

By Rent-A-Friend 2000

Debunking Berkeley's Darwinian Diatribe

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INTRO! In search of True Believers

Come with us into a world of Evo-Believers whose faith far outweighs their facts, and a team of PhD's who have dedicated themselves to Darwinism when in fact they can't even clearly tell you what it is. Welcome to Evolution 101 (Or, how to make every living thing, from Wolves to Cabbages, using just the tools and bacteria you'll find around the house).

A Critical Review and some snarky comments by Rent A Friend 2000

Original material including text and images comes from from <http://evolution.berkeley.edu/>

The site I am reviewing is called **Evolution 101**, and will be presented by me with no editing (though plenty of editorials) and in those few places where parts were cut out for brevity, I make note of it being done. The original site is a collaborative project between Berkley, the University of California Museum of Paleontology and the National Center for Science Education. That it took this many PhD's to make this web site will become either unbelievable or incredibly sad later on. Their words will appear in normal font. My words in **BOLD**, with **BOLDNESS** nearly approaching **ZESTY BUFFALO RANCH BOLD!** Nearly.

The story behind this book is simple; I decided one day to read up on the basics of evolution, and so I Googled (*Because that's a verb now*) "**Icons of Evolution for Highschoolers.**" One of the top search results was this web site which calls itself "Evolution 101". I saw the URL, evolution.berkeley.edu, and decided that I probably could not pick a better representative of the evolutionary sciences, especially now that both Charles "Chuck D" Darwin and Carl "Billion Billion Billion" Sagan are both dead.

When I saw the material before me was also due in part to the University of California Museum of Paleontology and the National Center for Science Education, I was certain of it. Surely a URL from BU, the UCMP and NCSE must be AOK, IMHO- no JK (*though once I read their HTML I was all OMGnR! and totally ROTFLOL*).

This was the evolutionary sciences right from the people who really believe it with all of their little hearts! This was not a strawman version of evolution written by some Young Earth Creationist propaganda group. This was made by the people who bake a monkey-shaped cake every Darwin Day, and string lights up on their phylogenetic trees while singing carols to random chance mutations. This is where I would learn what evolution really had to offer. Which, when all was said and done, wasn't much.

A little contextual backstory: When I was 14, I took an Honors level Biology class, and we were assigned a paper on a topic of our choosing. I wrote on how I thought evolution was not true and provided what I felt were many convincing proofs. I got an A, but more important was the note my teacher wrote in the margins. It said, "**I can't argue with any of your points, but I still think you're wrong.**" A tenured biology teacher in a public high school can't argue against the points made by a 14 year old? This struck me as rather odd. 14 year old boys don't tend to be nearly as smart as they think they are, or often, nearly as smart as the average waffle.

Yet, this man with a college degree, many years as a Biology teacher at the honors level, and a fresh pair of academic khaki pants couldn't argue with ANY of my points? He was given proofs against evolution, could do nothing to refute me, but stuck to his faith in evolution as fact! *"Is this how evolutionists are?"* I wondered. Surely a man with a full classroom set of microscopes under his command must know the Evolution as well as a man in khaki pants can know it, right? But maybe he did not.

That's where I figured Berkley could save the day for Chuck D and the old Professor. I thought, if there is anyone who should be able to make a good case for evolution, it is these authors of Evolution 101. Read on, friends, and prepare to be... disappointed.

Chapter 1 - Definition FAIL

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution team (True Believers in a Cynical Day)*! <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

They begin with a simple definition:

The definition
Biological evolution, simply put, is descent with modification.

Definition FAIL! This is put a little TOO simply. Everything that lives is descended from something of its own kind, and most are not clones of their parents- save a few bacteria and other wee terrible beasties. This weak sauce definition means that you, being descended from your parents (but being not their clone) are an example of evolution. This definition could be restated, "*Biological Evolution is any living thing giving rise to another living thing which is not its identical clone.*" Kind of narrows the possibilities a smidge TOO much if you ask me. Also, I refuse to say I "evolved from my mother." That sounds weird.

Furthermore, they don't say what KIND of modification. I think we'd all agree that a normal, four legged dog giving birth to a one legged puppy named Lil' Brudder would be decent with modification, but hardly a big evolutionary leap forward. Keep in mind that we need to define the process so that bacteria can change, over time, into wolves and cabbages and everything in between. Lil' Brudder just ain't getting the job done.



Lil' Brudder courtesy Homestarrunner.com completely without permission. Buy all their play-sets and toys!

This definition encompasses small-scale evolution (changes in gene frequency in a population from one generation to the next) and large-scale evolution (the descent of different species from a common ancestor over many generations). Evolution helps us to understand the history of life.

Once again, since they don't define "change" (*how's that for a popular bait and switch, America?*) then it can mean ANY change at all. Let's see- encompasses *changes* in a population, or *changes* between kinds. So.... Evolution is anything that ever happens to living things. This puts the term on par with other excellent pieces of scientific terminology, such as "Stuff," "Junk," "Things," and "Sorta."

Good job team! Let's stick those words in the glossary in the back of the book, and then we'll all break for a biscotti.

Why does a team of PhD's come up with such a weak definition? For three reasons:

1. Because when you define evolution too clearly, you start to see a whole WACK of examples of things not evolving (like *living fossils*), or doing the *opposite* of what evolution needs to do (such as *genetic entropy, extinctions, vestigial organs, etc.*).
2. The evidence ONLY supports the FIRST category they provide- small scale changes within existing kinds. If the definition was clear enough to differentiate between what they call micro and macro evolution, you would quickly see that there is NO evidence for Macro, which is the place where Creationism and Evolution actually differ. We don't balk at Natural Selection or Mendelian genetics. We invented those. We just refuse to call them "Evolution" when they fit so well into the Biblical Creation account.
3. Because with this definition, when Creationists say they don't believe in "evolution," you can mock them for believing that living things never change when it's OBVIOUS that they do. Evo WIN!

Also, "*helps us to understand the history of life*" seems to be their way of saying "*is the religious dogma with which we will interpret the data, if we bother with any data.*" You'll note that the way THEY wrote it, evolution is not BUILT on their understanding of the history of life, but rather is the lenses through which they will look at the past. Do you see the difference? It's not a conclusion, it is a DOGMA. So, once again their definition above just isn't cutting it. It's like I need a Darwin to English dictionary up in here. What Evolution MUST mean in order to be a useful term is a definition like this:

"An unguided natural process by which genetic information increases, resulting in additions and beneficial modifications to phenotype and/or behavior that helps the individual to survive, reproduce, and pass on that genetic information."

This is evolution the process. Evolution the worldview is the belief that

"All living things are the result of the evolutionary process, going back in time through common ancestors until arriving at a first universal ancestor, a single cell, which itself was the result of matter plus time plus chance, meaning that all life is merely a chemical process beginning with rain falling on rocks."

Look at this, we're in the first section and I'm already doing these people's job for them. I hope they remember this when picking the employee of the month. They already forgot to give me my Darwin Day bonus.

Chapter 2 - Grandma Rock and the Family Tree

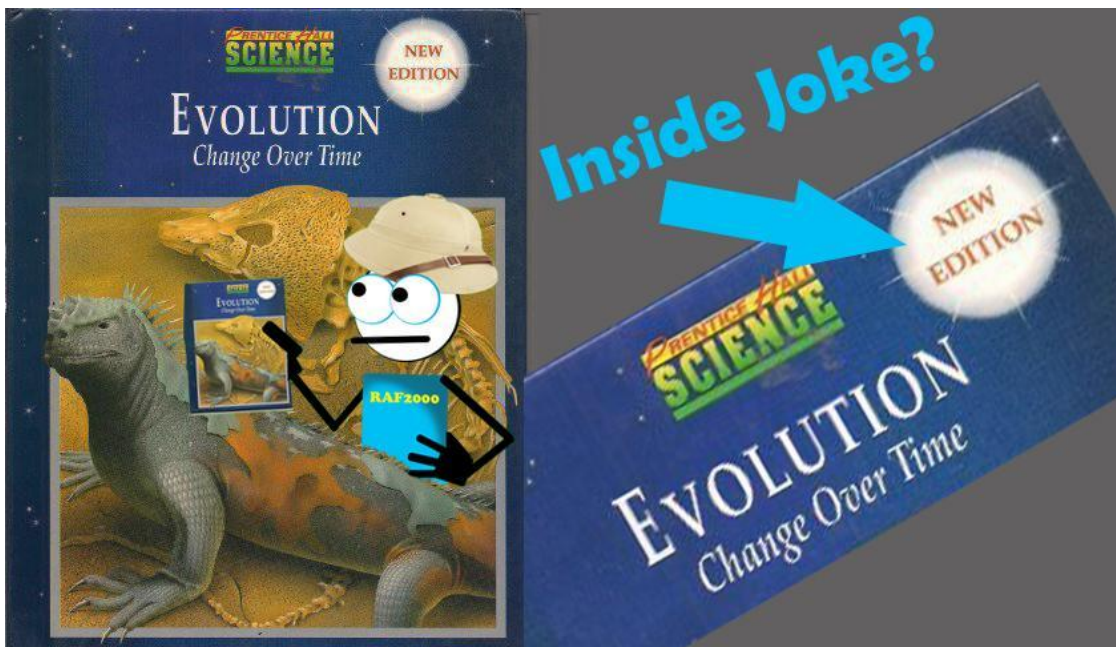
Remember, normal text is copied from Evolution 101 by the *Understanding Evolution* team (with more degrees than fahrenheit)! <http://evolution.berkeley.edu/>

BOLD font is me, Rent A Friend 2000, being Bold.

The explanation

Biological evolution is not simply a matter of change over time. Lots of things change over time: trees lose their leaves, mountain ranges rise and erode, but they aren't examples of biological evolution because they don't involve descent through genetic inheritance.

What's funny about this is I have a middle school science text book called "Evolution: Change over Time." It's good to see the team at Berkeley are doing a little better than the 8th grade public school kids.

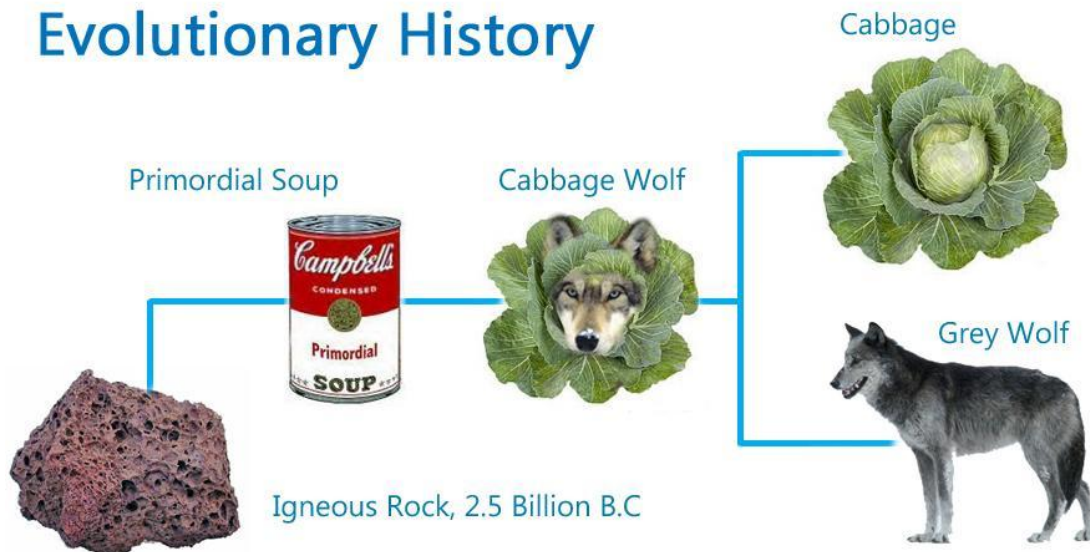


Did this new edition have an intelligent designer, or was it the product of random chance?

I had a blogger criticize me, saying I was demanding 'expert level specifics' in their definition for the word "evolution." But as I demonstrated in the previous chapter, it is possible to define "evolution" so the word actually means something. Go back and check that action out. I'm like Webster's Captain of Awesome over here. These guys are all, "Evolution is when Stuff happens, but NOT when THINGS happen." And when I point out that this isn't good enough for a definition written by three teams of PhD's, I get criticized. Go fig.

The central idea of biological evolution is that all life on Earth shares a common ancestor, just as you and your cousins share a common grandmother.

Only our grandmother is a rock. No, really. Grandma rock gave rise to grandma soup, and, somehow, all life came from that. Can you picture her in her ROCKing chair? Huh? Get it?... These are the jokes kids. You get what you pay for.



Some species represented may be speculation.

Through the process of descent with modification, the common ancestor of life on Earth gave rise to the fantastic diversity that we see documented in the fossil record and around us today.

I see we'll be skipping the identity of Grandma for now. Also, rather brazen to say "documented in the fossil record." Even these guys will later admit that the fossils present more of a jigsaw puzzle with pieces missing than a "Documented Record." When you study this stuff longer, you'll come to find that the evolutionary biologists know the evidence for evolution is in the fossil record, while the evolutionary geologists know it's in the biology department. That, if nothing else, should speak volumes.

But don't take my word for it. Let them speak for themselves:

'Palaeoanthropologists seem to make up for a lack of fossils with an excess of fury, and this must now be the only science in which it is still possible to become famous just by having an opinion. As one cynic says, in human palaeontology [the study of fossils] the consensus depends on who shouts loudest.'

J.S. Jones, Department of Genetics and Biometry, University College, London, in a book review. Nature, Vol. 345, May 31, 1990, p. 395.

'Genetics has no proofs for evolution. It has trouble explaining it. The closer one looks at the evidence for evolution the less one finds of substance. In fact the theory keeps on postulating evidence, and failing to find it, moves on to other postulates (fossil missing links, natural selection of improved forms, positive mutations, molecular phylogenetic sequences, etc.). This is not science.'
Professor Maciej Giertych, B.A., M.A. Oxon, Ph.D. Toronto, D.Sc. Poznan, Head of Genetics Department, Polish Academy of Science, Institute of Dendrology, Poland.

Evolution means that we're all distant cousins: humans and oak trees, hummingbirds and whales

Oh, Great. As if I didn't have enough Christmas cards to send out this year. On the other hand, in a roundabout way I am sure they don't realize, they just justified eating your family and friends. Or have they just given me the ammunition to attack people who've chosen to live an alternate lifestyle...? Hmmm...

Listen up vegetarians!!! That carrot is my cousin! And so is that Tofu (though the family doesn't like to talk about him). When you sink your hard, pointy teeth into my cousins, I hope you can hear my heart break over the crunch of their dying veggie flesh. Ask yourself this- do you use the salad dressing to hide the flavor, *or to cover your murderous guilt?*

Yup. Someone is gonna send me hate mail for that one.

Chapter 3 - Where no Popsicle Stick has Gone Before

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution* team! (We can act like we respect Richard Dawkins with a straight face) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

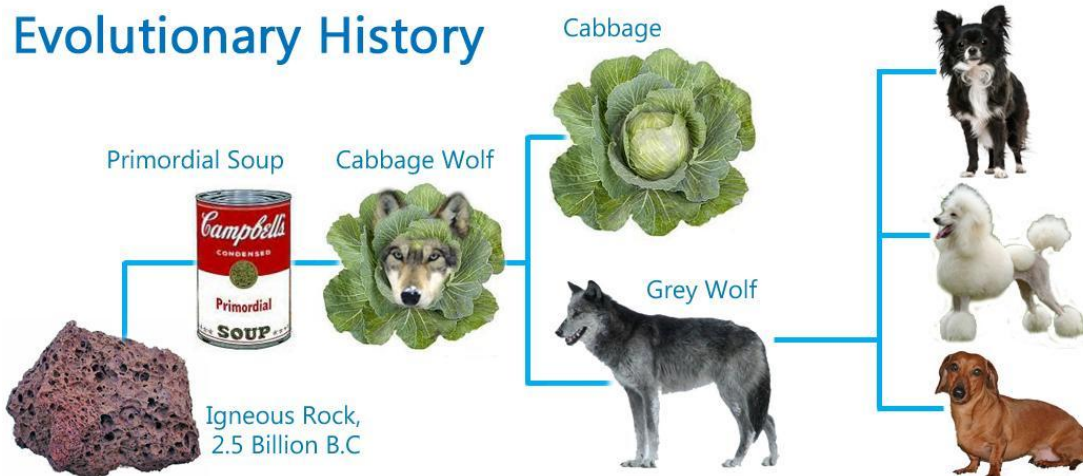
The central ideas of evolution are that life has a history — it has changed over time — and that different species share common ancestors.

Actually, this is true, and Creationists do not disagree with this at all. I guess that makes Creationists, evolutionists. Or, MAYBE they're still failing to define things in a usable way. But I'm no PhD.

It's true that different species do have common ancestors. Living things have changed over time. But that isn't evolution in the Darwinian sense. This central idea merely refers to things like the diversity of Chickens today coming from fewer species of chickens in the past. We observe chickens, over time, becoming *different* Chickens. That, my friends, is the Biblical story. That is creation.

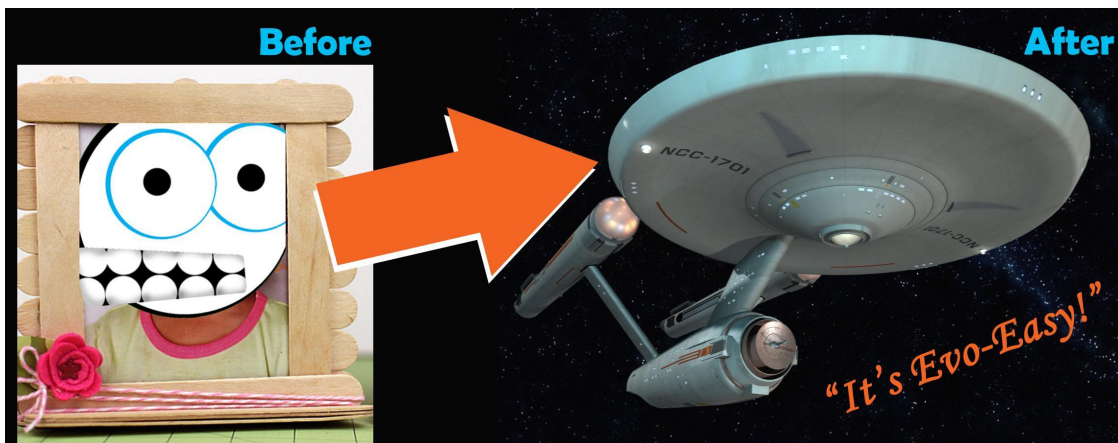
Darwinian Evolution requires the blind faith leap of believing ALL living things have common ancestors, from chickens of today back to the first chicken, back to the first bird, back to the first lizard, back to the first fish, back to the first worm, until, all the way back at the head of the family is Grandma rock. I smell a serious bait and switch here.

We OBSERVE lots of different dogs descending from some ancestral wolf kind over a few thousand years, and we OBSERVE certain vegetables descending from a common cabbage ancestor over a few thousand years, but to then try and argue that, therefore wolves and cabbage descended from a common ancestor billions of years ago is, I will argue, stretching the evidence a tad thin.



To restate the fact they are glossing over: Evolution needs to demonstrate how bacteria could gain the genetic information to add to their physical complexity until they become everything from wolves to cabbage.

To give you a metaphor- imagine you have eight Popsicle sticks and a bottle of glue. You have the instructions for making a picture frame. What I want you to build is the Starship Enterprise. Not a model of it- the real thing. What kind of information would you need to add to your instructions in order to fly me to someplace no man has gone before? Quite a bit, wouldn't you say? You might need mom to drive you to Home Depot more than once before you get that accomplished. Also, each step along the way has to be functional, or the entire process stops.

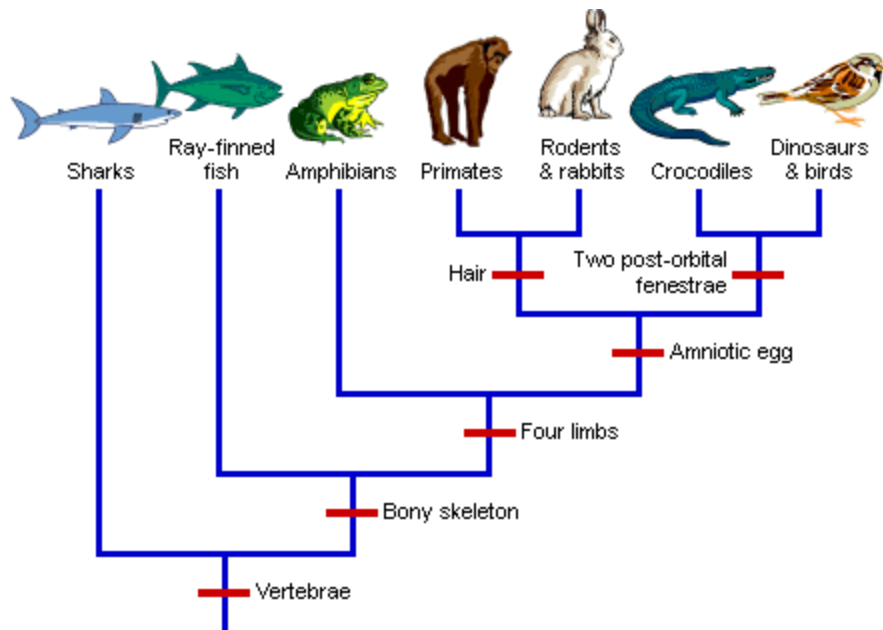


Some mutations required, batteries not included.

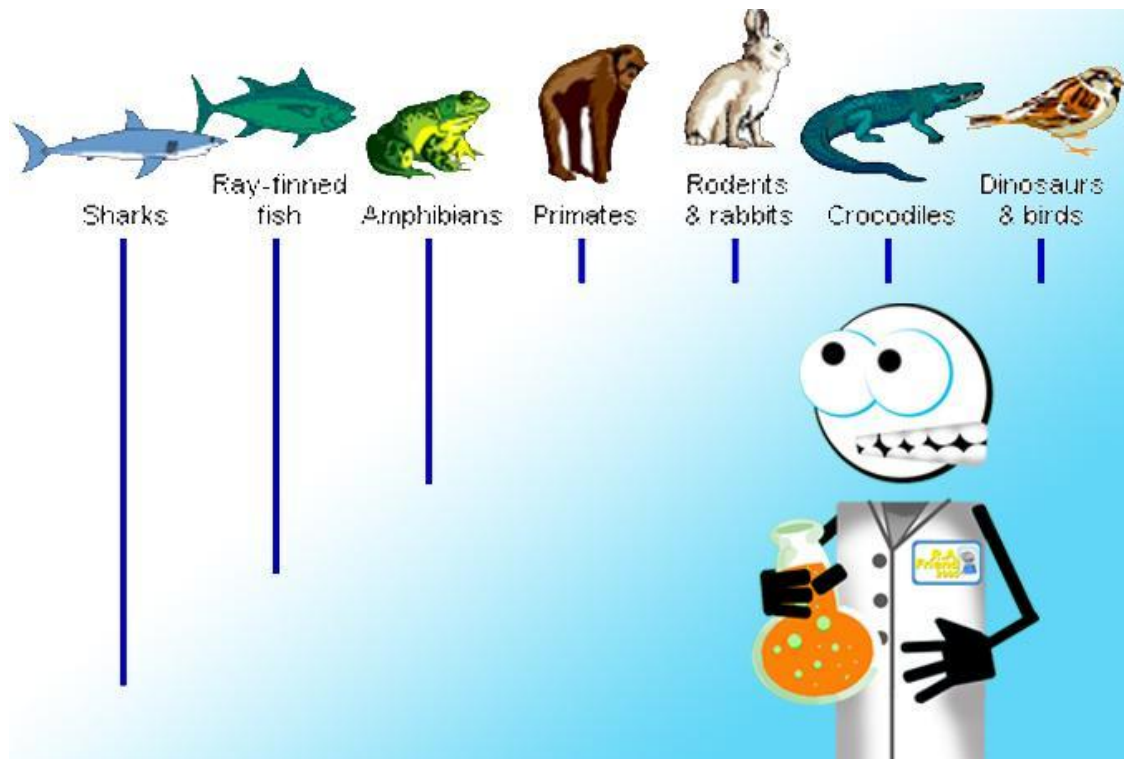
As a similar metaphor, imagine trying to turn a single prop engine plane into a Boeing 747 while it's in flight with small, successive modifications. Keep in mind that it needs to keep flying, or you all die. Oh, and you're all blindfolded. And you don't know that you're TRYING to make a 747. Are you starting to see what Creationists mean when we say life is too complex to evolve by chance? Because if not, I can keep cranking out metaphors.

The evolutionary story from start to finish is like turning a Popsicle stick picture frame into the Enterprise, only the tools and materials and the increase in information are made by a blind, accidental process with no mind, purpose, or goals, and the end product is FAR more complex than a simple star ship. Keep that in mind, because they are about to teach us how it's done!

Here, you can explore how evolutionary change and evolutionary relationships are represented in "family trees," how these trees are constructed, and how this knowledge affects biological classification. You will also find a timeline of evolutionary history and information on some specific events in the history of life: human evolution and the origin of life.



It's rare to find, but occasionally a book will have the courage to label the spaces on a chart like this to designate the difference between the animal we know to exist (or to have existed) and the ones we have to assume for the sake of the chart. In short, when you take away all of the imaginary friends, all of those horizontal lines magically go away. For those of you who are slow on the uptake, that means all of those T intersections and the transitional ancestor they represent don't exist either. Which should lead you to ask, What is the point of this chart, then? Which is my point exactly.



The chart looks different when it's only made of existing species.

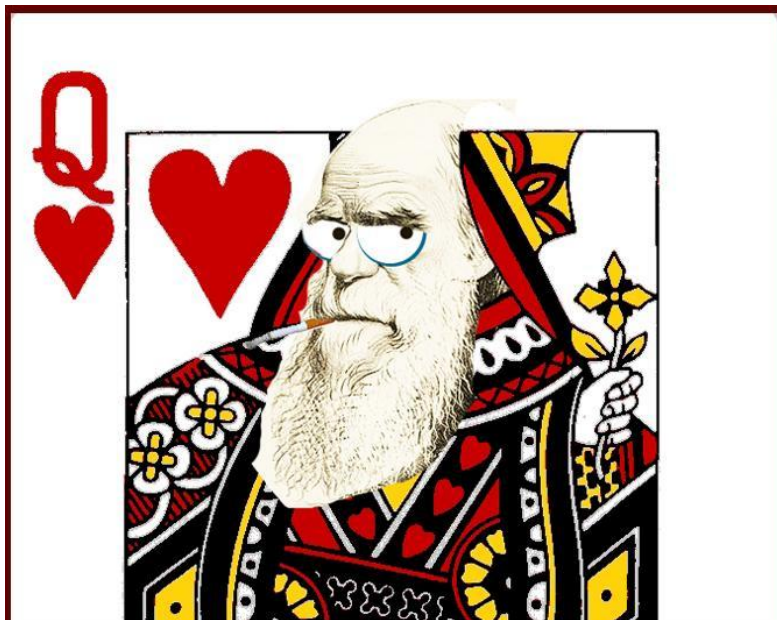
Chapter 4 - The Guessing Tree

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution* team!
(And yes, it really says that on their website) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

The family tree

The process of evolution produces a pattern of relationships between species.

I think what they meant is, "Patterns of perceived relationships between species, when *limitlessly extrapolated* into the past, create our belief in the unobservable process of evolution." But if they spent a lot of time being THAT accurate, they wouldn't have much of a story anymore. Maybe I'm being too picky. As they explain this below, you will see that they are going to agree with what I've just said. It's like a magic trick. Keep looking up their sleeves! Keep your eye on the Queen of Hearts!



Luck, be a Monkey tonight!

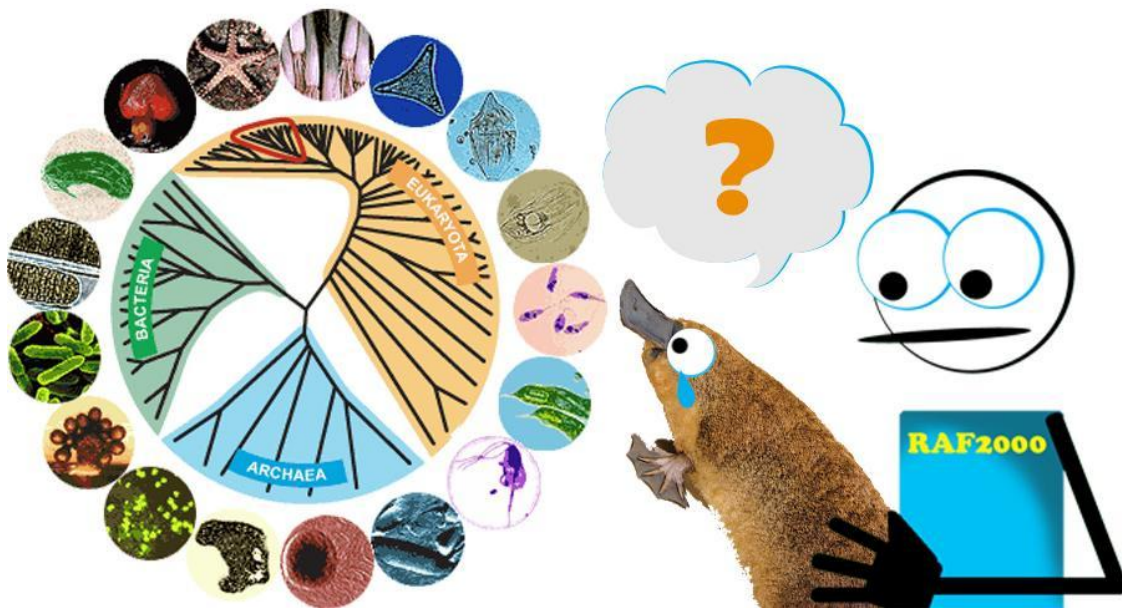
As lineages evolve and split and modifications are inherited, their evolutionary paths diverge. This produces a branching pattern of evolutionary relationships. By studying inherited species' characteristics and other historical evidence, we can reconstruct evolutionary relationships and represent them on a "family tree," called a [phylogeny](#).

Let me read between the lines a little: Reconstruct means "Invent." This is another way of saying, "We don't OBSERVE this happening (thus making it NOT observational science) but we can use our imaginations and lead ourselves to BELIEVE that it DID happen, and

maybe, just maybe, it's sort of happening still." Does anyone else suspect that, when they said Evolution is Science they meant it is Scientology?

And please note- as I just said above, they study PRESENT characteristics, group animals by some shared characteristics, and then extrapolate limitlessly into the past to invent these family trees. I don't make this stuff up you know. And when you don't believe me, it hurts my feelings.

The phylogeny you see below represents the basic relationships that tie all life on Earth together.



Where in the tree does Mr. Platypus fit?

The three domains

This tree, like all phylogenetic trees, is a [hypothesis](#) about the relationships among organisms.

Allow me to define a term-Hypothesis: a GUESS. In this case, a guess based on the presumption that evolution happened in the distant unobservable past. Remember that as we go along. I'm not saying that it is only MY opinion that this phylogenic tree is mere invention- they have just told you that it is. This is not a record of observation, but a fabrication which they BELIEVE tells a true story. Not to put too fine a point on it, but this is an admission of faith in something unseen.

It illustrates the idea that all of life is related and can be divided into three major [clades](#), often referred to as the three domains: Archaea, Bacteria, and Eukaryota. We can zoom in on particular branches of the tree to explore the phylogeny of particular lineages, such as Animalia (outlined in red). And then we can zoom in even further to examine some of the major lineages within Vertebrata.

