

# Macroevolution's Alternative to Neo-Darwinian Gradualism: *Punctuated Equilibrium*



Joshua Gurtler, May 1, 2011

# What We Will Learn in This Lesson

I. Evolutionists admit that billions of transitional fossils are inexplicably missing from the fossil record.

II. As a rescuing mechanism, macroevolution has come up with the hypothesis of “punctuated equilibrium” (PE), which says, “animals must have evolved so quickly that they left no trace of their transitional (i.e., intermediate) forms in the fossil record.” However. . .

III. PE couldn't have happened quickly or it would lead to a “grossmutation” “saltational” evolutionary model, which all scientists admit is impossible.

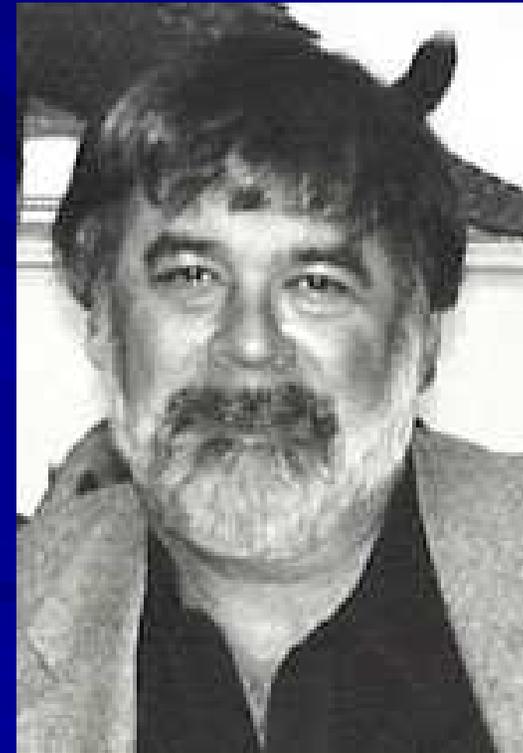
IV. But, it couldn't have happened slowly or we would find evidence in the fossil record.(!)

# REVIEW

- 1. Animals change within their own kind (microevolution) but not outside their kind (macroevolution)**
- 2. Darwinian evolution is not founded on the four-tiered scientific method**
- 3. To promote Darwinian evolution, gene mutations must be a (a) structural, (b) beneficial, and (c) persistent (none have ever been documented)**
- 4. All 100 animal phyla (or body plans) appear fully-formed at the bottom of the geologic column in the “Cambrian Explosion”**
- 5. Animal structures do not change in the fossil record (stasis prevails – lack of transitions)**

**“It is not just single species that are in stasis. Virtually all the component species of regional ecosystems are evolutionarily stable, often for millions of years.”**

**- Niles Eldridge. *The Pattern of Evolution*. New York: W.H. Freeman and Co. 1999. pp. 157**





“It takes a while to see  
what one is not prepared to look for.”

- Spencer Weart

Director of the Center for History of Physics of the American  
Institute of Physics (AIP) from 1971-2009.

# Introduction

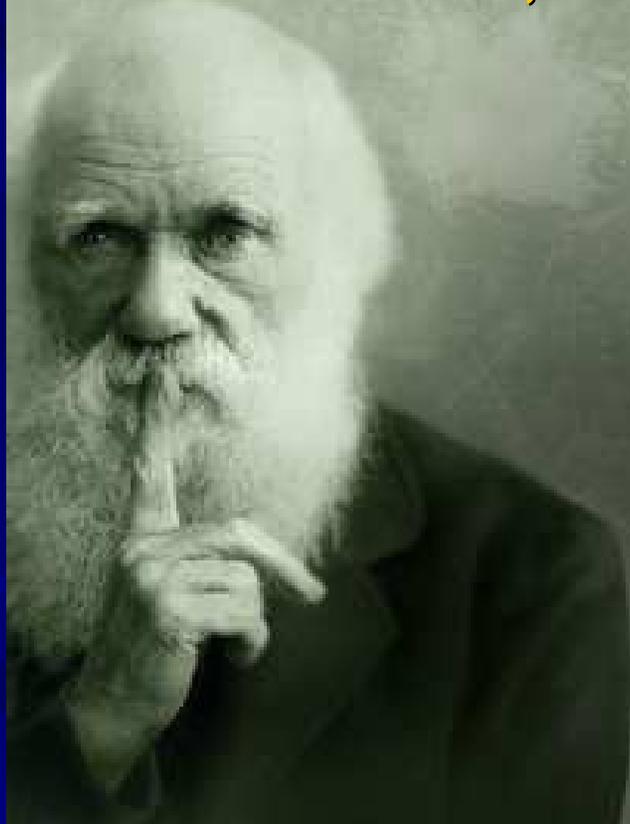
- For at least 200 years, creationists have contended that macroevolution could not have occurred because there are no transitional fossils.
- Darwinists, however, have argued that they just need more time and they would find the transitional fossils.

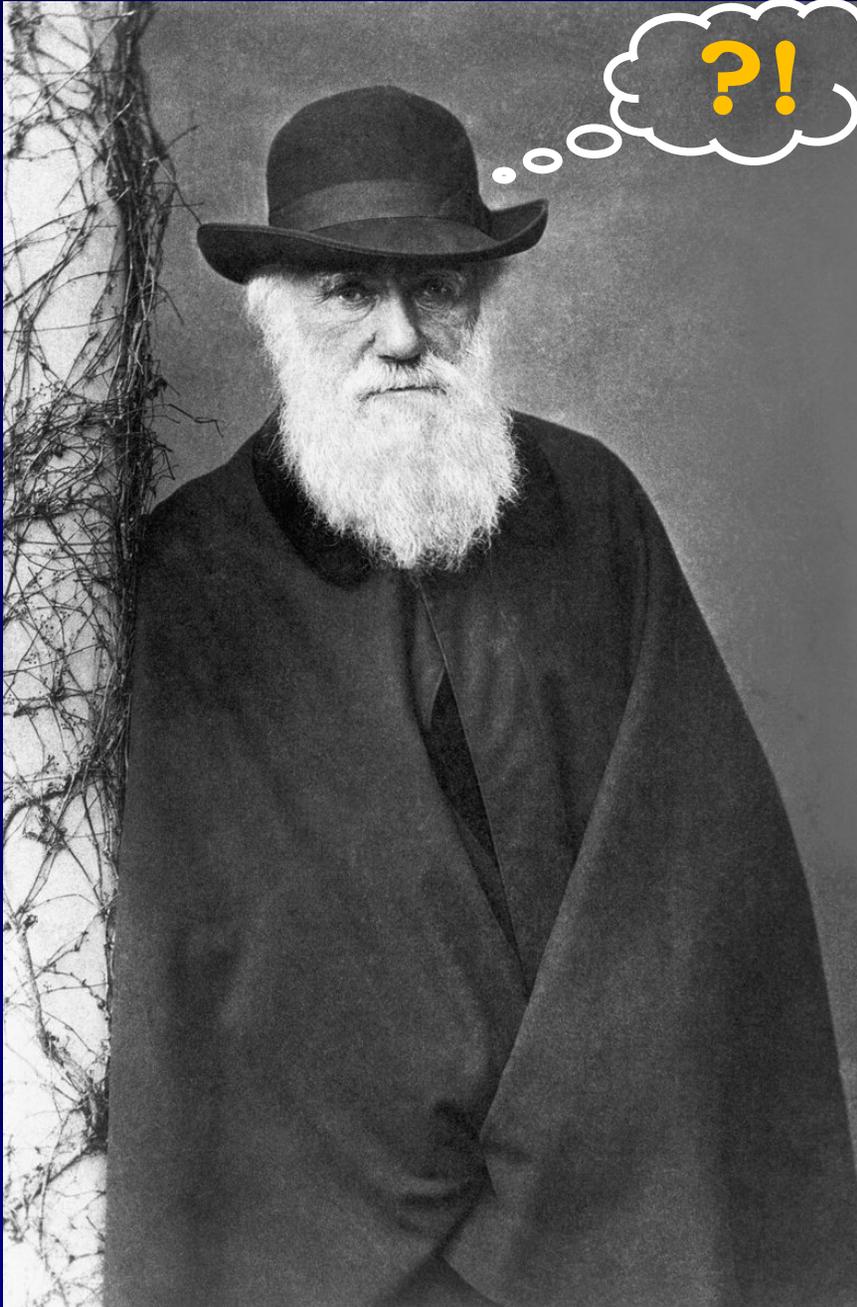
Transitions Between  
Mammalian Families have not  
been Found



*“The number of intermediate and transitional links, between all living and extinct species, must have been inconceivably great”*

