community was initially skeptical of Schweitzer's work. Some challenged her to follow more stringent laboratory methods in analyzing the samples, which she did. In 2007 the T-Rex bones yielded more soft material. Schweitzer was able to chemically isolate collagen, an important protein in bone. The collagen was compared to the collagen found in other organisms. The T-Rex collagen was found to be 58% similar to chicken and 51% similar to newt or frog. These are plausible figures for a dinosaur bone protein. Additional work on a hadrosaur bone (believed 80 MY old) involved more careful procedures than the original work with the T-Rex bone. Great care was taken to prevent contamination, better equipment was used, and samples were sent to two other labs for confirmation of the results. In the results, not only was collagen found again, but also two other proteins called elastin and laminin. There were actually eight different types of hadrosaur collagen found, so these results are very strong. Some materials found seemed to be blood and hemoglobin. There was also a study that looked for a protein called histone-H4. This is a protein that cannot come from bacteria but comes from animals with a backbone. They found histone-H4 in the dinosaur material. Thus this points to dinosaurs living on Earth in the not so distant past, as the Bible implies.

In 2009 a very similar thing was found that was not dinosaur tissue, but from a fossil salamander dated at 18 million years. This was published in the Proceedings of the Royal Society B, by a geologist from the University College, Dublin, Dr. Maria McNamara. They stated that this fossil showed "very little degradation since it was originally fossilised … making it the highest quality soft tissue preservation ever documented in the fossil record." This was quoted in a report by creationist Carl Weiland. This fossil had muscle material and blood vessels with blood in them, very well preserved. This has the same relevance as the dinosaur tissue, though it is not believed to be as old. Such things should bring into question the entire dating scheme that evolution depends on. On the other hand, if God created only several thousand years ago and there was a global Flood about 4,500 years ago as Genesis says, there could still be dinosaur blood and soft tissue today. But this would not allow time for evolution to occur.

Recommended Sources

1) Carl Weiland article from March 2005 with photos of soft T-Rex material. "Still Soft and Stretchy", http://creation.com/still-soft-and-stretchy

2) Carl Weiland article from May 2009 on the Hadrosaur evidence. "Dinosaur soft tissue and protein -- even more confirmation!"
http://creation.com/dinosaur-soft-tissue-and-protein-even-more-confirmation

3) Detailed response from Carl Weiland to statements from Reasons to Believe (the ministry of Hugh Ross) and other statements from evolutionists attempting to minimize or dismiss creationists arguments on the soft tissue evidence. "Squirming at the Squishosaur"
http://creation.com/squirming-at-the-squishosaur

4) Brian Thomas from the Institute for Creation Research, "DNA in Dinosaur Bones?" January 2013 Acts and Facts newsletter, Back to Genesis section, available at
http://www.icr.org/article/7160/

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http://creationanswers.net

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