this, I would give a reply something like: "If your father had lost his finger in a circular saw, do you think his children would have one less finger? or his sons, but not his daughters? Of course not. The DNA instructions that are passed on from parent to child are in the form of a code, like writing—removing a rib (or finger) would not change the instructions on the code, so all the offspring would have all their ribs."

While all that is still very true and pertinent, this information about rib regrowth adds a new and fascinating dimension. God designed the rib, along with the periosteum. He would certainly have known how to remove the rib in such a way that it would later grow back, just as ribs still do today—without requiring a special miracle. Adam didn't have any permanent area of weakness in his ribcage; he had the same number of ribs that you and I have today.

Bones and Bridges

Some years ago, while driving across the Sydney Harbour Bridge, my small daughter asked me why the bridge was made with all those funny poles and criss-cross things. Why not in one smooth piece?

I asked her to imagine beginning with a bridge of solid steel, strong enough so that it wouldn't buckle and collapse as cars drove over it. I pointed out how heavy and expensive it would be. So we had to cut pieces out, in our imagination, to make it lighter and cheaper. Which pieces would be the best ones to leave behind, so as to stop it from crumbling? In time, playing with these ideas, the two of us "non-engineers" began to see how and why trusses supporting garage roofs, for example, could keep most of the strength of a solid, more heavy and expensive beam just by "eliminating the pieces," in a sense, that were not actually acting as braces against the load.

Several years later, owing to the major car accident mentioned earlier, I was walking around with a massive pin running right down the center of my thigh bone (femur). Because the fracture in that bone was not healing, all the weight of my body was being supported by the pin, locked in place by sturdy horizontal screws, top and bottom. The metal used for this pin was the finest space-age steel alloy. So why was the orthopedic surgeon advising yet another major operation to try to get the bone to heal? After all, I was able to walk around. Why not just let the massive steel rod carry my weight for the rest of my life? Surely man's high-tech metals are just as good as some old bone!

Trusses and Braces

The surgeon knew from experience that the finest metal would eventually fatigue and give way in time, yet not so the average person's bones. In fact, within a few months, signs of excess strain on the metal had already shown up on an X-ray. The amount of repetitive stress placed on the leg bones during walking is remarkable. What is it about bone that makes it so special, so incredibly strong, yet light, and so resistant to stress and fatigue that it puts space-age metallurgy to shame?

Look carefully at a bone X-ray, and you will see lots of denser (whiter) fine lines inside the bone substance. These are like "braces" inside the bone—areas of increased strength for load-bearing. They are like the criss-cross members in a truss, so that the remaining areas can be lighter.

Like our Harbour Bridge, this gives maximum strength and minimum weight. The "braces" in bones are placed so that they are exactly coordinated with the lines of stress, the directions in which the weight is transmitted through that bone. In itself, that is a beautiful example of clever engineering design in bone. But there is more—much more!

The Bridge That's Continually Rebuilding Itself

If it were only a matter of clever engineering, man could design a similar structure for a leg bone with all sorts of internal bracing, which would make it as light as bone—able to bear the same load—at least at first. But even that would wear out after several years. So why is it that an ordinary thigh bone (for all practical purposes, and in the absence of diseases such as osteoporosis) will ***never*** wear out like a metal structure?

The answer lies mainly in the fact that bone, which is a ***living*** structure, is continually dismantling and rebuilding itself. It is very likely that the bones you now have are not the same as you had ten years ago! They have all been "removed and replaced," brick by brick, as it were.

Certain cells in your body have the job of devouring the old bone, while others lay down new bone in its place. Long before any fatigued areas can "give way," they will be replaced with brand new "girders and trusses." If that happened to the Sydney Harbour Bridge, it would last forever. But the marvels of bone engineering do not stop there.

Not Only Rebuilding, But Redesigning

Bones and bridges cannot be compared exactly from an engineering viewpoint. A bridge always takes stresses along the same lines, between the same points, throughout its lifetime. But the situation for the human body is different. Throughout their lifetime, people change in the way their body weight is distributed (looked in the mirror lately?). For instance, they may, because of arthritis or some other disability, change the way they walk and the exact way in which they put weight on the limb.

So, when the lines of force transmission through the limb change so that the existing "girders" or "braces" are no longer in the right place, why does bone not eventually fatigue? The fascinating answer is that the bone is not only rebuilding itself, but remodeling ("redesigning") itself as the lines of stress change. Remember our imaginary version of the Harbour Bridge, the one that's continually replacing its girders? Imagine that it was often being shifted onto different pylons and tilted at different angles, so that the areas that have the greatest stress are continually somewhat different. Now we would find that replacing existing girders was not sufficient. They must be put into new positions according to precise engineering principles. Those that are no longer usefully bearing stress must be removed and replaced with others at the correct angle.