- Charles Darwin, 1872, The Origin of Species, p. 266



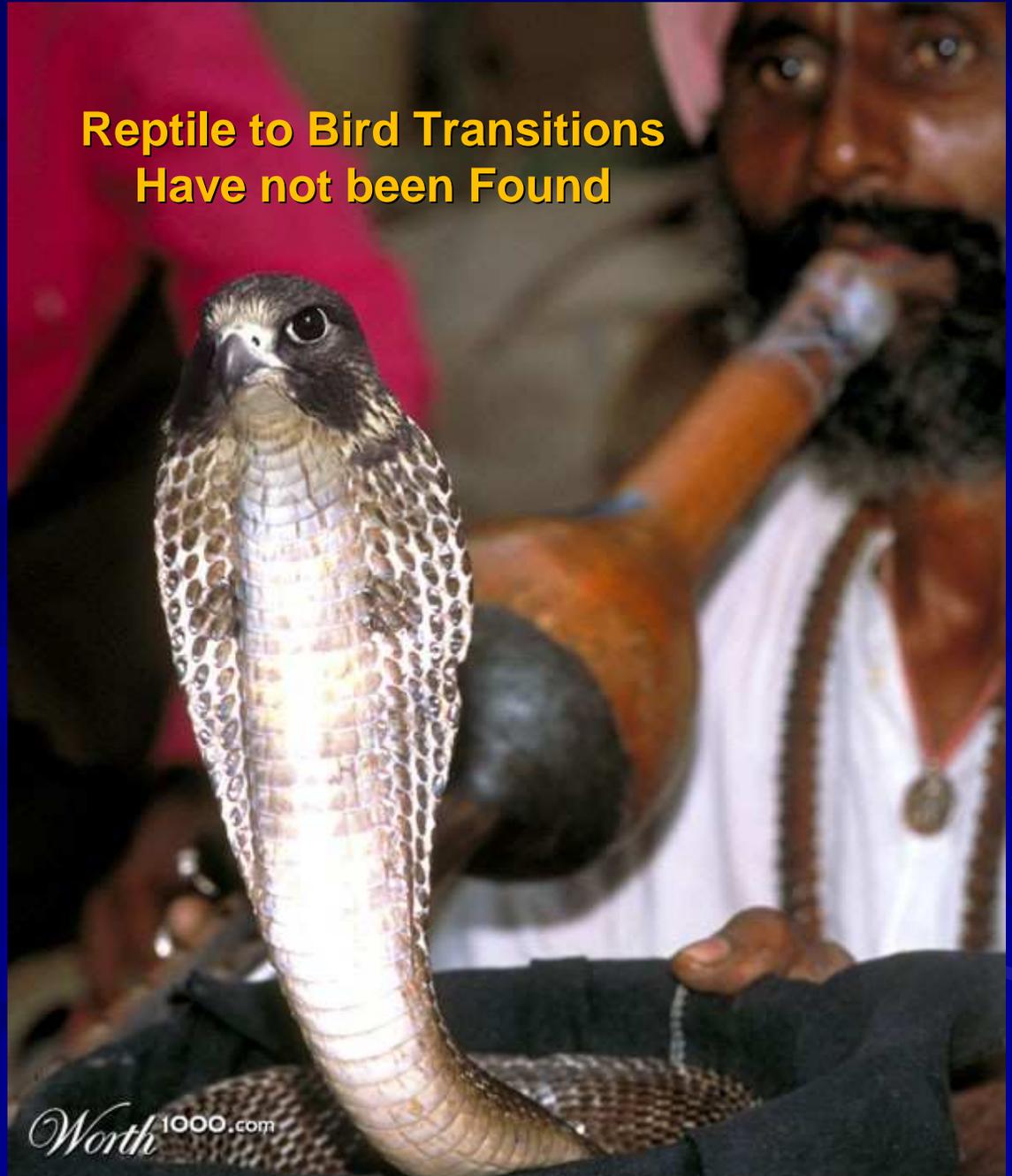


***“Why is not every geologic formation and every stratum full of such intermediate links? Geology assuredly does not reveal any such finely-graduated organic chain; and this is the most obvious and serious objection which can be urged against the theory”***

***- Charles Darwin, The Origin of Species, 1872, pp. 264, 265***

To date, ca. 300,000 fossilized animal species have been discovered with no undisputed transitions between Phyla, Classes, Orders or Families. The “gaps” and “missing links” are still unaccounted for.

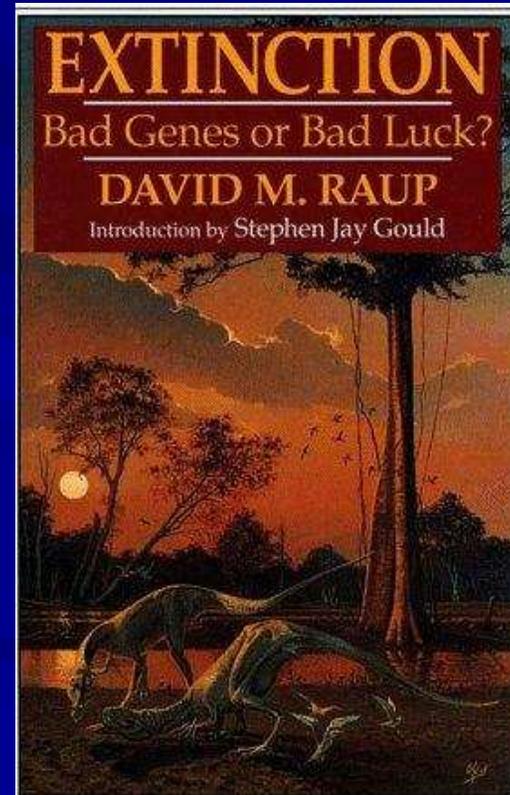
Reptile to Bird Transitions  
Have not been Found



Worth1000.com

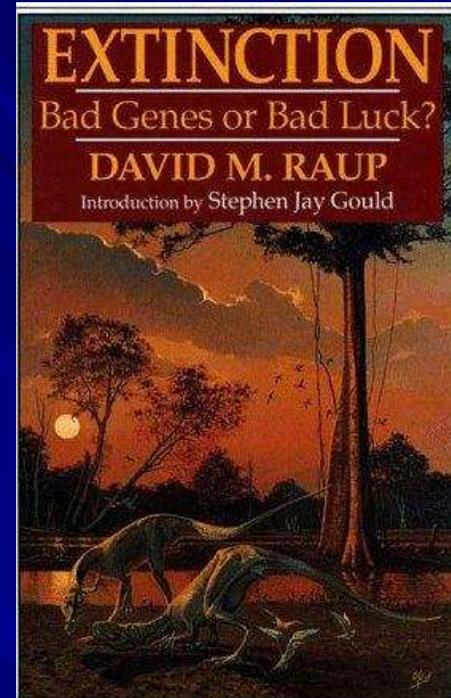
**“In the years after Darwin, his advocates hoped to find predictable progressions. In general, these have not been found—yet the optimism has died hard, and some pure fantasy has crept into textbooks.”**

**- David M. Raup, “Evolution and the Fossil Record,” *Science*, vol. 213 (July 17, 1981), p. 289 [Paleontologist, Univ. Chicago]**



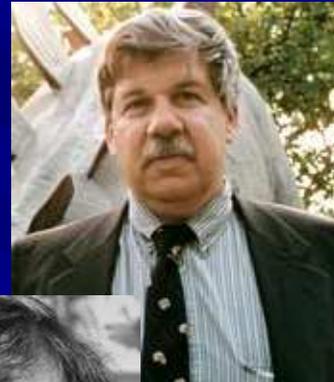
***“The record of evolution is still surprisingly jerky and, ironically, we have even fewer examples of evolutionary transition than we had in Darwin’s time.”***

**-Raup, David M., “Conflicts Between Darwin and Paleontology,” *Bulletin, Field Museum of Natural History*, vol. 50 (January 1979), p. 25. Raup is Curator of Geology at the Field Museum of Natural History, Chicago.**



# Enter, The Confessing Evolutionists

- Schindewolf
- Goldschmidt
- Simpson
- Gould
- Eldredge



Who agree with the creationists: The fossil record indicates stasis – not success-  
ionary transitions.

(Also Ayala, Grassé, Stanley, Vrba, and Margulis)

# The History Behind Punctuated Equilibrium

**Otto H. Schindewolf**

**(Top European Paleontologist; Director, Geological Survey of Berlin; University of Tübingen)**



- Explained lack of transitions in the fossil record by *“Typostrophism”* (saltational evolution; systemic mutations).

# The History Behind PE

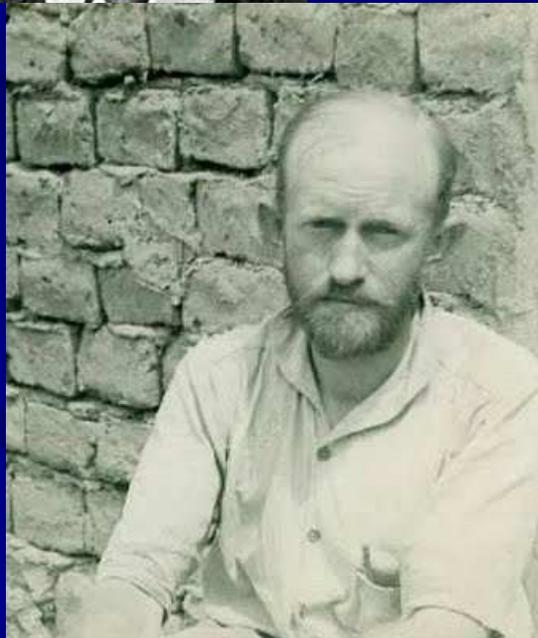
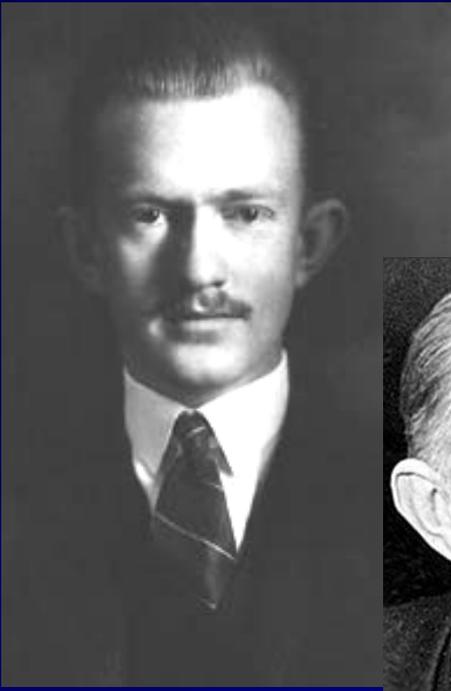


Richard H. Schmidt  
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**George Gaylord Simpson  
("Most Influential Paleontologist of  
the 20<sup>th</sup> Century," Columbia  
University, Modern Evolutionary  
Synthesis)**

**1944 and 1949 – renamed saltational  
evolution as  
"QUANTUM EVOLUTION"**





## 1960's Soviet Union Scientists Resorted to Saltational Evolution in Explanation of Paleontological Gaps



**Stephen J. Gould**  
**(Harvard University)**



*Stephen Jay Gould*  
10.09.1941 - 20.05.2002



**Niles Eldridge**  
**(American Museum of Natural History)**

TRILOBITE ("540-250 mya")



**Niles Eldridge**  
(American Museum of Natural History)



Rogerwendell.com



www.nasa.gov

Eldredge, N. 1971. The allopatric model and phylogeny in Paleozoic invertebrates. *Evolution*. 25 (1): 156-167.