When you dissect the diagram- as we will do later in some detail- you will find that the outer rim is made of existing animals, where as everything inside of that becomes creative speculation. In short, the tire is real, but the spokes and the hub are pure imagination. The tire (outer ring where REAL animals live) is really no different than the classification system made by Carl Linnaeus in the 1700's, except that this one begins with the belief that evolution is the cause of all life on earth, whereas Carl believed God made everything. Carl was not looking to link EVERYTHING with EVERYTHING ELSE, but mainly to see if he could figure out what the created Kinds are. This is why we have a level of biological classification called the Kind. Just keep in mind that they are creating these trees for their own purposes, NOT recording observations. There is a difference.

The tree is supported by many lines of evidence, but it is probably not flawless. Scientists constantly reevaluate hypotheses and compare them to new evidence. As scientists gather even more data, they may revise these particular hypotheses, rearranging some of the branches on the tree.

Bask in the warming glow of the humility it takes to admit that their Guesswork is "Probably not flawless." Let me say again, we *observe* the relationship between certain species of the same kind- most varieties of dogs for instance. But this is a far cry from having evidence that dogs and cabbages have a common ancestor. The biggest issue here, of which they are seemingly unaware, is that such charts are for our own organization of existing things under broad categories. We've been grouping the different living things for centuries, but then Darwin came along and said, "Let's connect all of the dots until it forms a picture!" This is where the hub and spokes came from. After connecting dots for 150 years, the picture is still REALLY hard to read, as will be made evident by the next amazing piece of data which is released like a flock of doves into the night sky.

For example, evidence discovered in the last 50 years suggests that birds are dinosaurs, which required adjustment to several "vertebrate twigs."

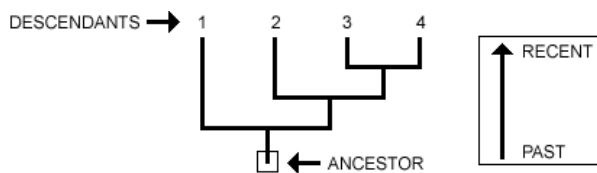


Yes, they think birds *are* dinosaurs. Make note that this doesn't read "descended with modification from dinosaurs." Chickens? They ARE dinosaurs, much like the International Space Station is a thatch-roof cottage. And when they say "Evidence discovered in the last 50 years" they mean to say, "Dedication to evolutionary dogma." I'll explain the flimsy nature of their 'evidence' later. Seriously- go watch Jurassic Park. Then go look at a pigeon. This theory makes SpongeBob look like Isaac Newton.

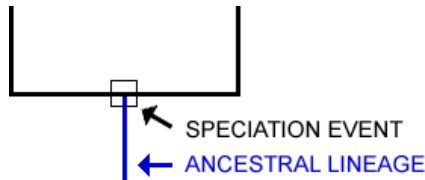
Chapter 5 - Snakes with Legs and Other Distant Cousins

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution* team! (worst superhero guild ever) <http://evolution.berkeley.edu/>
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Understanding phylogenies: Understanding a phylogeny is a lot like reading a family tree. The root of the tree represents the ancestral lineage, and the tips of the branches represent the descendants of that ancestor. As you move from the root to the tips, you are moving forward in time. [Editor's note: *Without a TARDIS? I don't like the sound of that.*]



When a lineage splits (speciation), it is represented as branching on a phylogeny. When a speciation event occurs, a single ancestral lineage gives rise to two or more daughter lineages.



Phylogenies trace patterns of shared ancestry between lineages. Each lineage has a part of its history that is unique to it alone and parts that are shared with other lineages. Similarly, each lineage has ancestors that are unique to that lineage and ancestors that are shared.

Our friends over at Berkeley are like children exploring a forest. They can see that branches meet at limbs, and limbs meet at the trunk, so they say, "Golly! Maybe ALL of these tree trunks are just branches on an even BIGGER tree way underground! Maybe this whole FOREST is only one big tree!" It's creative, but if you start digging, you'll find a significant lack of evidence for their theory. Grab your shovels, kids. We're gonna take a look into the roots of the problem.



Once again, **NONE** of this is based on observable data or events except at the level where all of the points on the chart are dogs, or where all of the points of the chart are cabbages. When you back out far enough to find where dogs blend with cats and with turtles and with cabbage, there's **NOTHING** which actually exists to fill in the chart. This is the result of beginning with an assumption of the evolutionary theory, then putting different species into a faux animation sequence.

Don't get me wrong- you bring in John Lasseter and add some catchy musical numbers and this animation sequence can be every bit as good as *Oliver and Company*. But a fictional story animated for kids is still fictional. And to be honest, I didn't really like *Oliver and Company*. But I digress.

What they fail to show above is how many of those lines should be dotted to indicate "*No known species exists here, living or in the fossil record.*" The ape to human family tree would be almost **ENTIRELY** dotted lines, and where it isn't would merely be connecting humans with humans or apes with apes which is not something Creationists disagree with. We're all just fine with the idea of apes giving birth to apes, and humans giving birth to humans. So, where there is actually some evidence to look at, we tend to agree with the Understanding Evolution Team! What we disagree with is all of the places where they draw a line from, for example, cabbages to wolves when existence of the cabbage wolf is as of yet without hard evidence.



An artist depiction of the Cabbage Wolf- which may have lived as early as the Cambrian.

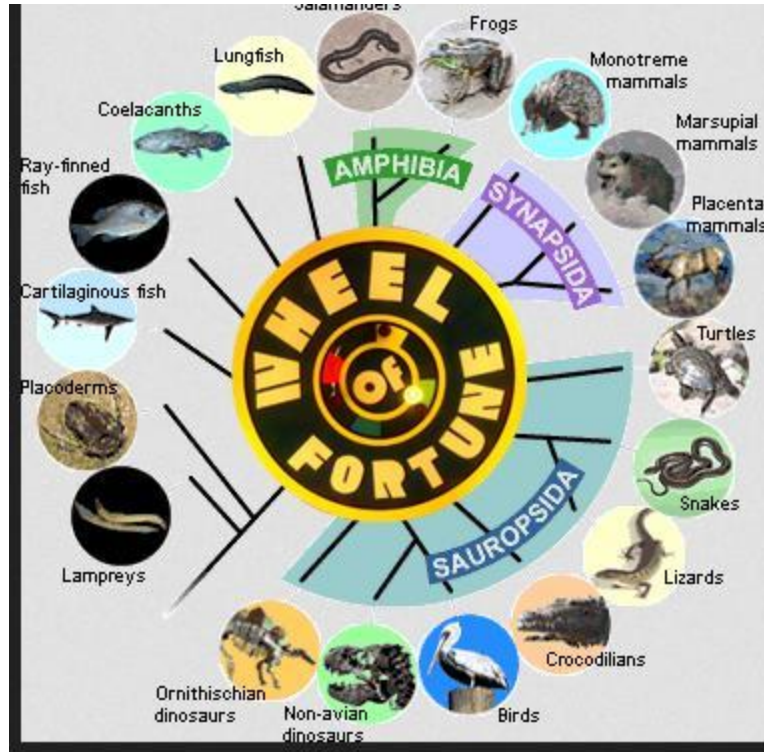
Building the tree: Like family trees, phylogenetic trees represent patterns of ancestry.

Remember above where they admitted that the ancestry was hypothetical guesswork? I just wanted to remind you as it seems they have already forgotten.

However, while families have the opportunity to record their own history as it happens, evolutionary lineages do not — [species](#) in nature do not come with pieces of paper showing their family histories.

Shocking as this will be to people like Richard Dawkins, we Creationists already knew this before Berkley put it on the internet.

Instead, biologists must reconstruct those histories by collecting and analyzing evidence, which they use to form a **hypothesis** about how the organisms are related — a phylogeny.



Let me translate with my handy Darwin to English dictionary: *“We don’t SEE things evolve, we can’t OBSERVE evolution (Making it no longer "observational science") so we invent it as we go along. Charts like this are speculative guesswork based on our faith.”* I’m paraphrasing, but nothing I am saying contradicts what they are saying. I’m literally just clarifying.

To build a phylogenetic tree such as the one [above], biologists collect data about the [characters](#) of each organism they are interested in. Characters are heritable traits that can be compared across organisms, such as physical characteristics (morphology), genetic sequences, and behavioral traits.

I did this once, and made a chart showing that all life on earth had evolved from rabbits. To be honest, mine made more sense than a lot of these. For instance, mine explained the origin of the Platypus. It involved a migrating space duck. I’ll publish that some day.

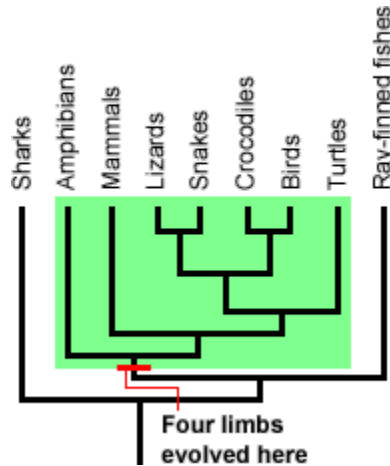
In order to construct the vertebrate phylogeny, we begin by examining representatives of each lineage to learn about their basic morphology, whether or not the lineage has vertebrae, a bony skeleton, four limbs, an amniotic egg, etc.

Or if they have fur, cute noses, long ears, a tendency to nap all day, eat hay, and poop on the floor. Bunny traits, which I think you will find a LOT of animals share.

Using shared derived characters.

Our goal is to find evidence that will help us group organisms into less and less inclusive clades. Specifically, we are interested in shared derived characters. A shared character is

one that two lineages have in common, and a derived character is one that evolved in the lineage leading up to a clade and that sets members of that clade apart from other individuals.



For instance, cabbages are green, and frogs are green, so we can group frogs with cabbages. The platypus is still on an island somewhere between beaver and duck with question marks around it.

Shared derived characters can be used to group organisms into clades. For example, amphibians, turtles, lizards, snakes, crocodiles, birds and mammals all have, or historically had, four limbs. If you look at a modern snake you might not see obvious limbs, but fossils show that ancient snakes *did* have limbs, and some modern snakes actually do retain rudimentary limbs. Four limbs is a shared derived character inherited from a common ancestor that helps set apart this particular clade of vertebrates.

I just have to ask- if they find a fossil skeleton of an animal with four limbs, why do they think it was a snake? Is it just me? Who looks at what is essentially a gecko or salamander and says, “*This lizard-like skeleton with four legs: snake. Four legged snake. Yup!*”

Who is that guy, and what university gave him tenure?



And it is simply false that “snakes have legs.” They have a bone structure in the back half of the snake which, with the right imagination, is located where hind legs would be if snakes had legs. That bone is used to anchor muscles which are necessary to make baby snakes. So, no. Snakes do not have legs. Neither do whales. Who's saying whales have legs? Ho ho! Just you wait. They'll get there.

However, the presence of four limbs is not useful for determining relationships *within* the clade in green above, since all lineages in the clade have that character. To determine the relationships in that clade, we would need to examine other characters that vary across the lineages in the clade.

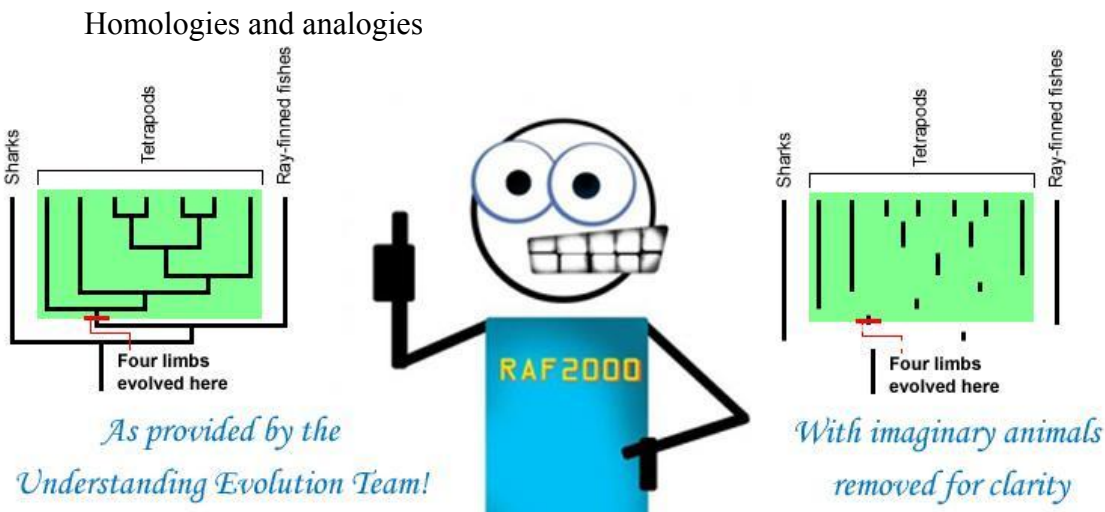
Can I just point out that we are still talking about creatively inventing these charts based on NOT observing anything evolve into anything else? It would be easy to forget that amidst all of this chart business. For instance, that all land dwelling animals evolved from the same four legged ancestor is merely assumed- no evidence is provided for it, and I seriously doubt they would even claim that any exists. As you will see later, the story the fossils tell is barely a word for every thousand page VOLUME of evolutionary story.

As part of the evolutionary story, these prior ancestors are assumed and unquestioned. Assumed and unquestioned are big around these parts. They are to evolution what i-phones and Twitter are to tweens.

Chapter 6 - These Homologous Limbs Were Made for Walkin'

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BOLD font is me, Rent A Friend 2000, being Bold.



Since a phylogenetic tree is a hypothesis about evolutionary relationships, we want to use characters that are reliable indicators of common ancestry to build that tree. We use homologous characters — characters in different organisms that are similar because they were inherited from a common ancestor that also had that character.

If you take out your Debate for Dummies book and look up Circular Reasoning, you'll find Homologous Characters. How do we know these two creatures are descended from a common ancestor? They have homologous features. How do we know these are Homologous features and not just coincidentally similar? Because they descended from a common ancestor with that trait. But how do we know they descended from that ancestor? Because they have homologous traits! But HOW do we know that those traits are homologous?!?!?

Later they will bring up what they call "Convergent Evolution," meaning two creatures evolve a similar trait, when their most recent common ancestor did not have that trait. So how do they distinguish between the homologous features from the convergences? They check the phylogenetic trees! Yes! The trees they are going to try and confirm with *this* data is the foundation on which the data is built.

Is the room spinning yet?

Again, imagine a lawyer pulling this one:

“We found shoe prints which were made at the time of the crime. We know these are the

defendant's shoe prints at the scene of the crime, which proves he is guilty.”
“How do you know those are HIS shoe prints and not the prints of a similar shoe?”
“We know they are his, because he was there committing the crime, therefore those MUST be his shoe prints.”

And on CSI Darwin, that's good enough to convict a man.

An example of homologous characters is the four limbs of [tetrapods](#). Birds, bats, mice, and crocodiles all have four limbs. Sharks and bony fish do not. The ancestor of tetrapods evolved four limbs, and its descendents have inherited that feature — so the presence of four limbs is a homology.

Translation: If you presume evolution to be true, and you presume the ancestor of all four legged animals was itself a four legged animal, then you can assume that four limbs is a homology. Yet, even after all of the required assumptions, these homologies will be delivered as PROOF of the evolution which has to be presumed to decide these are homologies.

Dizzy yet? We're just getting started!

Not all characters are homologies. For example, birds and bats both have wings, while mice and crocodiles do not. Does that mean that birds and bats are more closely related to one another than to mice and crocodiles? No. When we examine bird wings and bat wings closely, we see that there are some major differences.



The Homologous Knight- new from Darwin Pictures Ltd.

Bat wings consist of flaps of skin stretched between the bones of the fingers and arm. Bird wings consist of feathers extending all along the arm. These structural dissimilarities

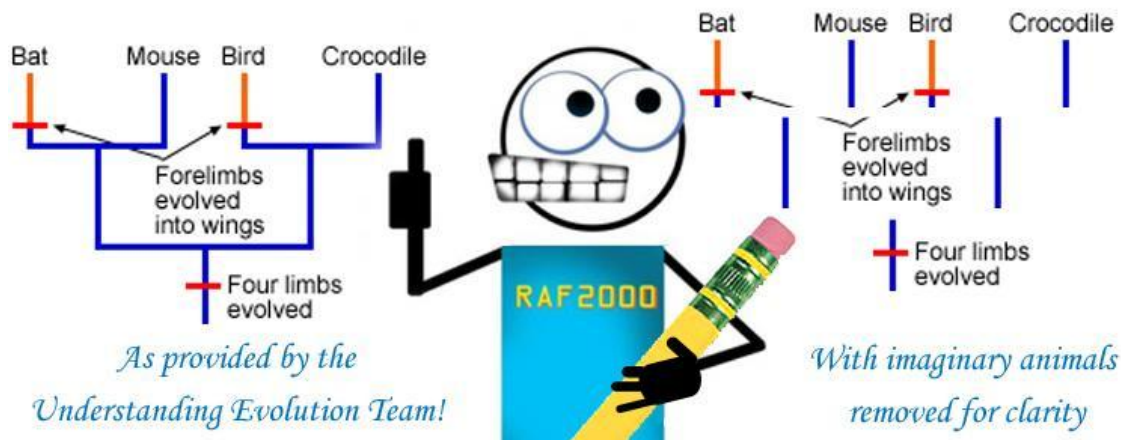
suggest that bird wings and bat wings were not inherited from a common ancestor with wings.

Not only did flight supposedly evolve in separate ways unrelated to a common ancestor, but the very similar radar that bats and dolphins have supposedly evolved separately and were *not* from a common ancestor. How do we know the radars are NOT homologous? We check the phylogenetic trees! But how do we build those trees? By linking species with similar traits! CHICKEN! EGG! CHICKEN! EGG! CHICKEN! EGG! CHICKEN! EGG!!!

One problem which instantly comes to the surface is trying to pick WHICH similarities mean a common ancestor. Bats and dolphins having a radius and ulna (forearm bones) is homologous, even though the bat uses his in a wing and the dolphin uses his in a flipper, but the sonar systems they use to hunt food are NOT homologous even though they come from similar genes. Doesn't this strike you as completely arbitrary? This is like grouping Batman with the Punisher because they both wear black, even though Batman doesn't use guns or kill anyone, and the Punisher does nothing BUT use guns to kill people. Right? Right?

Even more problematic is the necessity to have AMAZINGLY improbable events, such as the accidental increase in genetic information to cause the development of sight or flight from an unguided, accidental process happen not just ONCE in the history of life, but MULTIPLE TIMES. If I manage to get all four aces in one hand, it's pretty unlikely, but not impossible. But if it keeps happening, how long until you pull your six shooter and demand to take a look up my sleeves?

This idea is illustrated by the phylogeny below, which is based on a large number of other characters.



Bird and bat wings are [analogous](#) — that is, they have separate evolutionary origins, but are superficially similar because they have both experienced natural selection that shaped them to play a key role in flight. Analogies are the result of [convergent evolution](#).

Here is an amazing sleight of hand- Convergent Evolution. Because mice and bats are similar in their teeth and toes, we say those teeth and toes are *homologous features*. Because

bats and dolphins have a similar radar, but no common ancestor with that radar (*According to the imaginary tree we built*), then this is NOT an example of evolution. So how do we use this to sell evolution? We say this is evolution which is NOT the result of descent with modification (*Another reason why the original definition failed*) but the result of two different lineages creating similar (*But not Homologous!*) features.

So, if they had a common ancestor with that trait, it's garden variety evolution! If they don't, it's "Convergent" evolution! As you will come to see, they have created a veritable 31 flavors of evolution so that no matter what happens (Or doesn't happen) they can label it "Evolution"- despite thereby contradicting the original definition of evolution that was provided. In the meantime, OH LOOK! I just dealt myself ANOTHER ace. What are the odds? Unlikely I know, but this hand is not homologous to that last hand with an ace I dealt me, it's analogous because it's the ace of SPADES this time. These are CONVERGENT hands. Unguided, random chance. Yup. Just put that gun down and let's play the game...

Interestingly, though bird and bat wings are analogous as wings, as forelimbs they are homologous. Birds and bats did not inherit wings from a common ancestor with wings, but they did inherit forelimbs from a common ancestor with forelimbs.

Let me clarify this: Wings, not homologous. Limbs, Homologous.

How do we know? Because we believe the birds are dinosaurs, which are lizards, which used to be fish. Uh oh. Fish don't have legs. OK, so we believe fish grew legs and became four legged animals (Frogs?) which then became lizards and mammals, each of which developed flight over non-homologous pathways (*Which is still evolution! The convergent kind!*) and then evolved into birds and rodents, some of which developed flight.

How do we know all of this? Because...well, didn't you see that chart a few pages back? It's all on there. How did gills become lungs and a one chambered heart become a two chambered and then a three and then a four chambered heart without killing the creatures? And how did the lungs change from the hold your breath underwater for two hours kind to the fly nonstop for three days kind? And how did egg laying creatures become placental live birthers?

Stop asking questions and get back to work!

No we don't HAVE the transitional creatures which this story demands a thousand times over, but OBVIOUSLY they must have lived at some point because birds and lizards and rats all have a common ancestor! Do you know what happens to our phylogenetic tree if we ONLY put in the creatures we KNOW about?

It goes AWAY.

For more on upsetting the Darwinian Tree of Life with actual data, watch this: [LIVING FOSSILS](#)

[Check out IAN JUBY discussing this in more detail here.](#) What kind of Evolution??? This is Genesis Week, Episode 12, season 2 with Wazooloo, aka Ian Juby

Chapter 7 - Hot Date with a Dead Fish

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Adding time to the tree

If you wanted to squeeze the 3.5 billion years of the history of life on Earth into a single minute,

Don't try this at home. It will RUIN your carpets.

you would have to wait about 50 seconds for multicellular life to evolve, another four seconds for vertebrates to invade the land, and another four seconds for flowers to evolve — and only in the last 0.002 seconds would "modern" humans arise.

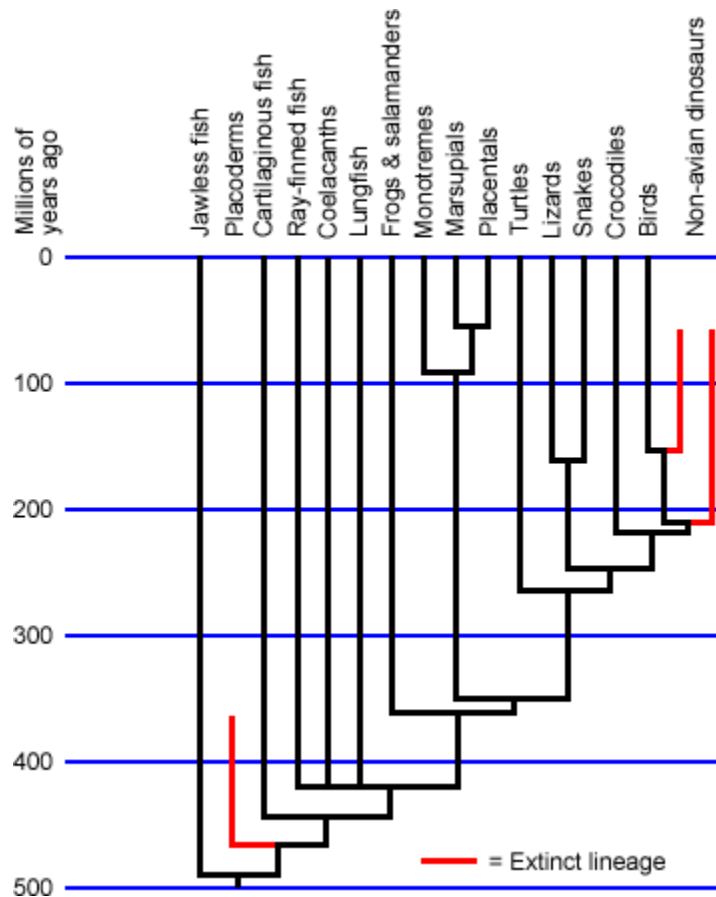
Am I the only person picturing a man with a heavy German accent and long white lab coat screaming, "ARISE, MODERN HUMANS! ARISE!"



Oh, I am? Ok. Sorry. Moving on...

Biologists often represent time on phylogenies by drawing the branch lengths in proportion to the amount of time that has passed since that lineage arose. If the tree of life were drawn in this way, it would have a very long trunk indeed before it reached the first plant and animal branches.

The following phylogeny represents vertebrate evolution — just a small clade on the tree of life. The lengths of the branches have been adjusted to show when lineages split and went extinct.



Let me restate for clarity, if you draw the above chart using **ONLY** creatures we know to exist (*Even allowing their time scale and other assumptions about the fossil record*) **ALL** of those horizontal lines go **AWAY**. But then, what evolution do you have left? None. That's why those horizontal lines are there, despite being nothing but pure imagination. To see evolutionists who are experts in their field verifying this over and over, you need to check out [Dr. Carl Werner's "Evolution the Grand Experiment" HERE](#). (Also here: <http://www.thegrandexperiment.com/>)

Where the vertical line stops, going up or down, **ONLY** tells us when the fossils (*On evolutionary assumptions*) were laid down. It **CANNOT** tell us that the species did not exist before or after that time, or even that they do not exist today.

Case in point- fossils tell us that the coelacanth (*a fat flipped fish*) went extinct (*according to Evolutionary dogma*) 65 million years ago. How do we know the fish went extinct? Because we do not find any fossils of this fish in more recent rock layers. But a funny thing happened in the early half of the 1900's. We found some coelacanth- not in the fossil record, but swimming in the ocean.



The fossils don't tell us the whole story, because while the "fossil record" shows the fish disappearing, the fish himself tell us, "The news of my extinction has been somewhat exaggerated." And if I may, I think Monty Python sums up my feelings on the evidence in the fossil record; "I will not buy this record- *IT* is scratched."

Chapter 8 - EvoHarmony Dating Methods

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(Buy One, Get One Free) <http://evolution.berkeley.edu/>

BOLD font is me, Rent A Friend 2000, being Bold.

How we know what happened when: Life began 3.8 billion years ago, and insects diversified 290 million years ago, but the human and chimpanzee lineages diverged only five million years ago. How have scientists figured out the dates of long past evolutionary events?

The real answer is an embarrassment which these authors probably don't really know. I will provide just a tiny glimpse into the pants-down-at-the-prom shame which is the history of evolutionary dating methods.

Here are some of the methods and evidence that scientists use to put dates on events:

1. **Radiometric dating** relies on half-life decay of radioactive elements to allow scientists to date rocks and materials directly.

The science of radiometric dating is a fairly new one- less than a century old. Suffice it to say, no one has been watching things decay for millions of years. So, how have they calibrated the system?

First off, most don't. The assumptions are unquestioned. Those that do, use things like fossils to calibrate the system by testing the radioactive elements found near them. But, wait! How do they know how old those fossils are without radio dating them? Simple- they are dated using the evolutionary worldview. But doesn't that mean they are using evolution to calibrate the dating methods, and then using the radio dating methods to support the evolutionary worldview?

Yes.

But doesn't that mean they're basically using evolution as evidence for evolution?

At this time, the captain would like you to fasten your seat belts, put your seats and tray tables in the full upright and locked positions, and firmly secure your mind diaper. Thank you for flying Creation Soapbox Airlines.

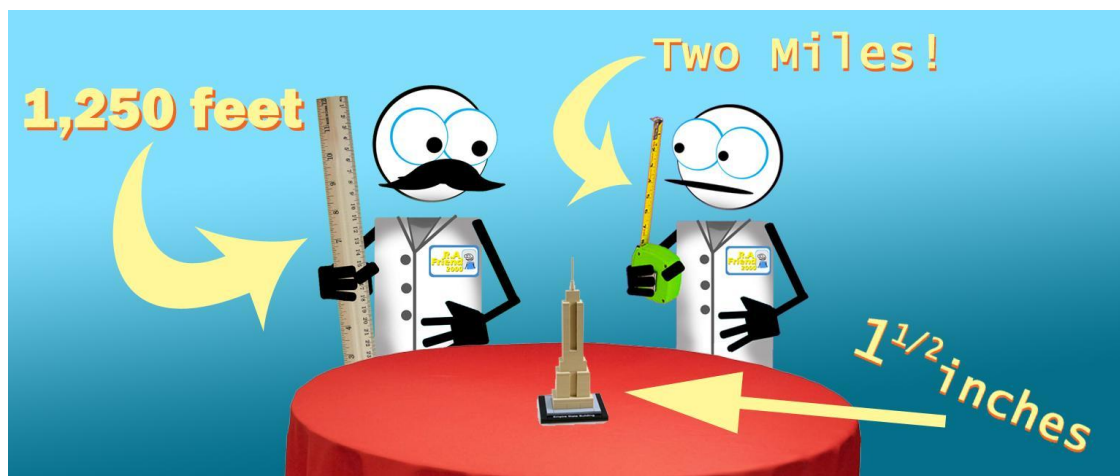
But chemistry is a fairly reliable science, right? Certainly. Chemistry is an observational science, meaning we can see chemicals doing their thing right here and now. But the evolutionary story, and deep time are FAR from here and now. This is like a guy saying to himself, "Hey! This tape measure certainly was accurate in measuring the length of my house and the height of my dog. I'll bet I can use it to measure the distance to the moon!"

I'm just waiting for the first angry email asking, "What's wrong with that?" Bring it on.

Do we have any cause to doubt the results of Radio Dating? Boy, do we! I could go on for pages with examples, but my favorite comes from right here in the good old US of A. When the lava rock at the top of Mt. St Helens was dated using these methods, we first off got dates that ranged from 300,000 to 2.8 Million years. That's a HUGE margin- like two scientists measuring the Empire State Building and one declaring that it is 1,250 feet tall (Which it is) and the other declaring that it is more than two MILES tall. Which it is not.

But the best part about this lava flow they tested is this: We KNOW when the lava rock formed. How? We watched it happen in 1980! (*Quick unnecessary joke: Science tells us that the rock is 300,000 years old, and we know that Madonna is older than that rock! I suppose she does look good for her age. OK, back to the science.*)

The rock was less than 30 years old. This is like our two scientists having come to the two measurements above by measuring a model of the Empire State Building which is actually an inch and a half tall.



Starting to see why some of us don't trust these methods? And this is not a new issue. Check out the date on this quote: "200 year old lava rock dated at 1.60 million to 2.96 billion years!" (See **Science, October 11, 1968; *Journal of Geophysical Research, July 15, 1968*).

EVERY TIME we date volcanic rock we know the age of, the resulting ages are wrong by hundreds of thousands or millions of years. Why would we trust it to find the age of rocks we don't know? If my bathroom scale says my hamster is 800 lbs, I'm not stepping on that thing to see what I might weigh.

Here's another part of the puzzle which fails for evolution- radiometric dating methods only work for lava rock, but fossils are found in conglomerate rock, which is rock formed by sediment in water (*like in some huge global flood, for instance*). Thus, these methods are useless for dating fossils, even if they were reliable. To continue with my metaphor, if my

bathroom scale says my hamster is 800 lbs, I'm not going to use it to find out how tall I am. But apparently Darwin would.

Carbon 14 dating is just as bad. First, because it's not even hypothetically reliable for anything older than 50,000 years. When people say it has been used to prove dinosaurs are HUNDREDS OF MILLIONS of years old, the only point they're making is how much they still have to learn. After 50,000 years, ALL of the C14 has decayed and there is nothing to test. But secondly, and more importantly, we cannot find anything on earth that has no C14 in it. This means, if the tests are to be believed, then NOTHING on earth lived more than 50,000 years ago.

So much for the 5 million year old monkey.

Finally, sometimes organic things, like tree remains, can be found fossilized in rock and coalified, meaning that part of the tree is coal (Still organic, containing C14) and part of the tree is rock (no longer containing carbon).



Fossil tree- rock at the top, coal at the bottom, and scientists suspect a gooey marshmallow center.

Even if you can explain the formation of such items with the evolutionary assumptions (you can't) you'd still fail to get the radio rock dates and the C14 dates to agree. And that's not merely my opinion as you can see here:

"It may come as a shock to some, but fewer than 50 percent of the radiocarbon dates from geological and archaeological samples in northeastern North America have been adopted as 'acceptable' by investigators."