And that is exactly what happens in bone, incredible as it may seem! Programmed in the DNA instructions that are in every cell of our bodies is the marvelous capacity for our bones to continually remodel themselves so that their internal engineering is always lined up so as to exactly cope, in the most efficient possible way, with the precise forces acting upon them. In fact, if the forces get larger (for example, a one-legged man who supports the weight of his body on one limb all the time) the bone will actually become thicker and stronger.

The apostle says in Romans 1:20 that all men are "without excuse," since God's power and wisdom is evident all around them in creation. How much more is this so in our age of tremendous advances in knowledge, which have revealed ever more astonishing marvels of complexity and design in the living world? The glory and honor of such engineering marvels do not belong to "nature," but to our Lord Jesus Christ, the Creator of all *(John 1:1-3,14).*

—Adapted from the writings of Dr. Carl Wieland

9 Scientific Reasons Why the Earth is Young!

Here are nine natural phenomena which conflict with the evolutionary idea that the universe is billions of years old. The numbers listed below in **bold** print (often millions of years) are ***maximum possible*** ages set by each process, not the actual ages. The numbers in ***italics*** are the ages ***required by evolutionary theory*** for each item. The point is that the maximum possible ages are always much less than the required evolutionary ages, while the biblical age (6,000 to 10,000 years) always fits comfortably within the maximum possible ages. Thus the following items are evidence against the evolutionary time scale and for the biblical time scale.

Much more young-world evidence exists, but these items are chosen for brevity and simplicity. Some of the items on this list can be reconciled with an old universe only by making a series of improbable and unproven assumptions; others can fit in only with a young universe. The list starts with distant astronomic phenomena and works its way down to Earth, ending with everyday facts.

1. Galaxies Wind Themselves Up Too Fast

The stars of our own galaxy, the Milky Way, rotate about the galactic center with different speeds, the inner ones rotating faster than the outer ones. The observed rotation speeds are so fast that if our galaxy were more than ***a few hundred million years*** old, it would be a featureless disc of stars instead of its present spiral shape.

Yet our galaxy is supposed to be at least ***10 billion years*** old. Evolutionists call this "the winding-up dilemma," which they have known about for 50 years. They have devised many theories to try to explain it, each one failing after a brief period of popularity. The same "winding-up dilemma" also applies to other galaxies.

For the last few decades the favored attempt to resolve the dilemma has been a complex theory called "density waves." The theory has conceptual problems, has to be arbitrarily and finely tuned, and lately has been called into serious question by the Hubble Space Telescope's discovery of very detailed spiral structure in the central hub of the "Whirlpool" galaxy, M51.

2. Comets Disintegrate Too Quickly

According to evolutionary theory, comets are supposed to be the same age as the solar system, about ***5 billion years old***. Yet each time a comet orbits close to the sun, it loses so much of its material that it could not survive much longer than about **100,000 years**. Many comets have typical ages of **10,000 years**.

Evolutionists explain this discrepancy by assuming that **(1)** comets come from an unobserved spherical "Oort cloud" well beyond the orbit of Pluto, **(2)** improbable gravitational interactions with infrequently passing stars often knock comets into the solar system, and **(3)** other improbable interactions with planets slow down the incoming comets, often enough to account for the hundreds of comets observed. So far, none of these assumptions have been substantiated, either by observations or realistic calculations.

Lately, there has been much talk of the "Kuiper Belt," a disc of supposed comet sources lying in the plane of the solar system just outside the orbit of Pluto. Even if some bodies of ice did exist in that location, the evolutionists' problem would not really be solved, since according to evolutionary theory the Kuiper Belt would quickly become exhausted if there were no "Oort cloud" to supply it.

3. Not Enough Mud On The Seafloor

Each year, water and winds erode about 25 billion tons of dirt and rock from the continents and deposit them into the ocean. This material accumulates as loose sediment (mud) on the hard basaltic (lava-formed) rock of the ocean floor. The average depth of all the mud in the whole ocean, including the continental shelves, is less than 400 meters.

The main way known to remove the mud from the ocean floor is by plate tectonic subduction. That is, the seafloor slides slowly (a few cm/year) beneath the continents, taking some sediment with it. According to secular scientific literature, that process presently removes only 1 billion tons per year. As far as anyone knows, the other 24 billion tons per year simply accumulate. At that rate, erosion would deposit the present amount of sediment in fewer than **12 million years**.

Yet according to evolutionary theory, erosion and plate subduction have been going on as long as the oceans have existed, an alleged ***3 billion years***. If that were so, the rates above imply that the oceans would be massively choked with mud, dozens of kilometers deep. An alternative (creationist) explanation is that erosion from the waters of the Genesis Flood running off the continents deposited the present amount of mud within a short time about 5,000 years ago.

4. Not Enough Sodium In The Sea

Every year, rivers and other sources dump over 450 million tons of sodium into the ocean. Only 27% of this sodium manages to get back out of the sea each year. As far as anyone knows, the remainder simply accumulates in the ocean. If the sea had no sodium to start with, it would have accumulated its present amount in less than 42 million years at today's input and output rates. This is much less than the evolutionary age of the ocean, ***3 billion years***. The usual reply to this discrepancy is that past sodim inputs must have been less and outputs greater. However, calculations which are as generous as possible to evolutionary scenarios still give a maximum age of only **62 million years**. Calculations for many other seawater elements give much younger ages for the ocean.

