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# THE LAW OF SYMMETRIC VARIATION AND THE GENE-THEME MODEL

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## Abstract

*Organisms remain within their respective Genesis kinds since they obey the Law of Symmetric Variation. This is the fourth in a series of biological laws suggested by Brown (1982a) and it will be explained fully, along with the term Gene-Theme Model. The evidence for the latter will be discussed in conjunction with the fossil record.*

### The Operation of Symmetric Variation

A chain of limiting factors serves to keep organisms within their respective Genesis kinds. First, most amino acids have more than one codon coding for them. For example, alanine has four codons, namely GCU, GCC, GCA and GCG. Arginine has six codons, AGA, AGG, CGU, CGC, CGA and CGG.

With such an arrangement, we have a form of symmetry which protects against major changes. For example, in the case of arginine, a change from one of its codons (say AGA) to another in the group (CCC), will still code for arginine. This is rather like rearranging many of the individual squares on a chessboard; although some changes would produce a different pattern, many recombinations would produce a seemingly unaltered board. For example, exchange squares Al, A3, A5, with D2, D4, D6 and a seemingly unaltered board is the result.

Secondly, depending on their molecular structure every amino acid belongs to one chemical group or another. Changes from one amino acid to another of the same group will, as a rule, produce only minor changes in protein. Changes from one group to another, in which two groups do not differ too sharply from one another will, as a rule, be more readily acceptable.

Changes from one group to another vastly different group can cause harmful or lethal results. There may be times when the change from one group to another would appear likely to cause harmful or lethal results but, in fact, does not upset the balanced mechanism of embryonic development. Under such circumstances the change would cause only modification within the kind and nothing more, because the plan of that organism's Genesis kind in its embryonic development dictates everything, in the sense that any change has to conform to that plan.

Therefore, the smaller the effect of any change, the better the prospect of its spreading through the population, because there would be less chance of the change unbalancing embryonic development (Abercrombie, Hickman and Johnson, 1974. p. 186).

Most point mutations will cause either no change in the amino acids or only minor changes in protein, hence the term 'symmetric variation.' Useful mutations, when they do arise, will affect amino acid selection as mentioned earlier.

In recent work carried out on mouse cells, biologists damaged the DNA of the cells by exposing them to ultraviolet radiation. Within 24 hours, 85 percent of them were returned to the normal state. In similar work carried out on bacteria, all were returned to normal over a very short period (Holliday, 1979. pp. 598-600).

Of the changes that remain uncorrected, a percentage would be of a type not far removed chemically from the original and, under the right conditions, would be allowed to remain. A smaller amount of a wider differing group may, again under the right circumstances, be allowed in only because it did not upset the balanced mechanism of embryonic development, but conformed to the Law of Symmetric Variation. The remaining types would cause harmful or lethal results, therefore would be selected against. All of this would be heavily in favor of keeping organisms within their respective Genesis kinds.

I must emphasize that mutations are a rare event and would not, as a rule, occur on a scale noted in Holliday, 1979. pp. 598-600. Therefore, the Law of Symmetric Variation, together with organisms' repair systems would, as a rule, eradicate the vast majority of mutations that may arise.

Strong support for this concept can be seen in a paper by Graur (1985), in which he recognizes that similar amino acids are more easily interchangeable than dissimilar ones, due to the structure of the genetic code together with the selecting out of anything harmful. Likewise, Dolittle (1985) also recognizes this very significant fact.

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An example of maintaining symmetry can be seen from the case of bacteria which were fed on a 'foreign' material. The gene involved in breaking down this material duplicated in order to cope with it, thus maintaining symmetry (Calder, 1973. pp. 54-5). Should one of these copies become a variant form, symmetric variation is maintained from duplication. Should the original gene become damaged, one of the copies may assume the function of the original, again keeping the organism within its kind, because of the symmetry of the replacement gene and its function.

