Fossils: The story they tell us

by Carlos F. Steger

The study of fossils in South America affirms the history of a global catastrophe.

One of the most significant evidences evolutionists offer in support of their theory of origins is derived from paleontology.[1] Paleontologists study animal and plant fossils—remnants or traces of organisms that existed in the past, such as a skeleton, footprint, or leaf imprint. As a science, paleontology is linked both to geology—because it studies fossils embedded in the layers and rocks of the earth's crust—and to biology, since it examines ancient life forms now fossilized.[2] Although fossil finds are often used to support the theory of evolution, we will show that fossils cry out in support of the biblical story of a universal flood. Our examples are mostly taken from South American fossil findings, an area of the world in which I have conducted considerable research.

The study of fossils is an ancient science. The Egyptians and the Greeks identified fossils of marine animals. Leonardo da Vinci defined fossils as the remains of organisms from the past, and Alessandro, his fellow countryman, explained their presence in the mountains as caused by the emergence of the marine bed.[3] During the 16th century, Gesner published a catalog of the first European fossil collection. Discoveries of fossils and explanations regarding their origin followed one another from the 17th century on.[4]

Etymologically, *fossil* means something dug up or extracted from the earth. The term is also applied to all evidence of life from the remote past.[5] An organism turns into a fossil only under certain circumstances:

1. The organism must experience rapid burial in order to be isolated and thus escape destruction from mechanical, chemical, and biological factors in its environment. All fossils are thus an evidence of that burial.[6]
2. The organism must be preserved by mineral salts, generally calcium or silica, dissolved in the sediment that buries it.[7]
3. This mineralization is produced by the pressure caused by the sediment, making the salts penetrate the organism.

In certain cases, the organism may be completely preserved by freezing, by enclosement in resin (amber), or by being buried in an asphalt pit or a peat bog.[8]

Originally, paleontology focused its attention on fossilized organisms, either complete or parts of them. In recent times, however, the interest of paleontologists' investigations has broadened to include various manifestations of ancient organisms, such as their interior and/or exterior molds, burrows, excrements (called coprolites), footprints, and tracks, as well as all other evidence indicating not only the presence, but also the direct action of an organism. An example of this are the now-petrified marks left on the mud by plant remains being dragged away by water.[9] Some authors even include ripple marks and traces of raindrops in this category.

Caution needed

One persistent risk in the study of fossils needs to be pointed out. In cases where only parts of the organism are found, or the organism has been altered by the fossilization process, scientists

The author (left) uncovering the fossilized cranium of a whale.

find it necessary to reconstruct the represented organism in order to interpret the fossil, comparing it to present organisms and/or similar fossils. This task is subject to the presuppositions and the imagination of the one who performs the reconstruction, therefore cannot be totally objective or reliable.[10]

The same applies to the classification of fossils. Many authors recognize that their classification systems, besides being artificial, presuppose the acceptance of a personal worldview.[11] Because of this subjective element in interpretation and/or reconstruction and the incomplete information available, we can expect errors in researchers' conclusions. In addition, there have been cases in which the investigator has succumbed to his or her "paradigm," falsifying facts, specially in the field of paleoanthropology (the study of human fossils).[12]

Stratigraphy and fossils

During the 18th century, W. Smith proposed characterizing geological formations by the fossils found in them. This principle is applied in paleontology and geology.[13] Although an uninterrupted succession of fossils and rocks cannot be found anywhere in the world, scientists created an ideal geologic column correlating fossils and sediments from different places, mostly from Europe.[14]

To characterize each "period" in the geologic column, "guide fossils"—peculiar fossils found in that layer—were used. A striking characteristic of the geologic column is the sudden emergence and disappearance of some of those "guide fossils," without evidence of their direct ancestors or descendants.[15]

The stratigraphic column may be interpreted on the basis of two theories or models: uniformitarianism (or actualism) and catastrophism (or diluvialism), to which we now turn our attention.

Uniformitarianism as a model

Several Greek philosophers held to the theory that current natural phenomena helped explain events from the past. In 1788, J. Hutton adopted this idea in developing his theory of the history of the earth by affirming that he did not observe "any vestige of a beginning, nor any prevision of an end."[16] This theory, applied to geology and paleontology, is known as uniformitarianism or actualism. It proposes that all phenomena may be explained as the result of forces that have operated uniformly from the origin of life to the present time. Let us evaluate this model in view of the paleontological evidence.

