

DISCUSSION No. 12

**PROBLEMS
THE FOSSILS
POSE FOR
EVOLUTION**

Part 1: Fossil Gaps

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OUTLINE

- 1. Introduction: Fossils, a key factor**
- 2. What some scientists say**
- 3. Examples of gaps**
- 4. Evolutionary trees**
- 5. The gaps are between major groups**
- 6. Conclusions**
- 7. Review questions**

**1. INTRODUCTION:
FOSSILS, A KEY
FACTOR**

1. INTRODUCTION

Do the fossils tell us that organisms evolved or do they say that they were created by God? Fossils represent past life on earth. Richard Lull, who was a famed paleontologist and director of the world-renowned Peabody Museum at Yale University, once hailed fossils as “the final court of appeal when the doctrine of evolution is brought to the bar.”

We are going to examine that “final court of appeal” and see what it really has to say about the “doctrine of evolution.”

1. INTRODUCTION

When the Pharisees asked Christ to rebuke his disciples, he replied that “if these should hold their peace, the stones would immediately cry out” (Luke 19:40). Christ’s metaphor may not have been intended to refer to the fossils we find in stones, but the analogy is very applicable to what the fossils have to say, especially about evolution. The “stones,” and especially their fossils “cry out” that there are serious problems for evolution.

1. INTRODUCTION

To get a more complete picture of the argumentation about fossils, you should also view the next discussion of this series (No. 13) titled **PROBLEMS THE FOSSIL RECORD POSE FOR EVOLUTION, Part 2: More Complications**. You may also want to view or review the discussion in this series titled **THE FOSSIL RECORD AND CREATION (No. 11)**. The ones dealing with the evidences for the Genesis Flood (No. 14, 15, 16) will also be helpful.

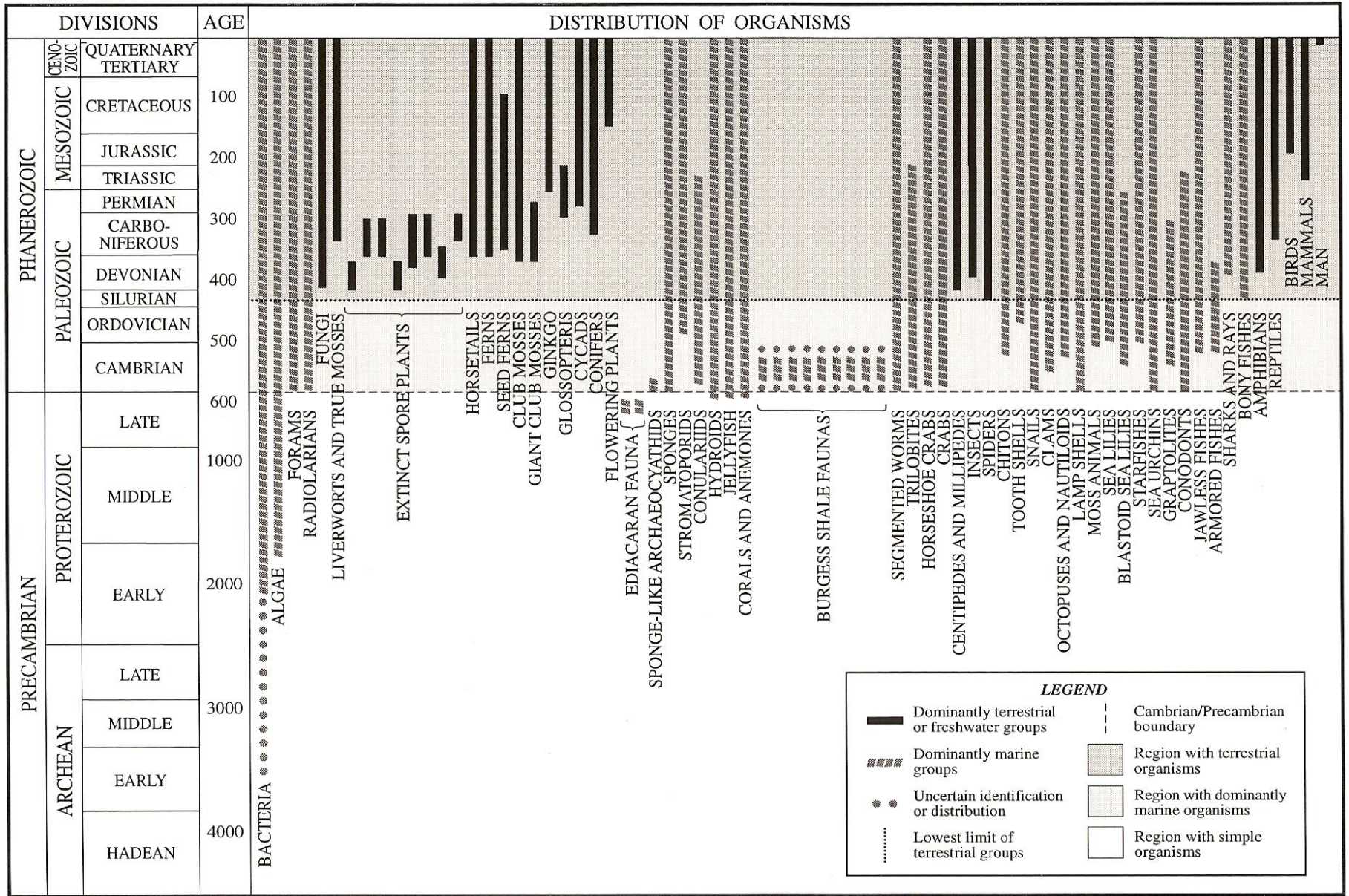
1. INTRODUCTION

The next two illustrations are replications from earlier discussions placed here for your convenience. The first is the general organization and names for the divisions of the standard geologic column. You may want to occasionally refer back to this if you are unfamiliar with the terminology. The following slide illustrates the specific distribution of many different kinds of organisms in the worldwide geologic column. The vertical lines represent where you find various kinds of organisms in the geologic layers. This comprehensive chart summarizes a lot of information that you will find helpful in understanding the significance of the fossil record as a whole.

MAIN DIVISIONS OF THE GEOLOGIC COLUMN

EON	ERA	PERIOD	EPOCH	Putative age in Ma*
Phanerozoic	Cenozoic	Quaternary	Holocene	0.01
			Pleistocene	1.6
		Tertiary	Pliocene	5.3
			Miocene	24
			Oligocene	34
			Eocene	55
			Paleocene	65
	Mesozoic	Cretaceous	144	
		Jurassic	206	
		Triassic	248	
	Paleozoic	Permian	290	
		Carboniferous	354	
		Devonian	417	
		Silurian	443	
Ordovician		490		
Cambrian		540		
PRECAMBRIAN Proterozoic Eon				2500
Archaean Eon				4600

*Ages given represent beginning of time period in millions of years (Ma).
Dates not endorsed by author.



SPECIFIC DISTRIBUTION OF ORGANISMS IN THE GEOLOGIC LAYERS. Putative ages are given in millions of years and are not endorsed by the author

2. WHAT SOME SCIENTISTS SAY

2. WHAT SOME SCIENTISTS SAY

If evolution had actually taken place we should expect that the fossils would provide evidence of a continuous gradual evolution of life forms from a simple original organism to complex advanced forms. **There are countless millions of fossils out there, but they tend to fall into major groups and the many intermediates expected between these major groups are not there.** This is one of the strong scientific arguments indicating that evolution from simple to complex never occurred.

Darwin was very aware of the problem, and in his famous book: *The Origin of Species* he frankly acknowledges this.

Charles Darwin. 1859. The Origin of Species by Means of Natural Selection or the Preservation of Favoured Races in the Struggle for Life. London: John Murray. Reprint from Burrow JW, editor. 1968. London, NY: Penguin Books: p 291-292.