Most of the variation from one generation to the next is provided by recombination of already existing genes. This helps further to continue symmetric variation and keep the organism within its kind. A single gene may influence many characters; conversely, a single character may be the product of the influence of many genes. Consider the case of a gene that was involved in coding for the eye in experiments carried out on fruit flies (de Beer 1971. p. 15). The gene in question became damaged and would no longer code for the eye, resulting in a re-shuffle of some of the genes until one was found that was compatible with the arrangement of other genes to produce the eye. This is another means by which an organism can maintain normal functions.

Just how often this type action occurs is not known, but the main genetic set-up would still remain the same by means of symmetric variation; the ratio of mutations and make-up of codons for the amino acids, plus the arrangement of genes would guarantee this occurence.

Messenger RNA plays an important role in early development. This is seen in many experiments, where the nucleus is removed from the egg-cell and, after suitable stimulation (in many cases), a blastula will be formed. This is achieved by regulating the translation of information stored in the egg cytoplasm at the time of its formation (Head 1968, p. 8-12; Lewis and John 1971). Another example of the importance of RNA is seen in the fruit fly. The maternal messenger RNA stored in the egg specifies dorso-ventral polarity. The maternal genes undoubtedly code for other important beginnings in the early development of organisms (Gehring, 1985). After this time, the DNA swings into action. In such organisms as the fruit fly, genes that cause segmentation may in turn stimulate other genes to do the same. Stimulation plays a major role in the cytoplasm. The components of the cytoplasm are stimulated into action by a number of factors such as pH, temperature, ions and ion gradients.

The cell membrane contains the means by which these types of temperature and ion gradients pass through the cell. The membrane contains various proteins, which give each kind of membrane its distinctive identity. By means of cell membrane proteins these gradients enter or leave the cell. [Unwin and Henderson (1984); Bretscher (1985)].

This permeability of the membrane by means of the proteins varies in different parts of the organism, at varying stages of development, thus creating gradients which help to guide development.

The membrane proteins are coded for by material originating in the nucleus. Their chemical arrangement of amino acids is subject to the same Law of Symmetric Variation as any other protein; therefore, by definition, they will maintain growth and development within the kind rather than leading to changes beyond the boundaries of a kind.

The components in the cytoplasm that respond to the gradients are, to name a few, microtubules and microfilaments, polysomes (clusters of ribosomes) and regulatory proteins. Microtubules serve as guides for where the microfilaments should be set up. They are the 'scaffolding' of the cell, which can quickly be set up or dismantled. The tubules are affected by pH, temperature and substances such as calcium. A calcium-dependent regulatory protein by the name of calmodulin seems to be involved in the assembly and disassembly of the microtubules in dividing cells. Tubules consist of proteins called alpha and beta tubulin which along with microfilaments help form and maintain the cell shape. These filaments are also made of protein, called actin. These are also coded for in the nucleus as are the regulatory proteins, such as calcium-activated enzymes which are involved in some of the interactions in the assembly of microtubules and microfilaments (Osborn and Weber, 1985). So the types of cell membrane proteins, together with their pattern of assembly in the membrane, help in orienting the components into their positions.

Cell-adhesion molecules, also coded for by genes made from nuclear material, are to be found at the cell surface. These molecules bring cells together, generally before cell differentiation, thereby helping the formation of organs and of the embryo itself (Edelman, 1984). Calcium atoms and ions have a specific effect on many of these molecules. Any large changes affecting these molecules would doubtless cause lethal results; only changes within the kind are permitted. Only within the limits of Symmetric Variation can new species arise within the kind or modification of existing or originally created species occur.

Symmetric Variation applies to tubules, filaments, cell membrane proteins and cell-adhesion molecules. So, the pattern of growth and embryonic development would be governed by this postulated principle permitting only changes within the kinds.