Scientists who adhere to uniformitarianism ignore the origin of the representatives from most of the current "phyla" in the Cambrian period—the first period in the Paleozoic era—and call their sudden appearance "the explosion of life."[17] That is why current taxonomy, which facilitates the classification of fossils based on evidences of small change in nature, is applied by paleontologists. Some authors propose a phyletic series (the ancestral history) of some animals, such as the horse. But it is difficult to base them on the fossil record. There are always "missing links," according to S. J. Gould.[18]

Gerald Kerkut points out that the *Seymouria*, a supposed "link between amphibians and reptiles, [was] unfortunately found. . . 20 million years" after their appearance.[19] According to some paleontologists, the gaps are notorious.[20] Thus the archaeopteryx, formerly considered a "link," is now recognized as a bird.[21]

Since paleontology does not provide evidence of the gradual evolution of organisms proposed by Darwin, some paleontologists have adopted S. J. Gould's ingenious theory of "saltatory evolution" or "punctuated equilibria," which proposes that evolution has occurred in unexplained but progressive "jumps." Others are still trying to demonstrate the progressive effect of accumulated small variations.[22]

The standard interpretation of the fossil record confronts four unique challenges:

1. The constancy of some life forms throughout the geological eras, called homeostasis. There are plants and animals that have not changed since the Cambrian or later periods, such as the opossum, which has remained without variation since the Cretaceous until today. Among plants are the cycads (that resemble palms), which have remained the same since the Carboniferous.[23]
2. The reduction in size or the loss of complexity in several organisms, which reveals devolution or evolutionary regression rather than increase in size or complexity. In some cases, when an atrophied part remains, it is designated a

"vestigial organ or member." Such is the case of the horse, as shown by the remains of its ancestors.[24]

We can also mention the bird *Argentavis magnificens*, from La Pampa, Argentina, and the penguin in the Antarctic as examples of animal size reduction in relation to their prehistoric ancestors. The *Megatherium* (giant sloth), the *Glyptodont* (giant armadillo), and the *Carcarodon megalodon* (giant shark), the terror of the Tertiary seas, are other examples of reduction in size.[25]

Fossil records of many invertebrates reveal an "evolutionary decrease in diversity," which "may only be justified by an evolutionary decline." That is the case of cephalopods, crinoids, and brachiopods.[26]

3. Plants or animals thought to be extinct millions of years ago have been discovered to still be alive today. Some authors designate them as "living fossils," for example, the *Coelacanth* fish, and the *Ginkgo biloba* tree.[27]
4. Finally, there are fossils that oppose the commonly accepted theory. Instead of vertebrates' ancestors having cartilaginous skeletons, they have just the opposite in the case of *ostracoderms*.[28]

Catastrophism as a model

The concept of a universal catastrophe, such as the flood described in the Bible, is present in many traditions from every continent.[29] Are these traditions a mere coincidence? Or do they point to a real cataclysmic event vividly remembered through many generations? Some authors, such as Derek Ager, affirm that the earth's sediments were deposited in and by water, by a catastrophe. These authors further suggest catastrophic events as the cause of sudden appearances and disappearances of organisms in the fossil record, although most of them do not accept the idea of a global catastrophe.[30]

Partial skeleton of a Mesosaurus from Sao Paulo, Brazil.

In the late 1600s, T. Burnet published a book about the world's origin and its destruction by the Flood, earning Isaac Newton's praise. Great naturalists from the 19th century such as Cuvier and D'Orgigny also defended the Flood theory. Trying to adjust the biblical record to the scientific knowledge of their day, they presented interpretations that discredited the Bible in the scientific world.[31]

Much of the evidence of the fossil record, which is only possible due to a rapid burial, can be explained through H. W. Clark's "ecological zonation theory." This theory presumes the burial of organisms in their respective habitats as the waters swept the earth, thus producing the succession of fossils.[32]

Conventional geology affirms that as a result of the bascular movement of the continents, which raised and lowered them, marine ingressions covered most of South America.[33] We suggest that these "ingressions" could have been part of the catastrophic event known as the biblical flood. This would explain the presence of ammonites (marine invertebrates) at altitudes of thousands of feet in the middle of the Andes Mountains going up through Cajón del Maipo, near Santiago, Chile, or on the other side of the Andes in Neuquén, Argentina.