“But just in proportion as this process of extermination has acted on an enormous scale, so must the number of intermediate varieties, which have formerly existed on the earth, be truly enormous. Why then is not every geological formation and every stratum full of such intermediate links? Geology assuredly does not reveal any such finely graduated organic chain; and this, perhaps, is the most obvious and gravest objection that can be urged against my theory.”

2. WHAT SOME SCIENTISTS SAY

In his book, Darwin goes on to try to explain the gaps between the fossils as due to the **imperfection of the fossil record**. By imperfection he is referring to **missing layers** in some localities and the peculiar circumstances necessary for an organism to be preserved as a fossil.

Since Darwin's time we have found **millions of fossils, and the gaps between fossils are still there**. Keep in mind that some **intermediate forms (missing links)** have been described, and evolutionists emphasize these, but these are very much fewer than expected and usually between closely similar forms. They could also represent different created kinds. Overall the fossil record reflects major gaps between the main categories of organisms.

2. WHAT SOME SCIENTISTS SAY

If evolution had taken place, the millions of fossils we have found should provide a **continuity** of intermediates tracing the pathway of evolution. However, only a few intermediates, that are too often of marginal evolutionary significance, can be suggested. Many evolutionists are very aware of this problem; however, a few deny it. Researchers since Darwin's time have repeatedly pointed out this problem. The next five slides provide **quotations** written over the years, by leading scholars in this field, who likely support evolution, but substantiate the lack of intermediate forms.

**Austin H. Clark. From the National Museum, USA. 1930
The New Evolution, p 105.**

“The facts are that all of the fossils, even the very earliest of them, fall into existing major categories. This is indisputable.”

[If evolution had taken place, the fossils should all blend into each other as you go down through the geologic layers towards the first original living organism.]

David B. Kitts (University of Oklahoma). 1974. Paleontology and evolutionary theory. *Evolution* 28:458-472.

“Despite the bright promise that paleontology provides a means of ‘seeing’ evolution, it has presented some nasty difficulties for evolution the most notorious of which is the presence of ‘gaps’ in the fossil record. Evolution requires intermediate forms between species and paleontology does not provide them.”

[Paleontology is the study of past life, especially fossils.]

Harold C. Bold (University of Texas), C. J. Alexopoulos, T. Dlevoryas. 1987. Morphology of plants and fungi, 5th edition. NY and Cambridge: Harper & Row, p 823.

“The writers after carefully weighing the current available evidence of comparative morphology, cytology, biochemistry, and the fossil record, are at *present* unwilling to amalgamate any two or more of the 19 divisions in which they have tentatively classified the organisms of the plant kingdom.”

[Evolution requires that all 19 divisions of the plant kingdom be related in the past by common ancestry as one goes back through to the first living form. That none could be associated with each other suggests creation.]

**Robert L. Carroll, McGill University. 1997.
Patterns and process of vertebrate evolution.
Cambridge University Press, p 8-9.**

“Fossils would be expected to show a continuous progression of slightly different forms linking all species and all major groups with one another in a nearly unbroken spectrum. In fact, most well preserved fossils are as readily classified in a relatively small number of major groups as are living species.”

Speaking of the features of various kinds of flowering plants he comments that **“In no case can the gradual evolution of these characters of groups be documented.”**

T. S. Kemp, Oxford University. 1999. Fossils and Evolution. Oxford University Press, p 16.

“The observed fossil pattern is invariably not compatible with a gradualistic evolutionary process. Fossils only extremely rarely come as lineages of finely graded intermediate forms connecting ancestors with descendants.”

[He then opts for a variety of explanations for the fossil record within an evolutionary context.]

2. WHAT SOME SCIENTISTS SAY

The sudden appearance of the **flowering plants** as one goes up through the fossil record has been a mystery to evolution for a very long time. One would expect that the long **protracted evolutionary process** that would be necessary to produce the various specialized parts of flowers **would leave a good fossil record**, but that is not the case. Darwin acknowledged this problem calling it an **“abominable mystery.”** It is no mystery if you believe in a Creator.

The next two slides are quotations from leading plant scientists that reflect on the problem the origin of flowering plants poses for evolution.

Harold C. Bold (University of Texas). 1967. *Morphology of Plants*, 2nd edition, p 495.

“About a century ago, Charles Darwin wrote that the sudden appearance in abundance of the flowering plants in relatively recent rock strata (Cretaceous, table 32-1), was an ‘abominable mystery.’ In spite of advances in our knowledge of comparative floral morphology and of the fossil record and in spite of the publication of many pages of speculation on this subject, Darwin’s words still eloquently summarize the current state of our knowledge.”

Daniel I. Axelrod (University of California, Davis). 1960. **The Evolution of Flowering Plants**. In Tax S, editor. **The Evolution of Life, Volume 1 of Evolution After Darwin**. Chicago: University of Chicago Press, p 227-305.

[In referring to the evolution of flowering plants, Axelrod comments:]

“In particular, these include the ‘abominable mystery’ surrounding their early evolution, notably their center of origin, their ancestry, and their sudden appearance in the Cretaceous as a fully evolved, wholly modern phylum. ... Not only are numerous and diverse families represented in Middle Cretaceous floras, but apparently many living genera.”

**3. SOME
EXAMPLES OF
GAPS**

3. SOME EXAMPLES OF GAPS

Flowering plants are a huge group of organisms for which we don't find evolutionary ancestors in the fossil record.

The next slide is an illustration of a flower. Note the complicated reproductive parts coming from the center. Inside those parts the structures and chemicals that facilitate reproduction in flowering plants are extremely complicated. It would take a lot of intermediates to gradually evolve all this.