Dr. Niles Eldredge  
Evolutionist

DARWIN

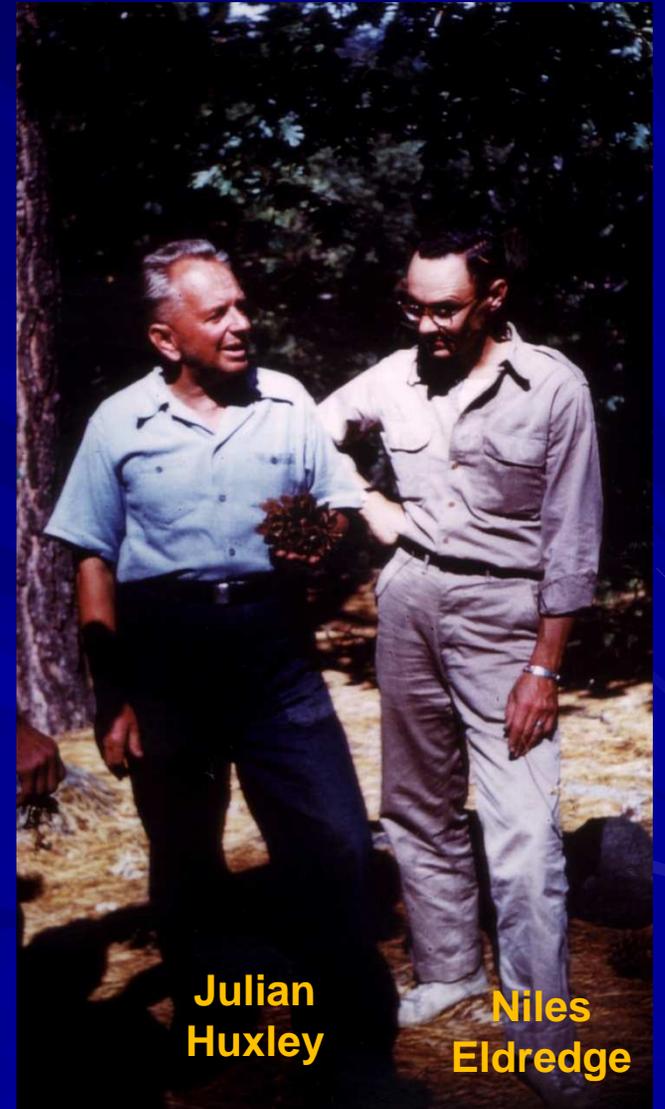
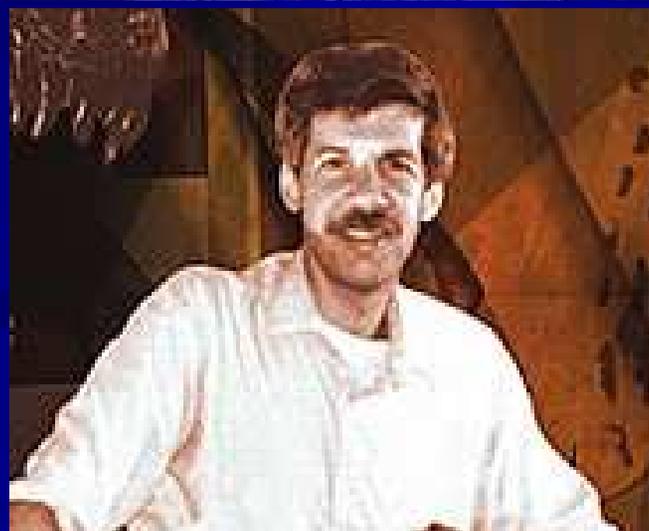
Happiest at home with his notebooks and his microscope, he shunned the public eye. Controversy made him ill. This BRILLIANT GEMSTONES OF NATURE kept his most original and revolutionary idea under wraps for decades. Yet today, two centuries after Charles Darwin's birth, nearly everyone knows his name. WHAT DID DARWIN DO, and why does he still matter so much?

Keenly observing nature in all its forms – from fossil cloths to mockingbirds, primates to children – Darwin – that we all are related. EVERY LIVING THING SHARES NEXTERITY, he concluded, and the vast diversity of Earth results from processes at work over millions and still at work today. Darwin's explanation – at unfolding of life through time – the theory

Photo: Denis Finnin, AMNH

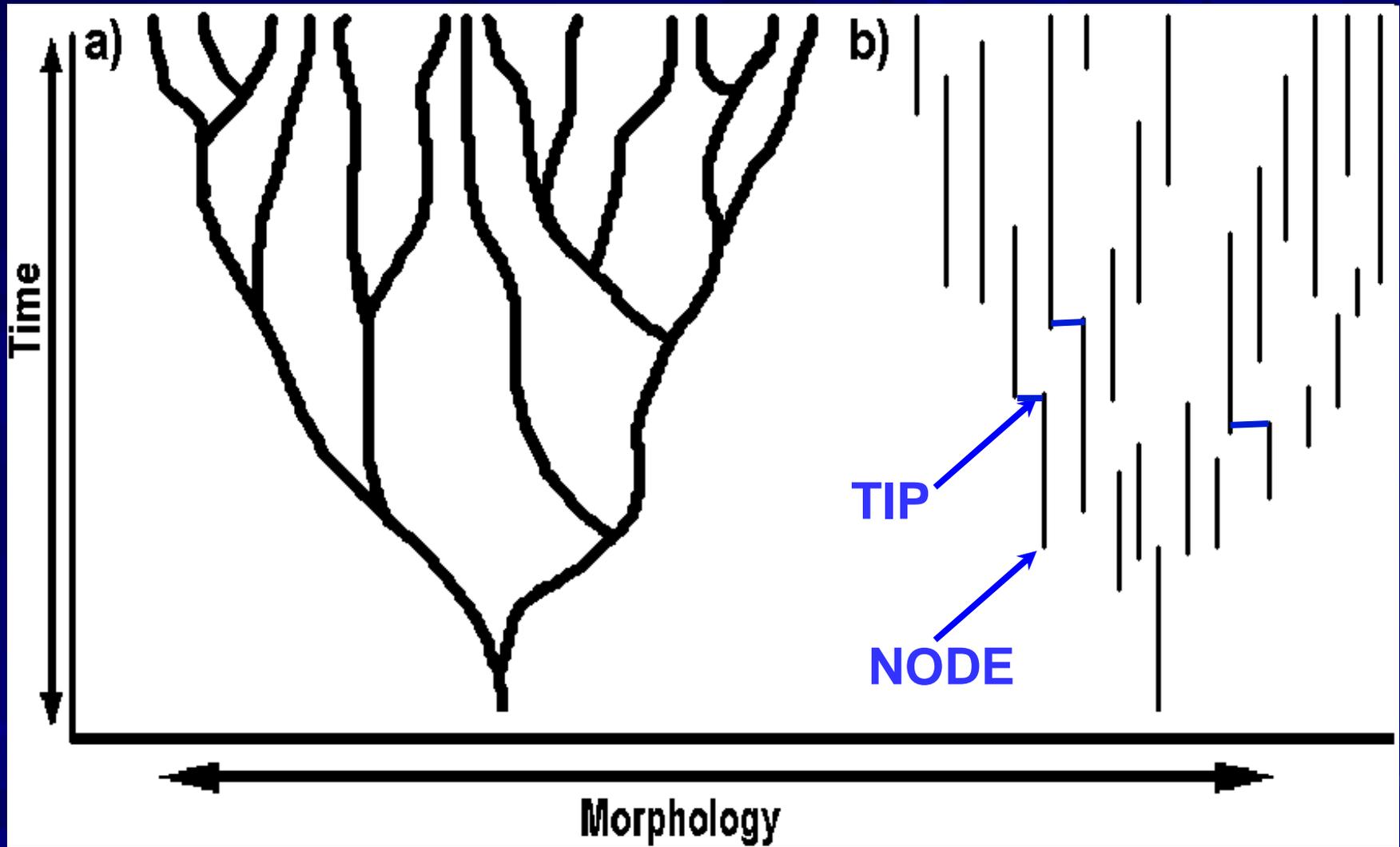
[www.nileseldredge.com/index.htm](http://www.nileseldredge.com/index.htm)

**Eldredge, N. and Stephen J. Gould. 1972. Punctuated Equilibria: An Alternative to Phyletic Gradualism. In Schopf, Thomas J.M. (ed.), Models in Paleobiology, pp. 82-115. Freeman, Cooper and Co., San Francisco.**