## Brief Examination of the Fossil Record for Evidence for the Gene-Theme Model

Amphibians were at first thought to have developed from lungfish. This idea prevailed until the 1950's, when the notion was discarded for several reasons. One reason was that the Lower Devonian lungfish lacked an upper jaw bone and lacked teeth, having instead oddly shaped chewing plates, whereas amphibians have a great number of sharp conical teeth. The nasal region is entirely different in the two groups, a major difference being that the lungfish lack an internal nasal opening. There are also basic differences in skull structure, as regards the mosaic skull roof bones. The lungfish also lacked a mobile skull. These and other features indicate a distinct difference between the lungfish and tetrapods (Grzimek 1974). The choice of contenders for the role of ancestor then shifted to the *Rhipidistian* fish such as *Eusthenopteron* and *Elpistostege.*

The skull bones of the earliest known amphibian, *Ichthyostega,* show all of the characteristic amphibian features. Claims have been made that some of the skull bones of *Eusthenopteron* are similar to those of *Ichthyostega,* also that some of the skull bones of *Elpistostege* are intermediate between the two. Even if this is so, in appearance, it is meaningless; for the *Elpistostege* were fish belonging to the *Rhipidistians* known as the *Panderichthids.* It seems likely that *Ichthyostega* lived a largely aquatic existence; a number of pits on top of the skull of this creature are found only in aquatic amphibians.

Similar tooth patterns are found between *Ichthyostega* and some fish. Also, the brain capsule of *Ichthyostega* is similar to that of some fish in that it is in two parts. However, no known fish, including all fossil types, are viewed to be on a direct line to the amphibians. There are two reasons for this. Most of the likeliest candidates lived after the appearance of the first amphibians; those that preceded, or at least seemingly preceded the amphibians show no sign whatsoever of having developed the limbs of any amphibians (Stahl, 1974). Fossilized larvae of amphibians of the past show all of the characteristics of typical amphibians and nothing else (Charig 1979, p. 83).

Structures found in the fins of the fish mentioned above vary distinctly from pectoral to pelvic and do not show a correct arrangement for the prospect of becoming limbs. The strikingly similar structures of fore and hind limbs of amphibians would have to have been developed from structures of differing arrangement, if the fish mentioned had been ancestral to them.

The arrangement of vertebrae of these supposed ancestral fish and of *Ichthyostega* is of much interest. Both types of known Coelacanth, the modern and the fossil known as *Holophagus,* have a totally unsuitable arrangement of vertebrae to connect them to any line of descent to amphibians. This is also the case in the lungfish *Fleurantia* and *Conchopoma* (Stahl, 1974, p. 134).

Likewise, the arrangement of vertebrae in *Eusthenopteron* is not the necessary one. Also, this fish has no extra bones for a fin-type structure on the dorsal surface of the tail end of the backbone, whereas *Ichthyostega* most certainly does: These structures are also possessed by amphibians such as *Anthraosaurus* and *Eogyrines,* both aquatic types, found in the Carboniferous period. These fin-type structures are similar to those found on the male of the European great crested newt, *Triturus* cristatus, but differ in that they possess bone. So, *Ichthyostega* did not get its crest or tail fin from supposed ancestral fish such as *Eusthenopteron,* which had no such structure in that position to produce the amphibian tail.

The Gene-Theme Model is the hypothesis that God has carried over a theme in which certain creatures of one kind have a number of similar features to those of another Genesis kind. It must be borne in mind, however, that the creatures in question need not bear a strong general resemblance to one another, merely that they possess a number of features not normally found among members of the various present day classes.

The genes involved could be the same or similar but, because one gene can affect more than one function, the different organisms need not possess the same genes to code for their similar features. The permutations of what may be permitted to develop under this system are thus very wide.

A prime example can be seen in the monotremes, where certain cells and their arrangement are the same or similar to those found in the Diploglossian reptiles, of which the Monitor lizard is a typical example. There is no real reptile cell structure, or even smaller reptile components making the cells that way. They are the animals' own tissue, forming structures similar to those found in reptiles (Brown, 1982b).

