Creation, Evolution, and the Historical Evidence

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• Although the views presented in this article are not acceptable to the majority of life scientists, the editorial staff feels that our membership should be aware of the creationist position as described by Duane T. Gish.

FOR A CLEAR UNDERSTANDING of the issues to be discussed in this paper, I must begin by defining evolution and creation. When the term evolution is used it will refer to the general theory of organic evolution, or the molecules-to-man theory of evolution. According to this theory all living things have arisen by naturalistic, mechanistic, evolutionary processes from a single living source, which itself had arisen by similar processes from inanimate matter. These processes are attributable solely to properties inherent in matter and are, therefore, still operative today. Creation theory postulates, on the other hand, that all basic animal and plant types (the created kinds) were brought into being by the acts of a preexisting Being by means of special processes that are not operative today. The variation that has occurred since creation has been restricted within the limits of each created kind.

Evolutionists adamantly insist that special creation be excluded from any consideration as a possible explanation for origins, because it does not qualify as a scientific theory. The proponents of evolution theory at the same time would view as unthinkable the consideration of evolution as anything less than pure science; and indeed most of them insist that evolution must no longer be thought of as a theory, but must be considered to be a fact.

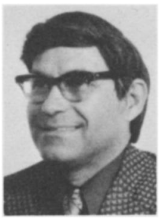
What Is Theory? What Is Fact?

What criteria must be met for a theory to be considered scientific in the usually accepted sense? George Gaylord Simpson (1964) has stated, "It is inherent in any definition of science that statements that cannot be checked by observation are not really about anything . . . or at the very least, they are not science." A definition of science in the *Oxford English Dictionary* is "a branch of study which is concerned either with a connected body of *demonstrated truths* or with *observed facts* systematically classified and more or less colligated by being brought under general laws, and which includes trustworthy methods for the discovery of new truth within its own domain" (emphasis added).

Thus, for a theory to qualify as a scientific theory, it must be supported by events or processes that can be observed to occur, and the theory must be useful in predicting the outcome of future natural phenomena or laboratory experiments. An additional limitation usually imposed is that the theory must be capable of falsification; that is, one must be able to conceive some experiment the failure of which would disprove the theory. It is on the basis of such criteria that most evolutionists insist that creation be refused consideration as a possible explanation for origins. Creation has not been witnessed by human observers, it cannot be tested scientifically, and as a theory it is nonfalsifiable.

The general theory of evolution (molecules-to-man theory) also fails to meet all three of these criteria, however. Dobzhansky (1958), while seeking to affirm the factuality of evolution, actually admits that it does not meet the criteria of a scientific theory, when he says, "The occurrence of the evolution of life in the history of the earth is established about as well as events *not witnessed by human observers* can be" (emphasis added).

Goldschmidt, who has insisted that evolution is a fact for which no further proof is needed, also reveals its failure to meet the usual accepted criteria for a scientific theory. After outlining his postulated systemic-mutation, or "hopeful monster," mechanism for evolution, Goldschmidt (1952, p. 94) states, "Such an assumption is violently opposed by the majority of geneticists, who claim that the facts found on the



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sub-specific level must apply also to the higher categories. Incessant repetition of this *unproved claim*, glossing lightly over the difficulties, and the assumption of an arrogant attitude toward those who are not so easily swayed by fashions in science, are considered to afford scientific proof of the doctrine. It is true that nobody thus far has produced a new species or genus, etc., by macromutation. It is equally true that nobody has produced even a species by the selection of micromutations" (emphasis added). Later in the same paper (p. 97) he says, "Neither has anyone witnessed the production of a new specimen of a higher taxonomic category by selection of micromutants." Goldschmidt has thus affirmed that, in the molecules-to-man context, only the most trivial change, or that at the subspecies level, has actually ever been observed.

Furthermore, the architects of the modern synthetic theory of evolution have so skillfully constructed their theory that it is not capable of falsification. The theory is so plastic that it is capable of explaining anything. This is the complaint of Olson (1960, p. 530) and of several participants in the Wistar Symposium on Mathematical Challenges to the Neo-Darwinian Interpretation of Evolution (Moorhead and Kaplan, 1967)—even including Ernst Mayr, a leading exponent of the theory. Eden (1967, p. 71), one of the mathematicians, puts it this way, with reference to falsifiability: "This cannot be done in evolution, taking it in its broad sense, and this is really all I meant when I called it tautologous in the first place. It can, indeed, explain anything. You may be ingenious or not in proposing a mechanism which looks plausible to human beings and mechanisms which are consistent with other mechanisms which you have discovered, but it is still an unfalsifiable theory."

