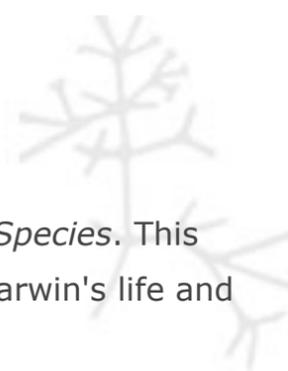


Don't Diss Darwin



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- [Video](#)
- [Analysis of the Introduction](#)
- [List of Schools](#)
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Analysis and synopsis

Ray Comfort has written a lengthy introduction to his edition of Darwin's *Origin of Species*. This introduction is partly lifted from other sources, partly Comfort's own musings on Darwin's life and legacy, and partly Comfort's evangelism.

Virtually every page contains scientific and historical errors.

Comfort repeats hackneyed creationist claims: a lack of fossils with transitional forms (false), the complexity of DNA requiring a creator (false), the 2nd Law of Thermodynamics somehow making evolution impossible (false). Comfort offers no fresh ideas, and simply parrots standard creationist talking points, all long-ago debunked by sites such as TalkOrigins.org.

Comfort attacks Darwin personally, assailing what he believes to be Darwin's racism and misogyny. Comfort even goes so far as to say that Darwin's most "famous student" was Adolf Hitler. Comfort does not provide meaningful evidence for such outrageous claims, only a few out-of-context quotes in a limp effort to tarnish Darwin. Comfort's use of attacks that are both *ad hominem* and insupportable exposes him as someone willing to bear false witness in order to promote his agenda.

Comfort dwells upon Darwin's religious beliefs, as if these beliefs were the key to evolution rather than the scientific evidence Darwin marshaled. It isn't surprising, then, to find that religion is at the heart of Comfort's own agenda. Because Comfort is unable to make meaningful attacks on evolution on the basis of the scientific evidence, he turns to non-scientific arguments.

Some of the most egregious quotes from Comfort:

- "Adolf Hitler took Darwin's evolutionary philosophy to its logical conclusions."
- "...Darwin was a racist."
- "Darwin believed that women were not as competent as men, and less intelligent than men, but they were better than a dog."
- "The legacy of Darwin's theory can be seen in the rise of eugenics, euthanasia, infanticide, and abortion."
- "DNA... presents a formidable challenge to Darwinian evolution."

1. p. 1-5, The History of Charles Darwin

- presents basic biographic information on Darwin.

- as the blog aigbusted.blogspot.com has revealed, some of the language in this section is taken unattributed from Stan Guffey's "A Brief History of Charles Darwin"
- the timeline Comfort uses is taken verbatim, with attribution, from Darwin200 (<http://www.darwin200.org/press-releases/darwin-timeline.doc>)

2. p. 5-9, Darwin's Religious Beliefs

- Comfort writes, "The issue of why God would allow such suffering in the world was an internal conflict that Darwin could not resolve."
- Comfort writes, "[Darwin] never entirely discounted the existence of a God but gradually become agnostic."
- it is unclear what relevance Darwin's personal religious beliefs have to the theory of evolution. Indeed, evolution is today accepted by a variety of people across the spectrum of religious belief and non-belief. They accept evolution not because of their agreement with Darwin's personal beliefs, but because the evidence in favor of evolution is so strong and compelling.

3. p. 9-13, The DNA Code

- Comfort talks about complexity, saying, "Imagine that there was nothing. Then paper appeared and ink fell from nowhere onto the flat sheets and shaped itself into perfectly formed letters of the English alphabet."
- this is part of Comfort's standard rhetoric, claiming that evolution requires that "something came out of nothing." This is not a scientific view of evolution
- this also mimics the argument of "irreducible complexity," implying that something very complex—DNA, a language—could not have arisen through evolutionary processes
- quotes Charles Thaxton, a creationist
- quotes Francis Collins (the current head of NIH), without explaining that Collins is a Christian who also accepts evolution
- Comfort: "DNA is an incredibly detailed language, revealing vast amounts of information encoded in each and every living cell—design which could not have arisen by purely materialistic means."
- this is the meat of Comfort's argument, but almost all scientists understand that complexity is not a problem for evolution