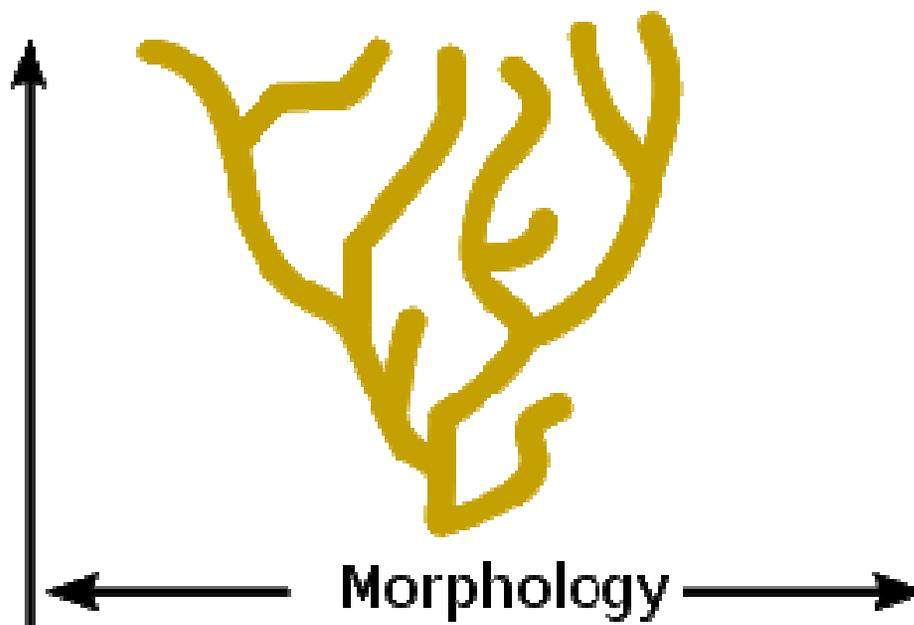


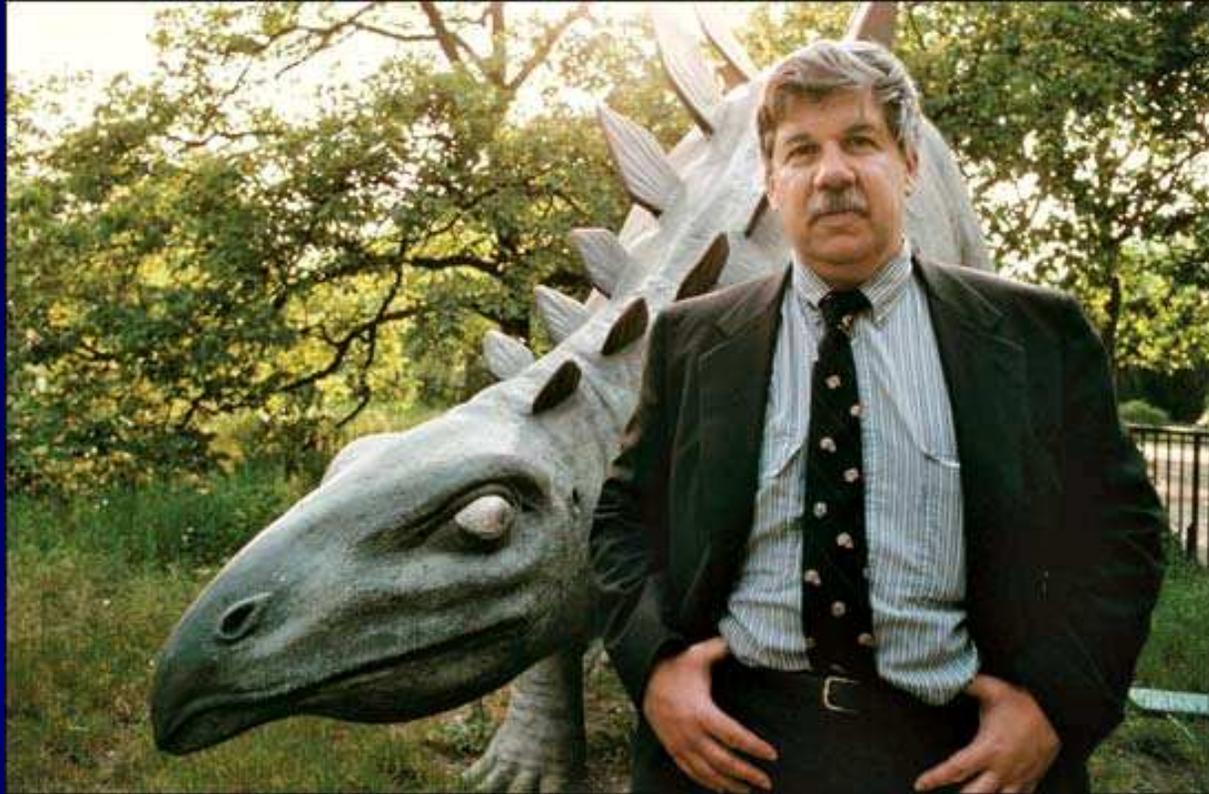
**Julian Huxley**

**Niles Eldredge**



## Phyletic Gradualism



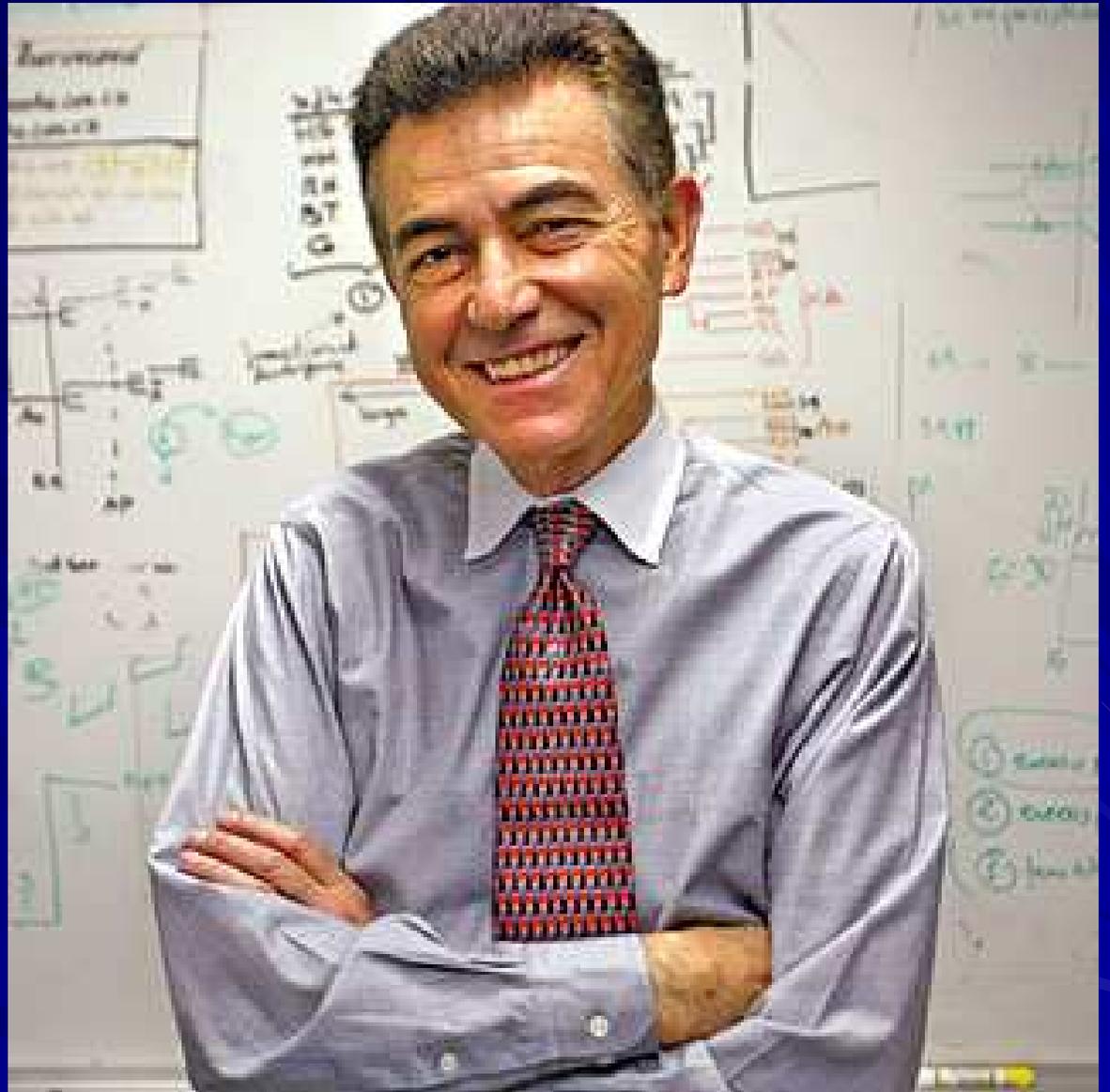


***“I do, however, predict that during the next decade **Goldschmidt** will be largely vindicated in the world of evolutionary biology. . . The fossil record with its abrupt transitions offers no support for gradual change. . . How could we ever convert a rhinoceros or a mosquito into something fundamentally different? Yet transitions between major groups must have occurred in the history of life”***

***- S.J. Gould, 1977, "The Return of Hopeful Monsters," **Natural History**, 86[6]:22-30***

***“I am now convinced from what the paleontologists say that small changes do not accumulate”***

**- Francisco Ayala, in Lewin, “Evolutionary Theory Under Fire” *Science*, 1980, 210:883-887 (Francisco Ayala has a Ph.D. from Columbia Univ. and is professor of Evolutionary Biology at UC Irvine.)**



