“How Do You Develop an Apologetics Ministry Within a Church?”

First off I want to commend you on your approach to defending and sharing the truth and love of the Gospel, as you show respect for others, without backing off from your discovery and communication of truth. It is very refreshing to see! I have two questions.

First, do you have any suggestions for ways to develop an apologetics ministry within the church? Second, I am considering pursuing a more focused apologetics/evangelistic ministry path, apart from working inside a church. I am definitely considering pursuing a Masters, or possibly Doctorate, degree. Are there any schools (Christian or secular) or degree programs that you would recommend with my ministry goal in mind? Also, are there any career paths that you would suggest for that type of pursuit, i.e. professor of philosophy at a secular university, speaker, or working at Probe Ministries? Thank you for your time. And again, I appreciate your ministry and your respectful approach to it.

Thank you for your kind letter and we are pleased that you have found our site both encouraging and helpful.

There are several suggestions about starting an apologetics ministry through the church, but it must be a two-pronged approach. Christians must be schooled or trained to some degree in apologetics and there must be regular opportunity to encounter non-Christians in a non-threatening manner. A simple reading group can be arranged for Christians to read helpful apologetics-oriented books like Lee Strobel’s *Case for Christ* and *Case for Faith*. You could schedule a Probe Mind Games Conference and offer the Basic Defense Track. (Click on the

"Mind Games Conference" button on our home page for information.) For the most part, Christians today not only do not really know *what* they believe, they certainly don't know *why*. To encounter non-Christians, you could host a regular film night or reading group. These groups would watch or read secular movies and books which raise worldview or ethical issues. With a mixed group, Christians can begin to hear what non-Christians really believe and think and begin to interact with them just by stating opinions. This can be enjoyable and non-intimidating. A moderator needs to be skilled in not letting some people dominate the discussion or get preachy.

There are a couple of Christian universities and seminaries that offer programs in apologetics. I believe that Trinity International University (www.tiu.edu) in Deerfield, Illinois offers such a program. Biola University (www.biola.edu) in Los Angeles also contains the Talbot School of Theology which offers apologetics and worldview-related programs through Professors John Mark Reynolds and J. P. Moreland. Southern Evangelical Seminary (www.ses.edu) in South Carolina is heavily geared towards apologetics. Famed apologist Norm Geisler is its president. Denver Seminary (www.denverseminary.edu) offers a degree in apologetics. I also know that Bryan College (www.bryan.edu) in Dayton, Tennessee utilizes worldview heavily in their undergraduate programs but I don't know if they have a graduate program that specializes in apologetics.

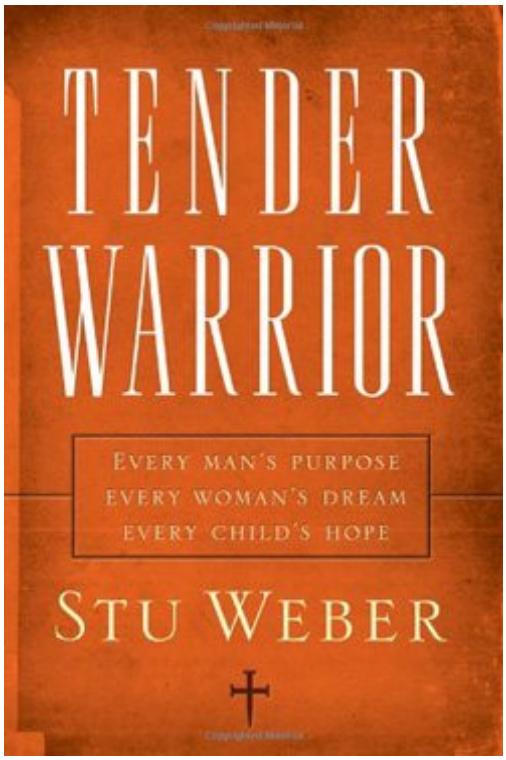
Ray Bohlin
Probe Ministries

Is the Tender Warrior Wild at Heart? – Characteristics of Christian Manhood

Dr. Bohlin looks at two attempts to define the characteristics of a godly man according to a Scriptural, biblical worldview perspective. These characteristics give a Christian man a way to evaluate his walk with God and how it communicates Christ to others.

The Four Pillars of a Man's Heart

Manhood continues to be in crisis. For many men today, their physical strength is rarely necessary. Technology and urban isolation have ripped up the landscape that men inhabit to such a degree that many men are wandering around wondering who they are and what they're here for. The extreme women's movement proclaims that a woman needs a man like a fish needs a bicycle.