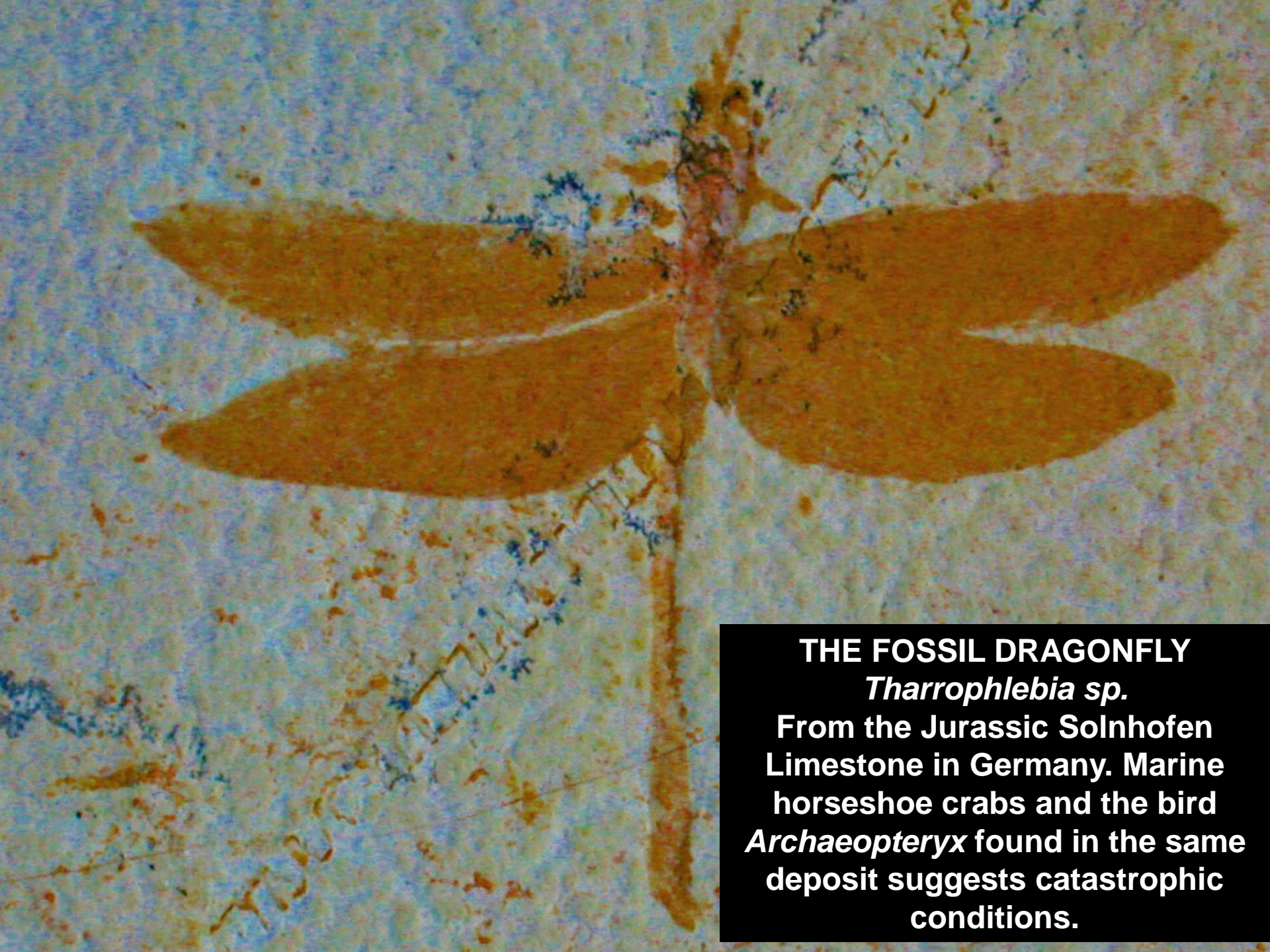
HIBISCUS FLOWER

Note the complex reproductive parts coming from the center

3. SOME EXAMPLES OF GAPS

As one ascends through the geologic column, **major kinds of organisms appear suddenly** and appear fully functional in their new unique features.

There are **huge dragonflies** in the fossil record, some with a wingspan approaching a meter (3 feet). The first dragonflies one finds in the fossil record have **fully developed wings**. It does not appear, at least on the basis of present information, that the wings evolved gradually. The next slide shows a smaller specimen of a fossil dragonfly.



THE FOSSIL DRAGONFLY

***Tharrophlebia* sp.**

From the Jurassic Solnhofen Limestone in Germany. Marine horseshoe crabs and the bird *Archaeopteryx* found in the same deposit suggests catastrophic conditions.

3. SOME EXAMPLES OF GAPS

The **very first bats** we find in the fossil record have fully developed wings. Bats are assumed to have evolved from a mouse-like mammal ancestor, but the transitional stages of a mouse gradually changing its forelimbs into wings are not found. These wings, illustrated in the next frame, are highly specialized structures, that would require a great deal of slow evolutionary transformation to become the versatile wings of a bat.

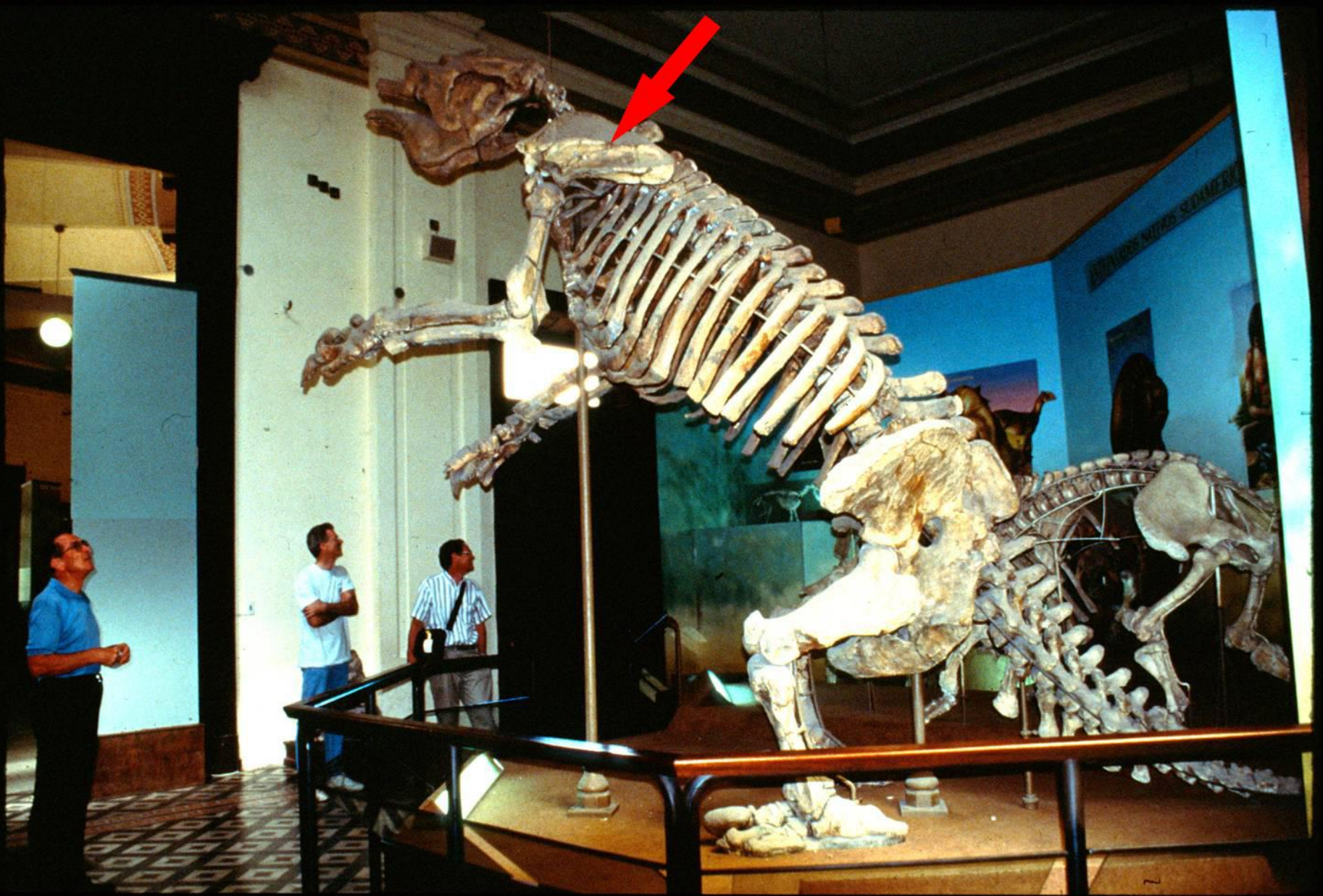


FLYING BAT
Note the specialized wing structures

Courtesy Army Corps of Engineers

3. SOME EXAMPLES OF GAPS

There are **huge turtles** in the fossil record, some over three meters (10 feet) long. Turtles pose a special enigma to evolution. The shell of a turtle corresponds to the ribs of other advanced vertebrates since it is also attached to the vertebral column as ribs are, and evolutionists believe that **the shell of the turtle evolved from the ribs of a lizard-like or crocodile-like ancestor of the turtle.** In other advanced vertebrates like lizards, crocodiles, birds and you, the **pectoral girdle** (shoulder girdle, i.e. clavicle and scapula) that supports the forelimbs, is on the *outside* of the ribs. This is illustrated in the next slide of a giant sloth's skeleton. (These mammals are now extinct.) The red arrow points to the pectoral girdle to which the anterior appendage ("arm") is attached. You can see that the pectoral girdle is well outside the rib cage of the sloth.



GIANT SLOTH, La Plata Museum of Natural History, Argentina
Note that the pectoral girdle (red arrow) is outside the rib cage.