A Rising Tide of Criticism

In addition to scientists who are creationists, a growing number of other scientists have expressed doubts that modern evolution theory could explain more than trivial change. Eden (1967, p. 109) is so discouraged, after a thorough consideration of the modern theory from a probabilistic point of view, that he proclaims, "an adequate scientific theory of evolution must await the discovery and elucidation of new laws—physical, physico-chemical, and biological." Salisbury (1969, 1971) similarly expresses doubts based on probabilistic considerations.

The attack on the theory by French scientists has been intense in recent years. In a review of the French situation Litynski (1961) says, "This year saw the controversy rapidly growing, until recently it culminated in the title 'Should We Burn Darwin?' spread over two pages of the magazine *Science et Vie*. The article, by the science writer Aimé Michel, was based on the author's interviews with such specialists as Mrs. Andrée Tetry, professor at the famous Ecole des Hautes Etudes and a world authority on problems of evolution, Professor René Chauvin and other noted French biologists, and on his thorough study of some 600 pages of biological data collected, in collaboration with Mrs. Tetry, by the late Michael Cuenot, a biologist of international fame. Aimé Michel's conclusion is significant: the classical theory of evolution in its strict sense belongs to the past. Even if they do not publicly take a definite stand, almost all French specialists hold today strong mental reservations as to the validity of natural selection."

E. C. Olson (1960, p. 523), one of the speakers at the Darwinian Centennial Celebration at Chicago, made the following statement on that occasion: "There exists, as well, a generally silent group of students engaged in biological pursuits who tend to disagree with much of the current thought but say and write little because they are not particularly interested, do not see that controversy over evolution is of any particular importance, or are so strongly in disagreement that it seems futile to undertake the monumental task of controverting the immense body of information and theory that exists in the formulation of modern thinking. It is, of course, difficult to judge the size and composition of this silent segment, but there is no doubt that the numbers are not inconsiderable."

Fothergill (1961) refers to what he calls "the paucity of evolutionary theory as a whole." Ehrlich and Holm (1962) have stated their reservations in the following way: "Finally, consider the third question posed earlier: 'What accounts for the observed patterns in nature?' It has become fashionable to regard modern evolutionary theory as the *only* possible explanation of these patterns rather than just the best explanation that has been developed so far. It is conceivable, even likely, that what one might facetiously call a non-Euclidean theory of evolution lies over the horizon. Perpetuation of today's theory as dogma will not encourage progress toward more satisfactory explanations of observed phenomena."

Sometimes the attacks are openly critical. Such is Danson's letter that appeared recently in *New Scientist*. He states in part, "The Theory of Evolution is no longer with us, because neo-Darwinism is now acknowledged as being unable to explain anything more than trivial changes and in default of some other theory we have none. . . . despite the hostility of the witness provided by the fossil record, despite the innumerable difficulties, and despite the lack of even a credible theory, evolution survives . . . . Can there be any other area of science, for instance, in which a concept as intellectually barren as embryonic recapitulation could be used as evidence for a theory?" (Danson, 1971).

Macbeth (1971) has provided an especially incisive criticism of evolution theory. He points out that although evolutionists have abandoned classical Darwinism, the modern synthetic theory they have proposed as a substitute is equally inadequate to explain progressive change as the result of natural selection; as a matter of fact, they cannot even define natural

selection in nontautologous terms. Inadequacies of the present theory and failure of the fossil record to substantiate its predictions leave macroevolution, and even microevolution, intractable mysteries, according to Macbeth. He suggests that no theory at all may be preferable to the existing one.

In view of the above considerations, it is incredible that leading scientists, including several who addressed the NABT convention in San Francisco, dogmatically insist that the molecules-to-man evolution theory be taught as a fact to the exclusion of all other postulates. Evolution in this broad sense is unproven and unprovable and thus cannot be considered to be fact. It is not subject to test by the ordinary methods of experimental science: observation and falsification. It thus does not, in a strict sense, even qualify as a scientific theory. It is a postulate, and it may serve as a model within which attempts may be made to explain and correlate the evidence from the historical record—that is, the fossil record—and to make predictions concerning the nature of future discoveries.

Creation is, of course, unproven and unprovable by the methods of experimental science. Neither can it qualify, according to the above criteria, as a scientific theory, because creation would have been unobservable and, as a theory, would be nonfalsifiable. Creation is therefore (like evolution) a postulate that may serve as a model to explain and correlate the evidence relating to origins. Creation is, in this sense, no more religious or less scientific than evolution. In fact, to many well-informed scientists creation seems to be far superior to the evolution model as an explanation for origins.