Over the last fifteen years numerous books have been written from both secular and Christian authors to help men find their way. In this article we're going to spend some time with two of them. Stu Weber, a pastor in Oregon wrote the hugely influential *Tender Warrior* in 1993. *Tender Warrior* is full of stories and illustrations that irresistibly pull you along to Stu's appointed end: a vision of manhood mined from God's original intention for a man wrapped up in the New Testament vision of the Ultimate Tender Warrior, Jesus

Christ.

At the core of Weber's vision is what he calls the four pillars of a man's heart: the Heart of a King, the Heart of a Warrior, the Heart of a Mentor, and the Heart of a Friend. I first read *Tender Warrior* in the mid 90s, and I was immediately caught up in his four-part description. I knew I didn't exemplify all of these characteristics as Weber describes them, but I knew I wanted to.

The Heart of the King reflects a man's provisionary heart. The part of a man that wants to offer order, mercy and justice to the world he inhabits. Think of some of the Old Testament patriarchs, people like Abraham, Moses, and David. All of these men had a sense about them that drew others to them. They were leaders; they looked ahead and prepared those around them for what was coming.

The Heart of a Warrior portrays that part of a man that wants to shield, guard, defend and protect those around him. We intuitively understand this about men, but so many are inhibited from expressing this today. Movies and the entertainment industry often portray this aspect of manhood in its harsher tones. Consequently, this true aspect of manhood is more a target for suppression than for understanding.

The Heart of a Mentor reflects that part of a man that desires to model, train, and explain. Little boys particularly expect their dads to know everything. And a dad puffs up every time he can answer his son's questions. This aspect particularly is missing today in the church as young men from broken and dysfunctional families flounder, looking for an older man to help point the way.

The Heart of a Friend describes the part of a man that is truly compassionate, loving, and committed. The apostle Paul was a tough character as expressed in the list of hardships in 2 Cor. 11:23-28, yet he talked to the Thessalonians with

gentle and tender words in 1 Thess. 2:7-8.

“Sourced in Scripture, observed in history, and experienced personally, these four pillars bear the weight of authentic masculinity. They coexist. They overlap. And when they come together in a man, you will know it. You will feel it. You will be touched by it. Like four strands of a steel cable, they will hold you.”{1}

A Man and His Family

These four pillars encapsulate four essential qualities in a man of God: leadership, protectiveness, teaching, and compassion. A man with just three of the four is out of balance. A man who just emphasizes one of the four is a caricature of a real man. Nowhere is this more evident than in the biblical picture of headship and a man’s role in his family.

Our culture is horribly confused on this point. Weber sums it up neatly when he says, “Men, as husbands you have been given a trust, a stewardship, a responsibility, a duty, to husband, or manage, or care for the gifts of your wife.”{2} Part of my job as a husband is to create an environment in our home that allows my wife to be all God created her to be. She needs to be able to trust my leadership. She needs to know I will stand up for her and provide a secure environment. She needs to be comfortable in seeking my guidance and instruction. Finally, she needs to know that she is loved with a Christ-like self - sacrificing love. Weber adds, “A woman was made to be provided for, protected, and cared for. A man was made to be a provider, protector, and caregiver. Nothing is more pitiful than a man forfeiting his masculinity or a woman her femininity by transgressing the created order.”{3}

Weber’s discussion of a man and his lady provides numerous helpful insights, exercises, and illustrations on how a man is to love a woman. One commentator suggested that the chapter

titled, “Does Anyone Here Speak Woman?” is worth the price of the book alone. Weber encourages men to realize that since men and women are inherently different, a man needs to learn a woman’s language, to live with her in an understanding way as Peter commands (1 Pet. 3:7). We need to put our analytical minds to work to understand how she is put together. We won’t ever get all the way there, but after all, a little mystery is what keeps marriage exciting, fresh, and interesting anyway.

Weber devotes three chapters to the incredible power of fathering. Our culture today is in dire need of real men willing to father their children. So many dads are absent either physically or emotionally. This alone accounts for so many wayward kids, both male and female alike. A father has a powerful multigenerational impact on his sons and daughters whether intentional or not. It’s the nature of God’s design.

Like arrows in a quiver, each child needs to be constructed, aimed, and released according to the bent God has given them. Skillful parenting does not come naturally, especially in our culture today that is so confused and off course. It will require biblical and rational thinking in advance.