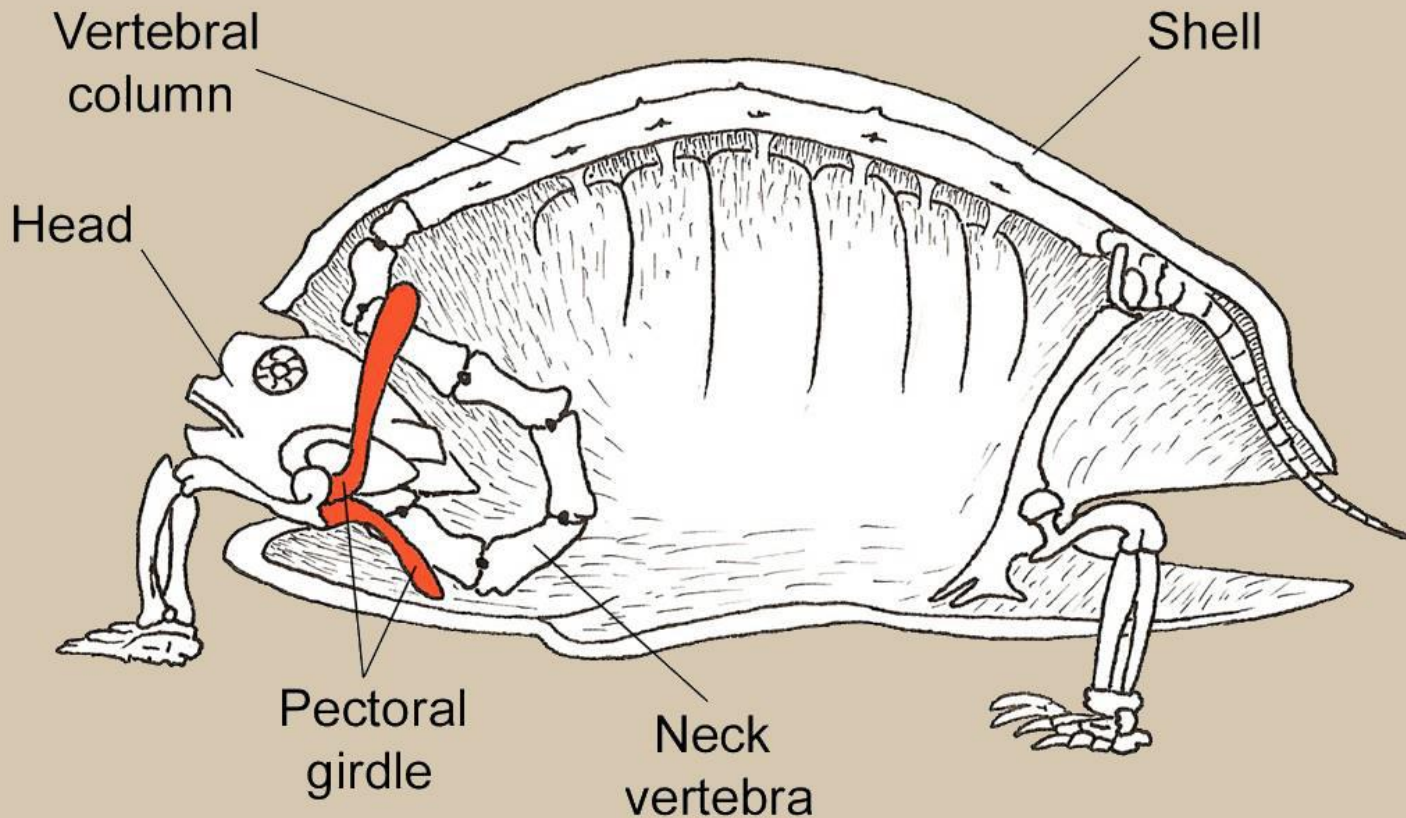
3. SOME EXAMPLES OF GAPS

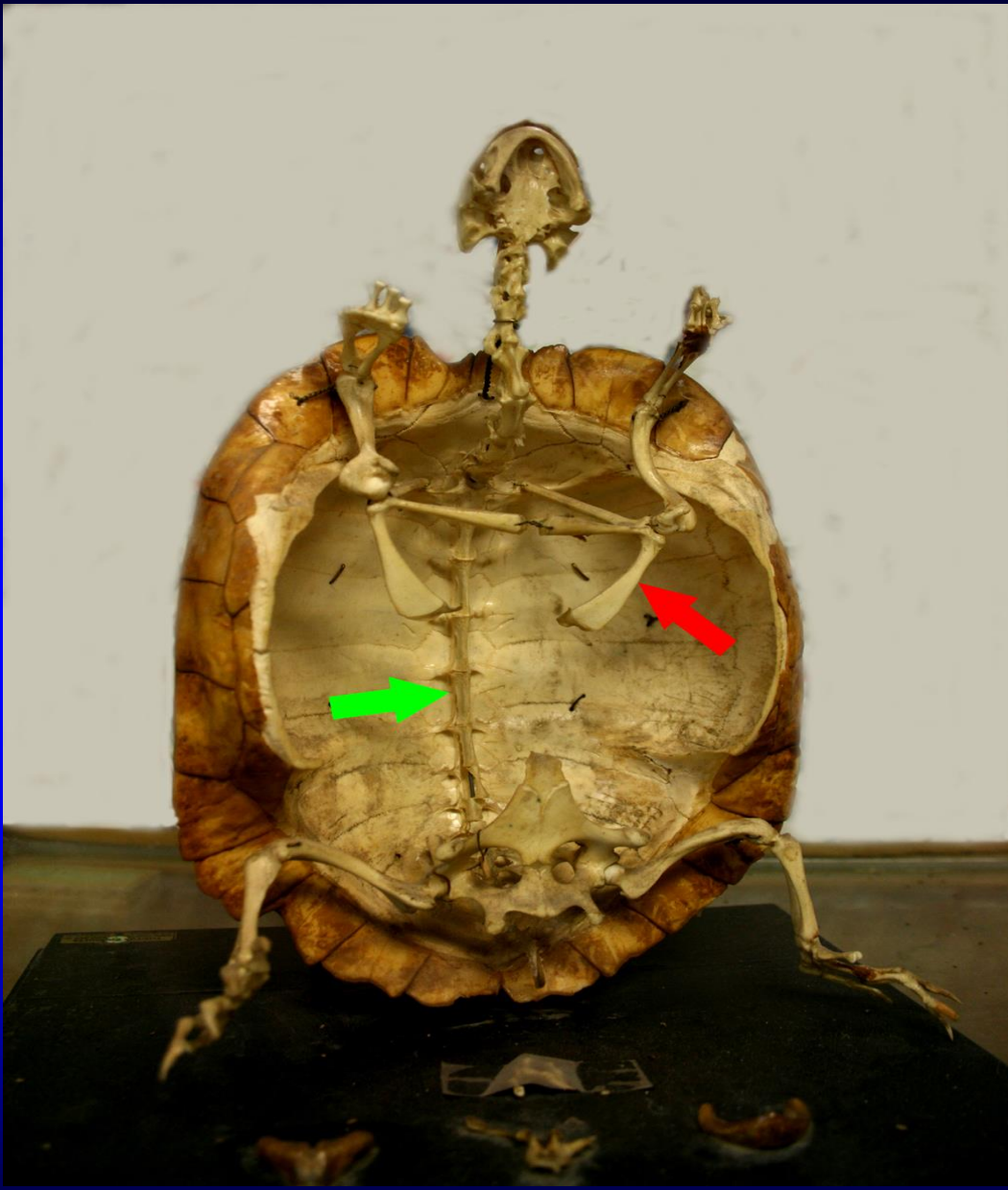
While in most vertebrates the pectoral girdle is on the *outside* of the rib cage, for the turtle it is on the *inside* of the shell that represents the ribs. The problem for evolution is: **How did the bones of the pectoral girdle, with all their muscles and where they are attached, nerves, and blood vessels, gradually move from *outside* the rib cage of the assumed evolutionary ancestor of the turtle to the *inside* where it is in the turtle now?**

The next slide illustrates the pectoral girdle of the turtle in red, and the following one shows the actual pectoral girdle of a turtle well inside the shell.