Also, in the ear of the monotremes is an organ called the lagenar macula, a special organ found in the reptilian cochlea, but not in the mammalian. Yet again, the electrophysiological properties of the monotreme cochlea are mammalian in nature, as are the ear ossicles. Here is living proof that features of one class can exist in an entirely different class, yet not be made up of the same components. This demonstration that any organism can have a number of features typical of another creature and yet still belong firmly to its own original kind and class, is clear proof of the Gene-Theme Model.

Should any genes be shared between two or more classes, then we can have a number of permutations. For example, the cell membrane may be patterned out somewhat similarly, causing the rough pattern of the cell to be similar. Or, the cell adhesion molecules may be similar in one or several organs, even though the rest of the genetics may differ widely.

Within the Gene-Theme Model, a wide choice of possibilities exist in carrying certain features over from one class to another. They range, from zero similarity between forms to varying amounts of similarity in forms which are otherwise vastly different.

People need re-educating with regard to how the Creator really worked. Last century, the view was that species were the Genesis kinds; as soon as a new species was seen to arise, Creation was looked upon as a false doctrine. The Bible, however, does not state that the differences of the Genesis kinds are to be found at species level. Likewise, the idea that God could not have taken a theme and built upon it to produce the next organism is just as false an assumption.

Gene-Theme "Links" can be demonstrated between reptiles and early birds, also between mammal-like reptiles and mammals such as Morganucodon and to varying extents between man and non-human primates. One may ask why both birds and some mammals should be constructed on the theme, in some respects, as are certain reptiles. The answer is that neither fish nor amphibian would be a good model for mammals or birds; neither would a bird be a good model for a mammal, or indeed a mammal for a bird. Reptiles would be a better choice on which to model both birds and mammals.

Slightly later in time there was another set of amphibians with a different vertebral pattern than the ones already discussed. Some of these types form snake-like bodies, while others are fully limbed. The limbless types would seem to be getting rid of their limbs just as fast as the fish were supposedly gaining limbs, thus changing the vertebral arrangement at least twice and their complete type once in the process. The vertebrae they had are of the form viewed to be more primitive than those of *Ichthyostega* and the *Crossopterygians*. Modern amphibians also have the more primitive or husk type vertebrae and not the more complex or arch type. These amphibians, according to evolutionists, must have a history going back further, lessening the valuable time needed by those fish to give rise to the amphibians, backing their theory into a very tight comer indeed.

In recent years, fossil footprints of a type of amphibian have been found in Australia in Frasnian strata, close to the Frasnian-Famennian boundary. Closer still to the boundary other trackways have been found, plus the jaw of an Ichthyostegan type of amphibian (Wakefield and Warren, 1972; Bell and Campbell, 1977).

The boundary is dated at 350 million years, marking the middle of late Devonian. *Elpistostege* and *Eusthenopteron* are both dated at 360 million years in early Frasnian. Some species of *Eusthenopteron* extend up into the Famennian and so have a range of 360-345 million years. We can safely say, therefore, that to find a true amphibian anywhere from 354 to 358 would militate against the fish to amphibian evolutionary idea.

Amphibians cannot precede all fish, for, according to the Genesis record, they were created after the fish; although they can, of course, come before various species of a particular type of fish. There must be a limit, therefore, as to how far back in the fossil record we would expect to find amphibians. *Eusthenopteron* is not now viewed to be on the direct line of any amphibians, leaving the evolutionists to find such a fish, let alone any intermediate types.