A Man and His Friends

In his book, *Tender Warrior*, Stu Weber titles the first chapter about a man and his friends, “Real Men Stand Together.” In our increasingly mobile and fragmented society, it’s harder than ever for men to know each other well enough to be willing to stand together. Upon hearing that Jonathan was dead, the future King David commented that Jonathan’s love was wonderful, more wonderful than that of a woman (2 Sam. 1:26).

Men who have weathered tough times together, even fought together, develop a bond that can be stronger than that between a man and a woman. But how many men have such a friendship? There are numerous forces in our culture that

leave most men isolated and cut-off. We see the lonely male model in the movies all the time. Characters played by John Wayne, Bruce Willis, Sylvester Stallone, and Arnold Schwarzenegger tend to be the isolated lonely male types: able, or perhaps, forced to handle life's pressures on their own.

Neighborhoods rarely have block parties today. We live in our closed up homes (no open windows in summer or people out on the porch on summer evenings) with tall fences keeping things private. We drive our own cars to work, work long hours, and relax in front of the TV or a book isolated from those around us. A sense of community has been lost in our cities and even small towns. Men, therefore, have no one to connect with outside of office mates or sports teammates. We think we do just fine on our own, thank you.

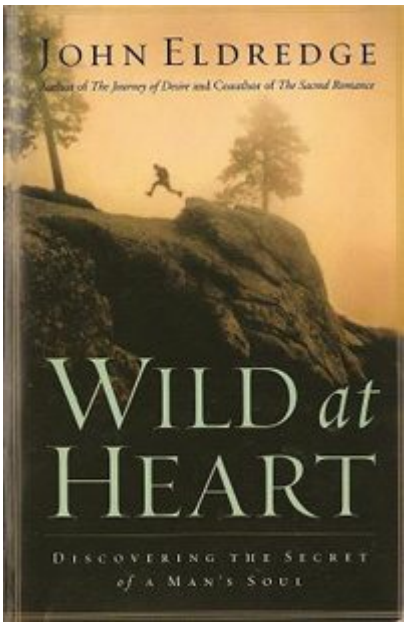
However, as we grow older, we hunger for someone of the male species to truly share what we are experiencing. But there is no Jonathan or David, someone I fought with in the trenches, someone who really knows me and my successes and struggles.

Men long for someone to lock arms with in a struggle greater than themselves. Looking again at David and Jonathan, we learn in 1 Samuel 14 that Jonathan was a warrior just like David, and when David slew Goliath (1 Samuel 18), Jonathan immediately made a connection. They had shared values. They became one in spirit. Jonathan made a covenant with David that basically said what's mine is yours. They developed an unselfish love for each other. Jonathan exhibited a deep loyalty to David when he intervened on his behalf when his father, King Saul, sought David's life.

In 1 Samuel 20, David and Jonathan expect that they may never see each other again and weep in each other's embrace. They were transparent. They weren't afraid to be emotional in the other's presence. Do you have a friend like that? I encourage you to seek a friend who shares your values, and work to

develop an unselfish, loyal, and transparent relationship that the Lord will use to guide you through today's muddy waters.

Battle to Fight, an Adventure to Live, and a Beauty to Rescue



In the continuing parade of books from Christian authors for men comes a book that has taken the evangelical community by storm. Counselor and writer John Eldredge claims that men are wild at heart and desperately need to recapture this essential part of maleness. In his book, *Wild at Heart*, Eldredge claims that every man needs a battle to fight, an adventure to live, and a beauty to rescue.

Eldredge's triumvirate lines up quite well with Weber's four pillars, the Heart of the King, Warrior, Mentor, and Friend. Both Weber and Eldredge assert that a man needs a cause outside himself to fully live out the image of God in him. They just use different terminology.

However, *Wild at Heart* sometimes leaves you a little too wild. Yes, men need to be free to explore that wild side, but responsibility is not just a duty that shackles a man's God-given wildness. Eldredge can sometimes run roughshod over the state of men in the church and seems to encourage men to be little boys rather than grown men with both needs *and* responsibilities.

For instance, Eldredge uses many illustrations from physically demanding backcountry experiences to highlight his call to be wild at heart. Early in the book he retells how he and his sons faced the flooded, muddy, and debris-filled Snake River with nothing but a canoe. He says, "I have never floated the

Snake in a canoe, nor any other river for that matter, but what the heck. We jumped in and headed off into the unknown, like Livingstone plunging into the interior of dark Africa."{4} Wild? Sure, but reckless and irresponsible, too!

But despite the occasional excess, Eldredge uncovers that same need for a cause outside himself, and identifies it as a battle to fight, an adventure to live, and a beauty to rescue.