—*J. Ogden III, *"The Use and Abuse of Radiocarbon," in Annals of the New York Academy of Science, Vol. 288, 1977, pp. 167-173.*

But as this fabulous quote will show, getting the right date isn't as hard as you might suspect- with a little imagination:

"Professor Brew, briefly summarized a common attitude among archaeologists toward it, as follows: 'If a C-14 date supports our theories, we put it in the main text. If it does not entirely contradict them, we put it in a footnote. And if it is completely 'out-of-date,' we just drop it."

—*T. Save-Soderbergh and *Ingrid U. Olsson, *"C-14 Dating and Egyptian Chronology," Radiocarbon Variations and Absolute Chronology, ed. *Ingrid U. Olsson (1970), p. 35 [also in *Pensee, 3(1): 44].*

And one more, just for fun:

"No matter how 'useful' it is, though, the radiocarbon method is still not capable of yielding accurate and reliable results. There are gross discrepancies, the chronology is uneven and relative, and the accepted dates are actually selected dates. This whole blessed thing is nothing but 13th-century alchemy, and it all depends upon which funny paper you read."

Dr. Robert E. Lee, "Radiocarbon: Ages in Error" Anthropological Journal of Canada, Vol. 19(3), 1981

When evolution tries to justify all of these issues, it sounds to me like the pants-down-at-the-prom nerd trying to explain that they were break away party pants. They're SUPPOSED to fall off during the spotlight dance. If you knew that, you wouldn't be laughing. You'd be jealous. And so would the 5 million year old monkey he's dancing with.

For more on this subject from a Canadian man wearing a pot on his head, see [Ian Juby's Crevo Rant on Dating Methods, HERE.](#) Dating methods: CrEvo Rant #100 with Wazooloo

Chapter 9 - Rocks for Jocks and the Snooze Bar

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BOLD font is me, Rent A Friend 2000, being Bold.

Stratigraphy provides a sequence of events from which relative dates can be extrapolated.

Extrapolated means, "If we can assume that what we've watched for 200 years applies to the other 99.999999% of earth's history which we have NOT observed, then we can come to some conclusions!" Here's a chocolate metaphor: According to Mars, there are around 200 M&M's in a one-pound bag. If every supposed year of earth's history was a single M&M, then we've been studying these dating methods for about a one pound bag. From those 200 M&M's we are making assumptions about the 4,000,000,000 M&M's we have NOT seen. To put a finer point on it- it's like making deductions from ONE 1lb bag about ALL of the M&M's which would be sold in a year-more than 20 Million pounds.

Or, because I love visual metaphors, they have 200 square centimeters of candy that melts in their mouths and not their hands, enough to cover a large pillow, and from those they will "extrapolate" the knowledge it takes to make declarations about enough candy to cover an area the size of Memphis Tennessee.

That's what they mean by "can be extrapolated." Do I still need to explain why I am suspicious about these deep time conclusions? Do I? Or are you getting it?

And the font of knowledge, Wikipedia, says this about Stratigraphy, "*Stratigraphy is a branch of geology which studies rock layers and layering. It is primarily used in the study of sedimentary and layered volcanic rocks.*"

This is where the evolutionary biologists say, Proof of evolution? Sure- the geologist have it! And the geologists say, not us! The chemists have it! And the chemists say, why would WE have it? Ask the biologists! And after a while the conspiracy theorists who say we never went to the moon sound completely legit by comparison. Much like the radio dating methods, these geology conclusions are based on a PILE of assumptions, the first being that the earth is billions of years old. Again, the problems with this branch of pseudoscience would take pages, but let me sum up a few key points:

The geologic column you see in textbooks representing the alleged billions of years does not exist ANYWHERE in the world. Dig as far as you want in the neighbor's backyard and the only thing you'll find is what it's like to get arrested. You'll find rock layers everywhere. You'll find different rock layers in different places. But the complete list of rock layers as found in your 5th grade science textbook will elude you like a good Adam Sandler movie and for the same reason. It doesn't exist.

Except Hotel Transylvania. I actually liked that quite a bit.

You may have heard that there are places on earth where ALL of the needed rock layers are found. When you take a look at the numbers, I think you'll see that "found" is the wrong word. It's more accurate to say all the layers are "claimed" to exist in these locations, but when you take a closer look, you'll see it doesn't change anything. But don't take my word for it:

There are a number of locations on the earth where all ten periods of the Phanerozoic geologic column have been assigned. However, this does not mean that the geological column is real. Firstly, the presence or absence of all ten periods is not the issue, because the thickness of the sediment pile, even in those locations, is only a small fraction (8–16% or less) of the total thickness of the hypothetical geologic column. Without question, most of the column is missing in the field.

Secondly, those locations where it has been possible to assign all ten periods represent less than 0.4% of the earth's surface, or 1% if the ocean basins are excluded. Obviously it is the exception, rather than the rule, to be able to assign all of the ten Phanerozoic periods to the sedimentary pile in any one location on the earth. It does not engender confidence in the reality of the geological column when it is absent 99% of the time.

-John Woodmorappe, MA Geology-

Imagine someone trying to claim that Green Eggs and Ham are actually a multi-volume epic the size of Lord of the Rings. Originally it was 2,400 pages long, but somehow some of the chapters between "In a house with a mouse" and "In a box with a fox" have been eroded away. But ALL of the chapters are represented, and thus the original mega epic can be said to exist in libraries all over the earth.

I do not like it, Sam-I-Am, son of Catus in Hatus, keeper of the flame of Whooville.



Cited by many as the best example of the geologic record on earth, the Grand Canyon is a mile deep collection of layers which is MISSING 90+% of the alleged time of evolutionary history. The excuse will be that erosion took away the missing layers, but then the layers which remain have been UNTOUCHED by erosion of any kind for the thousands of years they supposedly took to form. They are horizontal, flat, and extend for hundreds or even thousands of miles across the continent, yet somehow formed without being burrowed into by plants or animals, or dug into by sun, rain, and wind, or rivers and streams. A far more reasonable explanation would be that the layers aren't missing- the millions of years are missing. Like Big Foot. It just ain't there people. You can stop looking now.

What do we find in LOTS of those clean layers? Marine invertebrates. The earliest, and many of today's best geologists acknowledge the flood of Noah to be the only event which would make sense of such huge and even rock deposits full of sea creatures. For more on the Grand Canyon- [Check out Ian Juby discussing it HERE](#). *Geological Column Busted, this is Genesis Week, episode 30 season 2 with Wazooloo/Ian Juby*

If the list of layers doesn't really exist, how do we determine the age of the rock layers we do have? We use "index fossils." This means if the rock has a fossil in it which is 300 million years old, the rock must be 300 million years old. How do we know the fossil is 300 million years old? Simple- we find it in rock which is 300 million years old. This is where you expect me to say something about radio dating methods. OK, here you go: They almost never have *anything* to do with this.

Because radio dating is expensive and shoddy at best, most people never radio date their fossil finds. Since radio dating methods are only used on volcanic rock, but fossils are found in sedimentary rock, you can't actually radio date fossils or the rock they're found in anyway. They use this index fossil method of dating the fossil by the rock, and dating the rock by the fossil. If you need an example of circular reasoning, you won't find a better one than this.

The fossils tell us the age of the rock so we can use the age of the rock to determine the fossils. Round and round she goes! Where she stops, no one knows!

Molecular clocks allow scientists to use the amount of genetic divergence between organisms to **extrapolate** backwards to estimate dates.

OK, maybe this example of circular reasoning is as good as the last. Here's how this works- we assume evolution has happened over millions and millions of years (*Do you see how many of these 'proofs' for evolution require you to believe evolution at the start?*). Then we take two animals on the phylogenetic charts (*See: "Speculative guesswork" above*) and then, we see how different the two animals are genetically, divided by the number of years our chart (*Guesswork*) says it's been since those two animals began their evolutionary walk away from each other. This gives us the rate at which they have been evolving.

Or we can find some rate of mutation happening today, assume it's been the same for MILLIONS of years (*even though by definition mutations are random*) and then, based on

our guessing tree, figure out how long it would take to get as many differences as exist between two different kinds of animal.

Let me clarify again: If you start with the evolutionary assumptions based on unobserved, speculative guesswork, you can figure out how fast DNA changes (*if your assumptions are correct*), and use that to date the amount of time the evolution you started out assuming as fact has allegedly been going on.

Do I even need to explain why this isn't science?

Let me hit you with a fabu` metaphor. We are in the desert watching a turtle walk along, and I say, "It's amazing! This turtle is a thousand years old!"

You say, "How do you know?"

And I say, "By observing this turtle, we can see that over the course of a year, his cumulative migration is westward. During his various activities all year, he tends to move more west than east. Thus each year, he moves his home a mile further west."

Because you have watched this turtle for a few years, you know it is true. "Yes," you reply, "That turtle lived a mile east of here last year, and a mile east of that the prior year."

"Yes! And because we know he started on the east coast, a thousand miles from here, we know he is a thousand years old."

"Hold on," you say. "How do we know he started on the east coast?"

"Because," I explain with exasperated sarcasm due to your thickness, "he's been moving west for a thousand years!"

At this point, even the turtle rolls his eyes.

Before we leave molecular clocks, let me point out something which they will be addressing in a few chapters (*Or rather, they will be glossing over it*). There are species which do not change at all for long periods (*as they interpret the fossil record*). We call this, Stasis, and we call those species "Living Fossils." The horseshoe crab, for instance, has apparently not changed (*on the evolutionary model and timescale*) for 500 million years. Whatever assumptions you need to make to use the molecular clocks mean nothing when a 500 million year old crab goes walking by. It seems that clock has a MASSIVE snooze button, and this crab has been pounding that button for eons.



Since I'm already up, I'm going to grab a bag of M&M's and watch Hotel Transylvania.

Read more of [John Woodmorappe's article HERE](https://creation.com/does-geologic-column-exist).
<https://creation.com/does-geologic-column-exist>

Chapter 10 - Here Come the Beetles!

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Descent with modification

We've defined evolution as descent with modification from a common ancestor, but exactly what has been modified? Evolution only occurs when there is a change in [gene frequency](#) within a [population](#) over time. These genetic differences are heritable and can be passed on to the next generation — which is what really matters in evolution: long term change.

WOW, they should have proofread this one. They've just said a change in gene *Frequency* is *Heritable*. How are you going to pass a percentage onto the next generation? They've got a thousand metric tonnes of PhD's and can't muster the skills to pass Freshman English. COME ON Understanding Evolution Team! Get on the Ball! And the MLA Handbook!

They've got the last part right- long term change is what matters, but their definition is still paper thin and an inch tall. A "*Change in Gene Frequency*" is not good enough. It needs to be an INCREASE in genetic information, not merely a change in the frequency of genetic information which is already there. Having more or less of the same genes doesn't turn bacteria into cabbages and wolves. This is like saying "I know where this candy bar originated! I can prove that this chocolate bar came from a gum recipe because I found a label on one that says, "Now 20% bigger!"" Which is delicious but nonsensical.



Also, I know America has forgotten this, but **CHANGE** can mean decay, or other forms of getting worse. If enough of the right genes go away, the species dies. Extinction is not evolution, even if they do appear on the same page of the glossary in the back of the book.

Compare these two examples of change in beetle populations. Which one is an example of evolution?

1. Beetles on a diet

Imagine a year or two of drought in which there are few plants that these beetles can eat.



All the beetles have the same chances of survival and reproduction, but because of food restrictions, the beetles in the population are a little smaller than the preceding generation of beetles.

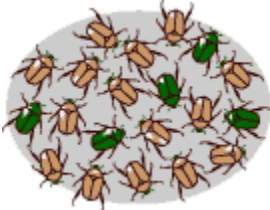


2. Beetles of a different color

Most of the beetles in the population (say 90%) have the [genes](#) for bright green coloration and a few of them (10%) have a gene that makes them more brown.



Some number of generations later, things have changed: brown beetles are more common than they used to be and make up 70% of the population.



Which example illustrates descent with modification — a change in gene frequency over time?

Before we answer, I'd like to point out that these are two different questions;

- 1. Is there descent with modification?**
- 2. Is there a change in gene frequency over time?**

But they are acting as if those are the same question- as if descent with modification IS a change in gene frequency. Hang on, let me see what they said at the start of this post...

Evolution only occurs when there is a change in [gene frequency](#) within a [population](#) over time.

And if I go back to chapter one, I see they said, "Biological evolution, simply put, is descent with modification."

Now they've said *descent with modification is a change in gene frequency*. So, if evolution IS descent with modification, and a change in gene frequency is descent with modification, then they've just started this chapter by saying "*Evolution only occurs when Evolution occurs.*" Can you see why I objected to their weak sauce definition for the word "evolution"?

**I think we need to go back to the candy store. Whooo Whooo!!! CHOCOLATE!!!..
Uh, I mean, Science!**

Candy Store Example #1:

Imagine we have two kinds of chocolate bars- regular and crispy. We start the day with a hundred of each. Because everyone knows that the regular ones are fool's gold, they all buy the crispy ones and not as many regular types. At the end of the day you have 88 regular bars and only six crispy ones.

Candy Store Example #2:

Every time we make a new batch of chocolate bars, we toss in something new- mint, marshmallow, crunchy frog, etc. This would be decent with modification, because each generation is a little different than the previous. We are modifying each descending generation.

See how that makes sense? And is it clear how a difference in sales is absolutely not the same as a change in the recipe?

It occurs to me that neither of the above examples were like this. Example 1 above, "Beetles on a Diet," would be more akin to starting with the regular and crunch bars, and then making smaller, "Fun Size" bars- so, same recipes, but different sizes. And if I may digress for a moment, WHO decided that LESS chocolate was "FUN"? I think Mr. Wonka needs to find that guy and make his paycheck "Fun Size." How about we bum me out with an extra eight pounds of fudge over here?

Which of these processes explain the origin of the Whipple Scrumptious Fudgemallow Delight? I think it's obvious that you can have a sales day like in Candy Store Example #1 for a thousand years and you'll never have anything but the two bars you started with. Even if you follow the trend until you stop selling plain old chocolate bars altogether, you still won't have anything new to sell with this procedure. To get a new chocolate bar, you have to change the recipe, and to get a new beetle you have to change the genetic recipe.

In their "Beetles on a Diet" example, the bars got all fun sized because we were running low on sugar, not because the "recipe" changed. Once the Tuesday shipments get here, fun sized goes away until we run out of sugar again. That will never get us anything but different sizes of the same two chocolate bars. The team here seems not to notice that in order to turn a regular chocolate bar into a Whipple Scrumptious Fudgemallow Delight, you have to make some changes to the recipe. Good thing the Understanding Evolution Team! had other things to fall back on when their candy business flopped.

Yes, there is descent in the Beetles above (As we're told some generations have passed) but there is no *modification*! The original population had green and brown beetles, and now the present generation has green and brown beetles. *Nothing has been modified.*

Is it me? Is this harder to see than I think it is? Because to me, green and brown beetles giving rise to green and brown beetles seems like a non-event. You can't sell many tickets to a show like this.



Gaze in **ASTONISHMENT** as Green and Brown Beetles are transformed before your eyes into **BROWN AND GREEN BEETLES!!!**

As for change in gene frequency, certainly it seems that has occurred, but what of it? The point of evolution is not to tell us how many people bought a new product, but where the product came from in the first place. Evolution is not about marketing, it's about engineering. The process by which a majority go from green to brown can never tell us why there are beetles in the first place, or even why they are green or brown in the first place. This bit is no better than a straw man or a smoke screen. How about a little fire, scarecrow?

See, because there's smoke, and a straw man... never mind.

The difference in weight in example 1 came about because of environmental influences — the low food supply — not because of a change in the frequency of genes.

Just wait- in a second they will try and tell you that getting stepped on IS a cause of evolutionary change. Am I amiss in suggesting that getting stepped on is an environmental influence which, it could be argued, is not as big a player in the development of new life forms as food supply? At this point it just seems like they're being sloppy.

Therefore, example 1 is not evolution. Because the small body size in this population was not genetically determined, this generation of small-bodied beetles will produce beetles that will grow to normal size if they have a normal food supply.

The changing color in example 2 is definitely evolution: these two generations of the same population are genetically different. But how did it happen?

This is simply false. They had the genes for green and brown in generation 1, and the final generation also has the genes for green and brown. They are not *GENETICALLY* different, they are *STATISTICALLY* different. A careless pedestrian could step on a bunch of brown ones and the population would 'evolve' back to where it started. No new information has been gained, no new features or behaviors exist. They've no more evolved than if most of them decided to start wearing fedoras.

Which would be pretty awesome.



Chapter 11 - Hope, Change, and Lethal Mutations

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution team!* (now serving the tri-state area) <http://evolution.berkeley.edu/>

BOLD font is me, Rent A Friend 2000, being Bold.

Mechanisms of change

Each of these four processes is a basic mechanism of evolutionary change.

Mutation: A [mutation](#) could cause parents with genes for bright green coloration to have offspring with a gene for brown coloration. That would make genes for brown coloration more frequent in the population than they were before the mutation.



A change in the frequency of a trait does NOT equate to a change in the genes of the individuals. In the example given, the beetles already had genes for brown. This has no bearing on the story above unless it is meant to explain why brown beetles exist in the first place, which, in the paragraph above, they do not attempt to do.

Ugh. I *suppose* I can do it for them. Seriously, am I the only person doing ANY work for the Understanding Evolution Team? I'm not even ON the team. I'm a temp!

OK, so here's how it would work:

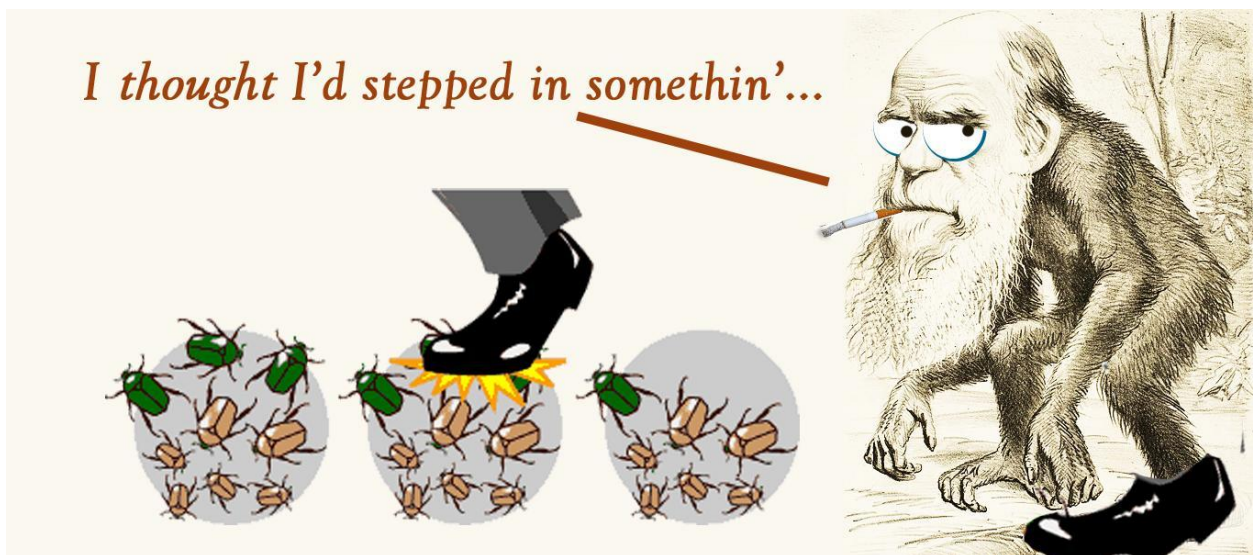
The beetles start off with ONLY the genetic information for GREEN. Then, somehow a mutation adds the genetic information necessary for a brown pigment to be created in the place of the green pigment. It could be the result of a pre-existing recessive gene. OR- the brown coloration could simply be the color of a beetle with NO pigment, and so this mutation would actually be a LOSS of the gene which codes for Green. Incidentally, this kind of mutation, where information is LOST, is the only kind of beneficial mutation which has EVER been observed. Keep that fact in mind.

Migration: Some individuals from a population of brown beetles might have joined a population of green beetles. That would make genes for brown coloration more frequent in the green beetle population than they were before the brown beetles migrated into it.



Do I need to say how this doesn't represent new genetic information? The brown beetles who moved into the all green neighborhood were *already brown beetles*. They already existed. Let's all take a second and remember that Evolution is supposed to explain the process by which bacteria became wolves and cabbages. Uncle Chuck's book wasn't called "*Moving to a new neighborhood of the species*," it was **ORIGIN** of the species. **THAT** is what this theory of his is supposed to explain. Thus, migration doesn't quite do the job.

Genetic drift: Imagine that in one generation, two brown beetles happened to have four offspring survive to reproduce. Several green beetles were killed when someone stepped on them and had no offspring. The next generation would have a few more brown beetles than the previous generation — but just by chance. These chance changes from generation to generation are known as genetic drift.



Once again, no new genetic information has been produced, so this isn't evolution. You can have as many brown beetles as you like, and it will never make beetles with ears. For that,

you'll need to add some genetic information. Feel free to verify this scientifically- put on some boots, go stomp every green beetle you can find, and when all of them are dead, none of the other beetles will have ears, I guarantee it- or your money back.

Natural selection: Imagine that green beetles are easier for birds to spot (and hence, eat). Brown beetles are a little more likely to survive to produce offspring. They pass their genes for brown coloration on to their offspring. So in the next generation, brown beetles are more common than in the previous generation.



According to the title of Darwin's book, Natural Selection is supposedly the means by which species originate. At least, that's my interpretation of "Origin of the Species by Means of Natural Selection," but as you know there are so many interpretations, it's impossible to know what Darwin really meant when he wrote that all those years ago. But look at Natural Selection- it removes a part of the population. If this happened often enough, and wide enough, it is hypothetically possible that it could cause the loss of an allele permanently- meaning the gene for green would not exist in any surviving beetles.

But when ALL of the green ones are dead, the brown beetles (*and stop me if I'm going too fast here*) will STILL BE BROWN BEETLES.

Once again, this is not evolution. You cannot turn bacteria into wolves and cabbage by having some of the bacteria go extinct! Natural selection as a mechanism of evolution is like spending your way out of debt (*politicians, please consult a business person to explain to you why that doesn't work*).

Furthermore, this idea was not Darwin's, but was taken from the writings of a Biblical Creationist, Edward Blyth. Blyth wrote about Natural selection in 1835 as being a stabilizing element to protect the Created Kinds from harmful changes, which is exactly what we observe. When a cow is born with five legs, that cow is less likely to survive, which means future generations are not so likely to need that extra roller skate.

Of course cows roller skate. Where are you from?

Darwin took Blyth's idea of a process by which corruption is removed for the benefit of the species, and imagined it as the creative process which created the species in the first place, which of course is nonsense. Natural selection cannot create anything. It is merely quality control. I can't create purple M&M's by eating all of the green ones. Though I would be willing to try.

To bring the point home, check out this quote:

"It must not be forgotten that mutation is the ultimate source of all genetic variation found in natural population and the only new material available for natural selection to work upon."

****E. Mayr, Populations, Species and Evolution (1970), p. 103***

All of these mechanisms can cause changes in the frequencies of genes in populations,

This part is true.

and so all of them are mechanisms of evolutionary change.

This part is *not* true. Even on their weak sauce definition of evolution. Seriously, I will keep eating M&M's until all of you understand this. I don't care how many it takes.

However, natural selection and genetic drift cannot operate unless there is genetic variation — that is, unless some individuals are genetically different from others. If the population of beetles were 100% green, selection and drift would not have any effect because their genetic make-up could not change.

This part is true. Are you enjoying the vast fluctuation between true and ridiculous? It's a lot like reading the ingredients in Cheetos or Twinkies. Occasionally you see something real among all of the alien substances.

In conclusion, let me remind you, that we're trying to explain with all of this evolution business how bacteria can give rise to cabbages and wolves. So, while they've just admitted that none of these mechanisms of evolution can work without variations in the genes, what they've forgotten is that they are trying to explain where the variations in genes come from in the first place. Yeah, they think Darwinism is all beetles with ears eating purple M&M's when in fact it's just another five legged cow on roller skates. Metaphorically speaking.

Chapter 12 - Mewtashuns are Misspeelings

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution team!* (We're *Also the UC Berkeley Brony Club*) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

So, what are the sources of genetic variation?

QVC! Is it QVC? No? Woot? Amazon.com? DO not tell me it's Pinterest or I will not be happy.

Genetic variation: Without genetic variation, some of the basic mechanisms of evolutionary change cannot operate.

“Some.” Did you get that? So, in a world of clones, other mechanisms of evolutionary change apparently could operate. I swear they didn't proofread this stuff. To me, they've basically said, "Without ingredients, SOME entrees could not be prepared." I'm not eating at their restaurant.

There are three primary sources of genetic variation, which we will learn more about:

1. Mutations are changes in the DNA. A single mutation can have a large effect, but in many cases, evolutionary change is based on the accumulation of many mutations.

In some cases, a single mutation can give you superpowers, or blue skin. They may gloss over that, since Fox Studios owns the rights to it. Maybe we'll see how it turns reptiles into martial artists.

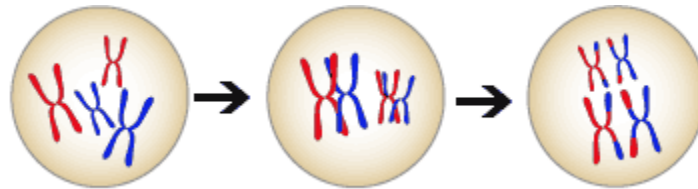
2. Gene flow is any movement of genes from one population to another and is an important source of genetic variation.

First, this only adds variation to a *particular population*. Those genes already existed in the species, so this isn't a SOURCE of genetic variation, it's basically just immigration. Second, I sat behind Gene Flow in high school chemistry. I tried to cheat off of his test once, but his answers were worse than mine.

3. Sex can introduce new gene combinations into a population. This genetic shuffling is another important source of genetic variation.

Well, there goes my PG rating. Kids, ask your parents before you read the rest of this chapter.

And again, they SAY they're going to show us where the Queen of Hearts came from, and they suggest one of the factors which created her was shuffling the deck? Are they making fun of me? How are you gonna MAKE the queen of hearts by shuffling the deck? SHE'S ALREADY IN THERE! She has tea with the Queen of Diamonds on Tuesdays! How about you kids shuffle until you make the Archduke of Hearts? Now that's a card trick I'd pay to see.



Genetic shuffling is a source of variation.

Mutations

Mutation is a change in [DNA](#), the hereditary material of life. An organism's DNA affects how it looks, how it behaves, and its physiology — all aspects of its life. So a change in an organism's DNA can cause changes in all aspects of its life.

Just to keep you on your toes, some scientific fact which doesn't contradict itself. Enjoy it while it lasts.

Mutations are random

Mutations can be beneficial, neutral, or harmful for the organism, but mutations do not "try" to supply what the organism "needs." In this respect, mutations are [random](#) — whether a particular mutation happens or not is unrelated to how useful that mutation would be.

I guess they expect you to do your own homework on DNA, so let me play Wikipedia and fill in a few gaps. DNA is the information which codes for proteins, which are the building blocks of the cell, and all life is made of cells. DNA is a four letter language which, as far as protein production is concerned, is written into three letter words called Codons. Just like in English, a misspelling can change the meaning of the word. Oh, I mean, a misspelling can change the meaning of the word. A mutation is a misspelling.

Not all mutations matter to evolution

Since all cells in our body contain DNA, there are lots of places for mutations to occur; however, not all mutations matter for evolution. [Somatic mutations](#) occur in non-reproductive cells and won't be passed onto offspring.

For example, the golden color on half of this Red Delicious apple was caused by a somatic mutation. The seeds of this apple do not carry the mutation.



Did you catch that? Of the trillions of cells which make up an organism, the beneficial spelling mistake HAS TO HAPPEN in the ONE CELL which results in a new organism. If a really helpful spelling mistake happens in any but the two haploids which actually join to make a new organism, then NOTHING gets passed on. Keep that in your head as we consider how likely this process is.

The only mutations that matter to large-scale evolution are those that can be passed on to offspring. These occur in reproductive cells like eggs and sperm and are called [germ line mutations](#).

Would you like an odd and somewhat unnecessary metaphor? Come on, you'll enjoy it! It involves cookies.

Cells replicating DNA are like an old, blind typist who spends his time copying recipes for cookies, so that they can be sent to waiting bakeries via fax (*Kids, ask your parents what a Fax Machine is*). He's trying to copy the recipe for some good, old fashioned chocolate chip cookies, but, being blind, he sometimes misses a key, or hits a key more than once when he doesn't mean to. Once the recipe is done being typed, he walks it to the office down the hall, where a thousand paper shredders and one fax machine await. They all feel and sound the same, and because the cleaning woman is always moving them around when she sweeps in there, he's never sure which is the fax machine. He just sticks it in one at random and hits the button.

Now, if the mistakes he makes actually made the cookies better, and he manages to stumble upon the fax machine, then the bakeries will get an improved recipe and will call him to tell him what the recipe should now read, and that change will stay. But, let's face it, that doesn't happen a whole lot.

So, a somatic mutation is an error in the cookie recipe which winds up in the shredder. A gene mutation is one which makes it into the fax machine. For evolution to happen, the mistakes that make it into the fax machine have to IMPROVE the recipe.

To change a cookie recipe, you need to add new information. Most misspellings will ruin the recipe. But to also change the cookies, that new and improved recipe needs to wind up in the hands of the baker. Otherwise, nothing happens.

So from chocolate Labs to cookie trees, the information which it takes to make them is far more than the info it took to make the Darwinian ancestor- a single cell. Mutations can't do that job. To add a lot of information takes a mind- and to add the amount of info it would take to make a cabbage or a wolf takes a SUPER mind- specifically God. Genesis chapter one tells us that God made the heavens and the earth, the sky and seas and all that lives in them. That seems to match the science.

Chapter 13 - Mutants Yes Ninja Turtles No

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution* team!
(Ironic Mascot: Ken Ham) <http://evolution.berkeley.edu/>

BOLD font is me, Rent A Friend 2000, being Bold.

A single germ line mutation can have a range of effects:

1. **No change occurs in phenotype**

Some mutations don't have any noticeable effect on the phenotype of an organism. This can happen in many situations: perhaps the mutation occurs in a stretch of DNA with no function, or perhaps the mutation occurs in a protein-coding region, but ends up not affecting the [amino acid](#) sequence of the [protein](#).

2. **Small change occurs in phenotype** A single mutation caused this cat's ears to curl backwards slightly.



3. **Big change occurs in phenotype**

Some really important phenotypic changes, like DDT resistance in insects are sometimes caused by single mutations. A single mutation can also have strong negative effects for the organism. Mutations that cause the death of an organism are called lethals — and it doesn't get more negative than that.

Here's what they aren't telling you:

We have NEVER observed a beneficial mutation that *added* information to a genome. MOST mutations result in disease or death. Consider these expert opinions:

"One would expect that any interference with such a complicated piece of chemical machinery as the genetic constitution would result in damage. And, in fact, this is so: the great majority of mutant genes are harmful in their effects on the organism."

****Julian Huxley, Evolution in Action., p. 137***

"But mutations are found to be a random nature, so far as their utility is concerned. Accordingly, the great majority, certainly well over 99%, are harmful in some way, as is to be expected of the effects of accidental occurrences."

****H.J. Muller, "Raditation Damage to Genetic Material", in American Scientist, Janurary 1950, p. 35***

Those which can be said to be beneficial- like antibiotic resistant bacteria- actually result in a *loss* of structure and function. These are like getting locked in the basement during a tornado. You haven't gained anything, but by happy chance you survive when others do

not. Yet, what evolution NEEDS to have happened is a mutation which ADDS information to the genome, like a guy who figures out how to make his siding tornado proof- or a guy who figures out how to get his car to fly. But how many spelling mistakes do you have to make in the blueprints for a car before it can fly, and without passing through a phase where it explodes?

When people say evolution is impossible, it's not because they don't know how it could work, it's because they know enough to know it could not work. Many evolutionists stick to evolution to fill in the gaps where a step up is impossible. "It must have evolved" they argue, "Because there it is." This is a very common "Evolution of the gaps" attitude. It will show up again later in their writing.