4. p. 13-16, Transitional Forms

- Comfort: "We would expect to find something that is half monkey, half man."
- this is Comfort's infamous "crocoduck" argument, which purports that evolution requires strange hybrid creatures in order for new species to arise; no scientist, of course believes this
- the truth is that evolutionary changes, over a long time, can produce major differences through minor changes
- Comfort criticizes the website Understanding Evolution (evolution.berkeley.edu) for saying there are numerous transitional forms in the fossil record, but listing *Pakicetus* as "the only example."
- in fact, the page Comfort is referring to (<http://evolution.berkeley.edu/evosite/lines/IAtransitional.shtml>), has a link to a TalkOrigins page detailing hundreds of fossils with transitional forms. While Comfort is technically correct that the only example given on this particular page is *Pakicetus*, this criticism is meaningless because the page provides a reference to profuse examples
- "And Neanderthal Man was exposed as being fully human, not ape. Not only was his stooped posture found to be caused by disease, but he also spoke and was artistic and religious."
- Neanderthals were not "stooped" in posture. Comfort may be thinking of Hollywood presentations of "cavemen."

- Archaeological evidence for Neanderthal art is controversial, and evidence for Neanderthal religion non-existent
- There are distinct physical traits (brow, rib cage shape) that distinguish Neanderthals and modern humans
- Neanderthal DNA has been analyzed and compared to modern humans; although there is much shared DNA, this evidence does not support the conclusion that Neanderthals were "fully human"

5. p. 16-18, The Missing Link

- Comfort criticizes the recent "Ida" fossil
- "In May 2009, however, headlines boldly proclaimed that scientists had finally found the missing link between animals and man."
- no headline described this as a link between "animals and man." Some journalists did describe the importance of Ida in terms of human evolution.
- journalists, not scientists, speak in terms of "missing links." Practicing paleontologists regard the term "missing link" as reflecting a popular misconception of evolution as progressive.

6. p. 18-20, The Cambrian Explosion

- "No new body plans have come into existence since then."
- not true. There are some post-Cambrian phyla, such as the Bryozoa.
- "Life forms are strictly separated into very distinct categories."
- not true. We human have created categories such as phyla, but these groupings have changed over time and continue to change. They are a human construct rather than a fact of nature.

7. p. 20-21, The Evolutionary Process

- "Species do of course change over time by adaptation and natural selection, but some disagree that this indicates Darwinian evolution."
- are any of those "who disagree" scientists, or are they all creationists?
- this statement is nonsensical, because we define Darwinian evolution in terms of natural selection
- "Darwin's theory of evolution is instead based on the concept of macroevolution."
- the phrase "based on" misleadingly suggests that Darwin was assuming, rather than showing, that variation and selection can lead to speciation
- there is no abrupt dividing line between macroevolution and microevolution
- the small-scale processes of evolution, when accumulated over time, can fully explain the large-scale differences in organisms over time

8. p. 21-26, Mutations

- "Despite being bombarded with mutation agents for half a century, the mutant fruit flies continue to exist as fruit flies."
- Comfort seems to expect fruit flies to abruptly become some new creature, or perhaps a half-fly hybrid such as his infamous crocoduck. This simply is not how evolution works.
- "The theory of punctuated equilibrium was proposed as a way to explain the lack of fossil evidence."
- No. Eldredge and Gould's seminal 1972 paper examined fossil evidence from Bermudan mollusks and trilobites, and proposed the punctuated view as a better fit for their data than standard phyletic gradualism.

9. p. 26-30, Evolution's Difficult Questions

- Comfort here proposes that the heart and the eye are examples of "irreducible complexity," and proposes this as proof of divine creation rather than evolution
- the creationist idea that irreducibly complex structures cannot have evolved, so often espoused by groups such as the Discovery Institute, has been thoroughly debunked: <http://www.talkdesign.org/faqs/icdmyst/ICDmyst.html>, http://en.wikipedia.org/wiki/Evolution_of_the_eye

10. p. 30-31, Vestigial Organs—Leftovers Again?