Many fossils provide evidence that they did not live in the place where they were discovered.[34] The orientation of tree trunks and the absence of root systems in petrified forests of the Patagonia, in Southern Argentina, reveal transportation prior to burial. The most probable agent of such transportation is water, as demonstrated by Harold Coffin's study of the Mount St. Helens catastrophe in the United States.[35]

The same can be applied to the ecology of animal and plant life within the same geological period. Fossils of animals and those of plants that should have served as their food frequently do not appear together, as expected. This can be seen not only in North America, but also in South America, as in the case of dinosaurs in Patagonia.

The best explanation for big charcoal and oil deposits are the catastrophic events that produced the accumulation and later burial of immense quantities of plants and animals.[36]

At La Portada, nine miles north of Antofagasta, Chile, there is an enormous accumulation of marine shell fossils. It is a "shell bank" with an average thickness of 165 feet, and an extension of many miles. Its most probable cause is the action of water followed by a rapid burial. But does this occur today? Some investigators affirm that "shells cannot permanently accumulate on the sea floor," and they add, "the question frequently raised about why so little is preserved,...had to be why anything is preserved at all."[37]

The anguished position at the moment of their violent death, revealed by many fossilized animals such as the fish of the Santana Formation of Brazil, offers undeniable evidence of catastrophism. Another evidence is the exquisite preservation of small fish and insects from the same formation in the state of Ceará, Brazil, with all the details of their delicate structure.[38]

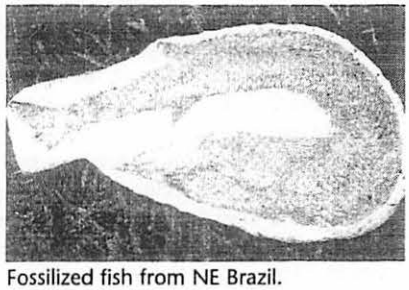
Tridimensional animal fossils, which are very rare, give evidence of a live burial or a burial immediately after death. A study of some fish from the Santana Formation has revealed para-

sites (copepods) in their gills. Investigation showed that the petrification of some specimens had to have started while the animal was alive.[39] The same phenomenon is seen in trilobite fossils from Jujuy, Argentina, and between La Paz and Oruro, in the Bolivian Altiplano. At the Quebrada de Humahuaca, in Jujuy, and at the Tunari Mountain, in Vinto, Cochabamba, Bolivia, the preservation of "cruzianas" (trilobite tracks) is even more remarkable.

Another evidence of rapid burial of living organisms is the closed and petrified oysters found along the small streams near Libertador San Martín, in Entre Ríos, Argentina, and in many places in the Argentinian Patagonia.[40]

Mesosaurus´ delicate, articulated skeletons can be found in the limestones from the state of Sao Paulo, Brazil. According to uniformitarian geology, each layer of sediments required one year to deposit, but the diameter of many of these small dinosaur bones exceeds the width of one layer. If the uniformitarian model is accepted, one needs to accept also that the fragile bones of the Mesosaurus were exposed to destructive agents for one year without being disarticulated or degraded before the next sediment was deposited—an unreal scenario.

Kurtén points out: "Many whole skeletons of these dinosaurs [Hadrosaurs] have been found in a swimming position and with their head pulled back, as if agonizing."[41] This, again, provides support for the catastrophic model.



Fossilized fish from NE Brazil.

Conclusion

What story do fossils, including those found in South America, tell us? They speak of catastrophic burial by water in many areas of the world, thus contradicting the uniformitarian model. A growing number of modern geologists concur with this view, although they may not accept the theory of a universal flood. Those of us who rely in the biblical story of a universal flood find in the fossil record abundant evidence that the surface of the earth once experienced the convulsions of a catastrophic destruction.

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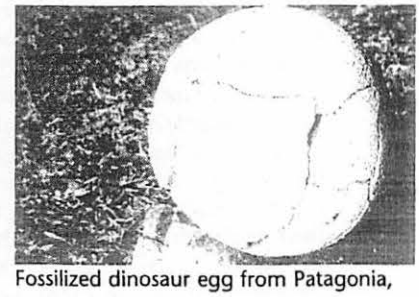

Fossilized dinosaur egg from Patagonia, Argentina.

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