



## Talk in Shrewsbury, Darwin's birthplace

Elaine Morgan 2009

<https://www.youtube.com/watch?v=rJLbXOGeU5s&list=PL46FAdrh3vI-3RDRk69sNADNhwjzH9H3>

I came here, I invited myself here, mainly because I had read that the creationists were going to hold seven or eight meetings this week, talking about Darwin. And all the speakers would be people who believed that Darwin's theory was fatally flawed. So I think there are two things. One is to counter that, because I think that at least somebody should be saying that Darwin's theory is not fatally flawed. And after that, quite separately, I want to say that I think Darwin got one thing wrong, and we'll come on to that later.

If you've heard anything at all about Darwin, you'll know he was a very nice guy. And when Stephen Jay Gould tried to describe his character, he said: "I can find one flaw in his character: this man was kind to a fault." And he delayed publishing his theory for decades, because, partly because of that. Because he hated the thought of upsetting anybody.

He didn't want to go to war against the Church of England. Most of his best friends were Christians. And his dear wife Emma was a devoted and pious Unitarian, who one wrote him a long letter explaining how it agonized her to think that she would die and go to Heaven, and Charles would die and go down there, and she would have to spend eternity without him. And he read this letter and he wept over it. But he couldn't lie to her and say: "Ok, I'm converted. I'll see you in Heaven." All he could do was write a loving message on it, for her to find after he was dead.

He knew that when his book came out there would be one hell of a row. And it happened just as he feared. When it came out he was reviled from the pulpit. He was denounced from the universities. He was lampooned on the musical stage. He was caricatured by the cartoonists in the press. And he was given a very bad time.

But the strange thing is, that as the years passed, all that seemed to evaporate. For some Christians it evaporated straight away. And here's a quotation from the Reverend Charles Kingsley, who wrote *The Water-Babies* book for children. He said: "It is just as noble a conception of Deity, to believe that he created primal forms capable of development, as to believe that He required a fresh act of intervention to supply the lacunas which he himself had made." And Darwin was so pleased with that he included it in the second edition of *The Origin of Species*.

So there were some people who just thought: "Well there's no reason why we couldn't accept this." There were also people higher up in the Church who remembered that after all, the Church had been through this kind of thing before: When they arrested Galileo and burned Giordano Bruno at the stake, for saying that the world went around the Sun. And yet, by now, everybody accepts that the world goes around the Sun. Nobody thinks that this is a threat to religion, and they began to hope that perhaps the same thing would happen with Darwin.

So that by the time he died, all the emotiveness had gone out of it, and he had been forgiven. And the Church said we will bury him with all due pomp and ceremony next to Newton, Isaac Newton, in Westminster Abbey. And furthermore, since he has died, in subsequent centuries, more and more of the mainstream Christians have come over. John Paul II made a statement saying: "Yes, this an established fact." In time, we can live with it perfectly well.

And all this was like a story with a happy ending. There had been stones on the ground, and now there was peace. But since 2000, all this has gone for a Burton. It's boiling up again, and people are calling each other evil and dangerous and pernicious and vicious. And I'll give you a couple of quotations. Here is Richard Dawkins: "Evolution has become a battlefield, on which the forces of enlightenment confront the dark powers of ignorance and repression." And here's one from Ian Paisley: "It is not a skirmish between science and non-believers, it is a war waged by the enemy himself against the very Creator!" So you get all these people up, slandering each other, using bad language to each other. And David Attenborough has been receiving threats and hate-mail because he dared to put on a program commending Darwin's idea.

So, another thing they're trying to say is: "What you believe leads to a great deal of wickedness." There's a man called Brian Edwards: "If you realized what Darwin gave life to, you would realize what a pernicious system it is." Because after Darwin's death, some of his followers like Gordon, started commending things like eugenics, so they said: "People who are handicapped or defective ought to be sterilised or got rid of." But this was not a very good move, because if you start asking: "What does belief in God lead to?" you can come back with: "Well, what about the Spanish Inquisition? And what about all those hundreds of years when Catholics and Protestants were burning each other alive at the stake, in the name of the Prince of Peace?"