I strongly suspect that the dogmatic acceptance of evolution is not due, primarily, to the nature of the evidence but to the philosophic bias peculiar to our times. Watson (1929), for example, has referred to the theory of evolution as "a theory universally accepted not because it can be proved by logically coherent evidence to be true but because the only alternative, special creation, is clearly incredible."

That this is the philosophy held by most biologists has been recently emphasized by Dobzhansky. In his review of Monod's book *Chance and Necessity* Dobzhansky (1972) says, "He has stated with admirable clarity, and eloquence often verging on pathos, the mechanistic materialist philosophy shared by most of the present 'establishment' in the biological sciences."

Two Models to Be Tested

The exclusion of creation from science-teaching as a credible explanation of origins is unwarranted and undesirable on both philosophic and scientific grounds. Under the present system, whereby evolution is taught as an established fact to the exclusion of creation, the student is being indoctrinated in a philosophy of secular humanism rather than benefiting from an objective presentation of the evidence.

This situation could be remedied by (i) presenting creation and evolution in the form of models, (ii) making predictions based on each model, and (iii) comparing the actual scientific evidence with the predictions of the models. The students would then be able to make up their minds on the basis of this objective presentation. This is what I would like to do in the remainder of this paper. I will restrict myself to an examination of the fossil record.

Although various scientific fields could be investigated in attempts to determine which model appears to be the more plausible of the two, the fossil record offers the only source of scientific evidence that would allow a determination of whether living organisms actually did arise by creation or by an evolutionary process. The case is well stated by Le Gros Clark (1955) when he says, "That evolution actually *did* occur can only be scientifically established by the discovery of the fossilized remains of representative samples of those intermediate types which have been postulated on the basis of the indirect evidence. In other words, the really crucial evidence for evolution must be provided by the paleontologist whose business it is to study the evidence of the fossil record." Gavin de Beer (1964) echoes this view when he states, "The last word on the credibility and course of evolution lies with the paleontologists."

In his revolutionary work *The Origin of Species,* Darwin (1859) says, "the number of intermediate and transitional links, between all living and extinct species, must have been inconceivably great." This conclusion seems inescapable, whether it be based either on the concepts of classical Darwinism or on those of the modern synthetic theory. Because the number of transitional forms predicted by evolution theory is inconceivably great, the number of such forms that would have become fossilized, according to this theory, would have been very great indeed, even though only a very minute fraction of all plants and animals that ever existed had become fossilized.

Sampling of the fossil record has now been so thorough that appeals to the imperfections in the record are no longer valid. George (1960, p. 1) has stated, "There is no need to apologize any longer for the poverty of the fossil record. In some ways it has become almost unmanageably rich and discovery is outpacing integration." It seems clear, then, that after 150 years of intense searching, a very large number of obvious transitional forms would have been discovered if the predictions of evolution theory are valid.

On the basis of the creation model, on the other hand, the virtual absence of apparent transitional forms between the higher categories or created kinds would be predicted. The presence of apparent transitional forms could not be rigidly excluded, however, for two reasons: (i) tremendous diversity is exhibited within each major type of plant and animal and (ii) possession of similar modes of existence or activities would require similar structures or func-

tions. On the basis of the creation model such pseudo-transitional forms should be rare and would not be connected by intermediate types. Gaps in the fossil record, therefore, should be systematic and nearly universal between the higher categories or created kinds. The fossil record should permit a clear choice between the two models.

The two models may thus be constructed as follows:

Creation model	*Evolution model*
By acts of a Creator	By naturalistic, mechanistic processes due to properties inherent in inanimate matter
Creation of basic plant and animal kinds with ordinal characteristics complete in first representatives	Origin of all living things from a single living source, which itself arose from inanimate matter. Origin of each kind from an ancestral form by slow, gradual change
Variation and speciation limited within each kind	Unlimited variation. All forms genetically related

These two models would permit the following predictions to be made about the fossil record:

Creation model	*Evolution model*
Sudden appearance in great variety of highly complex forms	Gradual change of simplest forms into more and more complex forms
Sudden appearance of each created kind with ordinal characteristics complete. Sharp boundaries separating major taxonomic groups. No transitional forms between higher categories	Transitional series linking all categories. No systematic gaps

Let us now compare the known facts of the fossil record with the predictions of the two models.

Advent of Life in the Cambrian

The oldest rocks in which indisputable fossils are found are those of the Cambrian Period. In these sedimentary deposits are found billions and billions of fossils of highly complex forms of life. These include sponges, corals, jellyfish, worms, mollusks, and crustaceans; in fact, every one of the major invertebrate forms of life has been found in Cambrian rocks. These animals were so highly complex that, it is conservatively estimated, they would have required 1.5 billion years to evolve.