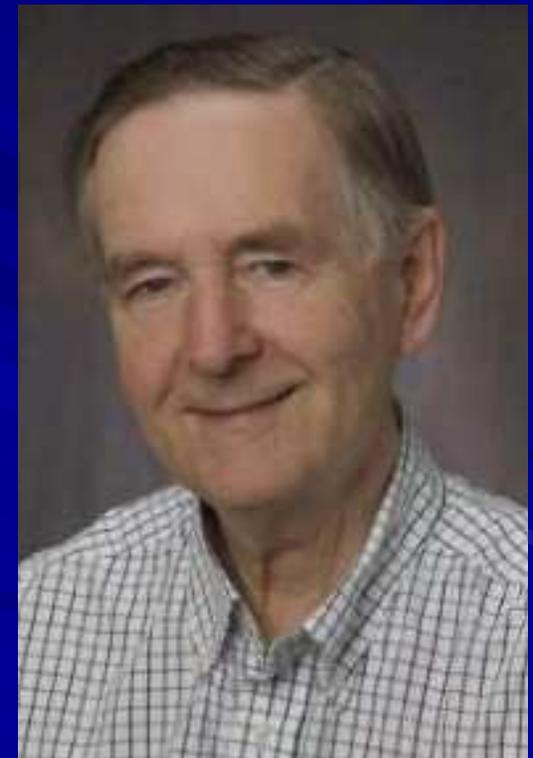
*“punctuated equilibrium has been accepted by most of our colleagues. . . as a valuable addition to evolutionary theory. . . paleontologists never wrote papers on the absence of change in lineages before punctuated equilibrium granted the subject some theoretical space. . . Darwinian extrapolation cannot fully explain large-scale change in the history of life”*

**- S.J. Gould and Niles Eldredge, 1993, “Punctuated Equilibrium Comes of Age.”  
*Nature*, 366:223-227**



***“Goldschmidt is becoming increasingly seen as on the right track regarding his evolutionary ideas.”***

**Dr. Donald Forsdyke, Professor, Biochemistry (Bioinformatics), Queens University, Kingston, Ontario, Canada. [Author of *The Origin of Species, Revisited*. Montreal: McGill-Queen's University Press. 2001]**



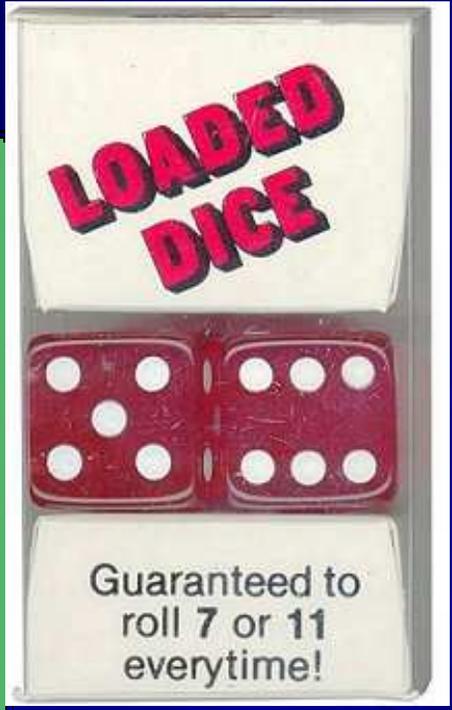
# Problems with Punctuated Equilibrium: (An Unscientific, “Jury-Rigged” Affair)



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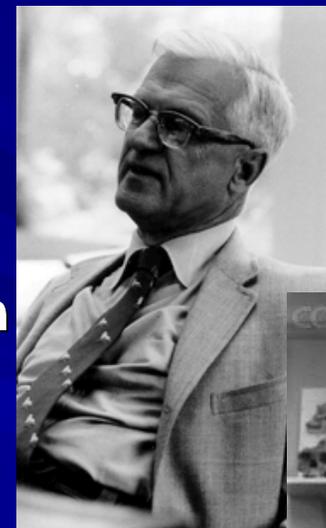
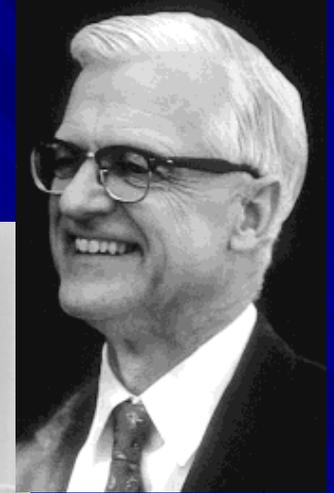
# A Rigged Game

- “Head I Win, Tails You Lose
- Stacked Deck
- Marked Cards
- Loaded Dice
- Corked Bat
- Fixed Race
- Palming trick
- Shot-Filled Frog
- Vasoline, or emory board in glove
- Two headed coin
- Shell Game



“The behaviors that led to the origin of man are not available for study, and must be reconstructed from fragmentary fossils, the anatomy and behaviors of contemporary primates but there is wide area for disagreements. Doctrines which seemed certain in one decade may crumble under the impact of new discoveries new methods of dating, new experiments. Under these circumstances, it may be more useful to regard the study of evolution as a game rather than as a science. Uncertainties are far greater than might be thought from reading scientific papers and, in spite of the emphasis on evolutionary theory, there is no agreement on the rules of the evolutionary game.”

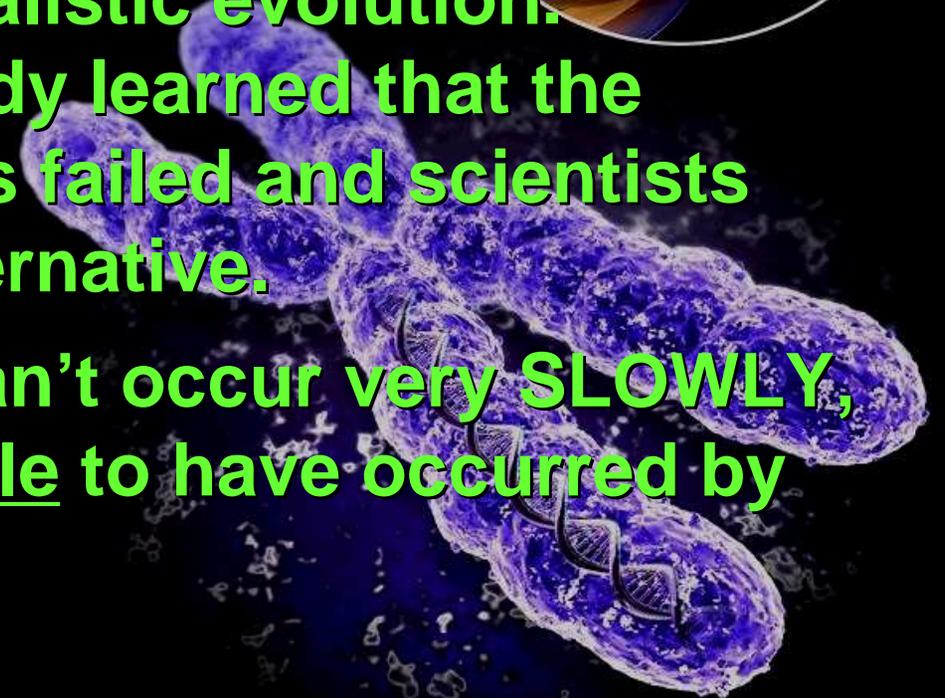
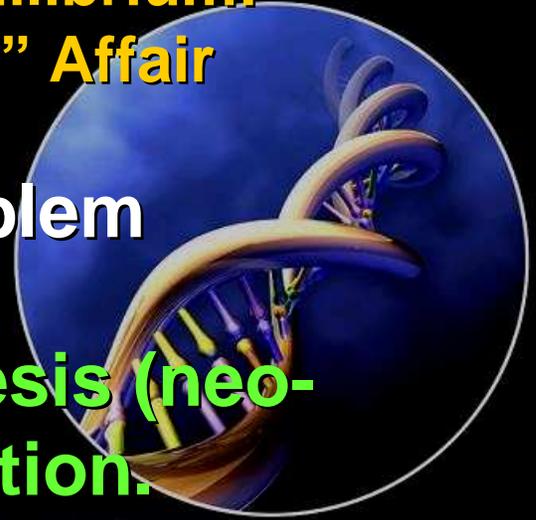
- S.L. Washburn, “Study of Evolution—More of a Game Than a Science,” Abstracts, 71st Annual Meeting (Washington, D.C.: American Anthropological Association, 1972) p. 121. [Ph.D., Harvard, Professor Columbia Univ., Univ. Chicago, UC Berkeley, Pioneer in the field of “human evolution.”]



## Problems with Punctuated Equilibrium: An Unscientific, “Jury-Rigged” Affair

### A. The Genetic Mechanistic Problem

- PE relies on the modern synthesis (neo-Darwinism) for gradualistic evolution. However, we’ve already learned that the modern synthesis has failed and scientists are looking for an alternative.
- If neo-Darwinism can’t occur very SLOWLY, it is even less plausible to have occurred by PE very RAPIDLY.





**"I have seen no evidence whatsoever that these [evolutionary] changes can occur through the accumulation of gradual mutations."**

**- Lynn Margulis, *Science* Vol. 252, 19 April 1991, p. 379**

*“[Neo-Darwinism will one day be viewed as] “a minor twentieth-century religious sect within the sprawling religious persuasion of Anglo-Saxon Biology” . . . [Neo-Darwinists] “wallow in their zoological, capitalistic, competitive, cost-benefit interpretation of Darwin . . .*

***Neo-Darwinism, which insists on the slow accrual of mutations by gene-level natural selection, is a complete funk.”***

**C. Mann, (1991) "Lynn Margulis: Science's Unruly Earth Mother," *Science*, pp. 252:378-381 (American biologist and University Professor in the Department of Geosciences at the University of Massachusetts Amherst; 2008 Darwin-Wallace Medalist) - Believes in symbiogenic reorganization**



**THE ALTENBERG 16:**

**AN EXPOSÉ  
OF THE  
EVOLUTION  
INDUSTRY**

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"Running out of superlatives ...

Brilliant, a Brueghel really."