So you may be asking where I stand. Well, I stand roughly where Darwin stood in the second half of his life. I don't believe in God. I do believe in evolution. But a lot of my best friends are Christian. I would not dream of trying to talk them out of it. And they don't try to talk me into it.

And so what I want to say about this row, is how can we cool it? We used to have a position where there was a definite demarcation line: that side was theologians, this side for the scientists. They did not make a feud with one another. They didn't badmouth each other. You could have a university with a Department of Theology and a Department of Science, and they lived in peace together. And I'm very sorry to think that this row is obliterating that demarcation line, because that's where the danger comes in.

So I came to ask: "Where is it coming from? Why suddenly, since about 2000?" I think there's no doubt that it began in the United States. Because a much higher proportion of Christians in the United States are evangelicals who believe in the literal truth of Genesis and that Eve was made out of Adam's rib, and there was a snake and there was a flood, and Noah's Ark, and all the rest of it.

You will all remember the Scopes trial in 1925, where a schoolmaster was fired because he taught evolution. You'll remember it if only because there was a film with Gregory Peck in it. But when that case was fought up to the Supreme Court, the man had to be reinstated, because they said it is part of the written Constitution of the United States that the authorities must not favor any one brand of religion against any of the others. It was very wise, because America was founded by people who had left Europe because they had been religiously persecuted in their own country, and they didn't want that to start again in America.

But it left the evangelicals frustrated, and they've been trying and trying ever since to find a way to get around that little bit of the American Constitution. In the 70s and 80s they've started saying: "Ok, we can't go into the schools and preach religion. But we can go in to the schools and preach our own kind of science — creation-science." Well, that again was fought up to the Supreme Court, and in 1982 the Supreme Court said: "What you are describing is not science, it is religious ideology."

And you can see that this was frustrating for them, because outside academia and outside the schools, they have been making great gains. They have been feeling quite triumphant. The latest census suggested that 150 million Americans don't believe in Darwin. They have friends in high places, like Bush and Palin. And in some parts of America, the school boards, although they can't actually get them in to say: "Darwin was wrong," and they didn't succeed in having stickers put inside all the copies of books about Darwin saying: "You don't have to believe this, this is only a theory." But, they were able, in many parts of America, are able, to make it so uncomfortable for anybody who goes in and talks about evolution, that a number of school boards, for the sake of a quiet life, have stopped putting it on the syllabus altogether. So you can see why a lot of people on the other side are getting alarmed and saying: "We've got to do something to stop this."

Mostly they have confined themselves, until recently, to America. And there's a lot of money going into it. In Cincinnati in 2006, they built a huge huge creation museum. And it cost 27 million pounds to put up. And if you go into this museum you will learn that the world was created ten thousand years ago. And if you find this hard to fit into some of our manifestations in heaven and earth, they will tell you that the reason for this, why it looks fishy, is that the speed of light used to be 300 times as fast as it is now, but later on God decided that He'd better slow it down a bit. And they have got a gravestone there with Darwin's picture on, and saying: "RIP. This is the End of the Evolutionary Theory."

But they are now, it seems to me, beginning to move over here, as they have every right to do. We've sent our missionaries all over the world. And they probably have more young missionaries coming two at a time, knocking on your door. The Emmanuel City Technical Technological College opened in Gateshead. And they've put a lot of money into it. And they invited the National Creationist Conference there. And they are spending a lot of money printing DVDs and giving them free to schools throughout this kingdom.

And they say: "But what we are teaching now is not Creationism. No, you shouldn't call it that. What we are teaching now is Intelligent Design. And it's purely and strictly scientific." And they complain that people won't take it seriously. They seem to think that the idea is so misconceived that it's not even worth refuting. Well, I can sympathize with them there, because I've been on the receiving end of that situation very often, and I can see that it's very annoying. So I have not refused to listen to them. I've been reading books by xxxx and Dembski and Meyer and Woodward, and so I think I know a lot about it.

The message they are bringing is that: "Evolution can't explain everything. There are things that happened that need explaining and we believe they never will succeed in explaining it. And if there is anything that Darwinism fails to explain, then the whole thing collapses, you don't have to believe any thing they say." And they are interested in phrases like Irreducible Complexity. They say: "You can look at some things in life, and it's so complex that it's impossible to believe that this happened a little bit at a time, as Darwin said."