What do we find in rocks older than the Cambrian? Not a single, indisputable multicellular fossil has ever been found in Precambrian rocks. Certainly it can be said without fear of contradiction that the evolutionary ancestors of the Cambrian fauna, if they ever existed, have never been found (Simpson, 1960, p. 143; Cloud, 1968; Axelrod, 1958).

Concerning this problem, Axelrod (1958) has stated, "One of the major unsolved problems of geology and evolution is the occurrence of diversified, multicellular marine invertebrates in Lower Cambrian rocks on all the continents and their absence in rocks of greater age." After discussing the varied types that are found in the Cambrian, Axelrod goes on to say, "However, when we turn to examine the Precambrian rocks for the forerunners of these Early Cambrian fossils they are nowhere to be found. Many thick (over 5,000 feet) sections of sedimentary rock are now known to lie in unbroken succession below strata containing the earliest Cambrian fossils. These sediments apparently were suitable for the preservation of fossils because they are often identical with overlying rocks which are fossiliferous, yet no fossils are found in them."

From all appearances, then, based on the known facts of the historical record, there occurred a sudden great outburst of life at a high level of complexity. The fossil record gives no evidence that these Cambrian animals were derived from preceding, ancestral forms. Furthermore, not a single fossil has been found that can be considered to be a transitional form between the major groups, or phyla. At their earliest appearance these major invertebrate types were just as clearly and distinctly set apart as they are today.

How do these facts compare with the predictions of the evolution model? They are in clear contradiction to such predictions. This has been admitted, for instance, by George (1960, p. 5), who states, "Granted an evolutionary origin of the main groups of animals and not an act of special creation, the absence of any record whatsoever of a single member of any of the phyla in the Precambrian rocks remains as inexplicable on orthodox grounds as it was to Darwin." Simpson has struggled valiantly but not fruitfully with this problem and has been forced to concede (1949, p. 18) that the absence of Precambrian fossils (other than alleged fossil microorganisms) is the "major mystery of the history of life."

These facts, however, are in full agreement with the predictions of the creation model. The fossil record *does* reveal (i) a sudden appearance, in great variety, of highly complex forms with no evolutionary ancestors and (ii) the absence of transitional forms between the major taxonomic groups, just as postulated on the basis of creation. Most emphatically, the known facts of the fossil record from the very outset support the predictions of the creation model but unquestionably contradict the predictions of the evolution model.

Discrete Nature of Vertebrate Classes

The remainder of the history of life reveals a remarkable absence of the many transitional forms demanded by the theory. There is, in fact, a *systematic* deficiency of transitional forms between the higher categories, just as predicted by the creation model.

The idea that the vertebrates are derived from the invertebrates is purely an assumption that cannot be documented from the fossil record. In the history of

the study of the comparative anatomy and embryology of living forms almost every invertebrate group has been proposed, at one time or another, as the ancestor of the vertebrates (E. G. Conklin, as quoted in Allen, 1969; Romer, 1966, p. 12). The transition from invertebrate to vertebrate supposedly passed through a simple chordate stage. Does the fossil record provide evidence for such a transition? Not at all. Ommaney (1964) has stated, "How this earliest chordate stock evolved, what stages of development it went through to eventually give rise to truly fishlike creatures we do not know. Between the Cambrian when it probably originated, and the Ordovician when the first fossils of animals with really fishlike characteristics appeared, there is a gap of perhaps 100 million years which we will probably never be able to fill."

Incredible! 100 million years of evolution and no transitional forms! All hypotheses combined, no matter how ingeniously, could never pretend, on the basis of evolution theory, to account for a gap of such magnitude. Such facts, on the other hand, are in perfect accord with the predictions of the creation model.

A careful reading of Romer's *Vertebrate Paleontology* (1966) seems to allow no other conclusion than that the major classes of fish are clearly and distinctly set apart from one another, with no transitional forms linking them. The fossil record has not produced ancestors or transitional forms for these classes. Hypothetic ancestors and the required transitional forms must, on the basis of the known record, be merely the products of speculation. How then can it be argued that the evolution model's explanation of such evidence is more scientific than that of the creation model?

The fossil record has been diligently searched for a transitional series linking fish to amphibian, but as yet no such series has been found. The closest link that has been proposed is that allegedly existing between rhipidistian crossopterygian fish and the amphibians of the genus *Ichthyostega,* of the labyrinthodont family Ichthyostegidae. There is a tremendous gap, however, between the crossopterygians and the ichthyostegids—a gap that would have spanned many millions of years, during which innumerable transitional forms should have existed. These transitional forms should reveal a slow, gradual change of the pectoral and pelvic fins of the crossopterygian fish into the feet and legs of the amphibian, along with loss of other fins, and the accomplishments of other transformations required for adaptation to a terrestrial habitat.