5. Earth's Magnetic Field Is Decaying Too Fast

The total energy stored in Earth's magnetic field has steadily decreased by a factor of 2.7 over the past 1,000 years. Evolutionary theories explaining this rapid decrease, as well as how Earth could have maintained its magnetic field for ***billions of years***, are very complex and inadequate.

A much better creationist theory exists. It is straightforward, based on sound physics, and explains many features of the field: its creation, rapid ***reversals*** during the Genesis Flood, surface intensity decreases and ***increases*** until the time of Christ, and a steady decay since then. This theory matches paleomagnetic, historic and present data. The main result is that the field's total energy (***not*** surface intensity) has always decayed at least as fast as now. At that rate the field could not be more than **10,000 years** old.

6. Many Strata Are Too Tightly Bent

In many mountainous areas, strata thousands of feet thick are bent and folded into hairpin shapes. The conventional geologic timescale has these formations deeply buried and solidified for ***hundreds of millions of years*** before they were bent. Yet the folding occurred without cracking, with radii so small that the entire formation had to be still wet and unsolidified when the bending occurred. This implies that the folding was fewer than **thousands of years** after deposition.

7. Helium In The Wrong Places

All naturally occurring families of radioactive elements generate helium as they decay. If such decay took place for billions of years, as alleged by evolutionists, much helium should have found its way into Earth's atmosphere.The rate of loss of helium from the atmosphere into space is calculable and small. Taking that loss into account, the atmosphere today has only 0.05% of the amount of helium it would have accumulated in 5 billion years. This means the atmosphere is much younger than the alleged evolutionary age.

A study published in the *Journal of Geophysical Research* shows that helium produced by radioactive decay in deep, hot rocks has not had time to escape. Though the rocks are supposed to be over ***one billion years*** old, their large helium retention suggests an age of **thousands of years**.

8. Not Enough Stone Age Skeletons

Evolutionary anthropologists say that the Stone Age lasted for at least ***100,000 years***, during which time the world population of Neanderthal and Cro-Magnon men was roughly constant, between 1 and 10 million. All that time they were burying their dead with artifacts. By this scenario, they would have buried at least 4 billion bodies. If the evolutionary timescale is correct, buried bones should be able to last for much longer than 100,000 years; so, many of the supposed 4 billion Stone Age skeletons should still be around (and certainly the buried artifacts). Yet only a few thousand have been found. This implies that the Stone Age was much shorter than evolutionists think, **a few hundred years** in many areas.

9. History Is Too Short

According to evolutionists, Stone Age man existed for ***100,000 years*** before beginning to make written records about **4,000 to 5,000 years** ago. Prehistoric man built megalithic monuments, made beautiful cave paintings and kept records of lunar phases. Why would he wait a thousand centuries before using the same skills to record history? The biblical timescale is much more likely.

—Adapted from the writings of D. Russell Humphreys, Ph.D.

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Adam's Rib, Bones & Bridges & a Young Earth!

A head-on impact with a fully laden fuel tanker at highway speeds is an experience I would hope for none to share. God clearly had plans for me—He brought me through it. During the five months in the hospital, and for years afterwards, I underwent 55 episodes of surgery to reconstruct various parts of me, particularly the bones in my face.

These operations often required using my own bone for grafting. I noticed that the plastic surgeon would keep going back to the right side of my ribcage (through the same horizontal scar) to get more bone for these procedures. One day I asked him why he hadn't "run out of bone." He explained to me that he and his team took the whole rib out ***each time***. "We leave the periosteum intact, so the rib usually just grows right back."

Despite having trained and practiced as a family doctor, I was intrigued; I had never realized this before. The ***periosteum*** (literally: "around the bone") is a membrane that covers every bone—it's the reason you can get things stuck between your teeth while gnawing on a leg of lamb. The periosteum contains cells that can manufacture new bone. Particularly in young people, "rib periosteum has a remarkable ability to regenerate bone, perhaps more so than any other bone."

Thoracic (chest) surgeons routinely remove ribs, and these often grow back, in whole or in part. A lot depends on the care with which the rib is removed; it needs to be "peeled" out of its periosteum to leave this membrane as intact as possible. A major reason why the rib is the ideal situation for such regeneration is that the attached intercostal muscles provide it with a good blood supply.

When the surgeon told me this, my first thought was—"Wow, Adam didn't have to walk around with a defect!" Eve was created as "the LORD God caused a deep sleep to fall upon Adam, and he slept: and He took one of his ribs, and closed up the flesh instead thereof" *(Gen 2:21)*. Some believe that men have one less rib than women; but they have the same number. Some anticreationists have used the fact that men don't have any missing ribs today to mock a "literal" Genesis.

For years before my accident, when asked about