SKELETON OF A TURTLE INSIDE THE SHELL

Note the pectoral girdle that is inside the shell.
The shell is supposed to have evolved from the ribs.





TURTLE SHELL

Opened to show the internal bones. Note the vertebral column (green arrow) attached to the shell. That shell represents the ribs. Also note the pectoral girdle for the front legs (red arrow), well inside the shell.

Photo by Larry Roth

3. SOME EXAMPLES OF GAPS

Evolutionists have been discussing the evolution of the turtle for well over a century. There are many ideas, vibrant contentions, and lots of scientific publications. Some think turtles evolved from a crocodile or bird group while others prefer a more primitive origin like from a lizard kind. Comparison of molecules between various organisms strongly favors the crocodile hypothesis, but others point out that some fossils found lower in the fossil record suggest a more primitive origin.

A bizarre fossil that has a few turtle characteristics is suggested as representing an intermediate. *Odontochelys* has large plates on its ventral (bottom) side, however a number of reptile fossils have plates (gastralia) on their ventral side, so this need not apply to turtle evolution.

The likely first turtles that one encounters as you go up through the fossil layers are found in China (*Odontochelys*). In this organism the top part of the shell appears to be missing, but this could be because it was a soft shell and was not preserved. A number of turtles that live now have a soft shell.

3. SOME EXAMPLES OF GAPS

There are many ideas, and only a very few perplexing assumed intermediate fossils. Some evolutionists suggest that the embryo stage of a turtle precursor became folded and this placed the pectoral girdle on the inside of the ribs. In doing this some muscles could remain attached to shifting bones, but other muscles would have to find new attachment points. There is no direct evidence that this ever happened. Folding a crocodile type so as to gradually make a turtle with the pectoral girdle inside the ribs would be a very complicated process.

Other evolutionists propose that as the turtle was evolving, the pectoral girdle was incorporated into the shell. There are many ideas and few facts. Much of this falls into the category of “*fact free science.*” In the midst of all this speculation it needs to be kept in perspective that as mutations gradually proceed, evolution needs survival value all the way along, or you don’t have advancement by survival of the fittest. Random mutations cannot plan ahead.

3. SOME EXAMPLES OF GAPS

The fossil record does not provide a model of how the pectoral girdle was moved to the inside of the ribs of the turtle. While the scientific literature is replete with speculation on this topic, the idea that a Designer might be involved is studiously avoided. The bias against God is obvious.

Some recent references:

Reisz RR, Head JJ. 2008. Turtle origins out to sea. *Nature* 456:450-451.

Li C, et al. 2008. An ancestral turtle from the Late Triassic of southwestern China. *Nature* 456:497-501.

Kurani S, et al. 2011. Evolutionary development perspective for the origin of turtles: the folding theory for the shell based on the developmental nature of the carapace ridge. *Evolution & Development* 13(1):1-14.

Lyson TR, et al. 2013. Evolutionary origin of the turtle shell. *Current Biology* 23:1113-1119.

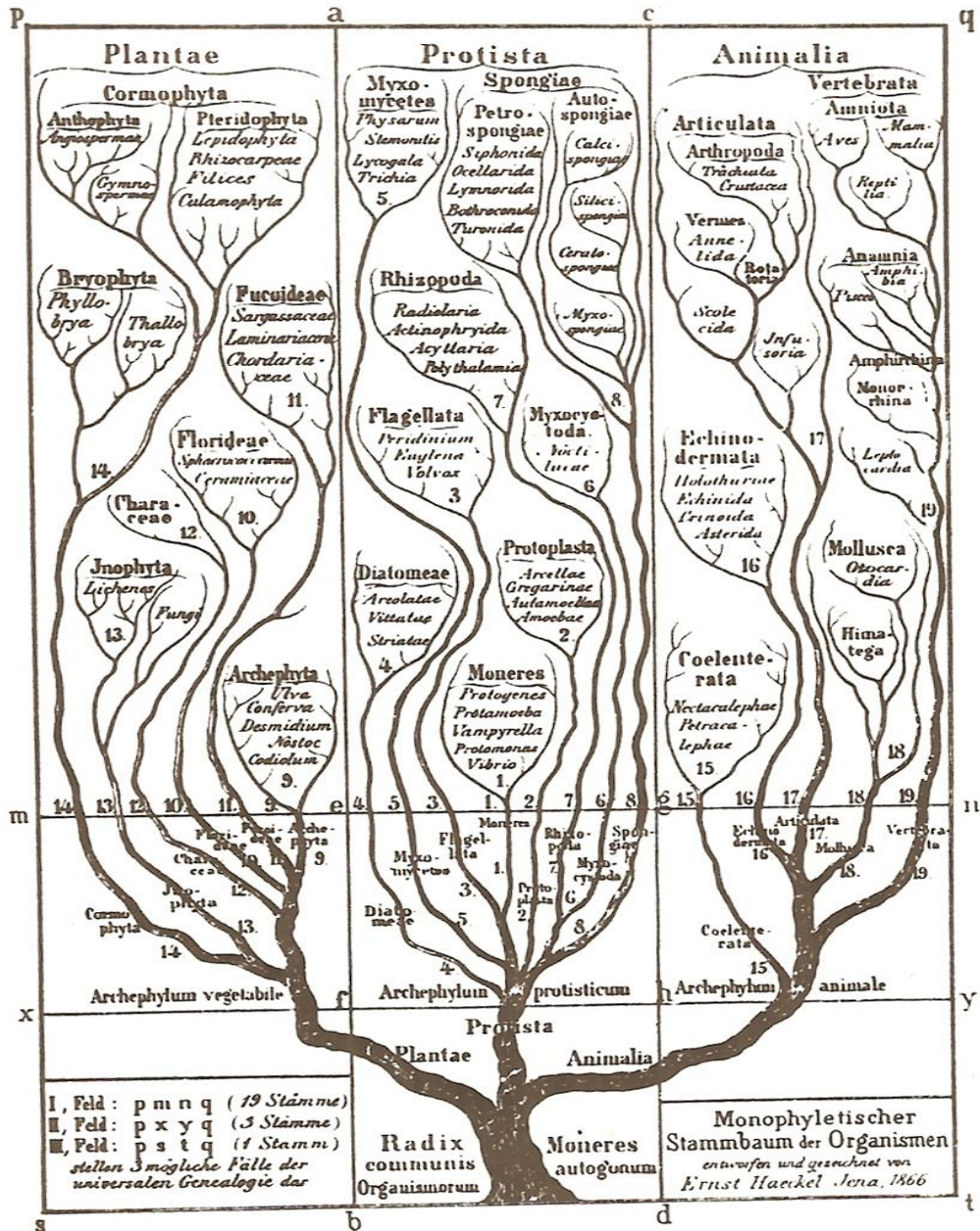
4. EVOLUTIONARY TREES

4. EVOLUTIONARY TREES

Evolutionists often build **evolutionary “trees”** that are supposed to illustrate the evolutionary pathway various kinds of organisms followed as they evolved from each other. Cladograms (mentioned earlier) can be considered a sophisticated evolutionary tree. The larger trees start with a very simple organism at the base (the trunk of the tree) that then branches up into more and more advanced organism as evolution proceeds.