What is the fact? Not a single transitional form has ever been found showing an intermediate stage between the fin of the crossopterygian and the foot of the ichthyostegid. The limb and the limb-girdle of *Ichthyostega* is already of the basic amphibian type, showing no vestige of a fin ancestry.

The extremely broad gap between fish and amphibians, as observed between the rhipidistian crossopterygians and the ichthyostegids; the sudden appearance, in fact, of all Paleozoic amphibian orders with diverse ordinal characteristics complete in the first representatives; the absence of any transitional forms between these Paleozoic orders; and the absence of transitional forms between the Paleozoic orders and the three living orders—all these conditions are contradictory to the predictions of the evolution model. These facts, however, are just as predicted by the creation model.

It is at the amphibian–reptilian and the reptilian–mammalian boundaries that strongest claims have been advanced for transitional types bridging classes. But these are just those classes that are most closely similar in skeletal features; that is, the parts that are preserved in the fossil record.

The conversion of an invertebrate into a vertebrate, a fish into a tetrapod with feet and legs, and a nonflying animal into a flying animal are a few examples of changes that would require a revolution in structure. Such transformations should provide readily recognizable transitional series in the fossil record if they occurred through evolutionary processes. On the other hand, if the creation model is the true model, it is at just such boundaries that the absence of transitional forms would be most evident.

The opposite is true at the amphibian–reptilian and reptilian–mammalian boundaries—particularly the former. Although it is feasible to distinguish between living reptiles and amphibians on the basis of skeletal features, they are much more readily distinguishable by means of their soft parts; and, in fact, the major definitive characteristic that separates reptiles from amphibians is the possession by the reptile, in contrast with the amphibian, of the amniote egg.

Many of the diagnostic features of mammals, of course, reside in their soft anatomy or their physiology. These include their mode of reproduction, warm-bloodedness, mode of breathing due to possession of a diaphragm, suckling of the young, and possession of hair.

The two most easily distinguishable osteologic differences between reptiles and mammals, however, have never been bridged by transitional series. All mammals, living or fossil, have a single bone, the dentary, on each side of the lower jaw; and all mammals, living or fossil, have three auditory ossicles, or ear bones: the malleus, incus, and stapes. In some fossil reptiles the number and size of the bones of the lower jaw are reduced, by comparison with those of living reptiles. Every reptile, living or fossil, however, has at least four bones in the lower jaw and only one auditory ossicle, the stapes. There are no transitional forms showing, for instance, three or two jaw bones or two ear bones. No one has explained yet, for that matter, how the transitional form would have managed to chew while its jaw was being unhinged and rearticulated or how it would hear while dragging two of its jaw bones up into its ear.

Special Features of Flying Animals

The origin of flight should provide excellent case histories for testing the evolution model vs. the creation model. Almost every structure in a nonflying animal would require modification for flight, and resultant transitional forms should be easily detectable in the fossil record. Flight is supposed to have evolved four times, separately and independently: in insects, birds, mammals (bats), and reptiles (pterosaurs, now extinct). In each case the origin of flight is supposed to have required many millions of years, and almost innumerable transitional forms would have been required in each case. Yet not in a single case can anything even approaching a transitional series be produced.

E. C. Olson, an evolutionist and geologist, in his book *The Evolution of Life* (1965) states that "As far as flight is concerned there are some very big gaps in the record" (p. 180). Concerning insects he says, "There is almost nothing to give any information about the history of the origin of flight in insects" (p. 180). Concerning flying reptiles, Olson reports that "True flight is first recorded among the reptiles by the pterosaurs in the Jurassic Period. Although the earliest of these were rather less specialized for flight than the later ones, there is absolutely no sign of intermediate stages" (p. 181). As for birds: Olson refers to *Archaeopteryx* as "reptile-like" but says that in possession of feathers "it shows itself to be a bird" (p. 182). Finally, with reference to mammals Olson states that "The first evidence of flight in mammals is in *fully developed* bats of the Eocene epoch" (p. 182; emphasis added).

Thus, in not a single investigation of the origin of flight has a transitional series been documented. In the case of *Archaeopteryx*—a so-called intermediate —all paleontologists now acknowledge that it was a true bird. It had wings; it was completely feathered; it flew. It was not a half-way bird; it *was* a bird. No transitional form with part-wings and part-feathers has ever been found.