Consider the case of the *Archaeopteryx*, which evolutionists have frequently maintained to be the missing link between reptiles and birds. They argue, for instance, that the low nasal opening supposedly demonstrates a link with reptiles (Stahl, 1974, p. 263). However, in the Brachiosaurs, Mesosaurs, the flying reptiles Rhamphorhyncus and Pteranodon, together with three marine reptiles, Ichthyosaurs, Pleisiosaurs and Kromosaurs, we find that the nasal openings are elevated. On the other hand, some modern birds, such as the Dominican gull, brown skua, common gull, white-fronted goose and grey-lag goose, have their nasal openings positioned half-way down the beak. The Southern and Northern giant petrels, kiwi, great skua and owls have their nasal openings positioned three-quarters downward or at the very tip. Of the British swans, some have them elevated while one species has them half-way down the beak. Therefore, the position of nasal openings proves meaningless (Brown, 1986).

Evolutionists have maintained that *Archaeopteryx* had solid bones, as most reptiles do. However, the bones have been shown to have been hollow, like those of most birds, although so far no air sacs have been found (Milner, 1986). Not all birds have hollow bones; the kiwi, swallow and swift are, for the most part, solid-boned. Hornbills, on the other hand, are the most extensively hollow boned of all birds, yet they are very poor fliers. Large birds, such as *Archaeopteryx*, need hollow bones to enable them to get airborne, whereas smaller birds, even the best fliers such as the swift, do not.

The feathers of *Archaeopteryx* were the same in number as found in modern birds. The numbers of both primary and secondary feathers are typical of those of modern birds, where there is a slight variation in these numbers.

The structure of the flight feathers is of an assymmetrical design, with the quill being arched towards the leading edge of the feather, which also possesses barbs and barbules (locking devices which hold the feathers and their constituent parts together to form an airtight or semi-air-tight area of wing, enabling powerful downstrokes which create a vacuum, in flight, above the bird, giving 'lift' to sustain flight). This design is typical of flying birds; non-fliers have feathers with a centrally-positioned quill (Akridge, 1979). As an example of the assymetrical design examine and compare the feathers of a budgerigar or other cage-bird, noting the difference in the position of the quill in the feathers from the front of the wing as compared to feathers from the tail or breast. The quill of the flight feathers from the wing is decidedly curved and closer to the front edge of the feather.

Another feature which supposedly connects *Archaeopteryx* with reptiles is the type of teeth. The crowns of the teeth, however, were unserrated, the waist present, the root expanded and tooth replacement resorption pit oval to circular. In the reptiles *Pseudosuchia* and *Coelurosauria,* the crowns were serrated, the waist absent, the root straight and unexpanded and tooth replacement resorption pit elongate (Martin, Stewart and Whetstone, 1980). So, *Archaeopteryx* did not posses the same type teeth as the reptiles from which they are supposed to have evolved.

The brain-case of *Archaeopteryx* resembles that of divers, grebes, cranes and rails. It is said to resemble that of the crocodile to a certain extent, although not that of any of the other 6000 reptile species. The claws on the wings of *Archaeopteryx* are of interest here. We already know that they are found on the young of the hoatzin of South America, the young ostrich, hens, game birds and birds of prey, plus the young touraco of North Africa.

From the study of embryonic development of birds, it seems that they have digits 2, 3 and 4 in their wings; this is also true of *Archaeopteryx*. The *Coelurosaurian* reptiles appear to have had digits 2 and 3 only. Originally, it was viewed that birds had digits 1, 2 and 3 but either way, the reptiles in question could not have passed on to their supposed descendants something which they did not possess, namely the correct digit in the correct ordered place. (Duffett, 1983, p. 20; Hecht and Tarsitanio, 1980).

The lower legs of birds have, on the bone three articulating surfaces for the toes, a feature absent in mammals and most, if not all, reptiles; it is present in *Archaeopteryx*. The metatarsals are indeed fused, although the structures between the individual elements are visible (Brown, 1983). Much more of the anatomy of *Archaeopteryx* could be discussed, but there is surely enough presented here to show that the creature was a true bird and not some kind of intermediate stage between reptiles and birds. The next birds along the time-scale from *Archaeopteryx* carry a number of features similar to this bird, but also show many marked differences. At least one species possessed teeth like those of *Archaeopteryx.*

The reptiles which are held as being contenders for the role as ancestors to *Archaeopteryx* either came later in the fossil record or were contemporary with the creature, hence have to be ruled out (Milner, 1986). The types that preceded it, in Upper Triassic, are completely different in features from the bird. However, in Lower Jurassic, there have been two separate finds of limb bones which could be those of birds, although this is not yet clear (Milner, 1986). Again this would place evolutionary theory in a very tight corner.