As a humorous side note, an evolutionist made a video to debunk what I said in this very chapter, and in that video he said, "Because we know evolution is true, we can use it to fill in the gaps in our knowledge." It became my favorite video ever.

There are some sorts of changes that a single mutation, or even a lot of mutations, could not cause.

I don't even know where to start. Suffice it to say, 'Duh.' But now we need these guys to see just how big this list is.

Neither mutations nor wishful thinking will make pigs have wings; only pop culture could have created Teenage Mutant Ninja Turtles, mutations could not have done it.

So... turtles that can talk and walk on two legs, impossible with mutations. But a bacteria that becomes a monkey who can talk and walk on two legs... science? And that a rodent became a lizard that grew wings and learned to fly is the evolutionary story they've already admitted to, so why now is flying pigs impossible? These guys pick weird times to decide what evolution can and can't do. Remember- these guys think chickens ARE dinosaurs.

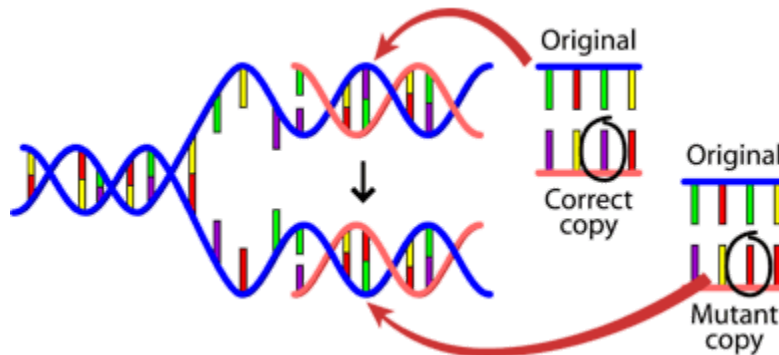
Chapter 14 - Gene Flow and the ArchDuke of Hearts

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution* team! (Recipients of the 2018 Richard Dawkins' "Nice Try!" Award) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

The causes of mutations: Mutations happen for several reasons.

1. DNA fails to copy accurately

Most of the mutations that we think matter to evolution are "naturally-occurring." For example, when a cell divides, it makes a copy of its DNA — and sometimes the copy is not quite perfect. That small difference from the original DNA sequence is a mutation.



Did I mention that an average functional protein needs 900 of those DNA letters in the right order? You know how having one number wrong in a telephone number means you can't make your call? It can be a lot like that. Sickle Cell Anemia is the result of ONE wrong letter. Your cells will pay dearly for dialing a wrong number. On the bright side DNA gets free nights and weekends, and unlimited texting. That could be the cause of lots of mutations. Your cells try to text and replicate at the same time. Tragically, not all of them survive.

Of course, sometimes the errors don't do any harm, but over generations, those harmless errors add up until they are harmful. "Neutral" mutations are like smoking. Your first cigarette probably won't kill you, but over the years, the tiny bits of tar from each one accumulate until your lungs look like a freshly sealed driveway. After that, your tennis game starts to deteriorate, along with your cardiovascular system. "Harmless" mutations are a lot like that.

2. External influences can create mutations

Mutations can also be caused by exposure to specific chemicals or radiation. **[note to self- add a joke about Taco Bell right here]** These agents cause the DNA to break down. This is not necessarily unnatural — even in the most isolated and pristine environments, DNA breaks down. Nevertheless, when the cell repairs the DNA, it might

not do a perfect job of the repair. So the cell would end up with DNA slightly different than the original DNA and hence, a mutation.



Mutations in a half-shell!

Now they're just TAUNTING the TMNT fans. *"Radioactive waste COULD cause mutations in a turtle, but not THOSE mutations."* Way to harsh our Ninja Turtle buzz, man. And again, remember that these misspellings and breakdowns have to

1. Create new information that
2. produces new structures, functions and behaviors which are
3. To the benefit of the organism and
4. Increases not only their chance of survival but of reproduction and
5. Occurs in the reproductive cells so they can be passed on.

Otherwise, while interesting, all of this would have nothing to do with evolution. And keep in mind, this information will not actually help the survival of the parent who originally carries it, because it doesn't change the DNA which makes them, only the DNA they donate to the next generation. How easy is that? Not very.

Once again, when we say life needs a super intelligence (i.e. God) directing it, we're not making an appeal to what we DON'T know. We're making an appeal to a rare and often overlooked scientific tool which I like to call, "Common sense." Admittedly the name is misleading.

Gene flow

Gene flow — also called migration — is any movement of genes from one population to another.

I'm going to edit out most of this migration business and just cut to the chase: Gene flow has nothing to do with evolution. Evolution needs to account for the writing of VAST amounts of genetic information. Sending it somewhere else can't account for that. Genetic information demands a WRITER (i.e. God) not merely a method of distribution. Gene flow is like tracking the sale of Harry Potter books. If you made a list of all the planes, trains, and automobiles which have shipped them, and all of the web sites and stores which have sold them, you would, at the end of the day, still not have explained a single page without J.K. Rowling. You certainly wouldn't know what a Muggle was.

Sex can introduce new gene combinations into a population and is an important source of genetic variation.

You probably know from experience that siblings are not genetically identical to their parents or to each other (except, of course, for identical twins). That's because when organisms reproduce sexually, some genetic "shuffling" occurs, bringing together new combinations of genes.

Once again I'll chop out the lengthy "For example" and just point out the apparently not obvious enough: "Shuffling" is not "creating." The genes being shuffled ALREADY EXIST. New genes are not created, only new arrangements of already existing genes. Put a thousand monkeys in a big room and have them shuffle a thousand decks of cards, around the clock as often as they can, and do you know what you'll have after a thousand years? You'll have a thousand dead monkeys.

But I can tell you what you WON'T have, even if the monkeys were immortal. You'll never have the Arch Duke of hearts.



This shuffling is important for evolution because it can introduce new combinations of genes every generation. However, it can also break up "good" combinations of genes.

This is true. It's also true that the plastic bit on the end of a shoelace is called an Aglet. Also, the hummingbird is the only animal that can fly backwards. What all of these true statements have in common is that they will never turn bacteria into wolves and cabbages.

If you'll check the title of the Understanding Evolution Team!'s web page, it's called Evolution 101, which implies that they will provide information about evolution. Yet, here we are wasting another page talking about fun science trivia which will NEVER MAKE ANYTHING EVOLVE. I'm trying to be patient here, but this is like asking for directions from someone who refuses to talk about anything but the weather.

"I don't care if it might rain tonight! I've got reservations at Claim Jumper! They have a piece of chocolate cake nearly two feet tall! Just point north and let me get on my way!"

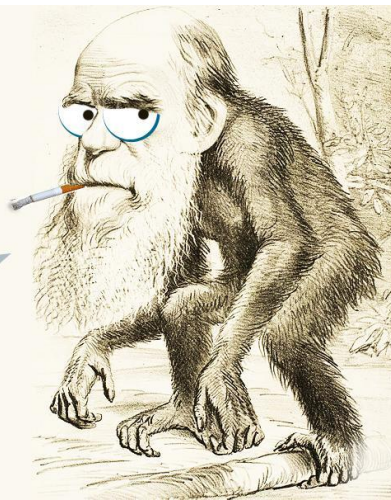
When shown the queen of hearts, evolution says, "This card did not have a designer, it arose by unguided natural processes." When asked for proof, it shuffles the deck, deals a few hands and says, "See how the five-card hands are all different? Look at what shuffling can create!" After a few rounds, you may notice that some of the cards are damaged and discolored, or that you no longer have all 52 cards. At this point evolution victoriously declares, "See! The deck has changed suit frequency! Clear evidence that the queen of hearts had no designer, but came about through random, accidental changes."

And then they mock the creationists.

And now, an Uncle Chuck Anti- Creationist Joke:

How many creationists does
it take to change a lightbulb?
None!
They don't believe in Electricity!

Ha ha! That's a good one! Let's all post this on Facebook!



Remember, the question is not "to where do genes flow?", or "how many ways can you shuffle them?", it's "*where did they come from in the first place?*" Genesis is God's text message to us, where he admits that he is the author of DNA, and life itself. Accepting a super intelligent creator as the cause of a super complex language system which runs astoundingly complex machinery just seems like common sense. But I've already talked about this too much. I need to get going. Somewhere, there's a piece of chocolate cake calling my name.

Chapter 15 - Heckling Haeckel and Developing to Death

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution team!* (*A million monkeys, a million typewriters, and a dream*) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

Development is the process through which an embryo becomes an adult organism and eventually dies. Through development, an organism's [genotype](#) [Editor's note: **Genetic information in the individual**] is expressed as a [phenotype](#), [Editor's note: **Physical characteristics of the individual**] exposing genes to the action of natural selection.

Anyone else find it morbid that they include *death* as a stage of development? This reminds me of an earlier chapter where they taught us how we can make a population of beetles 'evolve' by stepping on a bunch of them. I guess that would be *Origin of the Species by Means of Doc Martins*, but I digress.

Studies of development are important to evolutionary biology for several reasons:

Explaining major evolutionary change

Changes in the genes controlling development can have major effects on the [morphology](#) of the adult organism. Because these effects are so significant, scientists suspect that changes in developmental genes have helped bring about large-scale evolutionary transformations. Developmental changes may help explain, for example, how some hoofed mammals evolved into ocean-dwellers, how water plants invaded the land, and how small, armored invertebrates evolved wings.

The process of going from one cell to many many millions of them, of many different kinds and many different locations is like the space shuttle building itself from recycled car parts. If any of these instructions go wrong, you almost certainly lose the entire creature. The idea that a tweek here and a misspelling there could change the outcome by adding new features is a piece of hopeful optimism which no cheerleader in the NFL could hope to compete with, even with the help of prescription strength cappuccino.

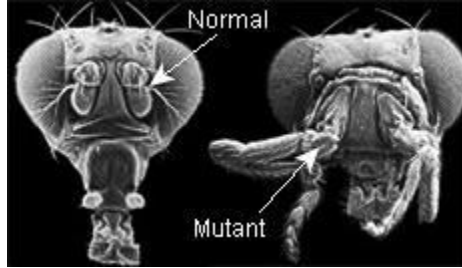
While I understand this path of reasoning for someone who already has an evolutionary bias, this is mainly the same logical fallacy made previously- they hope that errors will result in more genetic information. The problem is, the most likely outcome with an error in development is the death of the organism (*or as they'd say, the development of the organism toward increasing entropy and molecular dissociation*).

The example they give below is one where the antennae of a fruit fly are replaced with legs. This is merely another shuffling of preexisting information. The fly already had the genes for legs, but now he's lost the information to keep them off of his face. I'm no PhD, but I can say with some confidence that, if you wind up with legs on your face, you won't be saying, "What luck! Now I'll be able to run TWICE as fast!" I think you'd probably be saying, "AHHHH! THERE ARE LEGS ON MY FACE!!!"

What this proves is how much information is needed to even get a fruit fly to work properly. Information only comes from an intelligent source, and thus data like this cannot be used to show the likelihood of evolution, but shows clearly the need for an intelligent designer.



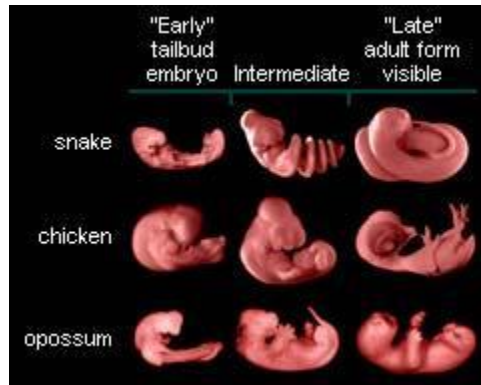
Mutations in the genes that control fruit fly development can cause major morphology changes, such as two pairs of wings instead of one.



Another developmental gene mutation can cause fruit flies to have legs where the antennae normally are, as shown in the fly on the right.

Learning about evolutionary history

An organism's development may contain clues about its history that biologists can use to build evolutionary trees.

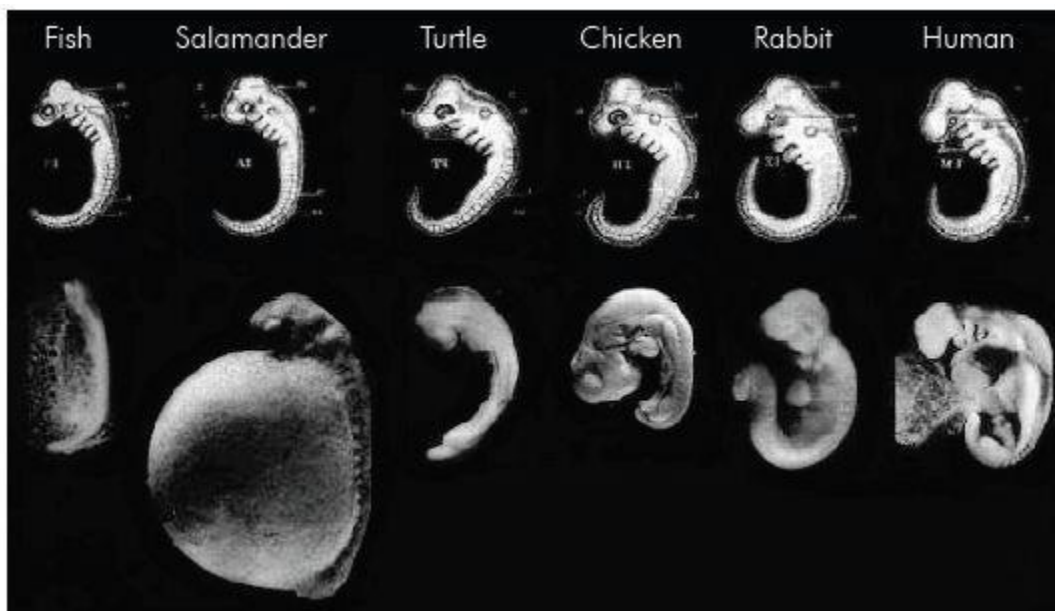


Characters displayed by embryos such as these may help untangle patterns of relationship among the lineages. #

For another spin till you puke, tilt-o-whirl circular reasoning piece of pseudoscience, I give you the "Law" of Biogenetics. This funderful bit of fiction states that animals go through different stages before they are born or hatched where in they revisit their evolutionary history. Thus, every baby starts as a worm, becomes a fish, and develops through a reptile and finally mammal stages. But how worm-like are we in early development? We're longer than we are wide... That's pretty much it. I would also argue that many people retain that feature for most of their lives, unless they develop my fondness for doughnuts.

How fish-like are we before we're born? Well, check any biology textbook that teaches evolution, and you'll see that as a fetus, we have "gill slits." Seriously, go flip through a few textbooks and you will see mentions and sometimes drawings of these gill slits. The problem is, those folds in the skin they point to are not used for respiration at any stage, and thus are not gills. They are not openings into the embryo, but merely folds in the skin, and thus not slits. If they aren't gills, and they aren't slits (*stop me if I'm going to fast here*) then they AREN'T GILL SLITS.

It's worth noting that, while they use the chart of fetuses and imply his work, they choose not to mention Ernst Haeckel. Could it be these guys did enough homework to discover that Haeckel- *whose work is still found in biology textbooks all over the country to this day*- was shown to be a fraud more than a century ago? While he did not admit to 'fraud,' he did admit to taking 'artistic license' to create images that could be used as evidence in support of evolution.



Haeckel up top, reality down below.

The biggest difference between Haeckel's drawings and photographs like the ones above is, in the photographs, you can see how very quickly the embryos become distinguishably different, whereas Haeckel basically used the 1800's version of cut and paste instead of drawing each animal differently. For instance, to show how humans pass through the worm and fish stages, he simply chose NOT to draw the developing limbs. I don't think you need to be an embryologist to know that something with arms and legs ISN'T a worm or a fish. On the other hand, PRETENDING that something doesn't have arms and legs doesn't make it a worm or a fish either.

Picture yourself at a fancy restaurant:

Waiter: Here you are sir, the catch of the day seafood special.

You: What is this? I thought it would be salmon.

Waiter: It is a rare fish of the day.

You: This is a squirrel with its legs removed.

Waiter: The chef has taken a little artistic license in preparing this evening's catch of the day.

You: And I'm going to take some artistic license in leaving you a tip.

Waiter: I fart in your general direction.

Limiting evolutionary change

Developmental processes may constrain evolution, preventing certain characters from evolving in certain lineages. For example, development may help explain why there are no truly six-fingered [tetrapods](#).

So... evolution has a feature which stops evolution from happening? You can get legs on your face, but not six fingers unless you're one of the villains from The Princess Bride? And no ninja turtles? DUDE! Evolution sucks!

#these photos are probably the work of Dr Michael K. Richardson.

Read more about it [here at CMI's website](#).

Chapter 16 - Survival of the Just Dumb Luckiest

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution* team!
(Voted "Best Use of an Unnecessary Exclamation Point" by the readers of *Car and Driver*, 2007)
<http://evolution.berkeley.edu/>

BOLD font is me, Rent A Friend 2000, being Bold.

Genetic drift — along with natural selection, mutation, and migration — is one of the basic mechanisms of evolution.

In each generation, some individuals may, just by chance, leave behind a few more descendents (and genes, of course!) than other individuals. The genes of the next generation will be the genes of the "lucky" individuals, not necessarily the healthier or "better" individuals. That, in a nutshell, is genetic drift. It happens to ALL populations — there's no avoiding the vagaries of chance.

According to this paragraph, you've got survival of the fittest, and then survival of the just dumb luckiest. I think if Darwin would have used the phrase "Survival of the Just Dumb Luckiest," he'd have been asked to more parties.



Earlier we used this hypothetical cartoon. Genetic drift affects the genetic makeup of the population but, unlike [natural selection](#), through an entirely random process. So although genetic drift is a mechanism of evolution, it doesn't work to produce [adaptations](#).

Finally, something we can agree on. Sort of. Genetic drift doesn't work to produce adaptations. True! But to then call it a mechanism of evolution seems rather pointless. They're trying to argue that some individuals getting killed and others having offspring through random dumb luck is a mechanism of a process whereby bacteria gain new genetic information until they become wolves and cabbages. Am I the only person who thinks the authors didn't read this? Transporting something around is NOT the same as creating that

something. This is why the law has different definitions for "Manufacturing" and "Stealing."

Natural selection

Natural selection is one of the basic mechanisms of evolution, along with mutation, migration, and genetic drift. Darwin's grand idea of evolution by natural selection is relatively simple but often misunderstood. To find out how it works, imagine a population of beetles:

1. **There is variation in traits.**

For example, some beetles are green and some are brown.



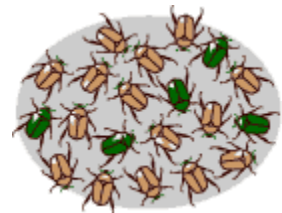
• **2. There is differential reproduction.**

Since the environment can't support unlimited population growth, not all individuals get to reproduce to their full potential. In this example, green beetles tend to get eaten by birds and survive to reproduce less often than brown beetles do.



• **3. There is heredity.**

The surviving brown beetles have brown baby beetles because this trait has a genetic basis.



• **4. End result:**

The more advantageous trait, brown coloration, which allows the beetle to have more offspring, becomes more common in the population. If this process continues, eventually, all individuals in the population will be brown.

If you have variation, differential reproduction, and heredity, you will have evolution by natural selection as an outcome. It is as simple as that.



NOW I get it. If I tear out enough pages from my copy of *Cookie Monster and the Cookie Tree*, it will eventually become *War and Peace* by Leo Tolstoy. It really is as simple as that! And every bit as impossible!

Check out their example- we start with green and brown beetles. Eventually, because of birds and just dumb luck, there are no more green beetles. This is a LOSS of genetic variation. And this is how bacteria become wolves and cabbages? It amazes me what people can overlook when they have already decided on a conclusion. On this logic I could get rich faster if I burn the money I already have instead of just spending it.

Now, before I get angry emails accusing me of attacking a straw man, let me explain that I know they aren't claiming that this process CREATES new genes, features, and species. But then, WHY are they calling it "Evolution?" In chapter one they defined Evolution as "Descent with modification," and then in chapter eight they said descent with modification is a change in gene frequency over time. They don't define "modification," nor do they qualify "change," and so all they are saying is Evolution is change over time, which THEY know is wrong because they said THIS in part 2A: "*Biological evolution is not simply a matter of change over time.*"

Between chapters 2 and 8 they spent a LOT of time showing off their phylogenetic trees, which are supposedly the history of life on earth, from bacteria to wolves and cabbages. So it follows that the only reason that they are taking our time on the Evolution 101 page here is to prove that Genetic Drift and other mechanisms cause the kind of change that results in the history of life as depicted in their little trees. But they don't. So what is the point of all of this?

It's a little trick called bait and switch. They define evolution weakly as "Stuff that happens" and then show *some stuff* happening, and then hope you don't notice that their stuff has NOTHING to do with evolution.

What does genetic drift show? It shows that the previous generations had greater genetic diversity which, due to natural selection and just dumb luck, is getting thinner over time. This is the exact opposite of evolution, yet is exactly what the Biblical creation model would predict. Funny how the evidence from observation points us back to the Bible. However, I think that's more than just dumb luck.

Chapter 17 - Glossing over the Peppered Moth

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution team!* (*Gluten Free and half the sodium of the leading Evolution team*) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

Natural selection at work

Scientists have worked out many examples of natural selection, one of the basic mechanisms of evolution. Any coffee table book about natural history will overwhelm you with full-page glossies depicting amazing adaptations produced by natural selection,

Hold on- does it really say “produced”? Uh, yeah. “amazing adaptations produced by natural selection,” Produced by natural selection. They use the word PRODUCED? That’s what it says.

Ok, carry on.

...amazing adaptations produced by natural selection, such as the examples below.



Orchids fool wasps into "mating" with them.



Katydids have camouflage to look like leaves.



Non-poisonous king snakes mimic poisonous coral snakes



The blue-footed booby

Behavior can also be shaped by natural selection. Behaviors such as birds' mating rituals, bees' wiggle dance, and humans' capacity to learn language also have genetic components and are subject to natural selection. The male blue-footed booby, shown to the right, exaggerates his foot movements to attract a mate.

OH, Well, if the blue-footed booby has an exaggerated foot waggle, then OBVIOUSLY all life has been produced through random mutations and natural selection over billions of years. I don't know what I was thinking. But in my defense, no one told me about the exaggerated foot waggle! There's no way I could have guessed that a bird with blue feet would exaggerate his foot movements! HOW WAS I TO KNOW?!?!?

[Editor's note: Sarcasm]

Previously we saw how natural selection reduces the genetic information in a population. (Start with brown and green ones, and thanks to Natural Selection, the Green ones *went away*.) Now we're going to look at all kinds of amazing design and say that these were somehow created by the process which made the green ones go away? These examples they give are NOT creatures which we have seen evolve from some simpler forms. We did not observe the Katydid evolve a leaf form, or the orchid evolve the wasp shape. These are given as the result of natural selection because the authors begin with the assumption that the *reductive* process of natural selection MUST HAVE created all of the existing features of all living things.

This is worse than circular reasoning. This is like claiming that if you take enough parts away from the Honda Odyssey, you'll create the Oscar Meyer Weiner Mobile. Do you know why I haven't bought a Honda Odyssey? Because that doesn't work. Although, you might be able to subtract enough parts to make a golf cart. Or a Smart Car. But I digress.



In some cases, we can directly observe natural selection. Very convincing data show that the shape of finches' beaks on the Galapagos Islands has tracked weather patterns: after droughts, the finch population has deeper, stronger beaks that let them eat tougher seeds.

Apparently these guys have not read ALL of the "very convincing data". The rest of the data shows how the sizes and shapes of those beaks are flexible across years. There is no net gain or loss, and the 13 species of finch which some claim to exist there all interbreed, making them, by most definitions of the word 'species,' all the SAME species.

When Darwin was there 150 years ago, there were finches with varying beak sizes. Today, there are finches with varying beak sizes. No information has been gained, no net change has been observed, and the data of their breeding habits indicates that they are all one single species. Yet, somehow, this is one of the best examples of Natural Selection the evolutionists can come up with.

When I was in middle school, I was on a basketball team. I could claim we were a great team, but when pressed, I would have to admit that the best we ever did was losing a game by ten points. If these examples are any indication, Natural Selection is a lot like that.

In other cases, human activity has led to environmental changes that have caused populations to evolve through natural selection. A striking example is that of the population of dark moths in the 19th century in England, which rose and fell in parallel to industrial pollution. These changes can often be observed and documented.



I can't blame them for glossing over this "striking" example. If the finches are their best example of Natural Selection, this is certainly the top contender for the spot. What this drive by reference is talking about is the peppered moth, an insect which, like the beetles in their hypothetical cartoon example, comes in two flavors: white with black spots and black with white spots.

The story goes like this:

When the industrial revolution hit, the soot from factories turned the trees dark, thus making it easier for the dark moths to hide. This meant the light moths were now easier for the birds to find and the populations shifted to have proportionally MORE dark ones and FEWER light ones. NATURAL SELECTION! EVOLUTION!

There are several problems with this story as it pertains to natural selection as a mechanism for evolution.

1. No new information was created. At the start- light and dark moths. At the end- light and dark moths. This will not turn bacteria into wolves and cabbages.
2. The color of the tree had not caused the dark moths to go extinct in the thousands of years before the industrial revolution, and so it is doubtful that the color of the trees would make the white ones disappear after it.
3. Even if it did, that is *a loss of genetic information*, which is not how you turn bacteria into wolves and cabbages. If you go back to those branch diagrams showing speciation events, this is the erasing of one arm, not the splitting of one into two arms. It's different.

4. The clean air act of the 1960's resulted in less soot and thus normal colored trees again. So this example is a short lived one with no long term results.

5. All of that aside, this example is based on poor science and demonstrated with lies. Let me sum it up: The pictures you see in your textbook of the moths resting on the tree trunks are fake. Those moths are dead and were glued there for the photo op. Scientists collecting data for 40 years found a grand total of 2 moths on tree trunks (and that photo is not them). The moths hide under leaves, up in the branches, NOT out on the tree trunks, making this example completely moot and the pictures used to sell it fraudulent, much like the thin and healthy people who are featured in fast food commercials.

6. And I don't think I'm amiss for doubting that any team of scientists can know for certain that they have accounted for all of the moths in a forest, no matter how often they walk around and try to count them. Give that a try some time- walk through the woods and try counting ALL of the moths. Keep in mind, these moths hide up in the branches, and the trees in England can often exceed six feet in height. The Black Poplar, just to name one average British tree, grows to an average height of a hundred feet, while the average British scientist does not.

But once again, you needn't take my word for it:

"The [peppered moth] experiments beautifully demonstrate natural selection—or survival of the fittest—in action, but they do not show evolution in progress, for however the populations may alter in their content of light, intermediate, or dark forms, all the moths remain from beginning to end *Biston betularia*."

**Harrison Matthews, "Introduction," to Charles Darwin's Origin of the Species (1971 edition), p. xi.*

"This is an excellent demonstration of the function of camouflage; but, since it begins and ends with peppered moths and no new species is formed, it is quite irrelevant as evidence for evolution."

On Call, July 2, 1973, p. 9.

And yes, this is one of the BEST examples of Natural Selection that is said to have been observed. Imagine the ones that don't make it into the textbooks. I can't fault them for choosing these two poor examples of alleged Natural Selection. When you have almost no evidence to work with, you sometimes just have to put your best foot forward, and then exaggerate its movements. If that doesn't work, try painting your feet blue. After that, you're on your own.




Chapter 18 - Peahens and Bacterial Imagineers

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution* team! (Celebrating Christmas by cursing the Virgin Mary since 1998) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

What about fitness?

Hey! I did pushups AND sit ups yesterday. 12 of EACH!

Biologists use the word fitness to describe how good a particular [genotype](#) is at leaving offspring in the next generation relative to how good other genotypes are at it. So if brown beetles consistently leave more offspring than green beetles because of their color, you'd say that the brown beetles had a higher fitness.

			
Number that survive compared to total	95 %	33 %	100%

The brown beetles have a greater fitness relative to the green beetles.

Editor's note:

Chuck Norris has a greater fitness relative to EVERYTHING ELSE ON EARTH.

Of course, fitness is a relative thing. A genotype's fitness depends on the environment in which the organism lives. The fittest genotype during an ice age, for example, is probably not the fittest genotype once the ice age is over.

These guys at Berkley have obviously never been to Illinois. Anything that was the fittest in the Ice Age would still be fittest in a Chicago Winter. Unless it froze to death.

In order to be successful in an evolutionary sense, they need to be alive (step 1) and have statistically more offspring than others (step 2). And here you all were thinking "fit" means smart, or big, or strong. Nope. Fit means not dead, and having lots of kids. I guess Tribbles may be the fittest thing in the galaxy.

Survival of the fittest is the mantra which, on this view, turned T-Rex into Chickens. So, somehow, chickens are more fit than T-Rex. If that doesn't make you question evolution, I don't know what will.



Run for your lives! It's the fittest!

Biblical Creationism doesn't disagree with this concept. Surely any individual which can live and have offspring will, by default, live and have offspring. You're not going to find a lot of Bible thumpers arguing with that. On the other hand, this is not evolution. When the less fit die, the traits which make them less fit die with them. This is a *reduction* of information in the population's genes. That won't turn bacteria into cabbages and wolves. That will turn a diverse population into a LESS diverse population. If you can prove that losing genetic diversity will turn bacteria into cabbages and wolves, then send the kids at the Understanding Evolution Team! an email, because, while I know they already BELIEVE it, I'll bet they'd love to find out how it works.

Fitness is a handy concept because it lumps everything that matters to natural selection (survival, mate-finding, reproduction) into one idea. The fittest individual is not necessarily the strongest, fastest, or biggest.

I think Bill Gates already knows this. NERD POWER!

A genotype's fitness includes its ability to survive, find a mate, produce offspring — and ultimately leave its genes in the next generation.



Copyright NBC.

Caring for your offspring (above left), and producing thousands of young — many of whom won't survive (above right), and sporting fancy feathers that attract females (left) are a burden to the health and survival of the parent. These strategies do, however, increase fitness because they help the parents get more of their offspring into the next generation.

It might be tempting to think of natural selection acting exclusively on survival ability — but, as the concept of fitness shows, that's only half the story. When natural selection acts on mate-finding and reproductive behavior, biologists call it [sexual selection](#).

There goes my PG rating again! Oh well, I guess since birds do it, bees do it, and even monkeys in the trees do it, let's do it. Let's discuss natural selection acting on mate-finding and reproductive behavior.

The paragraph above is supposed to convince us that certain traits evolve because of mating- a female prefers long feathers, so the males evolve long feathers. But suppose a female prefers long feathers, but the males don't have them. If she decides not to mate because they don't have what she likes, the mutation which caused those feelings dies with her.

On the other hand, if the males have long feathers but she doesn't prefer them, she'll mate with the short feathered brothers, and the long feather genes go away. This requires two traits- one physical and one behavioral- to develop at the SAME TIME, which makes it only all the more unlikely to happen without a designer. The only way to get a peacock is if HE has fabulous plumage and SHE prefers it within the same generation and the same population (*Which is what you would get as a result of Creation by God on a Thursday, for example*).

Also, there is the fact that the peacock, while the height of fashion, doesn't seem to be adapted for self defense:

"Even Charles Darwin thought natural selection could not account for peacocks' tails or similar fantastic structures so prominent in courtship displays. On the contrary, elaborate appendages or tail feathers could easily get in the way when animals had to escape enemies . . . if elaborate plumage makes the birds more vulnerable to predators, why should evolution favor them?"