- Comfort writes, "If an organ were no longer needed, it could at best be considered devolution. This is consistent with the Law of Entropy—that all things deteriorate over time."
- like many creationists, Comfort here incorrectly describes the 2nd Law of Thermodynamics
- the 2nd Law is not simply that "things deteriorate"
- although creationists frequently comment on the 2nd Law as if they had completed the coursework required to understand it, they rarely talk about entropy in ways meaningful to scientists
- Comfort seems to think that vestigial organs are by definition useless
- in fact, a vestigial organ is defined as "a reduced and rudimentary structure compared to the same complex structure in other organisms. Vestigial characters, if functional, perform relatively simple, minor, or inessential functions using structures that were clearly designed for other complex purposes."
http://www.talkorigins.org/faqs/comdesc/section2.html#morphological_vestiges

11. p. 31, Another Thought

- Comfort here brings out his argument that science cannot explain the world because it rests on the assumption that something came "from nothing"
- this is more the realm of cosmological physics than evolution
- Darwin's theory of evolution only involves interactions after the beginning of life, and does not touch upon the origin of life or the origin of the universe
- this section is therefore irrelevant to a discussion of Darwin and evolution

12. p. 31-34, Darwin's "Unsavory" Views

- Comfort recommends googling "social Darwinism," as if an Internet search engine result constituted evidence
- Comfort puts forth a quote by Darwin which compares different races of humans and apes, and cites a letter of 23 May 1833, by Darwin to William Fox. If one goes to Comfort's citation for this letter, however, this quote does not exist in the letter. You can see for yourself here: <http://www.darwinproject.ac.uk/darwinletters/calendar/entry-207.html>
- this quote actually comes from Chapter VI of Darwin's *Descent of Man*, and this example of academic sloppiness is typical of Comfort's loose concern for factual accuracy
- the full quote, as explained on Talk Origins, (http://www.talkorigins.org/origins/postmonth/2009_03.html), reveals that Darwin was talking about taxonomy and classification, using unfortunate language typical of even educated persons in the nineteenth century
- "It's interesting that a number of Atheists have agreed with me in my belief that Darwin was a racist."
- Comfort seems to imagine that all non-believers are conspired against him to oppose his interpretation of Darwin in every respect
- most historical figures, if judged by the standards of today, would offend modern sensibilities

- We honor George Washington, for example—but Washington was a slave owner. Should we therefore chip Washington off Mt. Rushmore and pretend he never existed? Historical figures need to be understood within the context of their time
- Comfort attempts to tar Darwin as a racist. But even if Darwin were a virulent racist—and the record does not support this—that in no way diminishes the scientific power of evolution
- as an example, Nobel laureate William Shockley is rightly honored for inventing the transistor, a vital component of electronics that in no way functions differently because Shockley was a racist who supported eugenics
- Comfort himself realizes this, saying, "Darwin's racism has nothing to do with the credibility of the theory of evolution."
- If so, why does Comfort even bring up this topic, if not to attempt to smear Darwin as a person, because Comfort is unable to touch evolution as a theory?
- Comfort then backtracks on the racism charge: "However, after much research, I do concede that you won't find anything in Darwin's writings that would indicate that he in any way felt blacks were to be treated as inferior or that his views of them were due to their skin color."
- why then does Comfort even bring it up?

13. p. 34-35, His Disdain of Women

- "Darwin believed that women were not as competent as men, and less intelligent than men, but they were better than a dog."
- Comfort here ignores the profound, life-long love Darwin expressed for his wife, and focuses on a single tongue-in-cheek statement as if this were better proof of his feelings
- Judging historical figures by the social standards of today is problematic. As just one example, one can argue that Lincoln did not view African-Americans as fully equal to whites—and it would have been incredible if he had, given the extreme racism permeating society during his time—yet Lincoln still deserves to be honored for ending slavery

14. p. 35-37, His Famous Student [Hitler]