Five or ten years ago, they had one favorite example, which was the eye. They said: "The eye couldn't have evolved a little bit at a time. Because it has got the iris, and the cornea, and the

retina, and all that. It would have to be created in one piece." Well, that didn't work very well, because the Darwinians joyously plunged into that, and produced detailed explanations. They discovered Hox genes by that time, exactly how an eye can develop from just a little light-detecting spot on an original thing, and how it gets a dent in it. They have got a heavily convincing account of how the eye has evolved in octopus, and insects, and mammals, independently several times. And you don't have to take my word for it that they have a convincing case. You only have to know that the creationists have stopped talking about the eye and in their latest books they don't mention it.

They have now got something else to put instead of the eye. They have discovered a thing called the bacterial flagellum. And this is in a single cell thing like a bacterium. You can look at it under a microscope and you think it's simple, but it's not. It's tremendously complex, and it's got this special little organ in it that can work like a propeller and it can make it move the thing and they can show you pictures of this and everybody's stunned and say: "Yes, that's terrifically complex. That must have been made." And they say: "This, then shows where Darwin went wrong. Because Darwinists say that in the beginning there were simple single-celled things like this bacterium, and we, since then, we have got more and more complex. "That", they say "Think of the beginning. It wasn't simple. Right at the beginning it was as complex as all of that."

I think this is based on a misunderstanding. Because Darwinists do not say that we are all descended from a bacterium with a flagellum like the one you are showing us. What the Darwinists are saying is that four billion years ago there were replicators, and 3.5 billion years ago there were bacteria. And later on these things evolved into eukaryotic ones and algae which gave rise to the plants and trees and flowers, and others which gave rise to animals. But the original ancestors that we share were not a bacteria with all these accessories. It was a single simple animal that later developed. After all, those bacteria, with all their little accessories, they have had 3.5 billion years to specialize in doing what they're doing. And we have had much less time to specialize in being mammals. So you'd expect that they'd be pretty good at it by this time.

I'd like to tell you why I find the creationist's case less than convincing. I think they use their own language to try to pretend that they are making less elaborate claims than they are making. They use words like. "Of course. We are scientists, we accept that Darwin was a great man. We believe in evolution. Yes, we believe in evolution. We believe in natural selection, yes. The only thing we say is that we believe in microevolution. Once you've got a species created, then that species will go on getting better and better at what it does. It just happens that we don't believe in macroevolution. We don't believe that one species can turn into another one. Or split into two species." And that sounds like a small technical point. But the point is, what they are saying is: "Every species was separately created, as it says in the Bible. So that if there are 5000 different kinds of beetles, God created every single one separately. Somebody said: "He must have been extraordinarily fond of beetles." And it's impossible to believe that man and the apes ever had a common ancestor, because no species has descended from any other species, they're all separately created. So, although it sounds like a minor thing, macro micro, it means that they are saying: "God created everything."

They are basing their arguments on incredulity. They don't like that to be said, but it seems to be true. They are saying: "When I look at the bacterium, it is so complex that I find it impossible to believe they will ever be able to explain it." Well, I can look at it and say: "Well, it explains things quite as difficult as that, and I don't see any reason why they should not believe that too." Another thing that makes me doubt them is that they're supposed to be talking about life on Earth, but they don't seem to be looking at the natural world at all. They are talking about language and philosophy and what he said and what I said.

When Darwin wrote his book, he was enthralled and enraptured by every thing in the world around him. He looked at thousands of species, he collected them. He spent years studying the earthworm. He spent eight years studying barnacles. And if you look up the index to Dembski's book about creation. I looked in vain through the index for the name of any single plant or animal. They don't seem to be looking at them. I did find the word seal, but I found that it was the other kind of seal, like in sealing-wax. And most of them now have reduced their description of the natural world to the bacterium and the flagellum. And in another book you can find one or two

references to animals, but X references to bacteria and flagellum, coming back and for always in the book.