**R. Milner, Encyclopedia of Evolution (1990), pp. 402-404.*

It seems that natural selection favors the males who are less likely to survive. Someone want to tell me how birds with feathers that DON'T attract every predator within a hundred miles somehow were LESS fit than the NBC logo over here? And even if we can do a Natural Selection Bait and Switch and pretend Natural selection somehow CREATES the fabu` plumage, that pales in comparison to the problem which arises when you try and figure out how asexual animals became sexual animals in the first place. When the first female evolved, was the male already there waiting for her? And why would natural selection choose a complex two member system instead of the one member split like it had, on this view, for 99% of the history of life? You don't see male and female bacteria, and supposedly THEY ruled the earth for 3 billion years.

Darwin tries to point to the fact that there is great advantage to having a two parent system- it allows for genetic shuffling, and thus allows for weak genes or harmful mutations to get weeded out or covered up. He likes to distract you with facts every now and then. But the advantage it offers NOW does nothing to explain how it came about in the first place. You can't explain the invention of the driver's side air bag by spouting statistics on how many drivers it saves. It's not like bacteria gathered and formed committees to plan this out in advance. There was no pre-cambrian imagineer team of bacteria. Or WAS there...?

[Ripple dissolve to flashback]

Bacteria 1 (Bob): OK, group, listen up. What we're going for in phase one is the ability for a bunch of us to merge together into a single unit- one big organism with one set of genes for all of us.

Bacteria 2 (Phil): That sounds difficult.

Bob: Nye impossible there Phil, but it's gotta be done so we can reach phase two.

Phil: What's phase two?

Bob: We're going to get those multi-cellular organisms to develop specialized organs which will create haploids.

Phil: What's a haploid?

Bob: It's a cell that carries only HALF of the genes which are needed to make the organism.

Phil: Why we gonna do that?

Bob: Because in phase two, part B, we make a completely different, but yet compatible organism which is making haploids which can join up with the first one's haploids and make a full set of genes.

Phil: Not to beat a dead horse here Bob, but why do we wanna do that?

Bob: Because if an organism has the ability to swap genes with another, the shuffling of genes will make for a greater diversity in the population, and natural selection will naturally select for an organism which can add diversity into its population.

Phil: But until we get both halves of the system working, how are we going to keep natural selection from selecting this whole shebang out?

Bob: Well, that's part of what this committee needs to figure out.

Phil: It seems unlikely.

Bob: Oh, yeah sure does.

Phil: Not only that, but if all this gains us is the ability to shuffle the old genes in the population, isn't this a waste of time?

Bob: Whatcha mean there Phil?

Phil: We're bacteria Bob. We can already do that.

Bob: Can we?

Phil: Sure. Some of us hand out special genes like candy at a parade, and others can write new genes to help us survive in difficult environments.

Bob: Like your cousin, Nylonaise?

Phil: You betcha. Also, the whole reason viruses exist is to give us genes we don't already have, so's we don't all look exactly alike.

Bob: Well, all of that might be true, but this plan will be far bigger and more complex.

Phil: How long do you suppose before we have a working prototype?

Bob: A few million years? Ten million tops.

Phil: As long as we can break to watch hockey, I'm in.

And after lots of meetings, the plans were implemented so efficiently, that the result is still known as the Cambrian Explosion.

Ha ha! I'm kidding of course. Bacteria planning ahead is a silly idea. Uncle Chuck assures us that the insurmountable leaps in engineering that took single cells into complex, multi-celled life with a diversity of different kinds of cells, all coded for in one collection of chromosomes, and the organs to produce compatible haploids all came about with NO planning or guidance whatsoever.

Because, somehow, that's less silly and improbable.

Chapter 19 - Natural Selection of Robots and Men

Remember, normal text is copied from Evolution 101 by the *Understanding Evolution team!* (*We liked Gangnam Style before it was cool*) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

Sexual selection (2 of 2)

It's clear why sexual selection is so powerful when you consider what happens to the genes of an individual who lives to a ripe old age but never got to mate: no offspring means no genes in the next generation, which means that all those genes for living to a ripe old age don't get passed on to anyone! That individual's fitness is zero.



Marathon Runner Fauja Singh, age 100. Picture from gymflow100.com

Non-smoker, jogs daily, runs marathons until he's 102, but if he has no kids: Fitness is Zero.



Ms. Darwin Fit, 2012

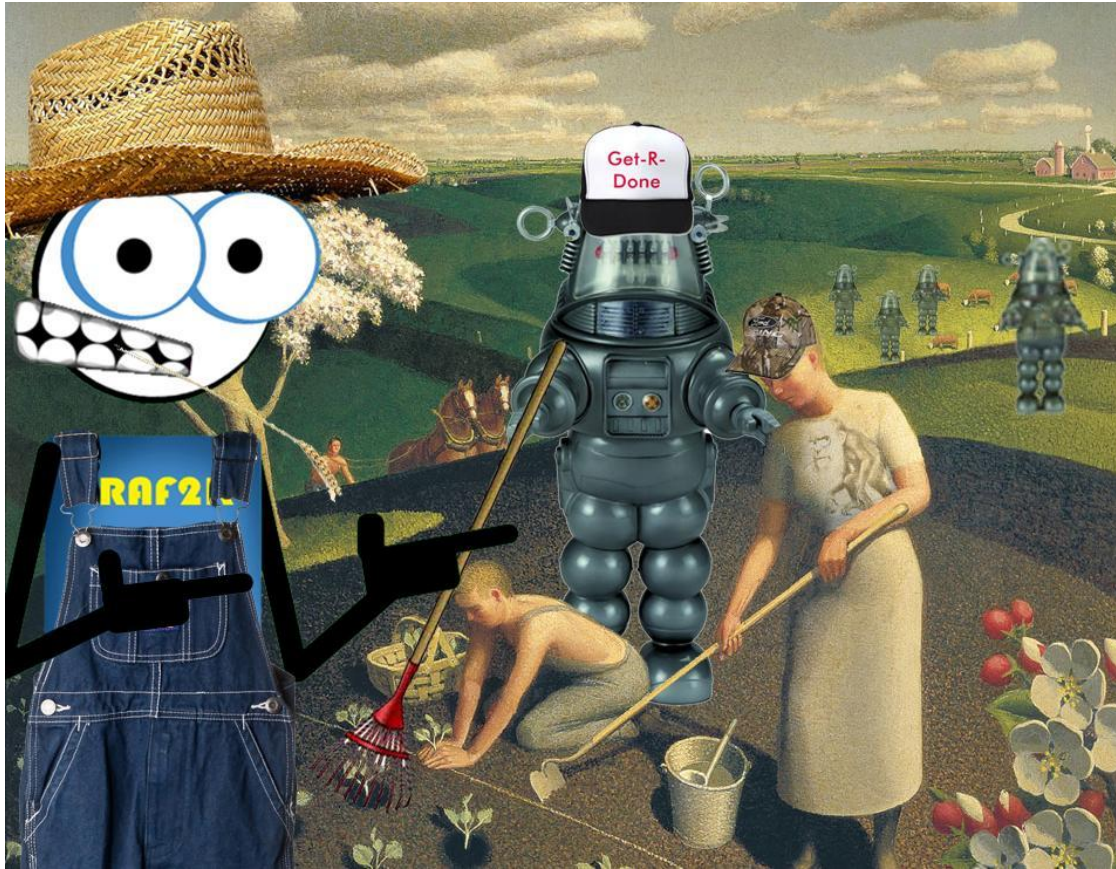
Lazy, McAddicted, 800 lb alcoholic who has sixteen kids with different daddies and dies at 27: SUPER FIT!

Maybe we need a different word. Calling that "Fit" seems a tad misleading. It also conjures up horrible ideas about what a "Fitness program" is. I don't know what it would be, but I suspect we should make it illegal.

Artificial selection

Long before Darwin and Wallace, farmers and breeders were using the idea of selection to cause major changes in the features of their plants and animals over the course of decades. Farmers and breeders allowed only the plants and animals with desirable characteristics to reproduce, causing the evolution of farm stock. This process is called [artificial selection](#) because people (instead of nature) select which organisms get to reproduce.

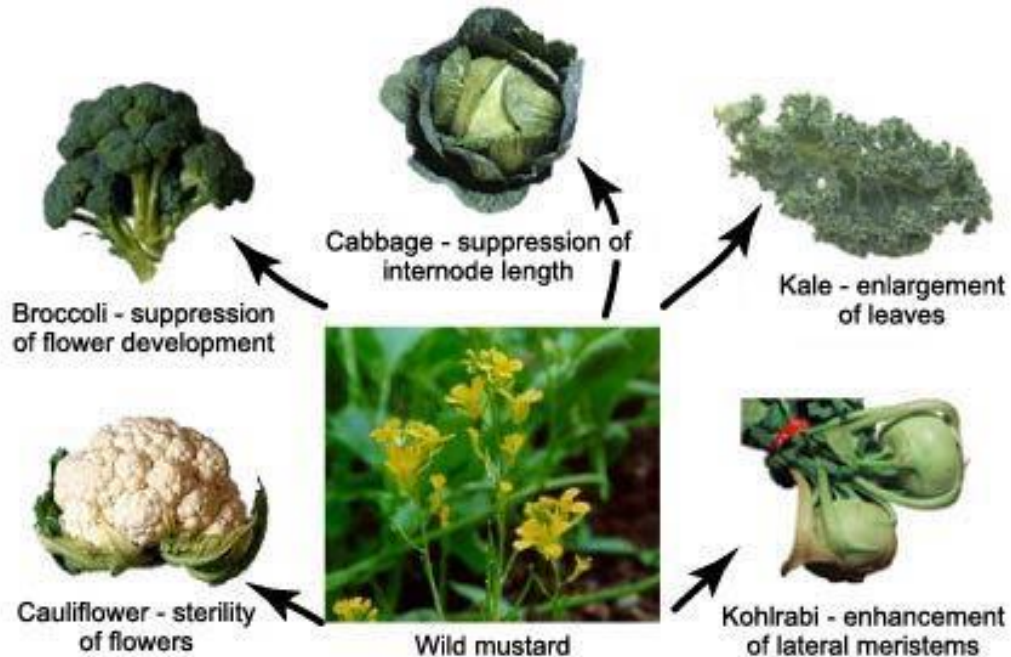
First off, why are we artificial? Shouldn't this be called "intelligent selection"? I think if robots did this we should call it artificial selection.



This fails to understand what farmers are actually doing. They are SELECTING traits so that the next generation has those pre-existing traits and NOT others. This means a net LOSS of genetic information. No new information has been gained.

This is like a magician tossing out all of the black cards. He's more likely to get the red ACE he wants, but he hasn't made any new cards. If he tosses out all of the black cards, he may get a red Ace, but he'll never get the Archduke of Hearts. Artificial selection is thinning the deck, or sometimes shuffling the deck, but it isn't adding to the deck. What this proves is how much genetic information existed in the naturally occurring kinds so that breeders could make 400 varieties of dog from a starting wolf kind. The breeding potential of the average poodle is arguably less.

As shown below, farmers have cultivated numerous popular crops from the wild mustard, by artificially selecting for certain attributes.



These common vegetables were cultivated from forms of wild mustard. This is evolution through artificial selection.

This is evolution? Just read the subtitles on their picture: "Sterility, suppression, & suppression." How is "Can't do what it used to do" supposed to be evolution? Isn't there another word for that? Like, "Broken"?

Consider the facts: We were able to produce a wide range of vegetables by selecting certain traits from a wild plant. This means the traits we selected were already there. I don't want to sound all wacky fundamentalist, but a farmer cannot select something which does not exist. In order to be selected, it must be there. Thus, if it is selected, by man or Nature, that means it was there already.

Thus, the act of selecting is not the mechanism which created it. If I can put a point on it- Natural Selection CANNOT be the origin of the species. The species has to already be there in order for nature to select it.

Sorry, Uncle Chuck. Looks like your book needs a new title.

Through Natural Selection, each generation has LESS genetic information than the previous one, just as a straight flush or a full house each have fewer cards than the original deck. This may be how you turn wild mustard into domestic cabbage, but it is not how you turn bacteria into wild mustard.

This is evolution in the same manner that our government is spending its way out of debt.

If I can highlight this point- in both natural and artificial selection, the end result is LESS genetic information than existed previously. Very simply then, when we look back in time, we see MORE genetic information and potential diversity than we do now. This is the exact OPPOSITE of what we expect to see if evolution were true, but it is exactly what we would expect to see if all living things were intelligently created by God according to their kind with the expectation that they would be fruitful and multiply.

To put a finer point on it- natural and artificial selection are both great evidence in support of God's act of creation as described in Genesis, AND great evidence against Darwinian Evolution.

The Understanding Evolution Team! seems to have missed that fact. I'd point it out to them, but I'm pretty sure they'd just have a fit.

Chapter 20 - Vestigial Organs and Other Recent News from the 1940s

Remember, normal text is copied from Evolution 101 by the Understanding Evolution team!
(*New Year's Pledge: Less Data, MORE DARWIN!*) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

Adaptation: An adaptation is a feature that is common in a population because it provides some improved function. Adaptations are well fitted to their function and are produced by natural selection.

It's like beating a dead horse, but here I go again: Natural Selection CANNOT PRODUCE ANYTHING. All it can do is SELECT, or choose, from what is already there. Otherwise we'd call it Natural Production. This team of PhDs should know better than to claim that anything gets produced by Natural Selection, because it simply isn't true. But don't take MY word for it. Here's a team of PhD's which say exactly what I am saying:

"However, natural selection and genetic drift cannot operate unless there is genetic variation..."

"..natural selection cannot try to supply what an organism "needs." Natural selection just selects among whatever variations exist in the population."

-the Understanding Evolution Team! from part 9 and part 14B respectively.

WHAT THE WHAT?!?! In order to discredit the Evolution 101 website all I have to do is go to the evolution 101 website?

I don't want to go tossing around words like "incompetence" or "deception" or "liar, liar, pants on fire," but I can't think of another way to put it. Of COURSE they know better! It doesn't take a PhD to know *you can't add by subtracting*, but apparently it takes a PhD to believe that you can. Look at their example of Natural Selection in a previous section: Birds eat the green beetles and leave alone the brown ones until there are no more green beetles. What is left? Brown ones.



Did the birds eating the green ones **PRODUCE** the brown ones? No. It only removed the green ones. So to say adaptations are **PRODUCED** by natural selection is again either ignorant or deceptive. To say that Species Originate by Means of Natural Selection is 180 degrees **WRONG**. Once again, Uncle Chuck needs a new title for his book. And a new premise for his book. And a completely different conclusion.

On the other hand, maybe I'll get a bag of M&M's and eat all the green ones, and then claim I *Produced* the red ones by Selecting out the green ones. Would I get paid royalties for that?



Either way, I get to eat some chocolate, so I'm going to try it.

Anyhoo, since their entire premise is bunk, I'll therefore skip the list of examples they provided of alleged "adaptations."

So what's not an adaptation? The answer: a lot of things. One example is [vestigial structures](#). A vestigial structure is a feature that was an adaptation for the organism's ancestor, but that evolved to be non-functional because the organism's environment changed.

"Evolved to be non-functional." How's that for New-Speak? Now something formerly useful becoming useless is evolution. These guys could do spin for the White House and report how great the economy has become since so many persons formerly burdened with employment have been promoted to a home based, unscheduled, non-for profit position.

How do we know something is Vestigial? First we assume evolution is true. Then we assume that the organ or structure in question has no purpose now. Then we assume it had a purpose in the evolutionary past and has "evolved to be non-functional." Then some idiot creationist comes along and suggests that the structure HAS a function, like the appendix or spleen or tonsils... and dang it he's right. So we take those off of the list of vestigial items and keep on believing in evolution.

Let me add a quote which kinda tweeks me off. My whole life I was told tonsils and the appendix are vestigial and prove we evolved from a monkey, which I suppose had a functioning appendix or something. They never actually filled in that gap for us. These examples are STILL brought up as proof for evolution in debates, yet look at the date on this quote:

"For at least 2,000 years, doctors have puzzled over the function of the thymus gland. Modern physicians came to regard it, like the appendix, as a useless, vestigial organ, which had lost its original purpose, if indeed it ever had one. In the last few years, however..men have proved that far from being useless, the thymus is really the master gland that regulates the intricate immunity system which protects us against infectious diseases..Recent experiments have lead researchers to believe that the appendix, tonsils and adenoids may also figure in the antibody responses."

***"The Useless Gland that Guards Our Health", in Reader's Digest, November 1966.**

NINETEEN SIXTY SIX! That's more than a decade before I was BORN! But wait! Look at the date on THIS ONE:

"There is no longer any justification for regarding the vermiform appendix as a vestigial structure ."

*** William Strauss, *Quarterly Review of Biology* (1947), p. 149.**

1947!!! This is only TWO YEARS after World War Two! Right? It's not just me here, is it? Did YOU hear this in highschool? Because my textbook left this out and taught the EXACT

OPPOSITE. Heck, check out the apparent lack of enlightenment from a 2010 National Geographic article:

The appendix, a narrow tube that hangs off one end of the colon, is probably the most famous "junk" organ. But it's turned out to be important even today—in certain circumstances.

-Vestigial Organs Not So Useless After All, Studies Find, Oct 2010

Not so useless after all! How about that! It only took National Geographic sixty three years to catch up with the Quarterly Review of Biology! High school textbooks may follow any decade now!

Fish species that live in completely dark caves have vestigial, non-functional eyes. When their sighted ancestors ended up living in caves, there was no longer any natural selection that maintained the function of the fishes' eyes. So, fish with better sight no longer out-competed fish with worse sight. Today, these fish still have eyes — but they are not functional and are not an adaptation; they are just the by-products of the fishes' evolutionary history.

This is a great example of something which could actually be argued to be vestigial. If you remove the claim that this has anything to do with evolution, then I agree with this paragraph. It is an example of a non-functional organ which was previously functional- and is a kind of change we have witnessed within a few generations, thus making it observation based science. Like I said before, they give just enough examples of real things to make it seem like there's actual science going on. But there's no bait and switch without the bait.

The problem is THIS IS STILL A LOSS! These fish have LOST the use of their eyes. In fact, they still retain the information it took to make eyes, but those genes are switched off. There are lots of examples of living things with genes that do not get used. When the conditions are right, the genes can get switched back on. This is why pasty, colorless Europeans get tan when exposed to sunlight; the gene that produces melanin gets kicked on when they are exposed to lots of sun. This is not evidence of evolution- as evolution requires a GAIN OF GENETIC INFORMATION. Turning genes off is NOT evolution anymore than parking your car makes you Henry Ford.

Once again, the way cave dwelling creatures tend to adapt to the total darkness by switching off genes is fascinating, but not an inch closer to supporting evolution as fact. It is actually an example of the exact OPPOSITE of what this web site is supposed to prove. Discovering they no longer have functional eyes tells us NOTHING about where the functional eyes had come from in the first place, and that is the claim they are making about evolution.

If we all work together to spread the word, I think we can educate even the Understanding Evolution Team! and National Geographic, and maybe, just maybe, they might change their tune. All they need is the truth. And fifty or sixty years.

Chapter 21 - What Natural Selection is Isn't and Is again

Remember, normal text is copied from Evolution 101 by the Understanding Evolution team! (*Smells like Science! Or your money back.*) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

In fact, biologists have a lot to say about what is and is not an adaptation.

Misconceptions about natural selection

Because natural selection can produce amazing adaptations

[Editor' Note: "Natural Selection CAN produce adaptations." Let's all jot this in our note book and save it for later...],



it's tempting to think of it as an all-powerful force, urging organisms on, constantly pushing them in the direction of progress — but this is not what natural selection is like at all.

That is correct. It's more like a forest fire or a controlled burn, destroying certain things and leaving others behind. To be clear on this point, young earth creationists have no problem with the process of natural selection- we discovered it. We simply understand that it is not a CREATIVE force. It subtracts- it does not add. Again, I don't wanna get all Fundy, Right Wing Baptist Evangelical on you, but if an effect requires that you ADD, then you can't cause it by SUBTRACTING. That's a little trick I like to call "Math." I hope I'm not getting too technical for you.

First, natural selection is not all-powerful; it does not produce perfection. If your genes are "good enough," you'll get some offspring into the next generation — you don't have

to be perfect. This should be pretty clear just by looking at the populations around us: people may have genes for genetic diseases, plants may not have the genes to survive a drought, a predator may not be quite fast enough to catch her prey every time she is hungry. No population or organism is perfectly adapted.

Now we're talking metaphysics and not science. What would a "Perfect" animal look like? Sophia Loren? Well, I'm not saying it isn't worth thinking about. I'm just saying we've left the realm of science and gotten philosophical. They keep this up and we'll soon be sitting in the woods talking about our feelings to the sound of a pan flute.

Second, it's more accurate to think of natural selection as a process rather than as a guiding hand. Natural selection is the simple result of variation, differential reproduction, and heredity — it is mindless and mechanistic. It has no goals; it's not striving to produce "progress" or a balanced ecosystem.

This part is true- no part of evolution has goals. But not every evolutionist knows this, which is why some teach "Pre-adaptive" evolution. The theory here is that evolution can cause cells or species to hold onto something which, while useless NOW, will come in handy once they've "evolved" a few more parts. This is the trailer park view of evolution, where red-neck cells have a pile of tires next to a transmission and an AM/FM radio/cassette deck which they're holding onto until they can get a few more parts and finally get that stock car up and running. Come on, evolution! Just a few more parts and that pole position is as good as mine!



Evolution does not work this way.

This is why "need," "try," and "want" are not very accurate words when it comes to explaining evolution. The population or individual does not "want" or "try" to evolve, and natural selection cannot try to supply what an organism "needs." Natural selection just selects among whatever variations exist in the population. The result is evolution.

Did you catch that? *"Natural selection just selects among whatever variations exist in the population."* **I couldn't have said that better myself (Even though I've already said it.).**

Remember, in the previous section they said “Adaptations are well fitted to their function and are produced by natural selection.” Do I need to say more? Because unless they can find some really clever way to make “produce” and “Select” mean the same thing (Which, the English language Stubbornly does not allow) then they are AMAZINGLY wrong.



Read this sentence again: "Natural selection just selects among whatever variations exist in the population. The result is evolution."

Remember how I asked for a better definition of "evolution" way back in the first couple of chapters? Look at what they have said here- a REDUCTION in the genetic and physical variations in a population IS EVOLUTION. So, if you take their definitions and their examples and put them together, "Evolution is a loss of genetic variation in a population or species." And this is the process by which bacteria become wolves and cabbages? I don't think so. I really don't. Nope. Do NOT think so. Not thinking it's so. No sir.

We've already been over this, but REMOVING parts from the Honda Odyssey does NOT produce the Oscar Meyer Wiener Mobile. Oh, how I wish it did.



Consider DNA again. It is information, a written coded system which results in the production and functions of all living things. To turn bacteria into wolves and cabbages requires great gains in the genetic information (DNA) over time, as even a cabbage has a GREAT DEAL of genetic information which no bacteria has. Obviously natural selection, which above they describe accurately as “mindless and mechanistic,” cannot create any information. Where did DNA come from? How has it been improved? Information ONLY comes from a mind- not mindless mechanistic processes. All life is a testimony to God’s brilliant creation and design, and when we say He is the author of life, we mean it literally. He is the writer of all DNA.

At the opposite end scale, natural selection is sometimes interpreted as a [random](#) process. This is also a misconception. The genetic variation that occurs in a population because of mutation is random-but selection acts on that variation in a very non-random way: genetic variants that aid survival and reproduction are much more likely to become common than variants that don't. Natural selection is NOT random!

That is a bold assertion, but you have to admit a VERY weak argument. Especially when you couple this idea with the genetic drift concept they already put forth. If you recall, stepping on some beetles causes the population to "evolve". If becoming roadkill isn't random, I'm not sure what is. I'd suggest that, if becoming roadkill is not random, then technically it would be an assassination. But I digress.

What they failed to admit above is this: NATURE does NOT SELECT. Nature has no mind or awareness, thus it cannot choose. Just step outside and shout, "Hey, Nature! Do you want pizza or take-out Chinese tonight?" You'll never get an answer.

Natural selection is a category under which we can put certain events just as the word Vegetable is a category under which we put certain plants- and certain US Senators. But 'Natural selection' cannot CAUSE anything to happen any more than separating vegetables from squash can create a pumpkin. If a species goes away, and it wasn't hunted to extinction, we call it Natural Selection. But I assure you, Nature didn't select anything. It's still trying to decide between pepperoni pizza and kung pow chicken.

Don't bother waiting. You should just order.

To go on a bit of a tangent, this speaking as though Natural Selection MAKES things happen is the same error people make when they speak of the Law of Gravity as though it were literally a law- a force, or even an authority who demands certain behaviors. The Law of Gravity is an adjective. It *describes* how masses are attracted to other masses. But it does not CAUSE them to be, it only describes to us how they are.

This is related to similar discussions because, in trying to argue that the universe could come into existence without God, Stephen Hawking tried to argue that, as long as there is a Law of Gravity, the universe will make itself. But if there is no universe, then there is no gravity at all, let alone some authoritarian law. When science tries to put itself in the place of God, it becomes more Cartoon Network than Mr. Wizard.

I hope this hasn't been too technical for anyone. This is a complex subject, and I could have made this chapter far longer with lots and lots more information, but that would have required me to delete random parts out of this version. Blindfolded. Over millions of years.

Did you see what I did there? Heh? Heh?

OK, I'm going to call it a day. The delivery guy is here with my Kung Pow Chicken Pizza.

Chapter 22 - CoEvolution and Fish Repair

Remember, normal text is copied from Evolution 101 by the Understanding Evolution team!
(with a low tonight of Evolution 92, and tomorrow a high of Evolution 105)

<http://evolution.berkeley.edu/>

BOLD font is me, Rent A Friend 2000, being Bold.

Coevolution: The term coevolution is used to describe cases where two (or more) [species](#) reciprocally affect each other's evolution. So for example, an evolutionary change in the [morphology](#) of a plant, might affect the morphology of an herbivore that eats the plant, which in turn might affect the evolution of the plant, which might affect the evolution of the herbivore...and so on.

This would make sense if there was any reason to believe evolution was happening in the first place. So far we have seen none, so providing a scenario where you get two for the price of one- aka the Natural Selection BOGO- is a fun jog on the old mental treadmill, but still makes stops only in the land of make believe.

For this to matter to the overall scheme of evolution, they need a mechanism by which information is ADDED to the genomes of both species, making it at least twice as unlikely to happen by mutations. If you tear pages out of Green Eggs and Ham AND Peter Rabbit, you will not end up with Lord of the Rings AND The Hobbit. You need some method of adding HUGE amounts of information which, in this case, now relates to the information being added to another volume. Or, if I may use some technical jargon- you need twice as many miracles.

Coevolution is likely to happen when different species have close ecological interactions with one another. These ecological relationships include:

1. Predator/prey and parasite/host
2. Competitive species
3. [Mutualistic](#) species

Plants and insects represent a classic case of coevolution — one that is often, but not always, mutualistic. Many plants and their pollinators are so reliant on one another and their relationships are so exclusive that biologists have good reason to think that the "match" between the two is the result of a coevolutionary process.

Let me translate: These plants and insects need each other to survive, almost as if they were designed to work together as two parts of a system, like a lock and key. But since a lock and key imply a locksmith, we reject that out of hand because we believe in

EVOLUTION! Somehow plants and insects which NEED each other for survival were naturally selected to survive over the plants and insects which were not so dependent. Yes, you heard me. On this view, Natural Selection REWARDS co-dependence over adaptability and independence. This is very much like how sales of the DVD remote (Which requires you to also have a TV remote, a Stereo remote, and a CD changer remote) eclipsed sales of the Universal remote which contains all of those functions.

Oh, wait. No it didn't, because that would be inexplicably stupid.



But we can see exclusive "matches" between plants and insects even when pollination is not involved. Some Central American *Acacia* species have hollow thorns and pores at the bases of their leaves that secrete nectar (see image at right). These hollow thorns are the exclusive nest-site of some species of ant that drink the nectar. But the ants are not just taking advantage of the plant — they also defend their acacia plant against herbivores.

This system is probably [Editor's Note: "Probably"] the product of coevolution: the plants would not have evolved hollow thorns or nectar pores unless their evolution had been affected by the ants, and the ants would not have evolved herbivore defense behaviors unless their evolution had been affected by the plants.

So they each developed structures and behaviors which were beneficial because of the structures and behavior the other was GOING TO EVOLVE IN THE FUTURE? So now evolution is planning ahead? Now the genetic information in both organisms has to accidentally increase so as to result in structures and behaviors which will be beneficial when the other makes changes sometime in the future. Remember when they said this in part 14? "Natural selection is the simple result of variation, differential reproduction, and heredity — it is mindless and mechanistic. It has no goals..." Since then, Evolution has figured out some way to plan ahead and work toward mutually beneficial goals. How nice. It's good to see little Evolution applying himself.

And now, a metaphor:

You walk into my fish store to buy some salmon, and you see that half of my store is equipped to sell and repair watches. "Why did you combine your fish store with a watch repair shoppe?"

"I used to only sell fish," I reply, "But I knew my customers would also come here to have their watches repaired, because *only I* carry this particular kind of battery." I hold up the rare battery.

"Why would they buy watches with a battery so rare they had to bring their watches to a fish mart to be repaired?" you ask.

"Because they knew I was going to start carrying this battery."

“But why did you start offering watch repair services and carrying that battery if no one yet owned a watch that needed it?”

“Because I knew that, if I spent the time and money to have a watch repair business here and offered that battery, they would change their habit of taking their watches elsewhere and start buying watches which need this rare battery, and then they’d bring them to my fish mart. And look! Now half of my business is watch repair.”

“What if people stop wearing watches? Or they buy more reliable watches that don’t need such a rare battery?”

“Well,” I reply soberly, “I’d quickly go out of business.”

Thank you.

Chapter 23 - Dazzling you with Fruit Flies

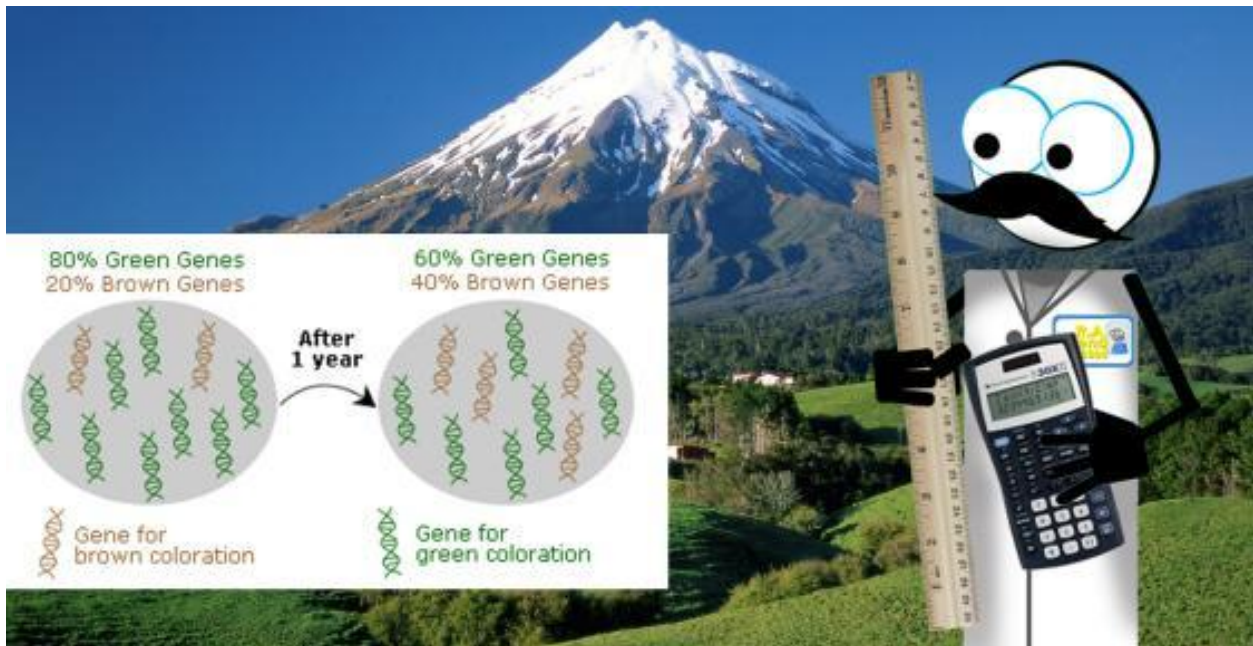
Remember, normal text is copied from Evolution 101 by the Understanding Evolution team!
(with special guest star Charlie Sheen! WINNING!) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

Defining microevolution: Microevolution is evolution on a small scale — within a single population. That means narrowing our focus to one branch of the tree of life.