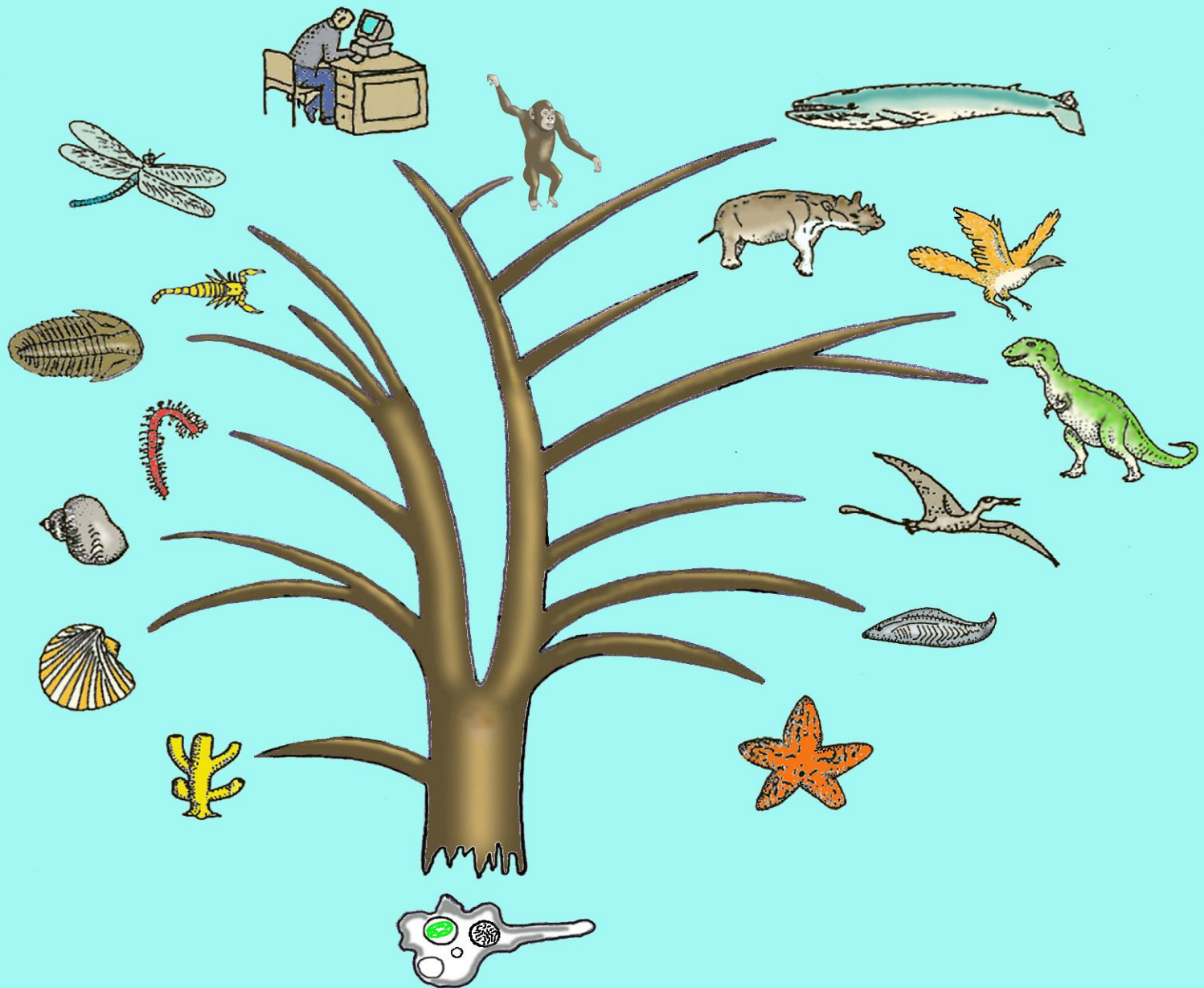
The next slide represents one of the classic evolutionary trees depicted by Earnest Haeckel over a century ago. Evolution proceeds up through the tree. The organisms are the leaves of the tree, but the labels on the dark branches are essentially classification categories, not actual organisms that might be evolutionary intermediates. **This absence further illustrates the lack of evolutionary intermediates.**

The slide that follows is that of another evolutionary tree for animals and it illustrates the same thing. The organisms expected for the main branches and trunk are usually absent.



THE EVOLUTIONARY TREE OF LIFE

This is one as envisioned by Ernest Haeckel, more than a century ago. Main branches are classification categories, not organisms.



MORE RECENT EVOLUTIONARY TREE FOR THE ANIMALS. The organisms are as the leaves of the tree, with there are very few organisms, if any, for the branches.

4. EVOLUTIONARY TREES

If evolution had taken place we should expect the **branches of the evolutionary trees to be well represented**, at least in the fossil record, but this is not the case. Occasionally an intermediate fossil like the fossil bird *Archaeopteryx* is discovered, but this could be **just another created kind**.

A leading American advocate of evolution, **Stephen Jay Gould**, in trying to emphasize small jumps in the fossil record (punctuated equilibrium), has underlined the problem of the scarcity of organisms for the branches of the evolutionary trees. He states:

Stephen J. Gould (Harvard). 1980. The Panda's Thumb: More reflections in natural history. New York and London: W. W. Norton & Co., p 181.

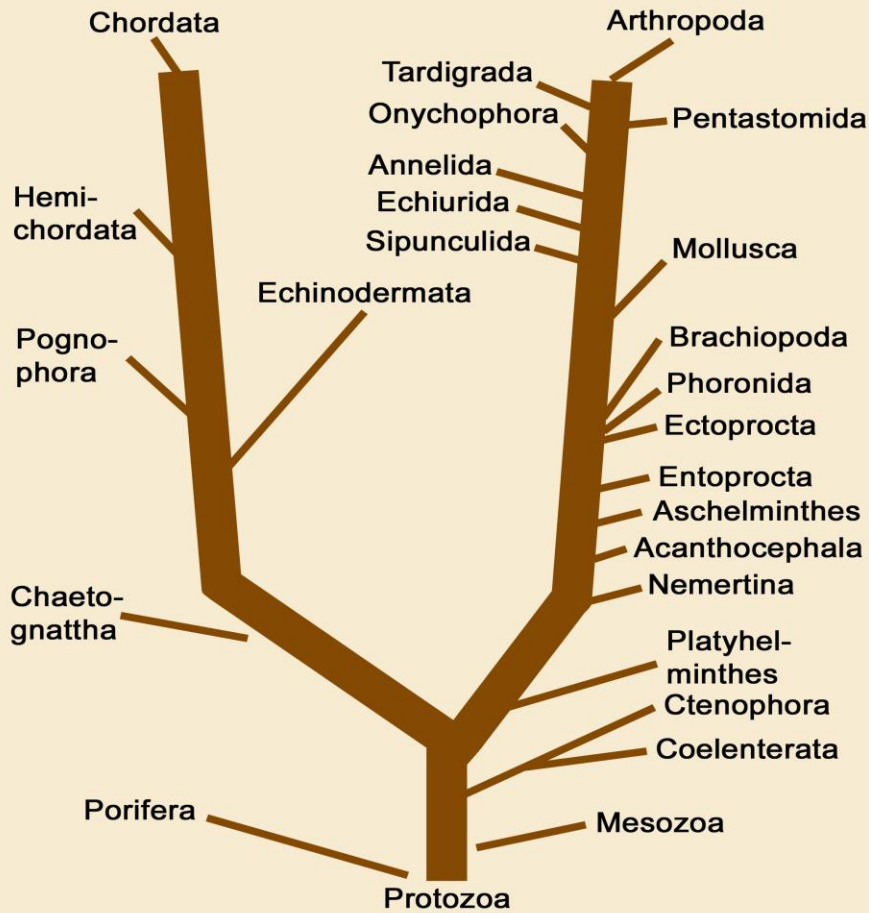
“The extreme rarity of transitional forms in the fossil record persists as the trade secret of paleontology. The evolutionary trees that adorn our textbooks have data only at the tips and nodes of their branches; the rest is inference, however reasonable, not the evidence of fossils.”