But the final reason, the main reason why I can't xxx up to them is because they way: "We are building a bridge between theology and science. Why can't you come half way and meet us?" So I say to myself: "Alright, you say that the world as you look at it convinces you that there must be an intelligent design, somebody must have thought of it. So tell me now about this designer, and what his purpose was." And to that question, you get two different kinds of answers. If you go to one of the more intellectual ones, they say: "I'm not talking about that. I'm not going to ... I never use the word God. I never use the word creator. All I've said is that it looks as if it was designed." Well, in that case, end of conversation. If you go to a less sophisticated believer, and say: "Tell me about the Designer", they are likely to say: "I thought you'd never ask. Come with me and I will tell you. Here is this book, the Holy Bible, and this is the word of God, and if you make a leap of faith, you will find all the answers in there." Well, they may be right. It may be the word of God. I can't prove it's not and they can't prove it is. But all I do say is that if you enter a debate which ends in saying: "This is the holy word of God and you have to believe it" then whatever else it is, it is not science.

I would defend their right to believe in it. I defend their right to preach about it in churches and chapels and public meetings. I defend their right to go into academies and schools and defend it there, as long as they defend it under the heading of theology or bible class or comparative religion. But I will not admit their right to walk into a science class and say: "You are doing this science all wrong. We know how science ought to be done. You've got to listen to us." It is not science and it never will be science. And I think that it is their refusal to accept that that is causing all the trouble.

There was recently a long letter in the *Daily Telegraph*. I don't read the *Daily Telegraph*, but people sent me cuttings. And it was signed by a long string of scientists right down to the end of the column. People like Lord Winston, and xxx and all the highest. And they were... the message of the letter was: "Please, please will the Christians stop bashing the Darwinists. And please, please will the Darwinists stop bashing the Christians." And I believe that if we could get back to the place we occupied for most of my lifetime, where there was a demarcation line: theology there, science there. Then we could take all the heat out of it. And if we could agree on that, I would be happy to end this section of my talk with the thing that the comedian Dave Allen always ended his show with: "Good night, and may your god go with you."

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 Now for something completely different.

I don't like to be seen to be opening up a second front against Darwin, when he's already got the creationists on to him from the other side. But I do think that if he was alive today, he might well have approved.

Everybody has been spending millions of words talking about Darwin's book *The Origin of Species*. And towards the end of that, he said: "Much light will be thrown on the origin of man and his history." And the people who believed in Darwin were very pleased with that. They said: "We have to wait a bit longer, and he'll tell us exactly how it happened, how we became different from the apes, and became this wonderful creature that we are today."

And they waited a long time. And nine years later, let me see, nine years later, he was writing to a man in France, and he said: "I was so much fatigued by my last book, that I determined to amuse myself by publishing this short essay on the descent of man." And now this essay has branched out into some collateral subjects. And what he ended up with was not a short essay, but a big fat book, bigger than the *Origin of Species*. And yet, almost nothing in that book throws any light on the origin of man. So what went wrong? You'd have expected, it was another three years after that letter before he wrote it out. You would have expected, and I would have expected, because the whole of Darwinism is concerned to explain, how you can explain an animal or a plant by reference of the kind of life it lived, and the environment it inhabits. So you would have expected if Darwin writes a book called the *Descent of Man*, he would say: "This was the environment, and

this was the lifestyle that changed it from an ape into a man." You would be dead wrong. He does nothing of the kind. He says, quite early in the book: "Nor will I have occasion to more than allude to the amount of difference between man and the anthropomorphic apes." But why is that? Why isn't he going to be talking about the differences between man and apes? The reason he gives is: "Well, I don't need to do that, because Professor Huxley has done it. Professor Huxley has talked a lot about anatomy." That is true, up to a point. Huxley has talked a great deal about the difference between our anatomy and the anatomy of apes. But he has always concentrated on the similarities. Because the creationists would say: "We were made in God's image, quite separately." Huxley kept on saying: "Look, we resemble them in this, we resemble them in that. Look at the skeleton. Look at the hands." But nobody was saying: "In what ways are we different from them?"