I think you'll find it means further applying the term "Evolution" in a place it doesn't belong. Here's a metaphor: Getting rich is merely the result of differentiating your financial income. Remember when your boss cut your Christmas bonus in half? That was an observable difference in your financial income. It's proof that you are getting rich!

And now, on with the show:

We've defined microevolution as a change in gene frequency [**editor's note: A STATISTICAL change**] in a population and a population as a group of organisms that share a common gene pool — like all the individuals of one beetle species living on a particular mountaintop.



The hills are alive with a count of beetles...!

Imagine that you go to the mountaintop this year, sample these beetles, and determine that 80% of the genes in the population are for green coloration and 20% of them are for brown coloration. You go back the next year, repeat the procedure, and find a new ratio: 60% green genes to 40% brown genes.

You have detected a microevolutionary pattern: a change in gene frequency. A change in gene frequency over time means that the population has evolved.

Lift intellectual club, aim at deceased equine mammal, and strike. Repeat process.

This process will never turn bacteria into wolves or cabbage. It doesn't even attempt to explain where the green or brown came from, let alone the beetles the green and brown is found on. The population here has NOT changed- certainly not in any way significant enough to warrant saying it has "evolved." There has been no genetic change- only a statistical change. These people are simply confusing adjectives for nouns.

The big question is, how did it happen?

I think the first question is, what happened? You started with green and brown beetles and, over many years, wound up with green and brown beetles. You can ask HOW after you find a WHAT.

Let me hit you with an auto metaphor:

We are admiring the new hybrid vehicles which use more electrical power than gas. You wonder aloud where the hybrid car came from.

"Well," I reply, "Last year more buyers preferred the red model, but this year more blue cars have sold."

"No," you say, "I meant, where did the cars come from? How did they come to exist in the first place? Where did the hybrid technology come from? Was it made by a corporation? A team? A particular scientist or inventor?"

I laugh politely and reply, "I've just told you. Last year more people bought red hybrids, and this year they bought more blue ones. So, the number of blue hybrids on the road is now more than the number of red hybrids."

"Maybe you didn't hear the question," you say. "I'm asking WHO invented the hybrid car in the first place. I don't care how many red ones to blue ones. I want to know how the car in *any color* came to exist."

I shake my head in pity. "I've just told you. By observing the changes in the percentages of red hybrids to blue ones, we are seeing the mechanism by which these cars came to be."

What you say next is too rude to repeat. Needless to say, you should wash your mouth out with soap.

Defining a species: A species is often defined as a group of individuals that actually or potentially interbreed in nature. In this sense, a species is the biggest [gene pool](#) possible under natural conditions.

A species is the Olympic Sized Gene Pool. And Natural Selection acts like a filter that removes junk, so the pool stays clean.

OH man! I just came up with that! That's awesome! I need to tweet how amazing I am when I'm done here.

If two lineages of oak look quite different, but occasionally form hybrids with each other, should we count them as different species? There are lots of other places where the boundary of a species is blurred. It's not so surprising that these blurry places exist — after all, the idea of a species is something that we humans invented for our own convenience!

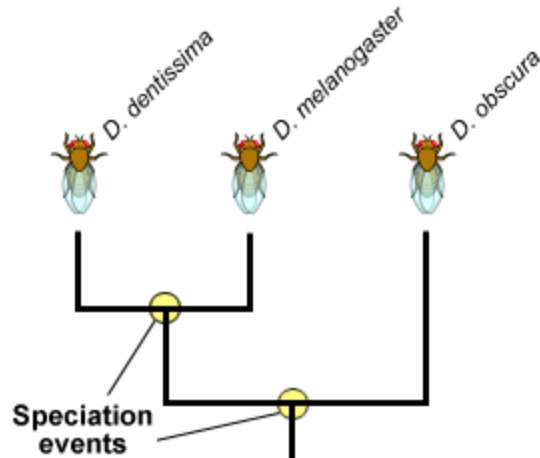
This is the truth. There is literally no good, universally accepted definition of “species.” Did you know that EVERY breed of dog is one species? From boxer to schnauzer to beagle to mastiff, ALL of them are *Canis lupus familiaris*. That’s 400 varieties as different as wiener dog and poodle, but all one species. Keep that in mind as the Understanding Evolution Team! tries to dazzle you with... fruit flies.

Defining speciation: Speciation is a lineage-splitting event that produces two or more separate species.

We already admitted that we don’t really have a good definition for “species.” Now we’ll tell you where new ones come from. Can you say ‘slight of hand’?

Imagine that you are looking at a tip of the tree of life that constitutes a species of fruit fly. Move down the phylogeny to where your fruit fly twig is connected to the rest of the tree. That branching point, and every other branching point on the tree, is a speciation event. At that point genetic changes resulted in two separate fruit fly lineages, where previously there had just been one lineage. But why and how did it happen?

Just a reminder from many chapters back: The phylogenetic tree of life is a fictional piece of guesswork based on the assumption of the evolutionary story where data is plugged into the places where they best fit the pre-existing story. Now we’ve added that we can’t really say what a species is, but each branch is where one species becomes two species. Got all that? OK, moving on.



The branching points on this partial *Drosophila* phylogeny represent long past speciation events. Here is one scenario that exemplifies how speciation can happen:

- **The scene:** a population of wild fruit flies minding its own business on several bunches of rotting bananas, cheerfully laying their eggs in the mushy fruit...

I cut this story out for brevity. It's a beautiful story of love lost, love gained, and bananas. In a nutshell- some flies get separated from some others, and over time each changes. When eventually they met again, Shazam! They are now TWO DIFFERENT SPECIES (whatever that is) of FRUIT FLIES! Which look almost identical. They're fruit flies for heaven's sake. Even THEY can't tell each other apart.

What this fails to show is an increase in genetic information. Dogs show a much better and easier to see version of diversification coming from an original parent kind, but they, again, show a gradual *decrease* in genetic information with each subsequent generation. Do you see what I am saying? These speciation events, from wolf to poodle or from mustard to cabbage show *DECREASES in genetic information*, which is the **OPPOSITE of what evolution needs to happen. On the other hand, it fits perfectly with the Genesis accounts of the creation and the diversification of animal varieties after the flood.**

I've never heard anyone claim that the diversification of fruit flies can be shown to increase the genetic info, so we can assume that they are doing what the dogs are doing. If you look at dogs, you will see the failure of evolution and the perfect match between the observable facts and the account of creation in Genesis. If you'd rather look at fruit flies than domestic dogs, may I suggest that you are not well and will probably die alone.

Chapter 24 - The Mystery of Iguana Island

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(Some people call them the Space Cowboys) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

This is a simplified model of speciation by geographic isolation, but it gives an idea of some of the processes that might [**Editor's note: "Might"**] be at work in speciation. In most real-life cases, we can only put together part of the story from the available evidence. However, the evidence that this sort of process does happen is strong.

The evidence is so strong that, instead of a real life and known example, they chose to create a cartoon about fruit flies based on speculation of what "might" happen. Do they not have access to Wikipedia? Could they not look one up? Or are the examples of this "Strong" evidence also hypothetical? Am I the only person who finds this suspicious? This evolution 101 is like one of those ads for prescription drugs with three pages of tiny fine print and a laundry list of possible side effects which include the symptoms you are trying to get rid of.

Perhaps the reason why they offer no actual examples of evolution can be found in the results of actual experimentation with fruit flies:

*"The fruit fly has long been the favorite object of mutation experiments because of its fast gestation period (twelve days). X-rays have been used to increase the mutation rate in the fruit fly by 15,000 percent. All in all, scientists have been able to catalyze the fruit fly evolutionary process such that what has been seen to occur in *Drosophila* is the equivalent of many millions of years of normal mutations and evolution."*

**Jeremy Rifkin, *Algeny* (1983), p. 134.*

Sounds good, right? MILLIONS of years of normal mutations and evolution! Imagine what these experiments have produced!

"Fruit flies refuse to become anything but fruit flies under any circumstances yet devised."

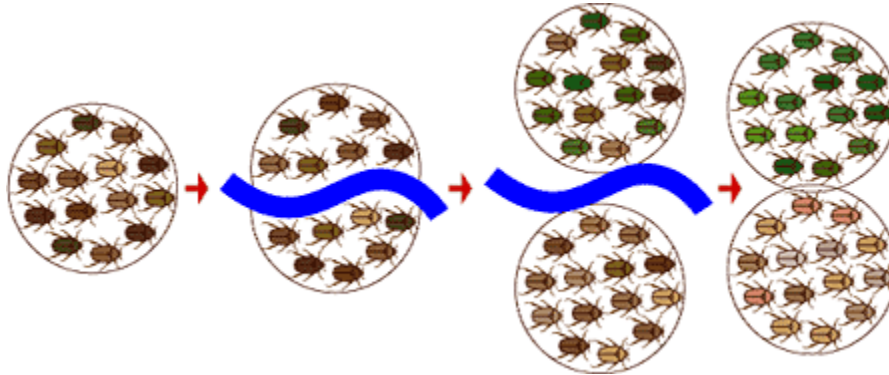
**Francis Hitching, *The Neck of the Giraffe: Where Darwin Went Wrong* (1982), p. 61.*

Hmmm... Seems that far from creating life in the lab, we can't even get it to CHANGE in the lab. Rotten little, uncooperative insects. Don't they know we're trying to prove evolution here? Did anyone tell them? Whose side are they on anyway?

Causes of speciation: Geographic isolation

In the fruit fly example, some fruit fly larvae were washed up on an island, and speciation

started because populations were prevented from interbreeding by geographic isolation. Scientists think that geographic isolation is a common way for the process of speciation to begin: rivers change course, mountains rise, continents drift, organisms migrate, and what was once a continuous population is divided into two or more smaller populations.



It doesn't even need to be a physical barrier like a river that separates two or more groups of organisms — it might just be unfavorable habitat between the two populations that keeps them from mating with one another.

I'll admit, this is probably true. What we did with dogs domestically or with corn and cabbages almost certainly happens in the wild, which is why we keep finding new species of beetles every year, even though we already know of 30,000 (though, the vague definition of “species” is probably another reason). But again, even in their example, the species diversifying are NOT gaining information. They are expressing unique parts of the information which already existed in the parent population. Evolution has to explain where the parent population got the information, not just watch how it gets disseminated in later generations. We are not finding beetles that can sing, or that have ears. The differences only go so far, and in MANY cases probably don't warrant the title of being different species.

See their definition above. “A species is often defined as a group of individuals that actually or potentially interbreed in nature.” Did you know a camel and a lama were bred to make a calamal? Or is it a comma? One creature from Africa interbred with one from South America and made a new creature, which means all three are, on this definition, ONE SPECIES. Also, lions and tigers can breed to make ligers and tygons, making all four ONE SPECIES.

Thus, we can assume that the camels of Africa and the Lammas of South America were descended from *the same kind of animal* in the not too distant past. Same can be said of lions and tigers, horses and zebras, dolphins and whales, and a whole mess of those beetle species. MANY of the creatures we label as a unique species would, on this definition, NOT be a unique species any more than all of the varieties of domestic dogs. This is why creationists are trying to figure out what borders constitute a KIND. It's a much more useful category which can make actual use of some of the data the team has been trying to present in favor of evolution.

Evidence for speciation: Speciation in action?

In the summer of 1995, at least 15 iguanas survived Hurricane Marilyn on a raft of uprooted trees. They rode the high seas for a month before colonizing the Caribbean island, Anguilla. These few individuals were perhaps the first of their species, *Iguana iguana*, to reach the island. If there were other intrepid *Iguana iguana* colonizers of Anguilla, they died out before humans could record their presence.

Finally! A real life, actually seen in the wild example of data! The Understanding Evolution Team! is finally moving away from hypothetical fruit flies to REAL LIFE actual lizards! I cannot wait to see all of the evidence for evolution this will provide. Are you Psyched? Because I am PSYCHED!



Evolutionary biologists would love to know what happens next: will the colonizing iguanas die out, will they survive and change only slightly, or will they become reproductively isolated from other *Iguana iguana* and become a new species? We could be watching the first steps of an [allopatric speciation](#) event, but in such a short time we can't be sure.

Huh... And I thought Windows Vista was a let down. Let me just check the box next to "Not meeting expectations..."

I hope you can appreciate how hard it is for me NOT to be sarcastic when faced with this kind of "scientific evidence" for the validity of Evolution. Remember a few paragraphs back when they said this: "the evidence that this sort of process does happen is strong." Here's how STRONG it is. "Evidence" for speciation is lizards moving to a new place. Also, note that this paragraph is about what MIGHT happen in the hypothetical future summed up with "we can't be sure." They aren't even certain that the iguanas will *survive* let alone do any evolving. Do I need to explain why this isn't evidence?

I will anyway, with a metaphor.

Imagine the president wants to send troops to start a war with the tiny nation of Stevemenadad. His rationale is thus: *“The invasion of Stevemenadad is vital to national security, and here is my strong evidence. A group of shepherds recently crossed the mountains into Stevemenadad with their sheep. If they grow in number, and sell their wool for guns, and become terrorists, they could threaten the United States. We can’t be sure they will do anything other than raising sheep, and we don’t know for certain that they’ll even stay in Stevemenadad...but they might.”*

Yeah, I’d go to war. What more evidence do you need?! They have SHEEP!

CNN would totally support this move. Unless the President was a Republican.

On a personal note, if I hadn’t gotten all of this from the Berkley web site, I’d have never believed anyone above a middle school level was involved in any way. I’m starting to feel bad, like I’m picking on a slow kid. But according to the web site I stole all of this from, it was a collaborative project of the University of California Museum of Paleontology and the National Center for Science Education. Yeah, it took a *team* of people to write the iguana paragraph. They better not have gotten any of my tax dollars for this intellectual travesty.

Chapter 25 - Ring Around the Species (or, How to Turn Owls into Owls)

Remember, normal text is copied from Evolution 101 by the Understanding Evolution team!
(Free Toy Inside!) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

A plausible model

We have several plausible models [Editor's Note: Tyra Banks! Is it Tyra Banks?] of how speciation occurs [Aw, man. NOT Tyra Banks.]— but of course, it's hard for us to get an eye-witness account of a natural speciation event since most of these events happened in the distant past.

Just a reminder: Observational Science requires observation. These guys just admitted that this part of the story CAN'T be observed, as it happened in the distant past. Oh, you're saying, but they said "MOST of these events happened in the distant past." Doesn't that mean SOME are happening today? Of course! Here's what they had to say about just such an event happening right before our very eyes!

Evolutionary biologists would love to know what happens next... We could be watching the first steps of an [allopatric speciation](#) event, but in such a short time we can't be sure.

If that doesn't convince you that evolution is happening today... then I don't blame you. But don't be too hard on them for not providing better examples to support their position. They only had three teams of PhD's writing this web site.

We can figure out *that* speciation events happened and often *when* they happened, but it's more difficult to figure out *how* they happened.

Once again I am having trouble not being sarcastic. Let me just summarize their main points: We can't really say WHAT a "species" is, but "speciation" is when one of them becomes two. We can't observe speciation, and we don't know how it happens. But we KNOW it happens and when. We just can't say WHAT happens when it happens because we've never watched it happen.

See? Even that sounds sarcastic. Try this sometime. It's not as easy as it looks.

However, we can use our models [Editor's Note: Cindy Crawford!] of speciation [DANG it!] to make predictions and then check these predictions against our observations of the natural world and the outcomes of experiments.

Wait, check these predictions against WHAT observations? Just a few lines up they admitted that they didn't know HOW it happened, and even if they did they're too late to

see it happen. Now they have enough going on to verify predictions? Am I still reading the same web site?

As an example, we'll examine some evidence relevant to the allopatric speciation model.

Allopatric, according to Wikipedia, means geographic speciation... speciation that occurs when biological populations of the same species become... isolated from each other to an extent that prevents or interferes with genetic interchange. I guess the Understanding Evolution Team! expected you to already know that. Personally, I would have guessed Allopatric was an Irish greeting. "Allo Patrick! Nice to see you Patrick!"

Scientists have found a lot of evidence that is consistent with allopatric speciation being a common way that new species form:

- **Geographic patterns:** If allopatric speciation happens, we'd predict that populations of the same species in different geographic locations would be genetically different. There are abundant observations suggesting that this is often true. For example, many species exhibit regional "varieties" that are slightly different genetically and in appearance, as in the case of the Northern Spotted Owl and the Mexican Spotted Owl. Also, ring species are convincing examples of how genetic differences may arise through reduced [gene flow](#) and geographic distance.

Anybody else notice that they failed to tell you what [Ring Species](#) are? If they are convincing examples, why are we told NOTHING about them? This doesn't disprove evolution of course, I'm just starting to notice more and more how sloppy the authors of this web site are. Come on Understanding Evolution Team! Get on the ball!

I think Hobbits are a Ring Species. Think about it.

Spotted owl subspecies living in different geographic locations show some genetic and morphological differences. This observation is consistent with the idea that new species form through geographic isolation.



We'll have Northern Spotted Owls up from Vancouver, through Seattle and parts south, and then Mexican Spotted Owls all across the Arizona border, followed by sun and rising temperatures this weekend.

Experimental results: The first steps of speciation have been produced in several laboratory experiments involving "geographic" isolation. For example, Diane Dodd examined the effects of geographic isolation and selection on fruit flies. She took fruit flies from a single population and divided them into separate populations living in different cages to simulate geographic isolation. Half of the populations lived on maltose-based food, and the other populations lived on starch-based foods. After many generations, the flies were tested to see which flies they preferred to mate with. Dodd found that some reproductive isolation had occurred as a result of the geographic isolation and selection for different food sources in the two environments: "maltose flies" preferred other "maltose flies," and "starch flies" preferred other "starch flies." Although, we can't be sure [Editor's Note: Try not to think about how much money they spent to not be sure], these preference differences probably [Editor's note: "Probably"] existed because selection for using different food sources also affected certain genes involved in reproductive behavior. This is the sort of result we'd expect, if allopatric speciation were a typical mode of speciation.

As the paragraph above admits, the researchers can't say WHY a group of flies prefers a similar group. Maybe they just like the smell of those who live on the same food. This is why I swore off Taco Bell many years ago.

Once again, I have no problem with this in theory. This may explain how we get different varieties in different places, but does ANYONE on the Understanding Evolution Team! remember what they are supposed to be teaching us? They are supposed to be teaching us how EVOLUTION works! Someone please send these guys an interoffice memo with a reminder! Evolution: It needs to explain how bacteria became wolves and cabbages and everything in between. Turning owls into owls is not getting the job done!

God made the plant and animal kinds with a lot of variety in their genes. That variety is expressed in different varieties of animals. Some of those varieties are better suited to particular environments, and so some varieties in certain places are "Naturally Selected" to survive, and others not to. This is why you can find dogs in very cold places, and very hot places, but not the same VARIETY of dog. You stick a husky in the Sahara and he'll fry like bacon. You stick an African wild dog in Alaska, and he'll be poochicle. Where did those varieties of dog come from? From an original population which had genes for cold weather, long hair dogs AND hot weather, short hair dogs. Natural selection REMOVED half of the genes from each population so that, while they are still dogs, they are adapted to their environment. Natural selection didn't MAKE those adaptations, it merely weeded out those dogs who didn't have the right genes for the weather. Natural Selection is an EDITOR not an AUTHOR.

In the owl example above, or the fly example, we have no cause to think the populations gained any new genetic information. Two kinds of spotted owl may well have come from a single original kind of spotted owl. What does it prove? Just like every other example they've provided, *nothing*. These are more birds shuffling the genes they already had, just like the Galapagos finches. You can shuffle, show off, and lose lots of cards without accounting for the creation of a single one, let alone the whole deck. To explain even ONE card (or gene), you need a designer.

Why this is funny to me is because anti-creationists ALL of the time be saying *"Evolution has proven that there is no God."* In light of this section's scientific proof, the argument goes like this: *"Because owls turn into owls, there is no God."* If Socrates was still with us, I'll bet he'd have a few follow up questions to that declaration.

The observed facts fit the creation model. Yes, my model involves the direct action of God, and thus is not whittled down to mere natural law for every single event ever, but don't let them fool you into thinking that ours is the only one of the two which requires faith and miracles. Their model tries to explain how subtracting genes can add enough genes to create a species (*which they can't define*) at a speciation event (*Which they can't witness*) due to mechanisms *they don't know*, which they will use as proof of evolution (*which they define so poorly that it's a meaningless term*) which directs the creation of phylogenetic trees (*which they admit are fiction*) which are also used as evidence of evolution (*whatever that means*). In my opinion, the Creation model is pretty enough to stand between Cindy and Tyra, whereas the Evolution model isn't worthy of shelf space at the discount hobby store.

Chapter 26 - Gopher Love

Remember, normal text is copied from Evolution 101 by the Understanding Evolution team!
(Now with the real flavor of Dolphin Safe Tuna!) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

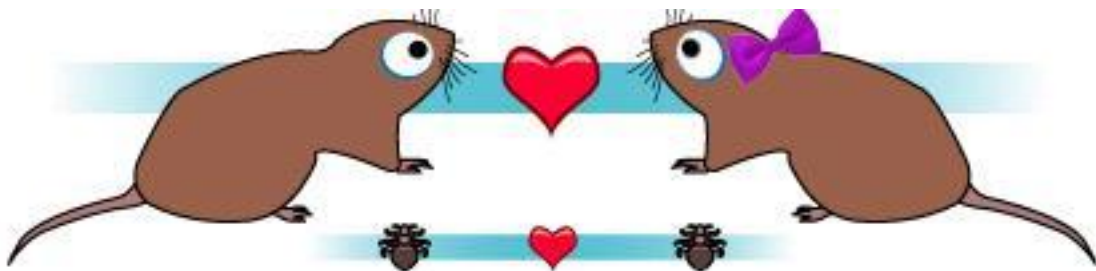
Cospeciation: If the association between two species is very close, they may speciate in parallel. This is called cospeciation. It is especially likely to happen between parasites and their hosts.

Ew. Gross. Look away kids! Look away!

To see how it works, imagine a species of louse living on a species of gopher.

Can I point out the word “imagine”? Remember that later. And can I point out how awkward it is to tell someone to imagine a blood sucking insect on a gopher? I mean, considering all of the things your brain COULD be doing right now, this seems like it ought to be low on your priority list. But here we go:

When the gophers get together to mate, the lice get an opportunity to switch gophers and perhaps mate with lice on another gopher. Gopher-switching allows genes to flow through the louse species.

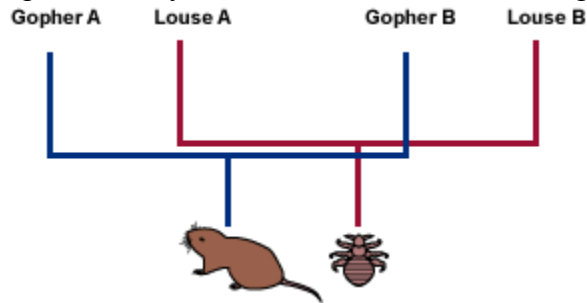


Try to get some Berry White to listen to during this section. It makes it all the more meaningful.

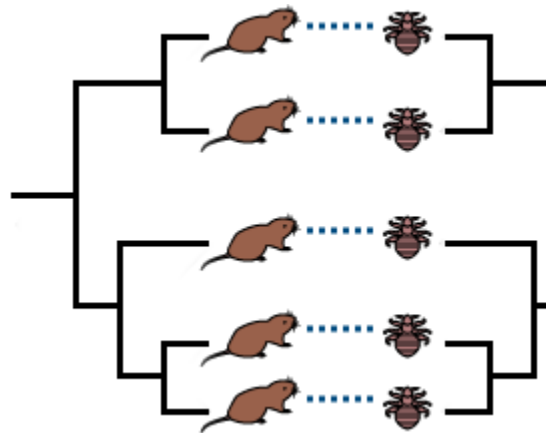
Consider what happens to the lice if the gopher lineage splits into lineages A and B:

1. Lice have few opportunities for gopher-switching, and lice on gopher lineage A don't mate with lice living on gopher lineage B.

2. This "geographic" isolation of the louse lineages may cause them to become reproductively isolated as well, and hence, separate species.



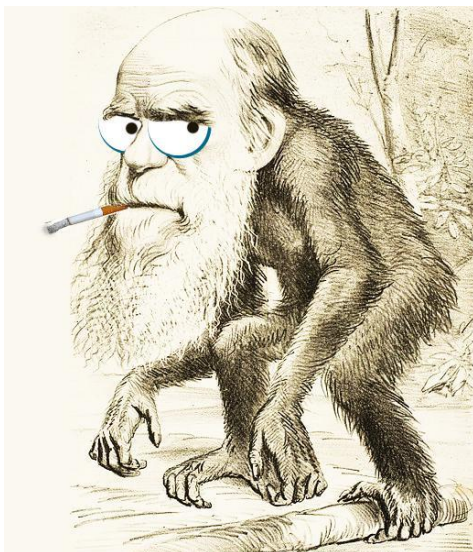
Evolutionary biologists can often tell when lineages have cospeciated because the parasite phylogeny will "mirror" the host phylogeny.



Observing parallel host and parasite phylogenies is evidence of cospeciation..

This example is somewhat idealized — rarely do scientists find hosts and parasites with exactly matching phylogenies. However, sometimes the phylogenies indicate that cospeciation did happen along with some host-switching.

OK, remember the word “Imagine” earlier? That’s what this paragraph just admitted to. This hypothetical situation hasn’t been observed, but if you begin with an evolutionary bias, then SOME things we observe sort of hint at this having happened in the past. This website the Berkeley kids have put together is founded on the faith that Evolution is FACT, that it REALLY HAPPENED, and is supposed to show us how Evolution has been SCIENTIFICALLY PROVEN. Yet, how many of their examples are hypothetical, rare to non-existent, or require a lot of assumptions about what the observed data MIGHT mean? Are you noticing that you don't need to wait for me to call their FACTS into question? These guys are already doing most of that for me, and that's on the examples they feel pretty good about. They've got a bunch more they GLOSS right over.



"I AM THE GREAT AND POWERFUL CHARLES DARWIN! PAY NO ATTENTION TO THE SCIENCE BEHIND THE CURTAIN! THE EVOLUTIONARY ESTABLISHMENT HAS SPOKEN!"

Like the speciation discussed previously, I can see how this kind of thing can occur, at least in theory, but even if we find a hundred examples in the field (*Which, by their admission, we have not*) **THIS IS NOT EVOLUTION!** Variations within a kind are not evolution **UNLESS** they are the result of an increase of new genetic information. Replace gopher with island and parasite with finch and this is the same event as before- a species with a wide range of genetic information for certain traits is put in a situation where some of those genes are beneficial and thus a certain phenotype does better than others.

NO new information has been formed, and the only possible outcomes are

- 1. Information stays the same but not all of it is expressed, or**
- 2. Some genes are lost because their expression does not help survival and thus those who carry those genes don't live to pass them on.**

Once again, this can **NEVER**, even in 4.5 billion years, result in the kind of changes that turn bacteria into wolves and cabbages. All this will do is turn gophers into gophers, lice into lice, owls into owls, and finches into finches. There is no justification for calling it evolution because- and stop me if I am going too fast- **NOTHING IS EVOLVING.**

Macroevolution encompasses the grandest trends and transformations in evolution, such as the origin of mammals and the radiation of flowering plants. Macroevolutionary patterns are generally what we see when we look at the large-scale history of life.

Which is (allegedly) in the distant past and therefore is unobservable, and thus is not science but faith.

It is not necessarily easy to "see" macroevolutionary history; there are no firsthand accounts to be read.

It not only isn't observable now, it was never observed. I actually HAVE a firsthand account of how all living things came to be. It's called Genesis chapter one. If you've been following so far, all of the evidence which the Understanding Evolution Team! has put up in support of evolution has actually done a better job of supporting the Genesis account. I don't think they intended it to be that way, but observed facts and logic are stubborn. They don't always dance to the tune you play them. Much like actors in children's theatre.

Instead, we reconstruct the history of life using all available evidence: geology, fossils, and living organisms.

Once we've figured out *what* evolutionary events have taken place, we try to figure out *how* they happened.

Just like in every other section of this site, they never stop to ask IF evolution has happened, but expect you to start with that bias in your head *before* you even look at the evidence. They don't even try to say, "*Here is the data, what reasonable conclusions can be drawn from it?*" Instead, they seem to say, "*Because we know Evolution happened, what does the data tell us about HOW or WHEN it happened?*" Somebody tell me the definition of "blind faith in a religious dogma" again? Because I suspect it's different than the definition for "Observational science."

And if you think I am reading too much into their position, just wait. In a later section they will actually say that *NO ONE is asking IF* evolution happened, only how and when. I don't make this stuff up you know. And when you don't believe me, it hurts my feelings.

Chapter 27 - The Invincible Ice Cream Sandwich

Remember, normal text is copied from Evolution 101 by the Understanding Evolution team!
(Because aren't '*understanding*' and '*blind religious faith*' basically the same?)

<http://evolution.berkeley.edu/>

BOLD font is me, Rent A Friend 2000, being Bold.

Just as in microevolution, basic evolutionary mechanisms like [mutation](#), migration, [genetic drift](#), and [natural selection](#) are at work and can help explain many large-scale patterns in the history of life.

Just as in microevolution, no. No they can't. What little worked for them in micro evolution fails horribly here in the macro. That there are events and situations which can change a finch into a finch does nothing to support the entertaining fairy tale that a bacteria can change into a wolf. Their faith here is simple- in micro evolution, there is a trend toward less and less genetic information, as genes are lost through mutations and natural selection. BUT, given enough time, they believe those little generational losses add up to HUGE INCREASES in genetic information making wolves and cabbages and everything in between! This isn't just bad business, it's an episode of "I Love Lucy."

The basic evolutionary mechanisms — mutation, migration, genetic drift, and natural selection — can produce major evolutionary change if given enough time.

A process like mutation might seem too small-scale to influence a pattern as amazing as the beetle radiation, or as large as the difference between dogs and pine trees, but it's not.

Mutation
Gene Flow
Genetic Drift
Natural Selection + 3.8 billion years = Macroevolution

Life on Earth has been accumulating mutations and passing them through the filter of natural selection for 3.8 billion years — more than enough time for evolutionary processes to produce its grand history.

This is the miracle which this whole sad story is clinging to- the impossible becoming actual because of the vast amounts of time they propose we've had for it to happen. This is why evolution is *SO DESPERATE* to defend deep time. Deep time is the last chance for this weak sauce theory, but if you've been reading up till now you should know that NO amount of time will be enough because none of the proposed mechanisms CAN produce the changes they claim it does. Subtracting for a billion years doesn't magically turn into addition, even if you click your heels together and wish REALLY Hard.

The impossible does not become actual because of deep time. You cannot spend your way out of debt no matter how long you spend. Organisms losing genetic information will NEVER gain information by losing it, no matter how many millions of years they do it.