4. EVOLUTIONARY TREES

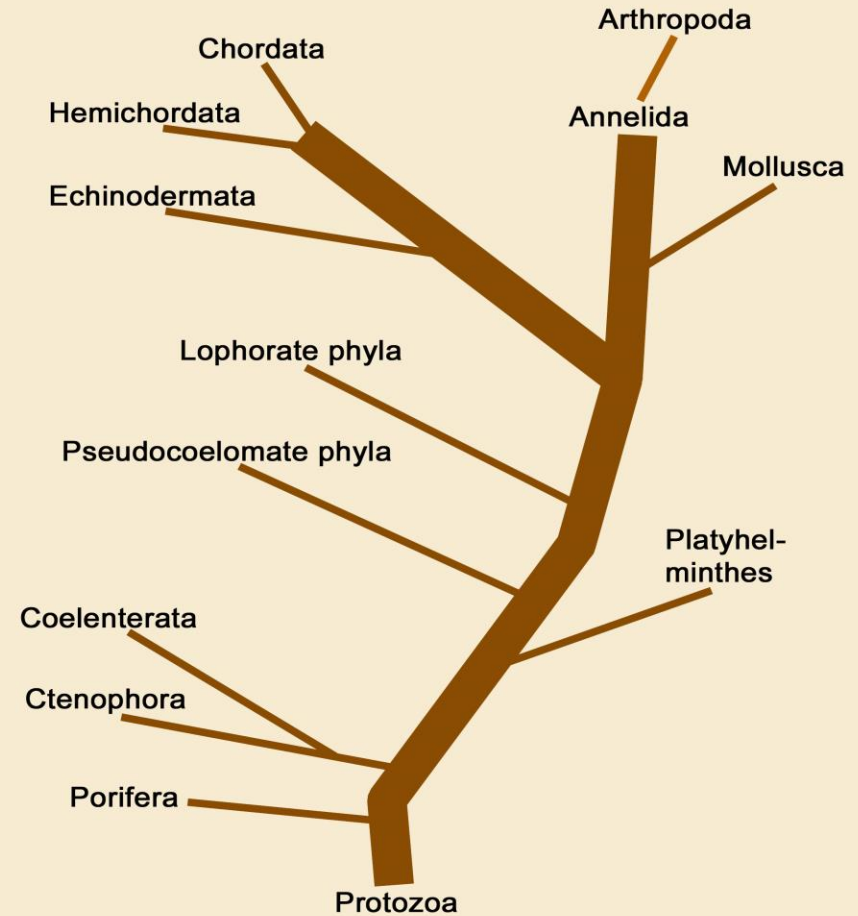
Because there are hardly any organisms that can be considered as intermediates between the major groups of organisms, evolutionists cannot authenticate an evolutionary pathway from simple organisms up through to our present living forms. The pathways (branches) are general assumptions of how evolution is thought to have proceeded.

Because of the lack of intermediates, evolutionists occasionally come up with very different pathways or trees.

The next slide of two different evolutionary trees serves to illustrate this lack of evidence.



Based on Keeton, W. T. 1967. Biological Science, Figure 22.22.



Based on Keeton, W. T. 1967. Biological Science, Figure 22.23.

TWO EVOLUTIONARY TREES

Because of the lack of intermediates to indicate how evolution proceeded, different kinds of trees can be envisioned.

**5. THE GAPS ARE
BETWEEN
MAJOR GROUPS**

5. THE GAPS ARE BETWEEN MAJOR GROUPS

Evolutionists sometimes refer to fossils they consider to be intermediate, or **missing links**, in the evolutionary process between two other kinds. Favorite examples are between: (1) reptiles and mammals; (2) assumed ancestral whales and whales; or (3) fish and amphibians. Their examples are usually fairly closely related to other organisms and some only represent normal biological variation called **microevolution**. Both creationists and evolutionists agree that microevolution occurs, and a number creationists agree that there are small limited changes beyond the microevolutionary level, but not major changes.

5. THE GAPS ARE BETWEEN MAJOR GROUPS

Some other intermediates, that are called **mosaics**, display mixtures of some **fully developed characteristics** of both kinds of fossils supposedly being bridged, but **these are not intermediate stages** in the process of changing the features being considered, and thus do not give evidence for gradual evolution.

However, the evolutionists' greater problems are between the major groups (phyla and divisions) of the biological world.

5. THE GAPS ARE BETWEEN MAJOR GROUPS

It is especially between the large phyla and divisions of the living world that one would **expect the greatest number** of evolutionary intermediates, but that is not what is found.

The evolutionist George Gaylord Simpson of Harvard University fame has pointed this out. As you can see in the next slide, the farther one goes towards the main (larger) categories (down on the slide) in our classification scheme, the fewer intermediates are found, with none between the phyla. **But this is precisely where evolution should show the greatest number of intermediates, because this is where the differences are the greatest.**

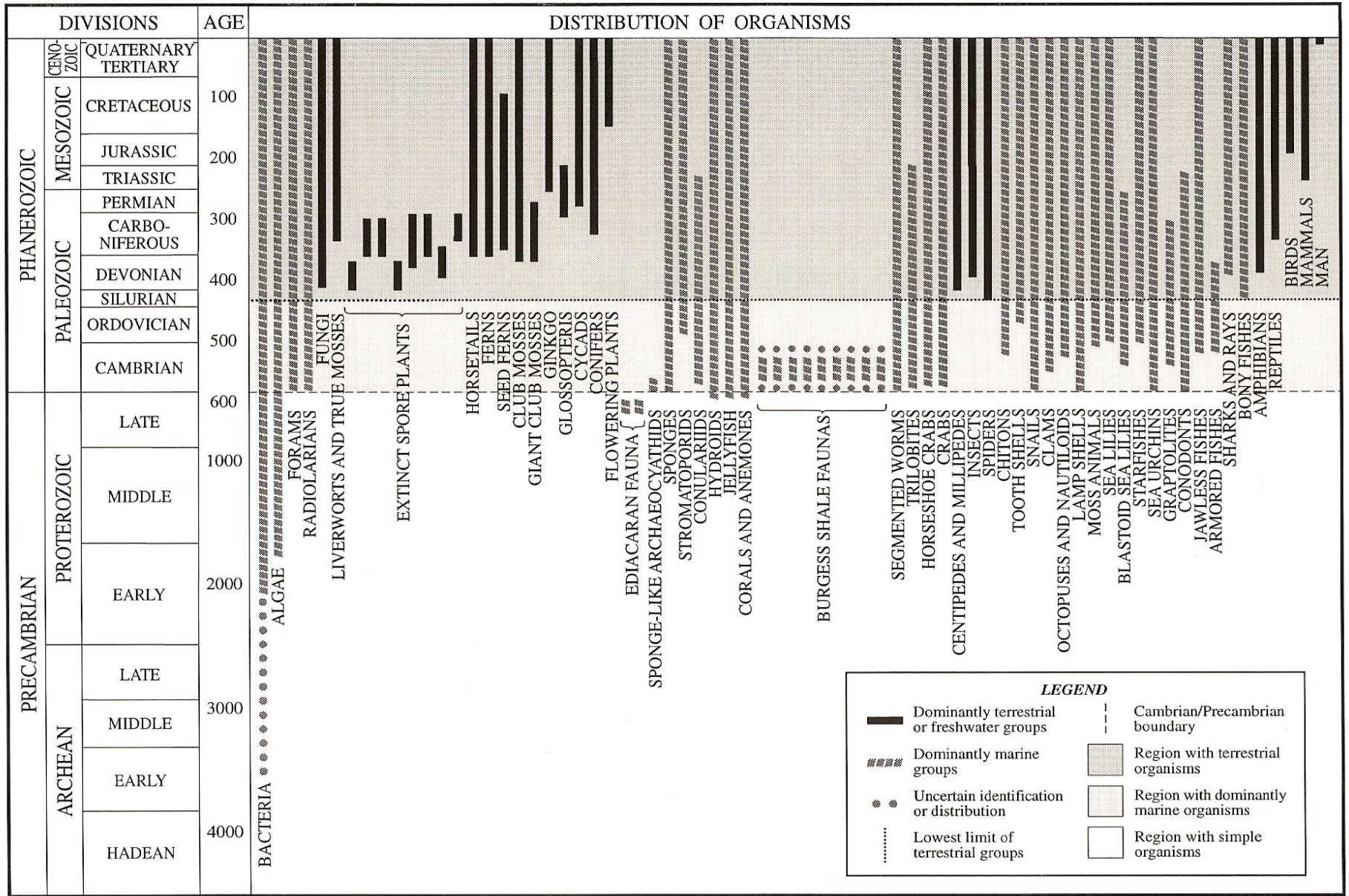
INTERMEDIATES IN THE CLASSIFICATION SCHEME

