

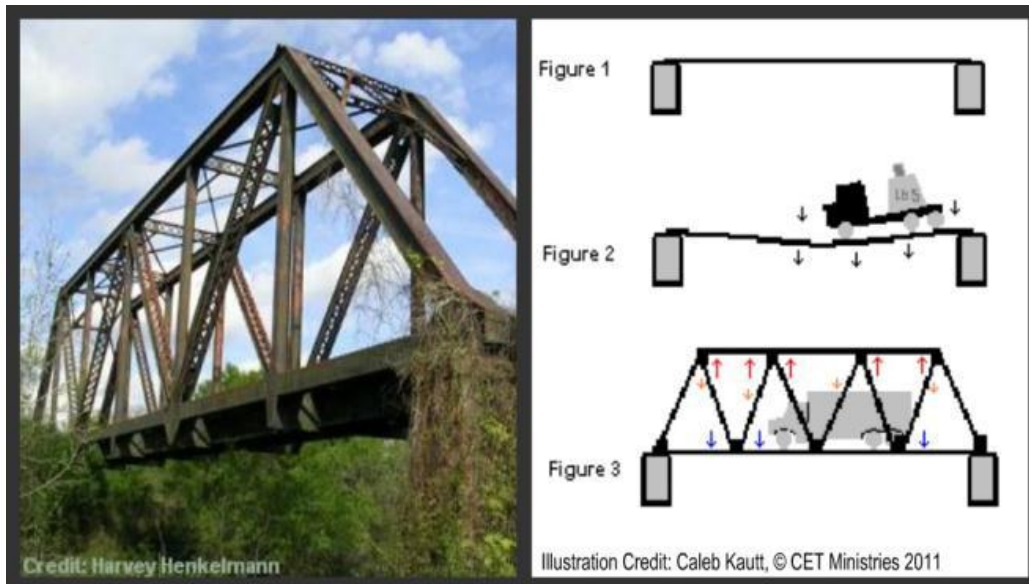


### ***Bird Bones & Bridges***

For as long as humans have been in existence, the problem of being able to safely cross rivers, streams, ravines, and other such dangerous obstacles to paths of mobility, has been overcome through the devising of various types of bridges.

The complexity of these bridges differs greatly, based upon the resources and technology available to the local people groups. Materials used in constructing such bridges range anywhere from hemp twine spun into ropes, to bamboo, to concrete, and steel.

One of the more recent inventions in the realm of bridges is that of the steel truss bridge, whose use has been used mainly in railway applications. This style of bridge may be somewhat boring to some people, especially those who make use of them routinely. But there are several secrets to this particular bridge design that many people have never heard about, and that I trust you will find fascinating.



On the bridge in Figure 1, no weight is being applied, so the bridge remains stable. Without bracing, however, when a load is applied to the bridge, it begins to sag, and potentially break (Figure 2.). On a bridge using trusses (whether steel or wood – Figure 3.), the downward pressure applied by the load is countered by the trusses, equally distributing the weight, and making the bridge much more stable.

The way in which these bridges are designed allows for maximum strength, with minimal weight and materials. The downward pressure being applied by the load on the bridge base is countered by the upper trusses.

Striking similarities between this bridge design and the internal structure of bird bones are immediately evident upon examination.



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According to evolutionary theory, birds (avian creatures) are said to have evolved from reptiles several million years ago. However, this theory is called into serious question due to several problems, the first being the fact that reptilian bone structure is more dense, while avian bone structure is entirely different, being more like an outside case supported by trusses and cross-members on the inside. As with the design in truss bridges, the birds bone structure allows for maximum durability and minimum weight, so that energy efficiency in flight is greatly increased.

The amazing structures in both the truss bridge and in the bone structure are testimony to the astounding design and incredible complexity of intelligence used in both these structures, and remind us of how man, by finding a design in nature that really works, has copied his Creator!