And another problem that Darwin had, which he quotes in this book: "Another most conspicuous difference between man and the other animals, is the nakedness of his skin. Whales and porpoises, cetacea, dugongs, sirenians, and the hippopotamus are naked." So we say, yes, go on, say some more... But he stops there. We hear nothing more about it. But he says this: "No one supposes that the nakedness of the skin is any direct advantage to man. His body therefore, cannot have been divested of hair through natural selection." Not through natural selection? Through what then? So, there is another kind, called sexual selection, which he had just mentioned in his third book, and now if he's got to account for the nakedness, he's got to give more details about it. And because he was Darwin, once he started collecting examples of sexual selection in birds and animals, he went on and on and on and on. So that two thirds of this book had nothing at all to do with man. And the third of it that is about man has little or nothing to do with his origin. It was about his taste in fashion, his dress, about the different races, about music, and his response to beauty. But none of this is saying why we are different from apes.

It was a popular book. It was a chatty book. It was much better received than the *Origin of Species*. But he didn't sound at all certain. And when he came to explain two of the most striking differences between us and the apes: why do we walk upright, and we are naked, he dismissed them with a little paragraph each. He dismissed bipedalism by saying: "Well, it would free the hands." Even there he doesn't sound very certain about it. He says: "I can see no reason why it should not have been advantageous to the progenesis of man to become more and more erect." Well, that's a good point, but there were dozens of other primates who came down from the trees and walked on the ground. None of them have stood upright; why was it not advantageous for them?

And when he comes to explain the nakedness, he does it practically in one sentence: "That man, or especially woman, became naked for purposes of ornamentation." In other words, it was sexual selection, and it was being naked that made the female more desirable, and, that is what he's implying, and I'm sorry to use this word, but I think that is plain silly. No other animal, all the way through the mammal world, for millions and millions of years, they've been covered with hair. They have found ways of becoming attractive to one another, but none of them have decided, suddenly, the male decides, I don't like that female, she's all covered with hair. I'd like one with a bald body. Find me a bald-bodied female and I will mate with her every time. And having made that decision then the woman said, well, ok, I will put up with a bald-bodied man. I think it was the best he could do. I think if that was the best that Darwin could do, there was something seriously missing in the narrative of evolution as he was doing it.

Now, nobody complained at the time. Nobody said: "That's silly, I don't believe in that." Because he skipped over it so lightly that nobody took any notice of it. And until 1930 nobody bothered to say: "Why did these things happen? Why are we so different?" Then a man called Raymond Dart said: "I know what happened. I can find some skeletons out on the savannah in the xxxx. And I believe that what happened was the ancestors of the apes stayed in the trees, and the human ancestors walked out on the savannah." And that was what made us different. I mean, it was so hot out there, that we took our coats of fur off. And we became terribly sweaty. We are the sweatiest animal in the whole of creation. And we sweated, in hot weather we can sweat 12 quarts a day, which means that we have to drink 12 quarts a day as well.

And for the best part of half a century, everybody believed that was the explanation of why they're different. They couldn't agree on any of the reasons why we were bipedal. There were about 12

different reasons about why being on the savannah made us bipedal. Or why being on the savannah made us naked. Or why being on the savannah made us able to talk. But they were all agreed that that was what had made the difference.

There was only one man who had a different idea. And his name was Alister Hardy. If we're talking about God and creation, Alister Hardy was a man who, from the time he was a boy, was in love with God, and in love with Darwin, and he thought he would devote his life to bringing these two things together, so he could believe in God and Darwin.

And he had this strange idea. He came back from the South Seas, expedition when he was quite young -thirty- and he read a book by Fredrick Wood Jones which says that the difference between man and the apes is that man has got a layer of fat attached to the underside of his skin. If you cut open an ape, or most animals, you get skin and then muscle. But in man, you get this layer of fat. And Wood Jones said we have no idea why it's there, because it's not true of any other animal. But Alister thought: "Yes, it is. I've just come from the South Sea and looked at aquatic mammals. If you cut a seal open there's a layer of fat, and if you cut a dugong open there's a layer of fat." And he thought perhaps, our ancestors had developed a layer of fat because they had spent some time in a semiaquatic environment.

And he looked at nakedness. And he thought: "Who are the naked mammals?" As Darwin himself had said, but never followed it up, there's the whale, and there's the dugong, and there's the walrus, and hippopotamus. Perhaps we became naked for the same reason that they became naked. Nobody believed him. And another thing about bipedalism, he said: "If you were an ape, walking on your knuckles, and you started going into the water, the time would soon come as the water gets deeper, that you've got to stand up on your hind legs. Because you want to breathe, and if you stay on four legs your head is under the water." And Attenborough has beautifully illustrated that with pictures of apes and monkeys. That is the one condition which causes them all to stand up and walk on their hind legs is wading in the water.