Nixon biographer

**ROGER MORRIS**

"Very glad to see the book."

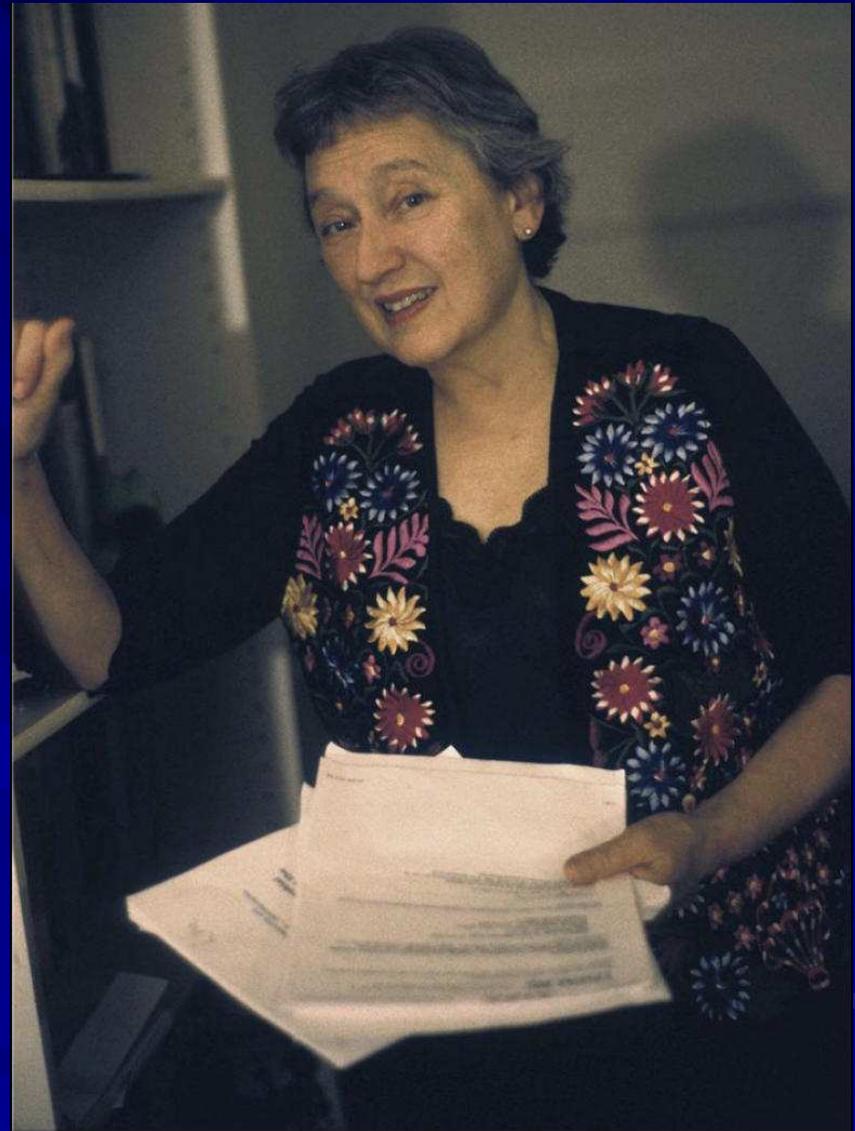
**NOAM CHOMSKY**

**SUZAN MAZUR**



**“Darwin’s claim of ‘descent with modification’ as caused by natural selection is a linguistic fallacy.”**

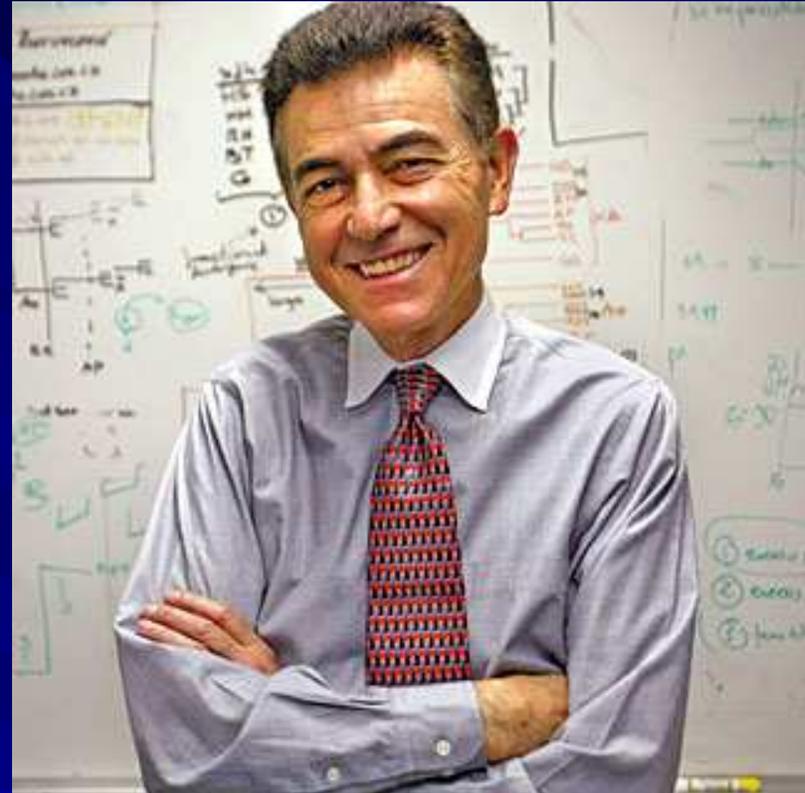
**- Lynn Margulis, in: *The Altenberg* 16, 2010. Suzan Mazur, p. 268.**



**“The source of purposeful inherited novelty in evolution, the underlying reason the new species appear, is not random mutation. . . .”**

**- Lynn Margulis, in: *The Altenberg* 16, 2010. Suzan Mazur, p. 279.**



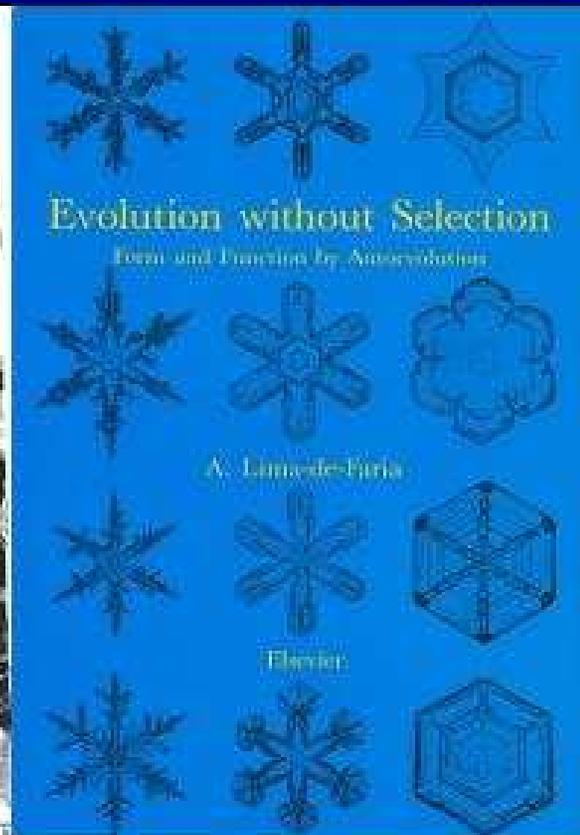
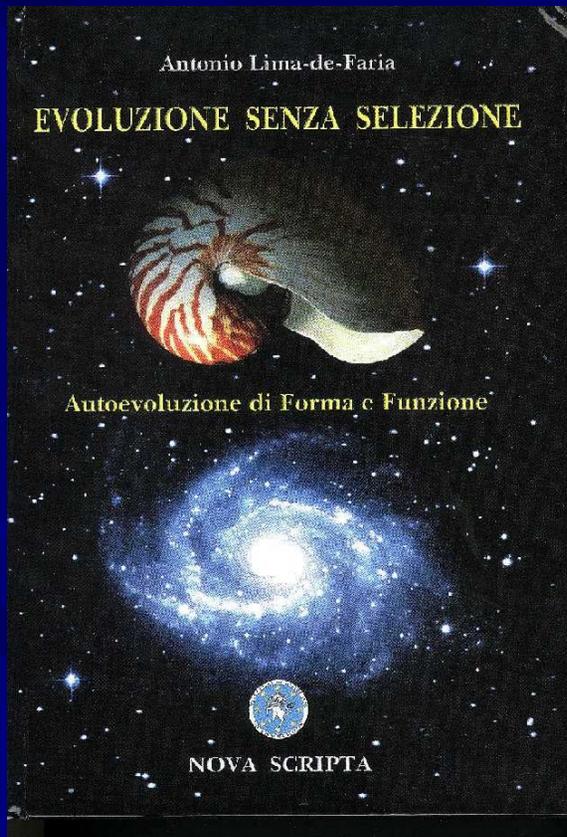


**“At that meeting Ayala agreed with me when I stated that this doctrinaire neo-Darwinism is dead. He was a practitioner of neo-Darwinism but advances in molecular genetics, evolution, ecology, biochemistry, and other news had led him to agree that neo-Darwinism is dead.”**

**- Lynn Margulis, in: *The Altenberg* 16, 2010. Suzan Mazur, p. 278.  
(Francisco Ayala has a Ph.D. from Columbia Univ. and is professor of Evolutionary Biology at UC Irvine.)**

**“The experimental results have been available for the last 35 years but have been ignored or silenced to avoid creating cracks in an edifice based on randomness and selection.”**

**- Antonio Lima-De-Faria, Professor Emeritus, Univ. of Lund, Sweden, as quoted in *The Altenberg* 16, 2010. Suzan Mazur, p. 86.**