The alleged reptilian features of *Archaeopteryx* consist of the clawlike appendages on the leading edges of its wings and the possession of teeth and of vertebrae that extend out along the tail. It is believed to have been a poor flier, with a small keel on the sternum. Although such features might be expected if birds had evolved from reptiles, in no sense of the word do they constitute proof that *Archaeopteryx* was an intermediate between reptile and bird. For example, there is a bird living today in South America—the hoatzin, *Opisthocomus hoazin*—which in the juvenile stage possesses two claws. Furthermore, it is a poor flier, with an astonishingly small keel (Grimmer, 1962). This bird is unquestionably 100% bird, yet it possesses two of the characteristics that are used to impute a reptilian ancestry to *Archaeopteryx*.

Modern birds do not possess teeth; but certain ancient birds, unquestionably 100% birds, possessed teeth. Does the possession of teeth denote a reptilian ancestry for birds, or does it simply prove that some ancient birds had teeth and others did not? Some reptiles have teeth and some do not; some amphibians have teeth and some do not. In fact, this is true throughout the entire range of the vertebrate subphylum. On the principle that toothed birds are primitive and that toothless birds are more advanced, the Monotremata (the duck-billed platypus and the spiny anteater), which are mammals that do not possess teeth, should be considered more "advanced" than humans. Yet in every other respect these egg-laying mammals are considered to be the most primitive of all mammals (although they are among the last mammals to appear in the fossil record). Just what phylogenetic value, then, can be assigned to the possession or absence of teeth?

Concerning the status of *Archaeopteryx*, Lecomte du Noüy (1947, p. 58) has stated, "Unfortunately, the greater part of the fundamental types in the animal realm are disconnected from a paleontological point of view. In spite of the fact that it is undeniably related to the two classes of reptiles and birds (a relation which the anatomy and physiology of actually living specimens demonstrates), we are not even authorized to consider the exceptional case of the *Archaeopteryx* as a true link. By link, we mean a necessary stage of transition between classes such as reptiles and birds, or between smaller groups. An animal displaying characters belonging to two different groups cannot be treated as a true link as long as the intermediary stages have not been found, and as long as the mechanisms of transition remain unknown."

What seems to be the most reasonable conclusion? I believe that the fossil record would permit no better assessment of the facts than that voiced by Swinton (1960): "The origin of birds is largely a matter of deduction. There is no fossil of the stages through which the remarkable change from reptile to bird was achieved."

The absence of any indication whatsoever from the fossil record that feathers gradually evolved is usually excused by the allegation that such delicate structures are not likely to be preserved in fossils. No such explanation is admissible, however, in the case of flying reptiles and the bats.

There are many significant differences between nonflying reptiles and flying reptiles. Again I refer to Romer's *Vertebrate Paleontology*. On p. 140 is shown a reconstruction of *Saltoposuchus* (fig. 214), which was a representative of the Triassic thecodonts —a group that Romer believes gave rise to flying reptiles (pterosaurs), dinosaurs, and birds. Comparison of this form with reconstructions of the earliest representatives among the two suborders of pterosaurs (p. 144 and 146) reveals the vast gulf between them—a gulf not bridged by fossil intermediates. A similar gulf also exists, of course, between this creature and *Archaeopteryx*.

Almost every structure in *Rhamphorhynchus*, a

long-tailed pterosaur (fig. 222, p. 144), was unique to this creature. Especially obvious (as in all pterosaurs) is the enormous length of the fourth finger, in contrast with the other three fingers possessed by this reptile. This fourth finger provided support for the wing membrane. It is certainly not a delicate structure; and if the pterosaurs evolved from the thecodonts or some other earth-bound reptile, transitional forms should have been found showing a gradual lengthening of this fourth finger. Not even a hint of such a transitional form has ever been discovered.

Even more unusual was the pterodactyloid group of pterosaurs (Romer, fig. 225, p. 146). *Pteranodon* not only had a large, toothless beak and a long, rearward-extending bony crest, but its fourth fingers supported a wingspan of 25 feet. Where are the transitional forms documenting an evolutionary origin of these and other structures unique to the pterosaurs?

The bat is presumed to have evolved from nonflying insectivores—although, as stated earlier, the oldest-known bat to appear in the fossil record is 100% bat, and no trace of a transitional form can be found (Jepsen, 1966). In the bat four of the five fingers support the membrane of the wing and are extremely long, compared with the normal hand. These and other unique structures are solid bone and are anything but delicate structures. Transitional forms, if they ever existed, should certainly have been preserved. The absence of such forms leaves unanswered, on the basis of the evolution model, such questions as when, from what, where, and how bats originated.

Now let me ask this question: concerning the origin of flight, does the creation model or the evolution model have greater support from the fossil record? To me the answer seems obvious. Not a single fact contradicts the predictions of the creation model; but the actual evidence fails miserably to support the predictions of the evolution model. Here, where transitional forms should be the most obvious and easiest to find if evolution really accounts for the origin of these highly adapted and unique creatures, *none* is found. Could the fossil record really be that cruel and capricious to evolutionary paleontologists? The historical record inscribed in the rocks literally cries "Creation!"