Consider the mammal-like reptiles and mammals such as *Morganucodon.* There is so much anatomical detail involved in this subject, together with the names of the many anatomical parts, that in order to save space, I have limited the account to a mere summary of the position.

Typical reptiles have a number of bones in the jaw and only one in the ear, known as the stapes. The jaw joint is formed by the quadrate and articular bones. The teeth are replaced throughout the creatures' life, as they continually grow. The mode of replacement is by erupting between older teeth. This is known as alternate replacement, as every alternate tooth gets replaced.

In typical (placental) mammals, there is one bone in the jaw, known as the dentary bone and three bones in the ear. The jaw joint is formed by the squamosal and dentary. Most placental mammals have one set of milk teeth, followed by one set of permanent teeth.

The main mammal-like reptiles that we will cover are the *Cynodonts.* In all forms of these creatures the tooth replacement was as that found in typical reptiles. Even in the fossilized young *Diademodon,* the same mode is to be seen. The jaw of the *Cynodonts* was made up mainly of the dentary bone, with bones like quadrate and articular forming the jaw joint. One bone is found in the ear, the stapes. Hence it appears truly reptilian and not mammalian.

Mammals such as *Morganucodon* had typical mammalian teeth with typical tooth replacement. The jaw joint was seemingly a double one. It had the squamosal dentary jaw joint and the quadrate and articular bones. however, the quadrate, articular and stapes all interconnect and, in turn, they are very close to the tympanum and tympanic of the ear. Undoubtedly, they all served as part of the sound conducting system in these mammals.

Much of the skull and post-cranial skeleton was that of a typical mammal, with some reptile-like features found in both areas. As far as brain comparisons are concerned, the brain of the *Cynodonts* showed many reptilian features, while some mammal-like features were seemingly present. In *Morganucodon,* the braincase was without doubt that of a mammal, being beyond that of any *Cynodonts.*

The fossil record of these creatures is of interest. Evolutionists favor the fossil *Chinquodonitidae* found in South America to have given rise to *Morganucodon.* However, this is where the trouble lies. The former are found in South America only, while the latter are found worldwide, except for South America! See Kemp, 1982.

The skeleton of the mammal-like reptiles is reptilian in most of its nature and mammal-like in some of it, fitting the gene-theme concept assuming that the Creator assigned similar components to forms that were unrelated.

Another fossil mammal-like reptile viewed at one time to have evolved into *Morganucodon* is the *Tritylodentia olygokyphus.* Even this is found worldwide, yet no connection with mammals is ever seen. *Morganucodon* contains features which are found in primitive mammal-like reptiles, absent in "advanced" forms. This would mean, in evolutionary terms, that a once-possessed structure in primitive *Cynodonts,* would have been lost in advanced *Cynodonts,* then re-evolved by their descendant *Morganucodon* — Kermack, Mussett and Rigney (1981).

If *Morganucodon* came from any of the primitive types, then these would have had to become relatively complex in order to be able to evolve into *Morganucodon.* This, of course, would be seen in the fossil record if any of those types were making such steps towards that goal; no such steps are to be found.

Many of the features of *Morganucodon* are shared by, or are at least similar to, the Monotremes. It should be noted that at sub-placental level such as the Monotremes and mammals of the past, liberties can be taken with design as regards to introducing various details of structure; yet they remain very firmly rooted within their own Genesis kinds. It takes more than one organ to take one kind over the boundary to another. In the Monotremes, it takes more than a number of features to make any impression.