- "Adolf Hitler took Darwin's evolutionary philosophy to its logical conclusions."
- Comfort gives a quote from Darwin, followed by three quotes from Hitler, in an attempt to link Darwin's ideas to Hitler
- if Darwin was so important to Hitler, then you might expect that Hitler would have at least mentioned Darwin once in *Mein Kampf*. Darwin's name never appears in Hitler's manifesto
- the Darwin quote includes the line from *Descent of Man* that no one would be "so ignorant as to allow his worst animals to breed," but fails to include the next part of the original passage, which reads, "The aid which we feel impelled to give to the helpless is mainly an incidental result of the instinct of sympathy, which was originally acquired as part of the social instincts, but subsequently rendered, in the manner previously indicated, more tender and more widely diffused. Nor could we check our sympathy, even at the urging of hard reason, without deterioration in the noblest part of our nature... if we were intentionally to neglect the weak and helpless, it could only be for a contingent benefit, with an overwhelming present evil."
- Darwin is clearly not advocating eugenics, but rather advocates compassion for his fellow man
- Darwin's ideas here are the polar opposite of Hitler's

15. p. 37-39, The Hit List

- "In promoting the idea that humans were merely animals and accidents of nature, the

natural consequence of Darwinism was to overturn the traditional Judeo-Christian values on the sacredness of human life."

- "The legacy of Darwin's theory can be seen in the rise of eugenics, euthanasia, infanticide, and abortion."
- this is simply hyperbole on Comfort's part. This laundry-list of unrelated controversial issues is meant to inflame passions rather than inform
- Comfort details Hitler's odious racial hierarchy—"Germanic—predominately Aryan... Black African—predominately Ape..."
- this was Hitler's thinking, not Darwin's
- "In promoting the idea that humans were merely animals and accidents of nature, the natural consequence of Darwinism was to overturn the traditional Judeo-Christian values on the sacredness of human life."
- as the previous passage shows, Darwin was a man of great compassion for his fellow humans, and certainly viewed human life as valuable
- it is not a "natural consequence" and does not follow that if human are merely animals, that then this somehow overturns the sacredness of human life

16. p. 39-41, Darwin and Atheism

- "Many believe that with creation adequately explained by evolution, there is no need for a God and no moral responsibility."
- Comfort ignores the fact that there are many people who fully accept evolution and are also people of faith
- as just one example, over twelve thousand members of the clergy have signed the pro-evolution [Clergy Letter Project](#)
- "If there are no absolutes of right and wrong, anything goes as long as it's within the bounds of civil law, and any sexual exploits are merely natural instincts to further our animal species."
- this is a very superficial reading of the origins of morality
- thoughtful people realize that there are many moral precepts (not telling small lies or returning books to friends, for example) that do not fall within the bounds of civil law, yet even atheists still follow
- "If I deny that there is a God, I am saying nothing created everything, and that's a scientific impossibility."
- Comfort may be unaware of high-vacuum quantum physics experiments which demonstrate that subatomic particles do indeed appear "out of nothing." Rather than a scientific impossibility, this is an experimental result and is measurable in phenomenon such as the Casimir effect
- quotes Dawkins and Crick on the appearance of design
- but in science, simply pointing out that something "looks like" something else is not solid evidence
- and Dawkins and Crick explain in detail how the appearance of design can be explained in terms of natural processes
- "And despite what evolutionists claim, those who believe in a Creator are far from being anti-science."
- "evolutionists" do not claim that religious people are "anti-science"
- Quite the contrary—many people who accept evolution are also people of faith
- quotes Penn Jillette about how one would struggle to save someone about to be hit by a truck, which Comfort relates to saving someone's soul
- Comfort ends by declaring, "I deeply care about you and where you will spend eternity."

17. p. 41-42, Solving Life's Most Important Question

- Comfort claims, "Christianity is unique among religions."

18. p. 42-43, The Leap

- This section on the Ten Commandments comments on religious matters

19. p. 43-44, Little Jessica

- In one of the most odious and inexplicable *non sequiturs* in his introduction, Comfort describes the gruesome murder of 9 year-old Jessica Lunsford in 2005.
- By exploiting the memory of a murdered child to promote his agenda, Comfort reveals just how low he is willing to go.

The following sections of Comfort's introduction involve religious statements that do not directly touch upon Darwin or evolution. We leave these topics to the individual reader.

20. p. 44-45, How Do You React?

21. p. 45-46, Instant Death

22. p. 46-47, Let's See

23. p. 47-48, Back to the Plane

24. p. 49, Do It Today



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