And he sat on this theory for 30 years, before letting it out. When he did let it out, everybody came down on him like a ton of bricks. They said: "Don't be so silly. Never do that again. You are betraying the reputation of Oxford University. And you are only a marine biologist. You've got no reason to talk about apes or people anyway. You don't know anything about people." So they said: "Never do that again." And he never did. He only published ever two articles about it. But I published it. I published that book because I said: "I think Alister Hardy had it right."

And since then I've published six other books saying: "I think Alister Hardy had it right." I think it explains nakedness. I think it explains bipedalism. We've got a descended larynx. No other primate has got a descended larynx, but you can find it in aquatic mammals. We've got this fat layer under our skin. We've got babies born with five times as much fat as a baboon baby or any other primate baby. What is that all about?

We are the only land mammal that has got breath control, which enables us to speak. Because you cannot teach a gorilla not only to speak, you can't teach him to say "Ah". Because his breath is unconsciously controlled the way ours is except when we speak. We have got to decide to take in a breath and let it out slowly and then we can say words with it. That doesn't mean to say that that breath control was sufficient to enable us to speak. But without that, we could never have learned to speak. It was an essential precondition.

And then people said: "Well, the other naked mammals. I mean, what about elephants? They were never in the water." And I honestly believe I was the first one, in 1980, to say: "I think perhaps their ancestors lived in the water." And by now, everybody accepts that their ancestors did live in the water.

But however much evidence I brought out, they would say: "We don't need that. We know why we are different. It's because of the savannah. That's where all the skeletons are." Until the 1990s. You've heard, I'm sure you've heard about the savannah theory. But you may have not heard, that the savannah theory has been disproved by the scientists themselves. They have looked more closely at the hominin skeletons and the things surrounding them. And the little animals surrounding them are animals that lived in woodland. And they have learned a way to analyze the

pollen, the fossilized pollen, that is with these early human skeletons. And the pollen is of plants that had grown in woodlands. Even including the pollen of lianas, those long dangly things that you only get in deep forest.

So the savannah theory was wrong. Did you read the headlines? No, you didn't read the headlines. It never hit the headlines. They have kept very quiet about it. In the professional journals, if you've got the patience and the knowledge to know where to look, you can find the admission that the savannah theory was wrong. They have stopped using the word savannah.

If not savannah, then what? Nobody is asking that question. Their response to this situation should be, they know they've got it wrong, they are not saying so very loudly: "If it wasn't the savannah, what made us different? There must be something else different." But there is nothing else there. It's just the aquatic theory, which they don't like.

So what is their response? Their response is: "Well, we won't talk about it at all." And you have two great big fat encyclopedias 500 pages long describing human beings and never mentioning the fact that we are naked. Never even hinting at it. Can you imagine if there was one species of bear that was naked. Can you imagine anybody writing a whole book about this animal and not mentioning the fact that it was the only naked bear? No you can't. There is something gone wrong inside their heads. They have forgotten about it. And they have forgotten that they have forgotten about it.

And some of them, indeed, are saying, not only we can't answer this question, but we should stop trying to answer this question. Aaron G. Filler from Harvard: "Perhaps we need to stop worrying about selection pressures." Well, selection pressures is the only thing that Darwin is about. So that some of the scientific establishment, as well as the creationists, are saying: "Perhaps we need to stop asking the Darwinian questions." Well, in 2009 we are living through the year of Darwin. Nobody is asking that question.

If you ask: "Why don't you believe in the aquatic theory?" you are liable to be told: "Oh, but they had an investigation about it years ago and they thought it was wrong. I mean, you can't keep on picking it up and doing it over." So they investigated it, did they? I have been spending 35 years trying to find out who investigated it, where this meeting was held, whether they reported it, and I have come to the conclusion that it's like one of those urban myths. Everybody who tells you this, sincerely believes it, because they have been told it by people they have the utmost respect for. But I don't believe that it ever happened. And I would like, sometime before the end of this year, either that somebody will tell me when it happened, and I deeply apologize. Or that they admit that it never happened, and in that case it is time it did.