Crocodiles have a secondary palate and a diaphragm and the oldest known crocodile stood more mammal-like than present day types, yet crocodiles have always remained reptiles. The fact that there are 'living fossils' among us today, shows that the same genetic system has always been in operation, demonstrating that the Law of Symmetric Variation applies along with the Gene Theme concept.

## Summary and Conclusion

The mathematical permutations of the amino acid mutations lead very strongly to the major part of them being either symmetric or varying within the family group of amino acids. Also, organisms' repair systems will repair almost all of the changes outside the close family group, thus returning them to their original formations. Any changes that are allowed will fit into one of the two types. Either they do not upset the balanced mechanism of embryonic development, therefore are part of the broader variation of the Law of Symmetric Variation of the organisms' make-up, or they are harmful, possibly lethal in effect, causing elimination of the organism because of competition with its own or other types of its life form. They may die at or soon after birth.

Various other types of mutations also provide support for the law of Symmetric Variation. The various types of gene duplication, for instance, which either take over from a damaged parent gene, back up a parent gene or produce variant forms of themselves. These either maintain what is already there or produce variant forms of what is already there, maintaining the

Law of Symmetric Variation, keeping organisms within their respective Genesis kinds.

Because of this, together with the fact that one gene may have more than one function, the Gene-Theme Model applies on two possible levels. The first is having different genes producing similar effects, functions and features in two distinctly separate kinds. The second is having some measure of similar genes to produce these effects, functions and features. Under these conditions, the Law of Symmetric Variation, as described, will not allow anything else apart from the permitted range of Symmetric Variation within the organisms' own respective Genesis kinds.

Although certain kinds share certain features, they are not the exact image of one another. The positioning of the various fossils in the fossil record verifies the Gene-Theme Model.

For example, positioning the amphibians backwards in the fossil record into the fish realm, especially considering the latest finds of trackways and jaws in Australia, is narrowing the time gap, making for a rather hurried sequence of events to produce the first amphibian. These footprints and jaws would more than likely belong to creatures which had a history of pure amphibian species, thus giving a more uncomfortably short geological time scale for the necessary events to take place.

In the case of *Archaeopteryx* and the various reptiles supposedly involved in its ancestry, some lived contemporarily with it, thus ruling them out as ancestors; others came later in time. This, plus the uncertainty of possible bird bones in Lower Jurassic, tells against the evolution model and concurs with the creation model.

Considering the mammal-like reptiles, together with various early mammals like *Morganucodon*, it is found that these mammals are located in many places throughout the earth; as are many of the advanced mammal-like reptiles, whereas the ones viewed to have changed into them are only found in South America. Also, certain features in the brain-case are not found in the advanced mammal-like reptiles, but are present in primitive forms and *Morganucodon*. This would necessitate a loss and regaining of these features. The majority of the mammal-like reptiles were at least dog and cat size, while the early mammals were shrew and rat sized. This yields a clear picture of considerable change, all within a very short geological time scale. The known early mammals very likely had a history of mammalian stock, shortening the time-scale further.

This makes the Law of Symmetric Variation and the Gene-Theme Model a good basis for postulating why organisms remain within their Genesis kinds, showing that certain members of different kinds share certain features. These are the two most important principles. in biology.

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# PANORAMA OF SCIENCE

## *Archaeopteryx* and *Protoavis*

Fossils are the remains, impressions or traces of a plant or animal structure or organism of a former period of history. They may be firmly established as an archeological fact, but their interpretation is open to highly variable human understanding. As reported in *Scientific American* (Anon., 1986), a new find and a reinterpretation of an old one have caused evolutionists to again reconsider an important aspect of their model of origins.

This finding of fossilized bones from at least two crow-sized animals in a mudstone quarry near Post, Texas, southeast of Lubbock are forcing evolutionists to reassess whether the alleged transitional evolutionary organism, *Archaeopteryx*, is really a transitional form between reptiles and birds. These newly discovered