**“The opportune appearance of mutations permitting animals and plants to meet their needs seems hard to believe. Yet the Darwinian theory is even more demanding: A single plant, a single animal would require thousands and thousands of lucky, appropriate events. Thus, miracles would become the rule: events with an infinitesimal probability could not fail to occur. . . . there is no law against daydreaming, but science must not indulge in it.”**

**- Pierre-Paul Grasse. 1977, *The Evolution of Living Organisms*, p. 103**

**(French zoologist, past president of the French Academy of Sciences.**

**Dobzhansky said that Grasse’s “knowledge of the living world is encyclopedic.”)**

**“It works by selection of traits produced by random variations in the genes. That’s essentially Darwin’s hypothesis. I think not. . . . There’s something wrong with the theory. It goes deep..”**

**- Jerry Fodor, in: *The Altenberg* 16, 2010. Suzan Mazur, p. 33. Fodor has a Ph.D. from Princeton Univ. and is professor of philosophy at Rutgers Univ. Caused stir when he questioned modern synthesis of evolution in his article, “*Why Pigs Don’t Have Wings*” Oct., 2007.**





**“How do major evolutionary changes get started? Does anyone still believe that populations sit around for tens of thousands of years, waiting for favorable mutations to occur (and just how does *that* happen, by the way?), then anxiously guard them until enough accumulate for selection to push the population toward new and useful change? There you have the mathematical arguments of neodarwinism that Waddington and others rightly characterized as ‘vacuous’ [empty, useless, lacking intelligence].”**

**-Kevin Padian, “The Whole Real Guts of Evolution,” review of *Genetics, Paleontology and Macroevolution*, by Jeffrey S. Levinton (Cambridge University Press, 1988, 637 pp.), *Paleobiology*, vol.~15 (Winter, 1989), pp. 73-78. Ph.D. Yale Univ., U.C. Berkeley; Professor of Integrative Biology; Curator of Paleontology, University of California Museum of Paleontology; President, National Center for Science Education**

## Problems with Punctuated Equilibrium: (An Unscientific, “Jury-Rigged” Affair)

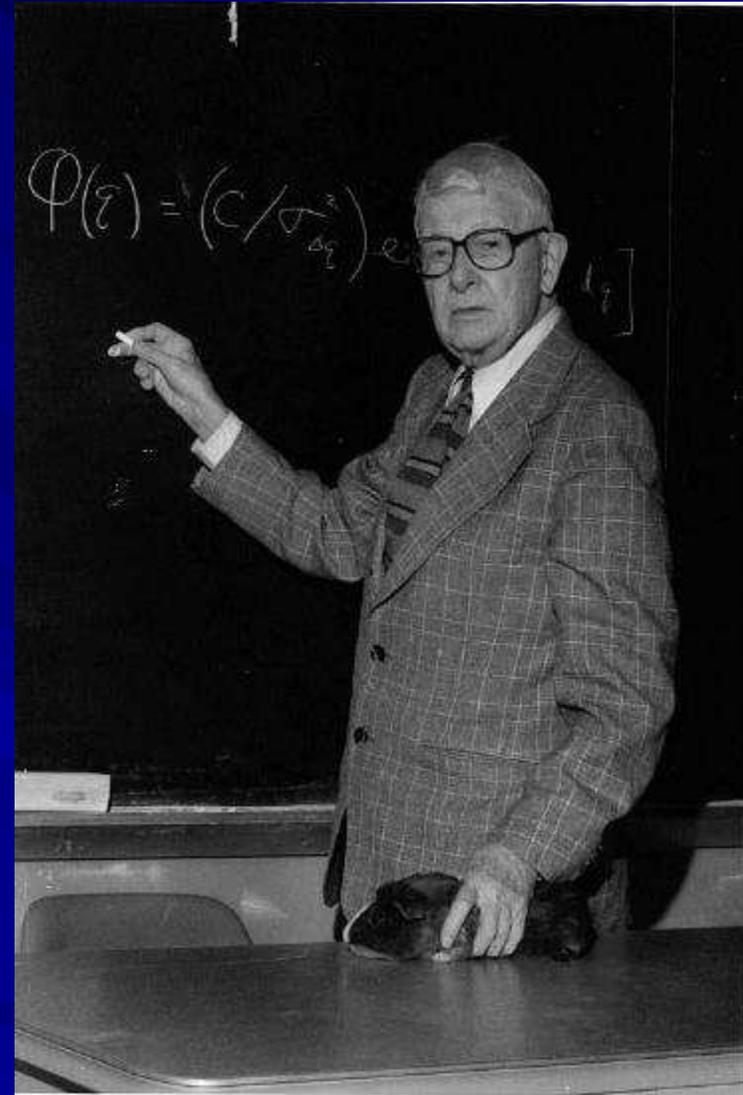
### B. The Time Problem

- Did PE occur in only a few thousand years?
  - *Scientists admit this is a mathematical and genetic impossibility and limited time would require a “grossmutation” model or “Hopeful Monsters.”*



***“I have recorded more than 100,000 guinea pigs and have seen many hundreds of monsters of diverse sorts, but none were remotely ‘hopeful,’ all having died shortly after birth”***

**- Sewall Wright 1982, *Evolution*, 36:427-433 (Evolutionary Geneticist, Harvard Graduate, USDA, and Univ. of Chicago).**



# Problems with Punctuated Equilibrium: An Unscientific “Jury-Rigged” Affair

## B. The Time Problem

- Then, did PE occur in tens of thousands or millions of years?
  - *If so. . . . Where are the fossils?!*



## Problems with Punctuated Equilibrium: An Unscientific Rigged Affair

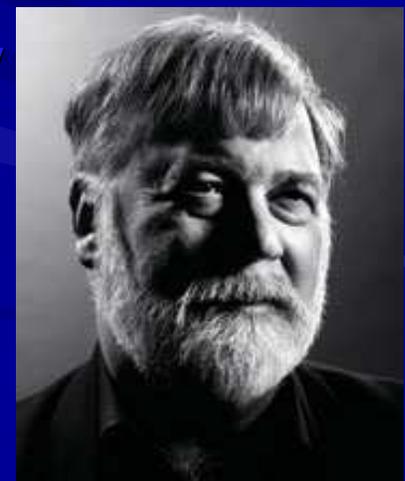
### C. The Lack of Evidence Problem

● Here is the duplicitous conundrum— **Before PE, Darwinists said, “we know evolution occurred, and we will eventually find it in the fossils.”** After the transitions weren’t found, Darwinists say, **“the stasis (lack of change) in this fossil record PROVE that evolution must have occurred.”** (?!)

**Translation: “PE is an accepted theory based on a lack of evidence, then, is a matter of faith.”**

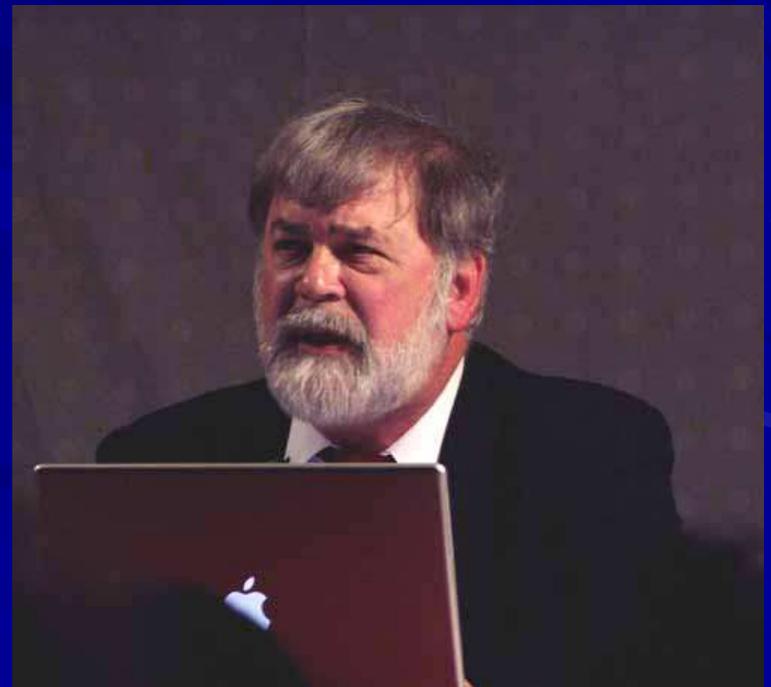
“Whatever my pattern was showing, it didn’t appear to be this mode of expected gradual change. . . It is the job of all Ph.D. candidates in the sciences to show they can formulate and carry out original scientific research. And, say what one will, there is the unspoken assumption that positive results are to be expected. . . It was no thunderclap, just a plodding, slowly dawning realization that the absence of change itself was a very interesting pattern. . . But Gould has also said that ‘stasis is data,’ and indeed it is. The trick to seeing stasis itself as a pattern, as a result, and not a nonresult, required only a shift from equating ‘evolution’ with ‘change’ – of seeing evolutions as patterns of histories of separate lineages, each marked by periods of stability and change. Punctuated equilibria simply says that the bulk of most species’ histories are marked by stability (that is, little or no accumulation of anatomical change). . . We have to learn to see, but there seem to be many tricks and lateral approaches to the task. Sometimes nature seems simply to impose patterns on our consciousness; other times, we deliberately, almost analytically, invent them. For the most part the interplay is probably more subtle, with even the subconscious working on discrepancies and anomalies, probing for a new way to see what is, in reality, only hinted at and not truly perceived as an actual pattern.”