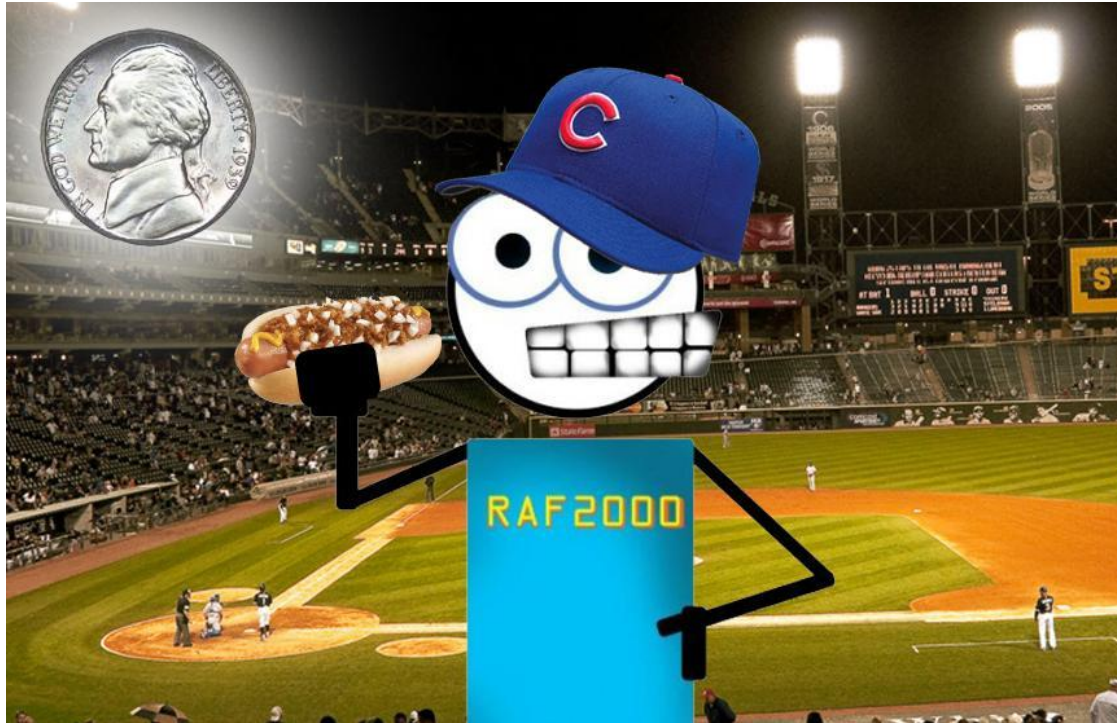
And when you consider the VAST amount of new genetic information it takes to turn a bacteria into a multi cellular life, and then into a sexually reproducing one, and then a warm blooded placental one, and then a hairy canine one- each of those changes with constant mutations for a billion years each would never happen. You cannot transverse the impossible with enough time. You simply fail for billions of years.

DNA is information, and information ONLY comes from an intelligent will acting to communicate according to a code system. This does not change due to billions of years. Natural Selection only REMOVES genetic variety. This will not result in a gain of information even in billions of years. Over and over deep time fails to save the day, and the sad thing is, the main reason for believing in deep time is a pre-existing belief in evolution. This is why evolution has been the cancer eating away at science in the western world. It is the religion which trumps all logic, reason, evidence, and observation.

Case in point: Chemistry tells us that proteins CANNOT last longer than a few tens of thousands of years. After 50,000 years, even in the most ideal conditions, ANY protein will have fallen apart. Present day bio-chemistry tells us this based on experimentation, field discoveries, and observations. Then, Mary Schweitzer found blood vessels and blood cells in a T Rex bone (*The first of many recent dinosaur bones with proteins and cells in them*). Richard Dawkins has an article on his web site entitled, "Tyrannosaurus rex protein proves dinosaurs evolved into birds." Did ANYONE question the age of the dinosaurs or the evolutionary timeline? Nope. Everyone just decided it is REMARKABLE how protein structures managed to last so much longer than we previously thought they could.

Let me do the math for you: Proteins cannot last longer than 50,000 years. Thus no intact protein structure can be older than 50,000 years- in fact no INTACT protein structure could be THAT old. The T Rex is said by evolutionary time to be 60 million years old. This is a factor of 1200:1.

Get out a nickel and look at how wide it is. A nickel is 0.835 inches in diameter. Now imagine that the width of that *ONE nickel* is the amount of time it takes any once living tissue to turn to dust. That's under the most ideal conditions. Would you like to question our present day observational science? No problem. Double the time it takes proteins to break down. Now double *that*. Now *Triple that*. Supposing biochemistry is wrong by a factor of TWELVE, we can now get proteins- the once living tissues- to last for JUST OVER ten inches. Not yet a foot. This is 600,000 years- 120 times longer than ANY Egyptian Mummy is alleged to be. So, where are those dinosaurs *supposed* to have lived? About 90 feet away (\$300 of nickels laid in a row). Get out a tape measure and just look at it.



90 feet is the distance between the bases in Major League Baseball. If Mary Schwitzer was an umpire, every batter would be considered safe on first before leaving home.

If you want to look at the facts and then ask what they tell us, here's one **OBSERVABLE fact. We have **INTACT** dinosaur tissue- skin, bone, blood and veins. When (*according to the existence of that tissue*) did those dinosaurs live? Not 65 million years ago, that is scientifically certain.**

Observation tells us an ice cream sandwich in the Sahara desert will only last for one minute. You drop your ice cream sandwich in the desert sands of Africa, under the summer sun, and in 60 seconds it is nothing but a memory. Now imagine I find a lunch box in the Sahara sands which I claim has been laying out in the sun for 20 hours (*Yeah, that's a long day, but it's just a metaphor, work with me*). When you open the lunch box you see an ice cream sandwich, still intact. Do you marvel at how our understanding of ice cream has been inaccurate? Or do you suggest that this lunch box has **NOT been out in the sun for nearly a full day? Apparently, if you're a Darwinist, you declare that everything we know about ice cream is about to be rewritten. Then you get interviewed by major news channels and magazines, all of which, I may add, feel the need to keep their ice cream in the freezer.**

Chapter 28 - Trilobites and Other Things Found Stuck to your Shoe

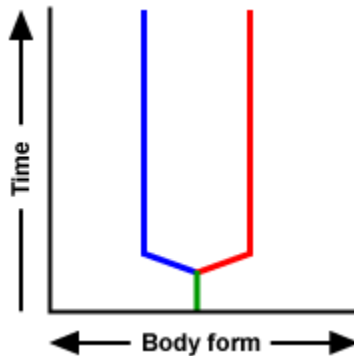
Remember, normal text is copied from Evolution 101 by the Understanding Evolution team!
(Now with Scratch Resistant Coating) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

Patterns in macroevolution: You can think of patterns as "what happened when."
[Editor's Note: Or, as "What Not to wear with Stripes"] All of the changes, diversifications, and extinctions that happened over the course of life's history are the patterns of macroevolution.

I stand corrected. It seems the Team DOES consider extinctions to be "evolution."

However, beyond the details of individual past events — such as, when the beetle radiation began [Editor's Note: February, 1964] or what the first flowers looked like — biologists are interested in general patterns that recur across the tree of life:

Stasis: Many lineages on the tree of life exhibit stasis, which just means that they don't change much for a long time, as shown in the figure to the right.



In fact, some lineages have changed so little for such a long time that they are often called living fossils. Coelacanths comprise a fish lineage that branched off of the tree near the base of the vertebrate [clade](#). Until 1938, scientists thought that coelacanths went extinct 80 million years ago. But in 1938, scientists discovered a living coelacanth from a population in the Indian Ocean that looked very similar to its fossil ancestors. Hence, the coelacanth lineage exhibits about 80 million years' worth of morphological stasis.



A coelacanth swimming near Sulawesi, Indonesia

If you recall, this was my example of why the “fossil record” doesn’t record much. The fossils show this thing disappearing 80 million years ago (*or 65 million if you ask Wikipedia, but what’s 15 million years among friends?*). Yet here he is.

The obvious lesson is, just because we don’t find the fossil of a certain species in a certain rock layer doesn’t mean that species wasn’t living at that time. That goes for the time BEFORE the fossils we have were formed, as well as after. On their story, this fish was around 80 MILLION years after it last left a fossil. How long was it around before it FIRST left a fossil? Can evolution say with any certainty that this fish wasn’t around 60-80 millions years BEFORE its first fossil? Of course not. Thus, even if the fossils were found in the neat, tidy order which we are shown in the textbooks, the evolutionary sequence would still be pure imagination.

So much for the fossil record.

And can I just point out that stasis, even on their weak sauce definition of evolution, is NOT evolution? They said evolution is “*Descent with Modification.*” Stasis would be “*Descent WITHOUT modification.*” If you need me to explain why that is different, you may be reading the wrong book.

If stasis can keep some creatures like the coelacanth and the horseshoe crab the same for hundreds of millions of years, then of what value is that “molecular clock” they used to argue for deep time at the beginning? If mutations happen so regularly that they can be used as a clock, then stasis should not be happening at all, let alone for so many species for such vast amounts of time. Yet, stasis is not rare:

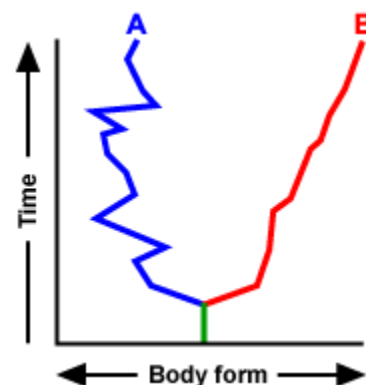
Fossil bacteria dated 3.55 billion years “...look identical to bacteria still on Earth today.”

-Peter D. Ward, Donald Brownlee, *Rare Earth, Why Complex Life is Uncommon in the Universe*, 2000, p. 57.

If something can remain unchanged for 3.55 BILLION years, then there might be less to this evolution thing that the brochure led us to believe.

Character change: Lineages can change quickly or slowly. Character change can happen in a single direction, such as evolving additional segments, or it can reverse itself by gaining and then losing segments.

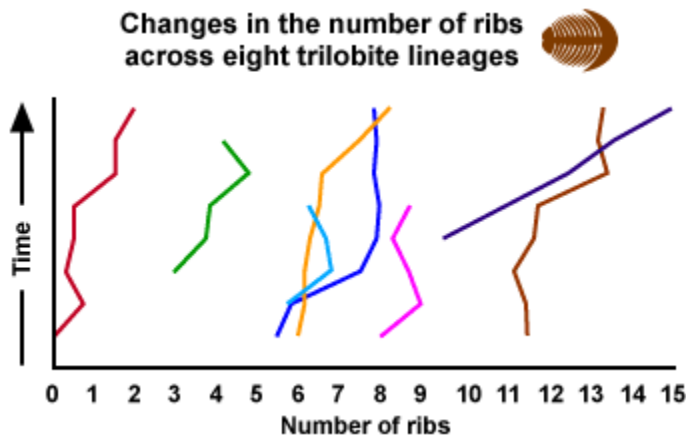
Changes can occur within a single lineage or across several lineages. In the figure to the right, lineage A changes rapidly but in no particular direction. Lineage B shows slower, directional change. Trilobites, animals in the same clade as modern insects and crustaceans, lived over 300 million years ago.





[Editor's Note: Here's one embedded in a shoe print]

As shown below, their fossil record clearly suggests that several lineages underwent similar increases in segment number over the course of millions of years.



I'd just like to point out, again, by their own admission, that these family groupings are for the convenience of ourselves. Thus, when two fossil trilobites are compared, it's entirely up to the person looking at them to say "*They are variations on one family of trilobites*" or "*these are two different species of trilobite,*" or maybe even, "*This is a young trilobite and this is an adult form.*" But let's note: we all agree that they are trilobites. So, like beetles, they might all be the same species, living at the same time, with LOTS of diversity because of a high amount of genetic information, which is exactly what the creation model calls for, and the opposite of what evolution would expect. The vast amount of diversity in such an "Early" creature goes directly against the onwards and upwards evolutionary model.

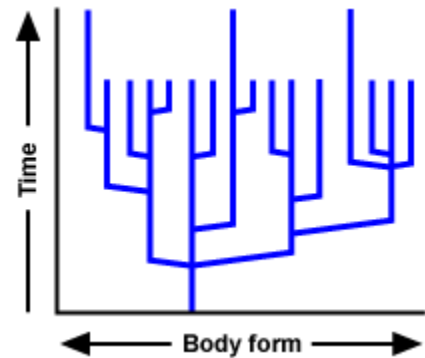
Without a single known evolutionary ancestor, these guys seem to have shown up completely prepared for life in the oceans. So ready are these guys that they have eyes with compound lenses which we have studied in my lifetime so that we can learn how to make better lenses for underwater viewing.

Lineage-splitting (or speciation): Patterns of lineage-splitting can be identified by constructing and examining a phylogeny.

I'm skipping this one, because it's really just about drawing those tree of life diagrams more than anything else. I did teach art at one point, but I still have fairly little to say about their drawings. All I need to say about this is, they are constructing a phylogeny based on their evolutionary assumptions, and then examining the picture they drew to find the patterns which they feel will show them macroevolution. Is this a self-fulfilling prophecy or fabricating evidence? Because it's nowhere near observational science, yet don't they seem to be treating it that way? Maybe it's just me. OK. I see how it is. Fine. Be that way.

Extinction: Extinction is extremely important in the history of life. It can be a frequent or rare event within a lineage, or it can occur simultaneously across many lineages (mass extinction).

Every lineage has some chance of becoming extinct, and overwhelmingly, species have ended up in the losing slots on this roulette wheel: over 99% of the species that have ever lived on Earth have gone extinct. In this diagram, a mass extinction cuts short the lifetimes of many species, and only three survive.



I'd like to give credit to these guys for having the sense to not just come out and say "*Extinction is also evolution.*" I say *I'd like to give them credit*, but they already said extinction is evolution at the beginning of this page. Once again this shows how they are considering ANY change over time to be 'evolution' even though they have already said "*Biological evolution is not simply a matter of change over time.*" They gave the word "evolution" a weak sauce definition, and then they chose to ignore it. After all, dead animals don't have descendants with modifications. Of course, neither do the coelacanth, or horseshoe crab, or platypus, or any of the other Living Fossils. Why don't you just [surf on over to AiG's web site](#) and read all about them?

I would like to draw attention to the 99% who have gone extinct. What could have caused the vast majority of animals to die, and then be buried fast enough to form layer upon layer of fossils? And what could have occurred that left these layers of fossils all over the world, on every continent? How about a global flood? I happen to know where you can find one [Editor's Note: [Genesis 6](#)].

And on a personal note, can anyone answer this quandary of mine? If 99% of ALL species which ever lived have gone extinct, and this is just a normal part of the evolutionary

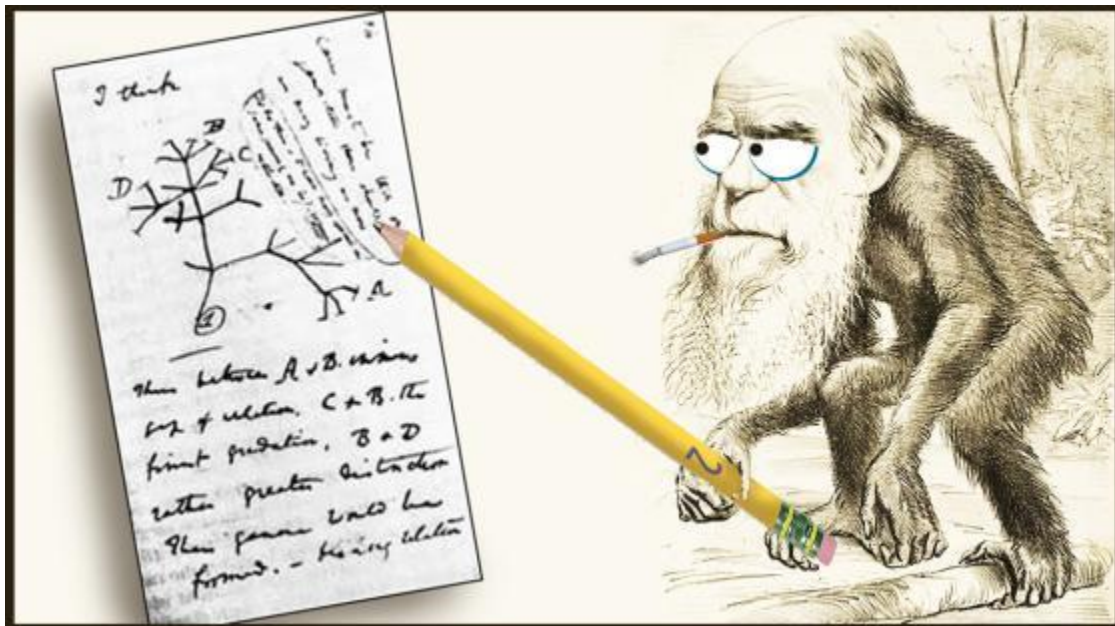
history of life, then why are we so bent out of shape when another one goes extinct? We've got the federal government sending assault teams against cattle ranchers to protect an endangered turtle, but why? What arguments can an evolutionist make for animal conservation? Wouldn't trying to stop extinctions be like trying to dry off the Pacific Ocean basin with paper towels?

Next time some animal conservation group complains about some animal going extinct, just suggest to them that, maybe like our friend the coelacanth, their animal friend didn't really all die out. Maybe their animal friend just decided to hide somewhere for 80 million years. They just need to be patient, and their animal friend will be back.

Chapter 29 - Natural Natural Natural!

Remember, normal text is copied from Evolution 101 by the Understanding Evolution team!
(Milwaukee's #1 News Team) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

The big issues



I done it all by miself.

A page from Darwin's notebook. [Editor's Note: Believe it or not, this is in English. And that may be the worst drawing of a giraffe I have ever seen.]

All available evidence supports the central conclusions of evolutionary theory, that life on Earth has evolved and that species share common ancestors.

Give them a break. They haven't read my critique yet. Or anything Answers in Genesis has put out in the past thirty years. I guess they were too busy getting their PhD's to find out about any of the available evidence which DOESN'T support the central conclusions of evolutionary theory. But I hope YOU have seen how NONE of the available evidence supports the evolutionary theory, and in fact how it opposes it at every turn. Weren't you taking notes? I've been taking notes. I'm taking notes right now in case I say something brilliant.

Biologists are not arguing about these conclusions.

It's funny how they used the word "Biologists" to mean, "evolutionists." Did these guys not have a dictionary? I expect not, otherwise they would be able to define the word "evolution." (*note to self- get Understanding Evolution Team! a dictionary for Darwin Day*). Or perhaps they live in such a tiny evolutionary bubble that they have never heard of Michael Behe, Steve Austin, or Dr Dwane Gish, or all of the scientists on this list who are arguing AGAINST their conclusions:

[Scientists alive today who accept the biblical account of creation](https://creation.com/creation-scientists#presentsci)

(<https://creation.com/creation-scientists#presentsci>)

and the scientists on this one:

[Some modern scientists who have accepted the biblical account of creation](https://answersingenesis.org/bios/)

(<https://answersingenesis.org/bios/>)

But they are trying to figure out how evolution happens, and that's not an easy job. It involves collecting data, proposing hypotheses, creating models, and evaluating other scientists' work. These are all activities that we can, and should, hold up to our checklist and ask the question: are they doing science?

Have I answered this question already? I think I have.

All sciences ask questions about the natural world, propose explanations in terms of natural processes, and evaluate these explanations using evidence from the natural world.

Can you feel how much they REALLY want to say "*Scientists do not accept any supernatural ANYTHING!!!*"? They want it so bad they can taste it. They used the word NATURAL three times in one sentence. Who talks like that? But to show you they aren't alone, here's Dr Scott Todd, an immunologist at Kansas State University:

'Even if all the data point to an intelligent designer, such an hypothesis is excluded from science because it is not naturalistic.'
-correspondence to *Nature*, 30 Sept. 1999.

So, there is a conclusion which SCIENCE is NOT ALLOWED to reach, even if ALL Of the evidence supports it, namely, God. But surely it's because SCIENCE has proven this anti-SuperNatural worldview, right? Think again:

"It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our a priori adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is an absolute, for we cannot allow a Divine Foot in the door."

**-Richard Lewontin, Billions and billions of demons, *The New York Review*, p.
31, 9 January 1997.**

Remind me again, what is the definition of "blind religious faith"? Because I suspect it might be different than the definition of "Observational Science." A blind faith in a godless universe is still a faith, and not a reasonable faith.

Evolutionary biology is no exception.

Except for the fact that Evolution violates the laws of thermodynamics and biogenesis, and any information sciences, and the fact that it is not based on any observable evidence. Otherwise, yeah, it's all natural, natural and natural.

I mean, "science."

Darwin's basic conception of evolutionary change and diversification (illustrated with a page from his notebook at left) explains many observations in terms of natural processes and is supported by evidence from the natural world.

Did I miss it? Because I read their whole web page here and I saw NO evidence from the NATURAL world. I did see hypothetical examples, guesswork, speculation, and conclusions which could not possibly be derived from the observations, and lots of phrases like "Probably," and "We can't be sure".

I would suggest that, if there was evidence which supported it, the Understanding Evolution Team! should have listed some on this website. But that's just me. I don't want to tell them how to do their jobs.

Chapter 30 - Flipper Vs the Diamond Squid

Remember, normal text is copied from Evolution 101 by the Understanding Evolution team!
(Coming to Nintendo Switch and Play station 5 this fall!) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

Some of the questions that evolutionary biologists are trying to answer include:

1. Does evolution tend to proceed slowly and steadily or in quick jumps?
2. Why are some clades very diverse and some unusually sparse?
3. How does evolution produce new and complex features?
4. Are there trends in evolution, and if so, what processes generate them?

Or 5. Does Evolution not happen at all?

SILENCE! YOU ARE NOT ALLOWED TO ASK THAT QUESTION!

OFF WITH HIS HEAD!!!!

The pace of evolution: Does evolution occur in rapid bursts or gradually?

This question is difficult to answer because we can't replay the past with a stopwatch in hand. However, we can try to figure out what patterns we'd expect to observe in the fossil record if evolution did happen in bursts, or if evolution happened gradually. Then we can check these predictions against what we observe.

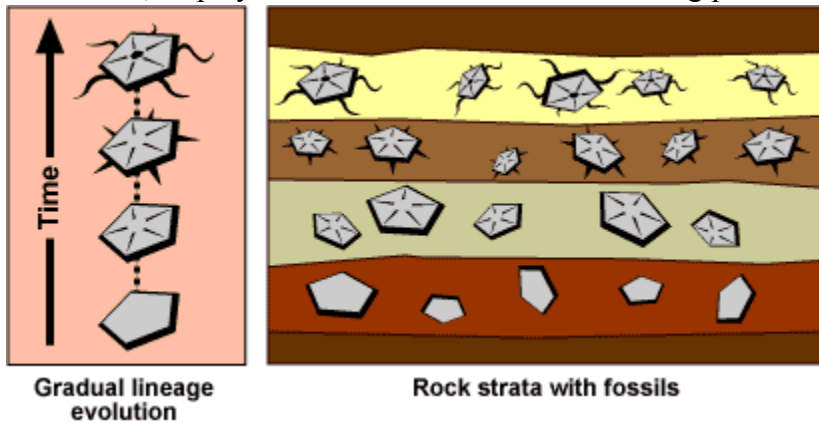
It's almost cute how they keep trying to sound like they're doing real science. They know scientists make observations and predictions and then check with experiments. But they are starting with the evolutionary bias- which is their conclusion, THEN making predictions (*Based on their conclusion*), THEN finding the data to wedge into their model NO MATTER WHAT the data actually is (*See Stasis and extinction*). If this was *real science*, they'd make observations, then ask questions, then form a hypothesis, then create experiments to test those guesses, then compare the results and try it again a few times just to be sure.

Can you see how that's different?

Note that in the first sentence they admit they CANNOT observe the past, which is what this question is about. Then in the last sentence they claim to check their "Predictions" (About the past?) with their observations (of the past?). I may have A.D.D., but even I can see the bait and switch going on here.

What should we observe in the fossil record if evolution is slow and steady?
If evolution is slow and steady, we'd expect to see the entire transition, from ancestor to

descendant, displayed as [transitional forms](#) over a long period of time in the fossil record.



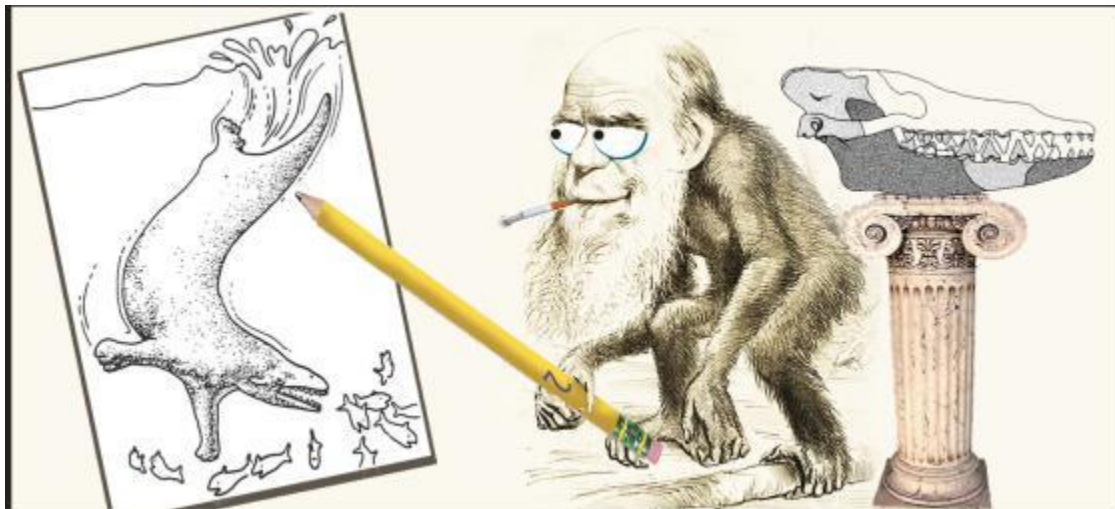
In the above example, the preservation of many transitional forms, through layers representing a length of time, gives a complete record of slow and steady evolution.

OK, seriously, what is this supposed to be? The evolution of the diamond squid?

In fact, we see many examples of transitional forms in the fossil record.

This is a bold faced lie, as is revealed by their using CARTOONS to show the transitions. If those transitions existed, they would have pictures of those fossils in here, but they keep reverting to cartoons- and you'll note in this case, a cartoon of something which never lived on this planet.

Wait until you should see the cartoons when they are color coded to indicate which of those bones they actually have and which are speculation. It should be illegal.



Dr. Phil Gingerich said it "is the oldest and most primitive whale yet discovered . . . "
*In his 1983 article about Pakicetus he had a drawing based on all the fossil evidence he had at the time: parts of the skull (the shaded parts in the skull figure).**

There are NO KNOWN TRANSITIONAL FORMS alive or in fossils. But don't take MY word for it:

"It remains true, as every paleontologist knows, that most new species, genera and families, and that nearly all categories above the level of families, appear in the [fossil] record suddenly and are not led up to by known, gradual, completely continuous transitional sequences."

—*George G. Simpson, *The Major Features of Evolution*, p. 360.

"Well, we are now about 120 years after Darwin, and knowledge of the fossil record has been greatly expanded...Ironically we have even fewer examples of evolutionary transition than we had in Darwin's time.....by this I mean that some of the classic cases of Darwinian change in the fossil record, such as the evolution of the horse in North America, have had to be discarded or modified as a result of more detailed information."

*-*David Raup, Conflicts Between Darwin and Paleontology, Chicago Field Museum Bulletin, January 1979"*

"...I fully agree with your comments on the lack of direct illustrations of evolutionary transitions in my book. If I knew of any, fossil or living, I would certainly have included them...Yet Gould and the American Museum people are hard to contradict when they say there are no transitional fossils...I will lay it on the line - there is not one such fossil for which one could make a watertight argument."

*-Personal letter from * Dr. Colin Patterson, Senior Paleontologist at the British Museum of Natural History in London, to L. Sunderland*

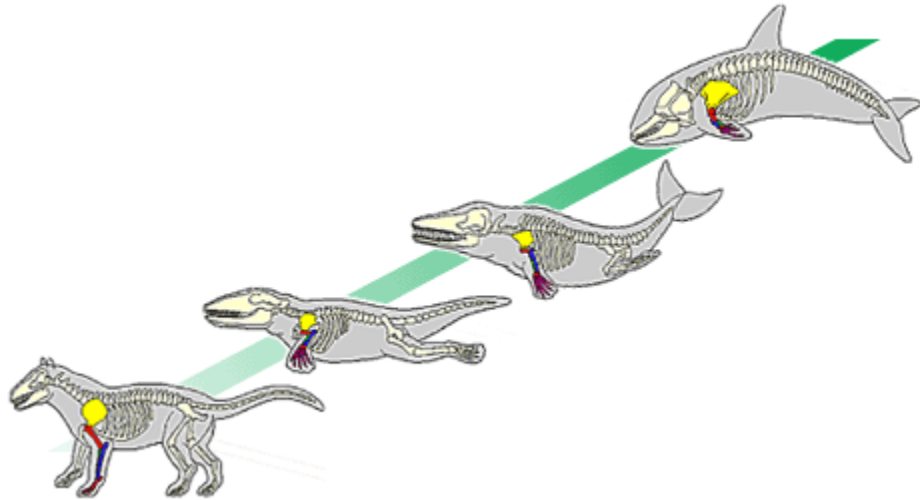
What's amazing about the sequence below is, the highlighted parts are some of the parts that were NOT FOUND. The first creature (Pakicetus) was most of a skull and some teeth. The arm/hand of the second in this lineup (Ambulocetus) was not found until after this cartoon lineage was proposed and made popular, and then that one was removed from this lineage BY THE GUY WHO PROPOSED IT IN THE FIRST PLACE because it did NOT support this evolutionary sequence.

Apparently the Understanding Evolution Team! didn't do their homework, because they still have that thing in this lineage, based on parts which were fabricated to fit the proposed evolutionary sequence.

The next animal up didn't have a tail when they found it, making its whale-like tail another piece of artistic license (aka: Fiction). What *evidence* led them to add a whale tail? None. It was added to support the evolutionary sequence which had already been decided on.

When you see enough of these, it's hard not to start thinking of it as an intentional scam. Some of these guys would reconstruct a whole city block from two bricks and a shoelace. But I digress.

For example, to the right we show just a few steps in the evolution of whales from land-dwelling mammals, highlighting the transition of the walking forelimb to the flipper.



Transitional forms in whale evolution

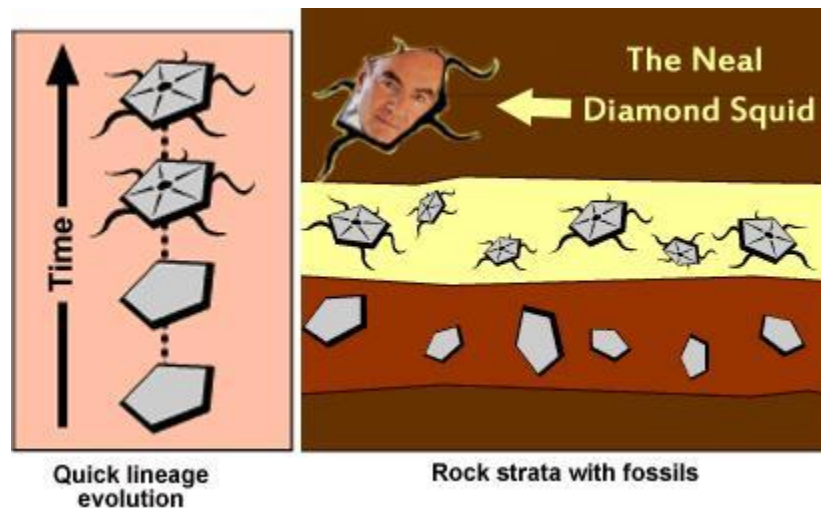
To recap- the first animal at bottom left was reconstructed from parts of a skull, the next was found with no front limbs, and the one behind that with no tail. Do you see why I object to this cartoon? Do you see why they use this cartoon and not pictures of the actual fossils? And if you consider that the first animal is the size of a Labrador Retriever and the last bigger than a city bus, the illustration above begins to feel even more misleading, as well it should. Above the authors of the Evo 101 site said this: "*Biologists are not arguing about these conclusions.*" I think I can make this statement true with just some slight modifications: "*The facts are not arguing for these conclusions.*" There. Now that's REAL science.