CLASSIFICATION LEVEL	ABUNDANCE OF INTERMEDIATES
Species	A multitude
Genera	Many
Classes	A few
Phyla	None

Based on: **Simpson, GG. 1967. The meaning of evolution: A study of life and its significance for man. Rev. ed. New Haven: Yale University Press, p 232-233.**

5. THE GAPS ARE BETWEEN MAJOR GROUPS

The problem of the lack of intermediates between the major groups of organisms is well illustrated by the detailed “Distribution of Organisms” chart we have been using. The various vertical lines represent the major groups of organisms found in the fossil record. These groups remain as separate groups down to their lowest representation. If evolution from a first living organism had taken place, as evolution proposes, all these groups **should be connected to each other** as you go down to the earliest form of life, like going down through an evolutionary tree to the first form of life. The fossils showing such connections are not there. Look at the chart; the groups are separate as would be expected if they were created.



SPECIFIC DISTRIBUTION OF ORGANISMS IN THE GEOLOGIC LAYERS. Putative ages are given in millions of years and are not endorsed by the author

5. THE GAPS ARE BETWEEN MAJOR GROUPS

The problem that the lack of fossil intermediates poses for evolution is severe, and whenever a suggestion of an intermediate is noted, a great deal is usually made of this. In a way this only serves to illustrate the reality of the problem and the rarity of examples.

Many evolutionists don't seem to understand the problem they face. They get quite excited about the rare missing links that are proposed as if this were solving the problem of the gaps in the fossil record. As more and more new fossils are discovered one can expect new forms to appear, but, as is admitted, these tend to fall into well established major groups. What evolutionists need is not the few intermediates they claim. If evolution had actually taken place, as organisms evolved over billions of years, often with few successes and many failures as expected from random changes, we should expect a **solid continuity** of intermediates in the fossil record trying to evolve, but this is not found.

6. CONCLUSIONS ABOUT THE MAJOR GAPS

6. CONCLUSIONS

The gaps in the fossil record between the major groups of organisms pose a major challenge to evolution. This problem is acknowledged by leading evolutionists, and sometimes denied by others.

Occasionally, forms believed to be intermediate between different kinds of organisms are reported, but these are almost always between fairly closely related ones.

The fossil record does not show a continuous lineage from a simple original life form on up to a rich variety of advanced forms. Instead major kinds of organisms tend to appear suddenly without evolutionary ancestors. The **solid continuity** of fossils expected, as many organisms would try to evolve by random mutations from one major kind to another, is not there.

7. REVIEW QUESTIONS

(Answers given later below)

7. REVIEW QUESTIONS – 1

(Answers given later below)

- 1. Why is it difficult for evolutionists to say that the reason we don't have intermediates between the major groups of fossils is because they have not yet been found?**
- 2. Why is it that some leading evolutionists call the evolution of flowering plants an “abominable mystery”?**
- 3. Explain why the turtle poses a problem for evolution?**

REVIEW QUESTIONS – 2

(Answers given later below)

- 4. What is the significance for creation that evolutionists can propose very different kinds of “trees” for evolutionary relationships.**
- 5. Evolutionists sometimes report on intermediates (missing links) between groups of organisms. What is the significance of the fact that these intermediates are between closely related organisms, but not between the animal phyla?**

REVIEW QUESTIONS AND ANSWERS - 1

1. Why is it difficult for evolutionists to say that the reason we don't have intermediates between the major groups of fossils is because they have not yet been found?

If we had found just a few fossils, we could say that we can expect to find some intermediates because our sample is small. However we have found millions of fossils. Our sample is very large, and the hope of finding intermediates between major groups dwindles as we find more samples. The more fossils we have the more sure we can be that the intermediates are not there. The probability of their existence keeps going down as the size of the sample tested increases.

2. Why is it that some leading evolutionists call the evolution of flowering plants an “abominable mystery”?

Flowering plants have many special features including highly specialized flowers. The gradual evolution of these features would be expected to leave lots of intermediates in the fossil record, but they are notoriously absent.

REVIEW QUESTIONS AND ANSWERS - 2

3. Explain why the turtle poses a problem for evolution?

Among land vertebrates, the turtle is unique because the pectoral girdle that supports the front legs is on the inside of the shell which according to evolution represents the rib cage. In other vertebrates, including you and the assumed ancestor of the turtle, the pectoral girdle is on the outside of the ribs. How did the evolving turtle gradually move its pectoral girdle inside, including moving the muscles, nerves, and blood vessels while providing evolutionary survival value all along the way. Furthermore, it had to do this without leaving a fossil record for all these changes.

4. What is the significance for creation that evolutionists can propose very different kinds of “trees” for evolutionary relationships.

The fact that evolutionists can suggest very different kinds of relationships between groups of organisms indicates that the fossil record does not provide the fossils showing how they evolved from each other. The data looks more like creation by God, without intermediates.

REVIEW QUESTIONS AND ANSWERS - 3

5. Evolutionists sometimes report on intermediates (missing links) between groups of organisms. What is the significance of the fact that these intermediates are between closely related organisms, but not between the animal phyla and plant divisions?

If evolution had taken place, we would expect to see the greatest number of intermediate fossils between the major groups. Since that is where they are especially absent, this implies that evolution from a microscopic one celled organism to complex forms like humans, never occurred.

ADDITIONAL REFERENCES

For further discussions by the author (Ariel A. Roth) and many additional references, see the author's books titled:

1. **ORIGINS: LINKING SCIENCE AND SCRIPTURE.** Hagerstown, MD. Review and Herald Publishing Association.
2. **SCIENCE DISCOVERS GOD: Seven Convincing Lines of Evidence for His Existence.** Hagerstown, MD. Autumn House Publishing, an imprint of Review and Herald Publishing Association.

Additional information is available on the author's Web Page: Sciences and Scriptures. www.sciencesandscriptures.com. Also see many articles published by the author and others in the journal **ORIGINS** which the author edited for 23 years. For access see the Web Page of the Geoscience Research Institute www.grisda.org.

Highly Recommended URLs are:

Earth History Research Center <http://origins.swau.edu>

Theological Crossroads www.theox.org

Sean Pitman www.detectingdesign.com

Scientific Theology www.scientifictheology.com

Geoscience Research Institute www.grisda.org

Sciences and Scriptures www.sciencesandscriptures.com

Other Web Pages providing a variety of related answers are: Creation-Evolution Headlines, Creation Ministries International, Institute for Creation Research, and Answers in Genesis.

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