- Niles Eldridge. *The Pattern of Evolution*. New York: W.H. Freeman and Co. 1999. pp. 20-23



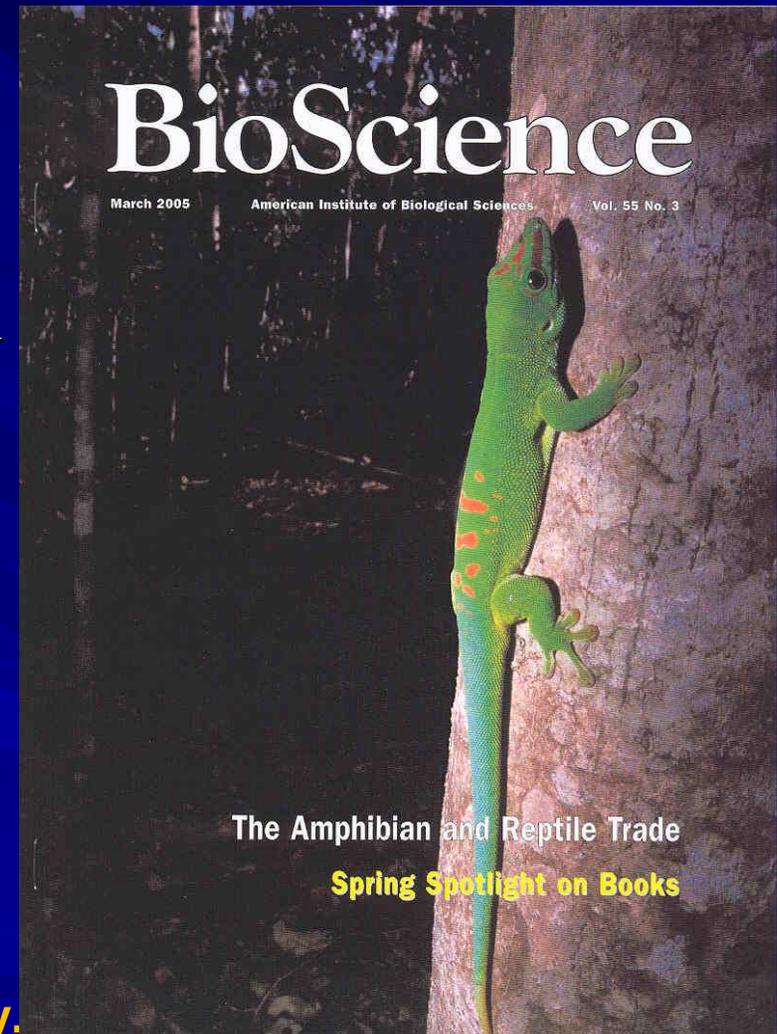
**“Stasis has been another matter. Over the years, Gould and I have explored a number of possibilities for why it happens (which has led to charges that we are forever changing our minds). . . Yet the mere suggestion of habitat tracking as the explanation of stasis has provoked howls of protest from some quarters. Are paleontologists not supposed to dream up ‘new’ mechanisms, even if they are merely the application, once again, of thoroughly observed and understood common natural patterns? . . . In short, it is highly unlikely that natural selection could ever ‘move’ all the populations of an entire species in any one single evolutionary direction for any significant amount of time at all. Lieberman seems to have confirmed Wright’s unspoken prediction: Stasis is implicit in the very structure of species in the wild.”**

**- Niles Eldridge. *The Pattern of Evolution*. New York: W.H. Freeman and Co. 1999. pp. 142, 143**



“I can understand the inherent difficulty in attempting to discover intermediate forms. My problem concerns the *methodology* of science: If an evolutionist accepts gaps as a prerequisite for his theory, is he not arguing from a lack of evidence? If a biologist teaches that between two existing fossils there was a non-existing third (and perhaps several others) is he not really like the man of religious faith who says, ‘I believe, even though there is not evidence.’”

- Larry Azar, “Biologists, Help!”  
*Bioscience*. 28:714. November, 1978.  
[Degrees in Physics, Math and Philosophy.  
Professor Emeritus, Iona College.]



**CONCLUSION**  
**Why the**  
**Fossil Record**  
**Cannot Prove**  
**Evolution**



**Evolutionary Paleontology is Based on Subjective Reconstructions of What a Given Scientist *Believed* Must have Occurred in the Past – Top-heavy with presupposition premised on a naturalistic worldview.**





***“To obtain its answers, particularly in cases in which experiments are inappropriate, evolutionary biology has developed its own methodology, that of historical narratives (tentative scenarios).”***

**- Ernst Mayr, Harvard University, 2004, What Makes Biology Unique? Considerations on the Autonomy of a Scientific Discipline. pp. 24, 25**

***“The idea that one can go to the fossil record and expect to empirically recover an ancestor-descendant sequence, **be it of species, genera, families, or whatever**, has been and continues to be, a pernicious illusion.”***

**- Gareth Nelson, American Museum of Natural History, quoted in D.M. Willimas and M.C. Ebach, The Reform of Palaeontology and the Rise of Biogeography. 2004. *Journal of Biogeography*. 31:709.**



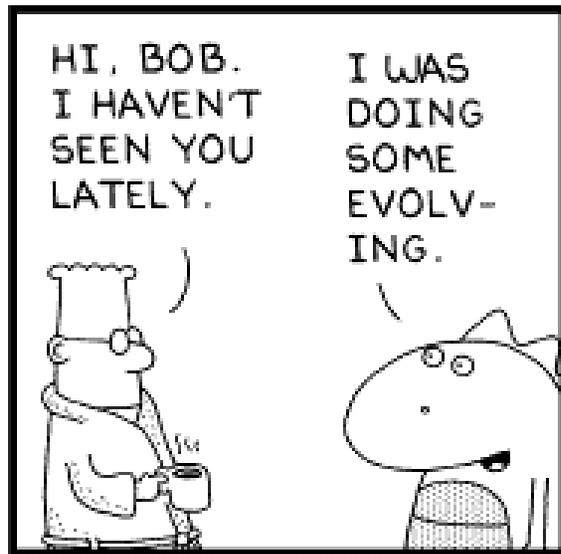
**“No fossil is buried with its birth certificate. That, and the scarcity of fossils, means that it is effectively impossible to link fossils into chains of cause and effect in any valid way. . . As if the chain of ancestry and descent were a real object for our contemplation, and not what it really is: a completely human invention created after the fact, shaped to accord with human prejudices. . . To take a line of fossils and claim that they represent a lineage is not a scientific hypothesis that can be tested, but an assertion that carries the same validity as a bedtime story – amusing perhaps even instructive, but not scientific.”**

**- Henry Gee, senior editor of *Nature*. Quote from In Search of Deep Time. 1999. pp. 23, 32, 116-117.**

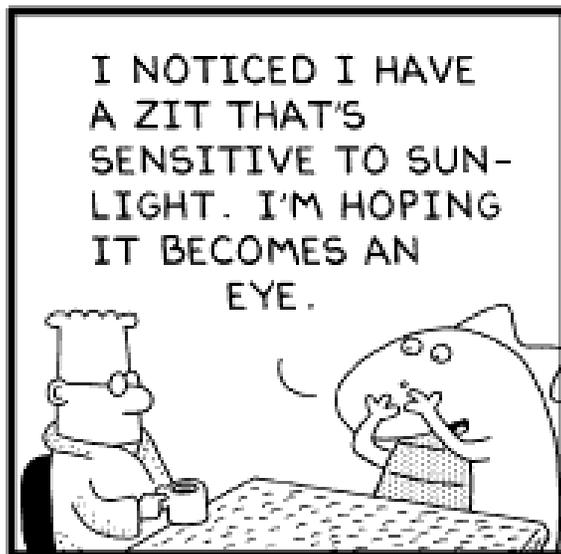




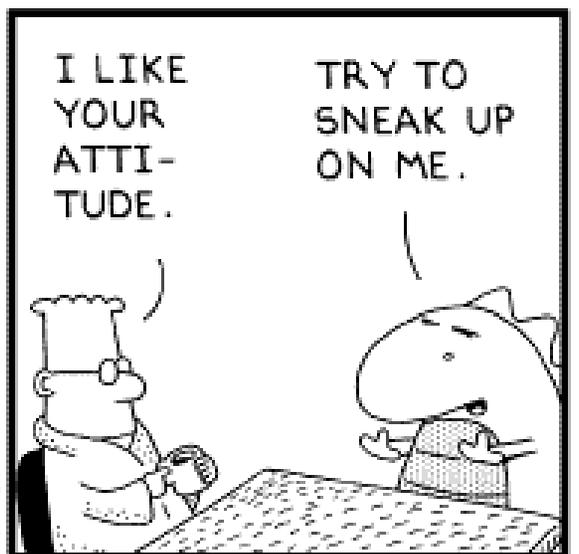
**No Transitions Between Taxonomic Orders**



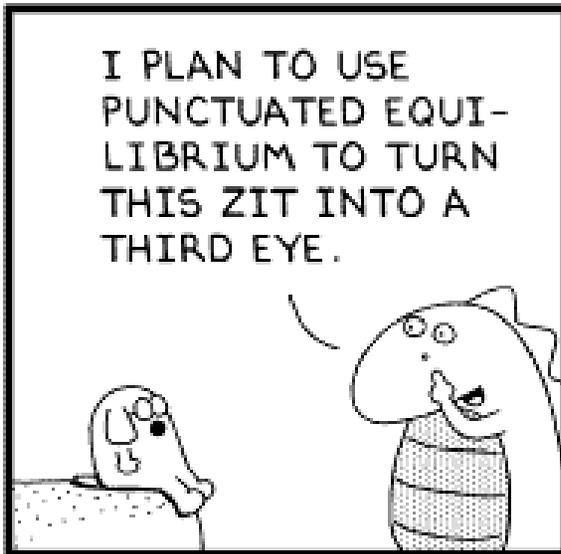
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