Systemic Discontinuity Is Pervasive

The examples cited in this paper are in no way exceptional; rather, they serve to illustrate what is characteristic of the fossil record. Although transitions at the subspecies level are observable and those at the species level may be inferred, the absence of transitional forms between higher categories (the created kinds of the creation model) is regular and systematic.

Simpson, in his book *Tempo and Mode in Evolution* (1944), under the heading "Major Systematic Discontinuities of Record" states that nowhere in the world is there any trace of a fossil that would close the considerable gap between *Hyracotherium* and its supposed ancestral order, Condylarthra. He then goes on to say (p. 106), "This is true of all the thirty-two orders of mammals . . . . The earliest and most primitive known members of every order already have the basic ordinal characters, and in no case is an approximately continuous sequence from one order to another known. In most cases the break is so sharp and the gap so large that the origin of the order is speculative and much disputed." Later (p. 107), Simpson states, "This regular absence of transitional forms is not confined to mammals, but is an almost universal phenomenon, as has long been noted by paleontologists. It is true of almost all orders of all classes of animals, both vertebrate and invertebrate. A fortiori, it is also true of the classes themselves, and of the major animal phyla, and it is apparently also true of analogous categories of plants."

In his book *The Meaning of Evolution* (1949) Simpson, with reference to the appearance of new phyla, classes, and other major groups, states (p. 231), "The process by which such *radical events* occur in evolution is the subject of one of the most serious remaining disputes among qualified professional students of evolution. The question is whether such *major events* take place *instantaneously*, by some process essentially unlike those involved in lesser or more gradual evolutionary change, or whether all of evolution, including these major changes, is explained by the same principles and processes throughout, their results being greater or less according to the time involved, the relative intensity of selection, and other material variables in any given situation." He continues: "Possibility for such dispute exists because transitions between major grades of organization are seldom well recorded by fossils. There is in this respect a tendency toward *systematic deficiency* in the record of the history of life. It is thus possible to claim that such transitions are not recorded because they did not exist, that the changes were not by transition but by sudden leaps in evolution" (emphasis added).

If phyla, classes, orders, and other major groups were connected by transitional forms rather than appearing suddenly in the fossil record with basic characteristics complete, it would not be necessary, of course, to refer to their appearance in the fossil record as "radical events." Furthermore, it cannot be emphasized too strongly that even evolutionists are arguing among themselves as to whether these major categories appeared *instantaneously* or not. It is precisely the argument of creationists that these forms *did* arise instantaneously and that the transitional forms are not recorded because they never existed. Creationists thus would reword Simpson's statement to read, "It is thus possible to claim that such transitions are not recorded because they did not exist—

that these major types arose by creation rather than by a process of gradual evolution."

In a more recent work, Simpson (1960, p. 149) says, "It is a feature of the known fossil record that most taxa appear abruptly." In the same paragraph he states further, "Gaps among known species are sporadic and often small. Gaps among known orders, classes, and phyla are systematic and almost always large."

It would hardly be necessary to document further the nature of the fossil record. It seems obvious that if the above statements of Simpson were stripped of all presuppositions and presumed evolutionary mechanisms to leave the bare record, they would describe exactly what is required by the creation model. This record is woefully deficient, however, in the light of the predictions of the evolution model.

No one has devoted himself more wholeheartedly than Simpson to what Dobzhansky (1972) has called the "mechanistic materialist philosophy shared by most of the present 'establishment' in the biological sciences." Simpson (1953, p. 360) therefore asserts that most paleontologists "find it logical, if not scientifically required, to assume that the sudden appearance of a new systematic group is not evidence for creation . . . ." He has expended considerable effort (1944, p. 105–124; 1953, p. 360–376; 1960, p. 149–152) in attempts to bend and twist every facet of evolution theory to explain away the deficiencies of the fossil record. One needs to be reminded, however, that if evolution is adopted as an a-priori principle, it is always possible to imagine auxiliary hypotheses—unproved and by nature unprovable—to make it work in any specific case. By this process biologic evolution degenerates into what Thorpe (1969) calls one of his "four pillars of unwisdom": mental evolution that is the result of random tries preserved by reinforcements.

Concerning the plant kingdom, the following remark of E. J. H. Corner (1961), of the Cambridge University botany school, is refreshingly candid: "Much evidence can be adduced in favor of the theory of evolution—from biology, biogeography and paleontology, but I still think that to the unprejudiced, the fossil record of plants is in favor of special creation."