Chapter 31 - Lemonade Mouth and the Cambrian Explosion of Voltron

Remember, normal text is copied from Evolution 101 by the Understanding Evolution team!
(Last year's 3rd place at the "Understanding Evolution Bowl") <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

What would we observe in the fossil record if evolution happens in "quick" jumps (perhaps fewer than 100,000 years for significant change)? **[Editor's Note: 100,000 years is *quick* to these people? What are they, the DMV? Why do I have to wait in line just to wait in another line? And when I think I'm done I gotta do it one more time!?!?]**

If evolution happens in "quick" jumps, we'd expect to see big changes happen quickly in the fossil record, with little transition between ancestor and descendant.



Oh, Caroline! Look at those Fossils! They're coming to America!

In the above example, we see the descendant preserved in a layer directly after the ancestor, showing a big change in a short time, with no transitional forms.

When evolution is rapid, transitional forms may not be preserved, even if fossils are laid down at regular intervals. We see many examples of this "quick" jumps pattern in the fossil record.

Or maybe you see quick jumps because you have found two different kinds of animals and the transition never existed. Why is there no fossil fish-pig? Same reason there's no fossil cabbage wolf. Because they NEVER EXISTED. Like the Jackalope, and the band "The Monkeys." Or JEM and the Holograms. Spinal Tap? Dang. I'm sure there is an example from the past twenty years out there somewhere. Gorillaz?

Let me Google that real quick... Lemonade Mouth? Is that a thing? Do the kids know about this? Does OSHA know about it?

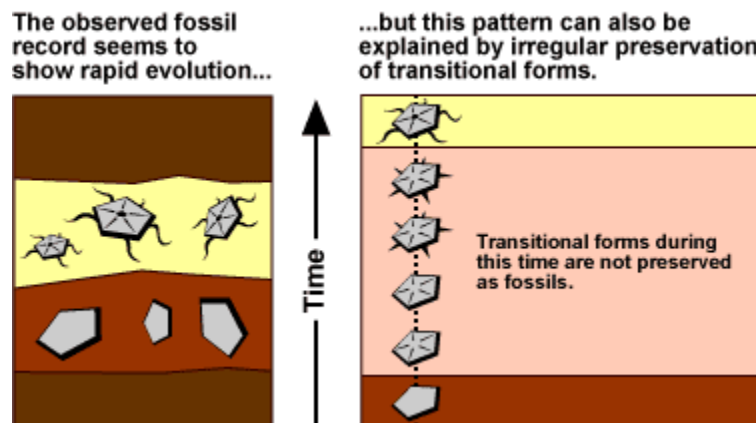
Anyway, the point is, the evolutionary story predicts transitions. MILLIONS of them between worm and fish, fish and lizard, lizard and rat, rat and lawyer, fungus and politician, and on and on. A lack of transition is exactly what the biblical model would predict, because there would be no half cat /half dog, or half bird /half lizard. Each creature reproduces according to its KIND. Cows make cows. And T Rex absolutely does not make chickens. I'm serious about that.

But worse than the assumption of the evolutionary theory here is the gross misrepresentation of what is found in the rock layers. Paleontologists do not find fossils in neat layers like this. This layering of simple forms to more complex forms is created as cartoons. They're the Cartoon Network best case scenario, but not what we would call an accurate depiction. In the real rocks, there is no assortment of creatures. Clams and fish are found with T Rex and flamingos. Clams are found on the top of Mt Everest. Footprints are found in rocks supposedly older than the first feet and birds are found in layers supposedly older than the first dinosaur to grow feathers and start evolving into a chicken. Modern human footprints are found in rock layers supposedly MILLIONS of years older than the first human. The geological column is pieced together by imagination based on the evolutionary bias. It does NOT exist. Like... Lemonade Mouth.

Dude, we had Smashmouth, and I thought that was weird. But, Lemonade Mouth? That just sounds like some obscure citrus disease.

Does a jump in the fossil record necessarily mean that evolution has happened in a "quick" jump?

We expect to see a jump in the fossil record if evolution has occurred as a "quick" jump, but a jump in the fossil record can also be explained by irregular fossil preservation.



This possibility can make it difficult to conclude that evolution has happened rapidly.

Does anyone else hear the laundry list of excuses? Where else does a scientific model get this much legal defense and yet still make so many excuses? When I teach gravity, I don't

have a lot of lessons on “*What should we think if we let go of a brick and it fails to fall?*”. What they essentially have said is, “*No matter what the observed data, evolution has happened.*” When I say this is faith and not science, this is a fine example of what I am talking about.

We observe examples of both slow, steady change and rapid, periodic change in the fossil record. Both happen.

So evolution happens so slowly that we can’t observe it, and it happens so fast that it doesn’t have time to leave the expected transitional forms. Mainly we just find fossils of things that are still around, like bats, turtles, platypuses, squid, dogs, snakes, fish, clams, birds, bugs, etc. Many of which have not evolved AT ALL even on their view, and many of which wind up found in rock layers that- on the evolutionary view- are in the wrong place. This is when a fossil becomes “Controversial.”

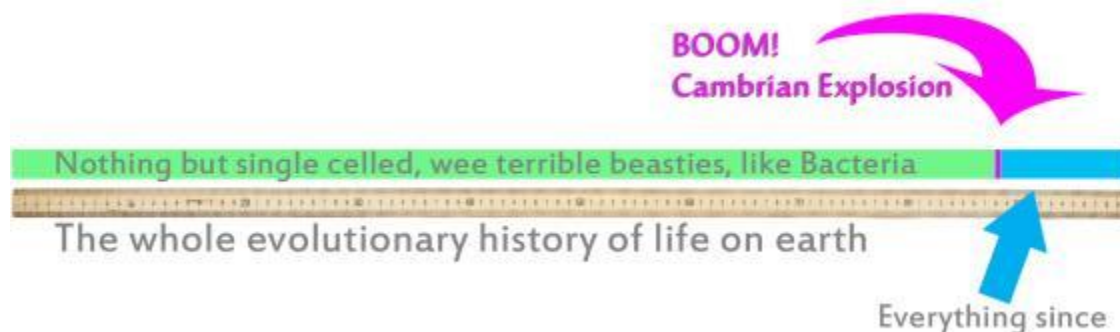
But scientists are trying to determine which pace is more typical of evolution and how each sort of evolutionary change happens.

I’m skipping the part that follows, because it’s not really anything new except that it applies some concepts to ancient silverfish instead of modern fruit flies. You can read about fruit flies back in Chapter 23. And silverfish are gross. Like earwigs are gross. Why can't these people do a page about hamsters? Why does it always have to be some creepy insect? Hamsters can be science too!

This next part is always fun to watch them dance around:

a. **Explosion:** About 530 million years ago, a huge variety of marine animals suddenly burst onto the evolutionary scene. (Of course, "suddenly," in geological terms, means in perhaps 10 million years).

Let me illuminate this: For billions of years (on their view) the earth had nothing but single celled bacteria. All of a sudden, they not only accidentally mutated enough information to create multi-cellular life forms, but ALL of the *still existing* Phyla.



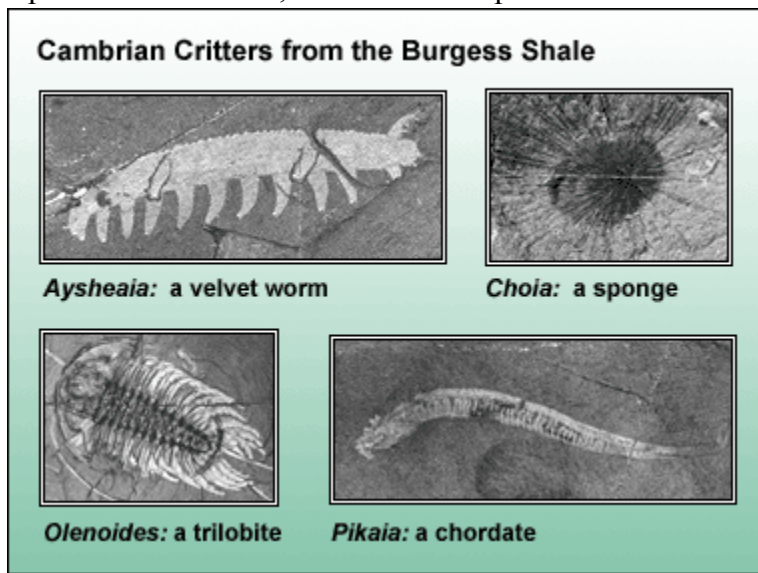
Suddenly means that, like pretty much everything else in the fossil record, there are no transitions between the different kinds. There are trilobites and worms, but no triloworm. And can I point out that, when you consider that we're jumping right from bacteria into all

of these guys, a trilobite starts to look REALLY complex. We had a world of tricycles, and suddenly we have Voltron.

Imagine the history of life above as a half hour cartoon show. You have a team of good guys on tricycles for 26 minutes, with no additional motors or wheels. Just tricycles. Then, over the course of FOUR AND A HALF SECONDS they figure out how to turn their tricycles into multiple different large robot lions, which then join up into one massive robot defender of the universe. But accidentally, with no plans, goals, or engineers. THAT is the kind of cartoon show they are trying to sell you here. I don't know about you, but I wouldn't watch that. I might buy the robo-trilobite action figures though. Those things are pretty sweet.

Also, they managed to evolve into phyla which were ALL so successful that they are *still ALL around today*. Talk about beginner's luck! That's like developing not only Voltron, but Optimus Prime, The Iron Giant, and Mecha Godzilla all within those four and a half seconds. If you can't see how this explosion completely fails to fit the evolutionary story, yet totally fits the creation account, then I haven't done my job. Or maybe you aren't paying attention. Why should I take all the blame around here? Start taking some notes, you slackers! And do some math!

These animals had a variety of new body forms that evolution has been using to produce "spin-offs" ever since, such as these representatives from the Burgess Shale.

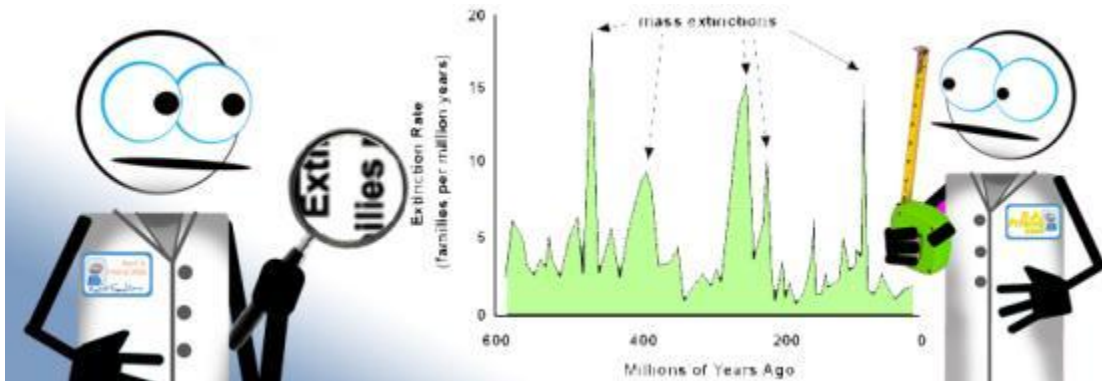


b. **Extinction:** About 225 million years ago, over 90% of the species alive at the time went extinct in fewer than 10 million years.

Yes, they couldn't swim. They went extinct in 150 days, which the authors correctly identify here as '*fewer than 10 million years.*' Although they shouldn't have rounded 4400 BC up to the nearest 225 Million years. That skews the data a little.

Some groups that were dominant before the extinction never recovered. The cause of this extinction is the subject of much debate, but of equal significance is that it set the stage for a massive diversification of taxa that filled the empty niches.

Why the debate? Because despite the many lines of observable evidence and scientific reasoning that tell us that the many rock layers were laid down by water, rapidly (*Like the huge deposits of sandstone, chinks, and conglomerates*) and that the fossils are mainly resulting from major water related catastrophe (*Like entire herds of dinosaurs who drowned as they were buried, pods of whales dumped onto continents, and the MANY fossils of birds, dinosaurs and marine animals in the 'death pose' indicating they died fighting for air*) and that the fossils were formed rapidly (*such as fossil jellyfish*) The Understanding Evolution Team! will not tolerate any explanations which give credence to the biblical account of creation or the flood. Otherwise, it would be fairly obvious that the only explanation which makes sense is a global flood. But that would ruin Darwin Day.



Geepers! Lookit all them Mass Extinctions! Whatcha s'pose coulda done it?

When Charles Lyell invented (Not discovered or calculated- *invented*) the ancient, deep time version of earth history and a geology to go with it, he did it with the expressed intent of replacing the history of the world as written in the Bible. Darwin based part of his theory on Lyell's work, and then Lyell used Darwin's work to support his own. Anti-creationists have been fighting tooth and claw to hang onto both ever since, despite the weak and often missing evidence for either.

I'd just like to remind you, as you look at the chart above, of the large and growing collection of creatures which get grouped under the category of "Living Fossil," meaning they were THOUGHT to have gone extinct, but did not. That's all. Just a reminder. Enjoy your chart of mass extinctions.

So to conclude, let's review the facts as presented by the TEAM here: First, while evolution predicts lots of transitional forms through all of the history of life, there are arguably not a single one. While the fossil record shows evolution false, the faithful Darwinists cling to their faith by inventing stories to explain how ANY evidence will fit their faith, making evolution not falsifiable, and thus not science, but dogma.

While evolution predicts slow, gradual change over long periods of time, the jump from bacteria to EVERY OTHER KIND of life form happened in a time period short enough that they call it an EXPLOSION. Much like their faith about the universe itself, they believe against evidence and reason that an explosion caused all of the design and complexity which we see around us.

Finally, they see in the fossil record many things which a massive watery catastrophe is needed to explain, including the kind of mass extinction which would result from all of the varieties that did not get taken on the ark.

Not to beat a dead horse, but again all of the evidence points to the Genesis accounts, and Uncle Chuck pretty bad. I hate to say it, but it's going to take more than the Voltron Marathon on Cartoon Network to save Darwin Day this year, no matter how good the monkey-shaped cake is. But the Understanding Evolution Team! can just look at the bright side. Their evolutionary faith is based on cartoons and imagination, but at least none of them are suffering from a terminal case of Lemonade Mouth.

Also, for more on the topics above, check out these great episodes of Genesis Week, starring robotics engineer and certified genius, Ian Juby:

[The Geologic Column](#)

[Fossil Record](#)

[Flood of Noah](#) and more on the [Flood of Noah](#)

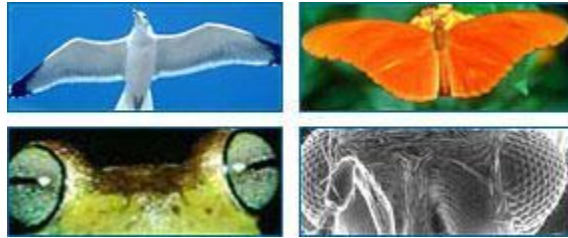
Chapter 32 - Halfway to Flatworm

Remember, normal text is copied from Evolution 101 by the Understanding Evolution team!

(Battle Cry: "Stop Asking Questions!") <http://evolution.berkeley.edu/>

BOLD font is me, Rent A Friend 2000, being Bold.

Looking at complexity: Life is full of grand complications, such as aerodynamic wings, multi-part organs like eyes, and intricate chemical pathways. When faced with such complexity, both opponents and proponents of evolution, Darwin included, have asked the question: how could it evolve?



Complex adaptations: bird wings, insect wings, vertebrate eyes, and insect eyes.

Science does not sweep such difficult questions under the rug, but takes them up as interesting areas for research.

OK, I've got it! "Evolution did it!" Send that to everyone and let's go to lunch. Oh, and let's make fun of the creationists for claiming God did it.

The difficulty is as follows. Since many of these complex traits seem to be adaptive, they are likely to have evolved in small steps through natural selection. That is, [intermediate forms](#) of the adaptation must have evolved before evolution arrived at a fully-fledged wing, chemical pathway, or eye.

Note the use of the phrases "likely to have evolved" and "must have evolved" in the place of actual evidence. This is a statement of faith, not of science. Also, there are *MANY* examples of biological systems which are irreducibly complex- meaning we know through study and observation that they need multiple specific parts all at once for the system to work AT ALL. Like a machine, these systems, organs, organelles, chemical pathways, and protein machines could not have formed through small steps and gradual accumulations, but must have had all of their necessary parts immediately. Making such features through Natural Selection is like riding a motorcycle off of a cliff and then trying to turn it into a helicopter by removing parts, while blindfolded. The Great Gonzo would have given it the old college try, but then failed spectacularly. Irreducibly complex systems CANNOT be built up a step at a time. The Understanding Evolution Team! will gloss over this fact in the following section.

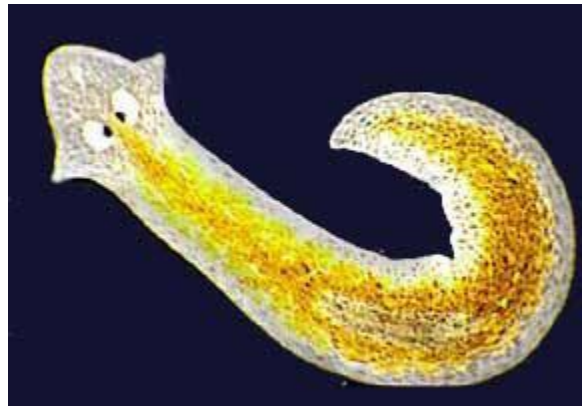
But what good is half a wing or only a few of the elements of an eyeball? The intermediate forms of these adaptations may not seem adaptive — so how could they be

produced by natural selection?

[Editor's Note: *Produced by Natural Selection?* Keep this question in mind.]

There are several ways such complex novelties may evolve:

- **Advantageous intermediates:** It's possible that those intermediate stages actually were advantageous, even if not in an obvious way. What good is "half an eye?" A simple eye with just a few of the components of a complex eye could still sense light and dark, like eyespots on simple flatworms do. This ability might have been advantageous for an organism with no vision at all and could have evolved through natural selection.



A *Planaria* flatworm with its light-sensitive eyespots.

Michael Behe covers this well in his book, [Darwin's Black Box](#). While the arguments against this evolutionary cartoon are valid, a better argument is an examination of the irreducible complexity of light sensitive cells which turn light into sight (*And the chemical cascades which do the job of making sight possible*). These cells, like all cells, are very complex, but unless they are fully functional, they do the organism and themselves no good, and thus would be weeded out by natural selection. Building these cells one piece at a time is impossible, not merely unlikely, as they depend on multiple parts and processes to function at all.


Imagine a process which MIGHT turn a tricycle into a motorcycle. First it adds a muffler. How long will it hold onto that while waiting for the rest of the parts it needs? Good grief, this isn't even common sense. We're knee deep in la-la land here.

And do I have to point out that, even after THEY explained that Natural Selection only selects from what is already in the population- meaning it takes AWAY genetic information- they again want to give credit to Natural Selection as being able to produce the ability to see? Remember when they said this back in Part 14? "*Natural selection just selects among whatever variations exist in the population.*" So, sure, those flatworms which can see may survive better than those that can't, but that doesn't do anything to explain where the complex machinery of sight came from.


Which would sell better- a laptop which comes pre-loaded with Windows 7, or a laptop which comes with a slice of Baby Swiss Cheese? I think you'll see the one with Windows 7 does notably better. That data alone doesn't explain where Windows 7 came from, yet they are trying to argue that it does.

- **Co-opting:** The intermediate stages of a complex feature might have served a different purpose than the fully-fledged adaptation serves. What good is "half a wing?" Even if it's not good for flying, it might be good for something else. The evolution of the very first feathers might have had nothing to do with flight and everything to do with insulation or display. Natural selection is an excellent thief, taking features that evolved in one context and using them for new functions.

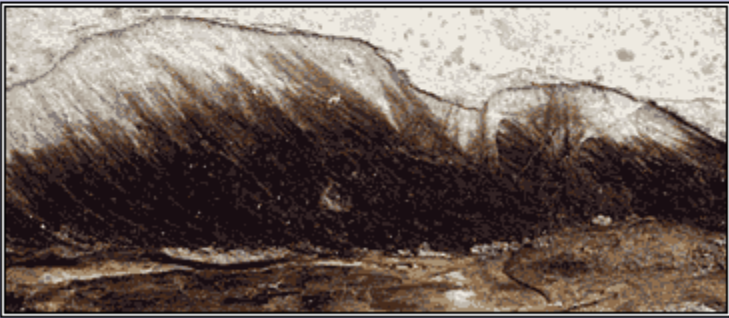
First Feathers
The fossil record indicates that birds are in fact a living clade of dinosaurs, and that dinosaurs evolved feathers before they could fly.



This is a small dinosaur from the dromaeosaur family.



Feather imprints were preserved along this dinosaur's bones. Here we can see feathers on the forearm.



Here's a close-up of the fossil's head feathers.
This dinosaur could not fly, and it's possible that the initial evolution of feathers had nothing to do with flight.

Once again we are skipping the actual, observable complexity of real feathers for some dark streaks which we will declare to be feathers. First problem- fossils of modern birds

have been found in rock layers older than this. Thus, since complex flight feathers already existed when this guy got buried- NOT the evolution of the feather. Or bird.

Secondly, these dark fibers have also been found on fossils of an ichthyosaur- a dinosaur which is a lot like a dolphin. Either these dark lines are, as some have proposed, protein strands from the decay of the dead animal as it fossilized, or a fish like dinosaur was also growing feathers.

And third, even if this is a lizard with feathers, so what? That no more proves it was evolving into a bird than the beak proves birds evolved from turtles or parrot fish. That leap is based, not on the evidence, but on the evolutionary bias used to color the interpretation of evidence or maybe an odd species. Do I need to bring up the platypus? Because I will if I have to.

One of the best reasons for this dino to bird theory is fossils like Archeoraptor being put forth by magazines like National Geographic. You need to see the facts behind this amazing fraud for yourself. Here's a spoiler- they were told MONTHS BEFORE they published on it. They had been shown (*By a pro-evolutionary lab who examined the fossil*) that archeoraptor was a fraud made of several different animals in several different kinds of rocks. Even so, National Geographic shrugged it off and published it as fact anyways, KNOWING it was a fraud. I had a link to a video where you could see the lab admitting all of this themselves, but the channel that carried that video seems to have been mysteriously deleted. But you can still read all about it:

<https://creation.com/archaeoraptor-phony-feathered-fossil>

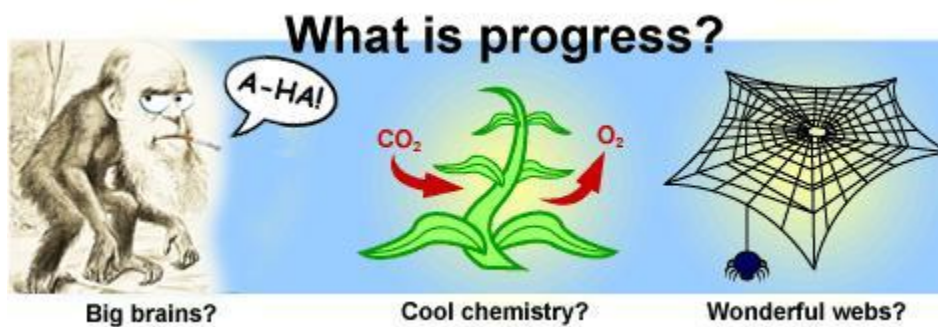
I love science, kids. I love Biology, and I love studying all kinds of living things. But I can tell you one thing from observation: If Natural Selection was anything to shout about, these kinds of science frauds would have gone extinct many years ago. Even the flatworm with his simple eyes can see that I'm right.

Chapter 33 - Climbing the Fish Ladder to Nowhere

Remember, normal text is copied from Evolution 101 by the Understanding Evolution team!
(Now offering Plush Bill Nye dolls at their merch table) <http://evolution.berkeley.edu/>
BOLD font is me, Rent A Friend 2000, being Bold.

Is evolution progressive?

This is not an easy question to answer. From a plant's perspective, the best measure of progress might be photosynthetic ability; from a spider's it might be the efficiency of a venom delivery system.



Here is where the darkness of this worldview peeks out its ugly head. On atheism, there is no value at all. Nothing is good or bad, right or wrong, only useful or harmful to the individual. Humans are not better than any other animal, as we are all merely organized pond scum, which itself is merely organized soup. We eat the plants, the plants ingest the soil we become when we die and decompose, why should we not also eat each other? Darwin gives no reason, and this is one of the reasons his theory so heavily influenced Adolph Hitler, as well as many other despots and mass murderers in the past century.

Admittedly, this does not prove Evolution to be false, but it gives good reason to consider the case against it, and does in fact lead to a strong line of argumentation against the world view based on observable data of another kind. Also, if you wonder why anyone would want to spend the time and effort it takes to mount an attack against Darwinism, then look no further than this. When an idea leads to the slaughter of MILLIONS of civilians, that idea needs to be attacked as strongly as possible until it is no more.

See Wazooloo on THE DARK SIDE OF DARWIN:

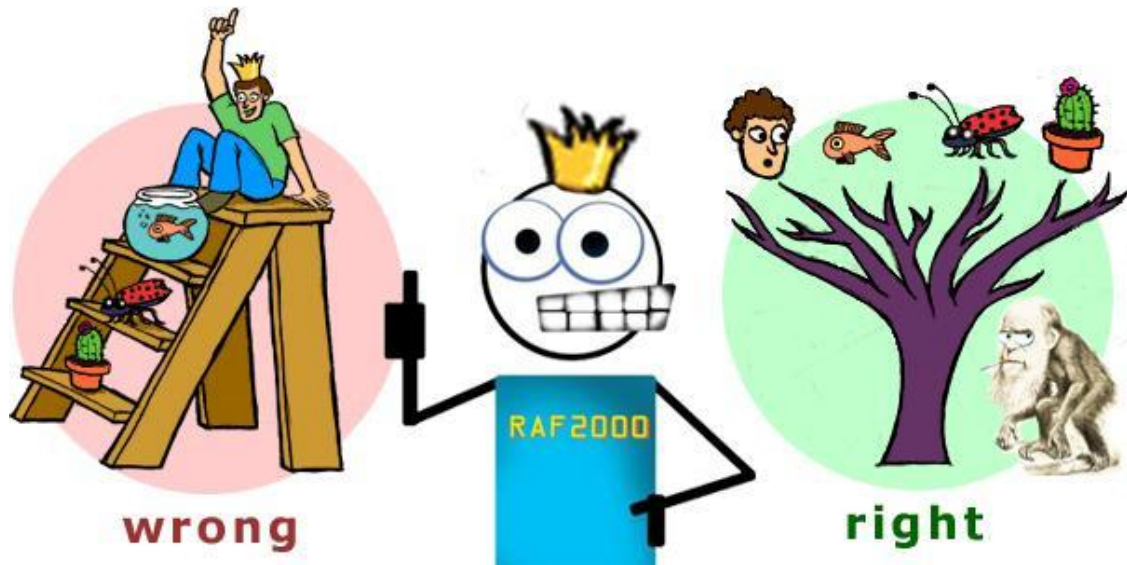
<http://youtu.be/FmemCYs9sLk>

<http://youtu.be/qJlVprFSnvg>

The problem is that we humans are hung up on ourselves. We often define progress in a way that hinges on our view of ourselves, a way that relies on intellect, culture, or emotion. But that definition is [anthropocentric](#).

I'd hate to have these people as parents. That's all I'm saying.

It is tempting to see evolution as a grand progressive ladder with *Homo sapiens* emerging at the top. But evolution produces a tree, not a ladder — and we are just one of many leaves on the tree.



There is the final message- you are no better than the fish, insects, and plants. You are just another temporary interruption in the laws of entropy, until entropy wins. This view not only has no room for God, but no room for value judgments, morals, or even free will. Life is merely a chemical accident, nothing more.

I dig that guy's little crown though. I'd totally wear one of those if I was sitting on my fish ladder.

THE BIG CONCLUSION

Having reached the end of Berkley's Evolution 101 web page, I feel like I need to have one of those moving musical montages of the highlights where we get to see the cast growing up, using catch phrases for the first time, and other moments which became part of the pop culture until we started seeing them made fun of in cartoons... Ah, the memories.

The evolutionary story tells us that we, the human race, are nothing more than the most recent version of fish or worm. We differ from the gum on our shoe only in the complexity of our makeup and in the fact that the gum is the result of a conscious designer creating it for a purpose. WE are here without cause, purpose, value, or destiny. On this story, there is no right or wrong, good or evil, heaven or hell, hope, justice, or salvation. On evolution,

there is no sin, there is no righteousness, and we are merely animals. **NOTHING** is wrong- for as we eat animals and animals eat each other, we could just as well eat each other. On evolution we have no reason not to own other men as we own hamsters.

Here is the most important place that Evolution **FAILS** when compared to the observable data. We all **KNOW** there is good and evil. We know slavery is **WRONG**. Rape, theft, murder, and lies are **EVIL**. Not merely inconvenient, but **EVIL**. We know that loving other people is **GOOD**. Not merely socially preferred, but truly **GOOD**. We all know this as sure as the sun shines. My first critic on this series admitted that he believed kindness was good and cruelty is evil, as **EVERYONE KNOWS**. He was offended that I would even ask the question. But if that is so- if we observe the fact that good and evil are real, then we **KNOW** evolution is wrong because it **CANNOT** account for that fact. Not only does it have no explanation of the fact of objective morality, it **CANNOT CO EXIST** with the fact of objective morality. If one is true the other **MUST** be false.

If Good and Evil exist, then there is a moral law by which to distinguish between them. If there is a moral law, then we know there is a law giver. If there is a law giver, then there is a God who has the authority and the character to give us that law.

Science has given us lots of observable data which can be used to discredit the evolutionary story and give support to the account of creation as told in Genesis, but there is some data which anyone can examine for themselves, and that is the human experience. We know that Good and Evil are real. We know that we are not meaningless accidents. We know that the people we love have **REAL** value, beyond our love for them. We know that we are not just blind, purposeless accidents. This is not wishful thinking- this is **DATA**. And the data deserves a conclusion. The evidence demands a verdict.

Here's the point of all of this- the data we cannot escape, as hard as we try, is that we are sinners. We all have done wrong, even in our own eyes. We've all done what we know we should not do. We all need to be forgiven.

The conclusion of the data is, because we know we have done wrong, we know we can tell right from wrong.

Because we know right from wrong, we know there is a Moral Law.

Because there is a Moral Law, there must be a moral law giver, and the only being with the character and authority to be that law giver is the God of the Bible.

But of course, if he is the perfect moral law giver, and we have done wrong, then we have put ourselves under his wrath, guilty of that law, and in need of forgiveness. We need **GOD** to forgive us, for we have broken **HIS** law.

One of the reasons I take the time to disprove evolution is to show that the Bible is true from the very first page. God did create the heavens and the earth, just as he said, and all attempts to explain the universe opposed to Genesis fail under scrutiny. But the Bible

doesn't just tell us where we came from, and what went wrong, it tells us how GOD set about to fix it.

John 3:¹⁶ For God so loved the world that he gave his one and only Son, that whoever believes in him shall not perish but have eternal life. ¹⁷ For God did not send his Son into the world to condemn the world, but to save the world through him.

Here is the point of all of this scientific debate- we are made special, we were made perfect, but we have sinned. However, GOD has come to us and given us a way to be forgiven. All you have to do is accept that you are a sinner, believe that Christ died for your sins, to pay your debt to God, and confess that Jesus is Lord, and you will be saved.

As Paul wrote in Romans 8: 23 *"for all have sinned and fall short of the glory of God, ²⁴ and are justified by his grace as a gift, through the redemption that is in Christ Jesus, ²⁵ whom God put forward as a propitiation by his blood, to be received by faith."*

Give your sins to Jesus and accept his gift of forgiveness and you will be adopted into the family of God. Darwin said we are rearranged pond scum, and the children of worms. The truth is, we are made in the image of God, and through Jesus we can be children of God. Accept his love today.

And remember, Jesus Loves You!