Even in the famous horse "series," which has been so highly touted as proof of evolution within an order, transitional forms between major types are missing. Lecomte du Noüy (1947, p. 74) has stated in reference to horses, "But each one of these intermediaries seems to have appeared 'suddenly', and it has not yet been possible, because of the lack of fossils, to reconstitute the passage between these intermediaries. Yet it must have existed. The known forms remain separated like the piers of a ruined bridge. We know that the bridge has been built, but only vestiges of the stable props remain. The continuity we surmise may never be established by facts." Goldschmidt (1952, p. 97) has said, "Moreover, within the slowly evolving series, like the famous horse series, the decisive steps are abrupt."

The "Hopeful Monster" Alternative

Goldschmidt (1940; 1952, p. 84–98), in contrast with Simpson and the majority of evolutionists, accepts the discontinuities in the fossil record at face value. He rejects the neo-Darwinian interpretation of evolution (the modern synthesis), which is accepted by almost all evolutionists, at least among those who accept any theory concerning mechanisms at all. Goldschmidt instead has proposed that major categories (phyla, classes, orders, families) arose instantaneously by major saltations or systemic mutations. Goldschmidt terms this the "hopeful monster" mechanism. He has proposed, for instance, that at one time a reptile laid an egg and a bird was hatched from the egg. All major gaps in the fossil record are accounted for, according to Goldschmidt, by similar events: something laid an egg, and something else got born. Neo-Darwinists prefer to believe that Goldschmidt is the one who laid the egg; they maintain that there is not a shred of evidence to support his "hopeful monster" mechanism. Goldschmidt insists just as strongly that there is no evidence for the postulated neo-Darwinian mechanism (major transformations by the accumulation of micromutations). Creationists agree with both the neo-Darwinists and Goldschmidt: they are *both* wrong. However, Goldschmidt's publications do offer cogent arguments against the neo-Darwinian view of evolution, from both genetics and paleontology.

No one was more wholly committed to evolutionary philosophy than was Goldschmidt. If anybody wanted to find transitional forms, he did. If anybody would have admitted that a transitional form was a transitional form, if indeed that's what it was, he would have. But, concerning the fossil record, this is what Goldschmidt (1952, p. 97) says: "The facts of greatest general importance are the following. When a new phylum, class, or order appears, there follows a quick, explosive (in terms of geological time) diversification so that practically all orders or families known appear suddenly and without any apparent transitions."

Now, creationists ask: what better description of the fossil record could one expect, based on the predictions of the creation model? On the other hand, unless one accepts Goldschmidt's "hopeful monster" mechanism of evolution, this description contradicts the most critical prediction of the evolution model: the presence in the fossil record of the intermediates demanded by the theory.

Against Authoritarian Materialism

Kerkut (1960), although not a creationist, wrote a notable little volume to expose the weaknesses and fallacies in the usual evidence used to support evolu-

tion theory. In the concluding paragraph of the book this author states that "there is the theory that all the living forms in the world have arisen from a single source which itself came from an inorganic form. This theory can be called the 'General Theory of Evolution' and the evidence that supports it is not sufficiently strong to allow us to consider it as anything more than a working hypothesis." There is a world of difference, of course, between a working hypothesis and established scientific fact. If one's philosophic presuppositions lead him to accept evolution as his working hypothesis, he should restrict it to that use, rather than force it on others as an established fact.

If, without the philosophic presuppositions of either the materialist or the theist, creation and evolution are used as models to predict the nature of the historical evidence, it can be seen that the creation model is just as credible as the evolution model (and, I believe, much more credible). And I reiterate: the one model is no more religious or any less scientific than the other.

No less convinced an evolutionist than Thomas H. Huxley (as quoted in L. Huxley, 1903) acknowledged that " 'creation', in the ordinary sense of the word is perfectly conceivable. I find no difficulty in conceiving that, at some former period, this universe was not in existence, and that it made its appearance in six days (or instantaneously, if that is preferred), in consequence of the volition of some pre-existing Being. Then, as now, the so-called *a priori* arguments against Theism and, given a Deity, against the possibility of creative acts, appeared to me to be devoid of reasonable foundation."

The majority in the scientific community and educational circles are using the cloak of "science" to force the teaching of their view of life upon all. The authoritarianism of the medieval church has been replaced by the authoritarianism of rationalistic materialism. Constitutional guarantees are violated and free scientific inquiry is stifled under this blanket of dogmatism. It is time for a change.

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Bird-Bashing Preventative

Tall buildings are struck by migrating birds, sometimes by the hundreds. To lessen the hazard, the Empire State Building, in New York City, turns off its floodlights on the top 30 floors during May, so that birds are less likely to be confused.