Eldredge proclaims that there is something fierce inside every man, whether it is slaying the dragons of business or whacking a little white ball on a golf course. Men naturally compete. If there is no winner, we quickly get bored.

The adventurous spirit is not just about having fun. Adventure requires something of a man. Deep down inside we wonder if we have what it takes, whatever the task that presents itself. Most men watch war movies wondering how they would have responded if presented with the same situation.

But there's more. Men need someone to fight for and with. A companion. A beauty. A helpmate. Adam had a great and wonderful world to explore at his creation. But God recognized that he needed something else, a helpmate suitable for him.

In summary then, at the heart of every man there is something fierce, wild, and passionate. But all this can only be properly harnessed as we seek a relationship with the Ultimate Tender Warrior, Jesus Christ. But in a fallen world, we are all walking wounded. If that is the case, does Eldredge have a recipe for healing?

Healing the Wound

John Eldredge likens many men to a huge male lion in his local zoo. The lion, as powerful and ferocious as he is, is caged in a small cell where he lies around, bored except at feeding time, and is but a shadow of what he was created to be. In a fallen world, where our enemy prowls around looking for

someone to devour, most if not all men have been wounded at the heart of their masculinity. It has sapped their strength and put them on the sidelines.

Most often this wound comes from someone close to us, either a parent (usually the father), sibling, relative or peer. Most of us can remember someone telling us, either by words or actions, that we don't have what it takes to be a man. This can often be due to a series of events over an extensive period of time rather than to a single event. As a result, we go through life wondering if we have what it takes.

In today's culture, this wound can come from a school system that is telling our boys that there is something wrong with them. Boys are far more likely to be medicated than girls, and often it is only for just being boys. And with so many fatherless homes due to either physical absence or an extremely passive father who never gets involved, nobody is showing boys and young men what it means to be a man.

So men will often try to answer their question, to heal their wound, by going to some very unwise places. Some rebel, others try to earn their father's respect by becoming driven overachievers. Others retreat into passivity or are haunted by pornography or even drugs. Some search for their masculinity from women or maybe just one woman. But femininity can never bestow masculinity.

There ends up being a false self we create to distance ourselves from the question we fear, that gives others the impression we have it all figured out, when deep inside everything is mush. The answer lies in going to the One who created us for a very specific purpose and indeed knows who we are (Psalm 139). Jesus never shied away from acknowledging that He was totally dependent on the Father. Many times He said things like, "I and the Father are one." Or "I do nothing apart from the Father."

We have been created to be dependent on God, yet we as men continually try to convince ourselves we can do it on our own. In order to bring us to a point of recognizing our daily need to walk with Him, the Lord will bring us through trials that force us to depend on Him. The false self is stripped away until there is nothing left for us to do. Here and only here can the wound be healed. The Lord will walk us through an intensely personal awakening to reveal whom He created us to be if we will only trust Him.

So when troubles arise, instead of whining or complaining, we should ask, What is it the Lord wants me to see? What is He trying to teach me? What do I need to learn? Then we will be on the road to true masculinity.{5}

Notes

1. Stu Weber, *Tender Warrior* (Sisters, Ore.: Multnomah Books, 1993), p. 43.
2. Ibid., p. 92.
3. Ibid., p. 92.
4. John Eldredge, *Wild at Heart* (Nashville: Thomas Nelson, 2001), p. 5.
5. This last section summarizes chapters 3-7, which are the heart of Eldredge's book, *Wild at Heart.* When reading *Wild at Heart,* one needs to be aware that Eldredge's language is sometimes imprecise and can leave the wrong impression. I'm convinced that Eldredge sees that the real battle we all must face is with spiritual forces, and that our physical tests of strength are only rehearsals for the real thing. But his book can be misinterpreted as an excuse for men to overindulge in risky behavior and some men to take dangerous risks they are not prepared for. For some, *Wild at Heart* can only serve as an appeal to the flesh.

So, is the tender warrior wild at heart? Yes, but not to the degree some choose to believe.
Eldredge uses a great illustration on page 83. “Yes, a man is a dangerous thing. So is a
scalpel. It can wound or it can save your life. You don’t make it safe by making it dull; you
put it in the hands of someone who knows what he’s doing.” Only the Ultimate Tender Warrior, Jesus
Christ qualifies.

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The Controversy over Evolution in Biology Textbooks

Texas, Textbooks and Evolution

Public school textbooks are big business in Texas. Texas is the second largest purchaser of textbooks behind California. Texas also employs an extensive review process which involves input from the public. Independent school districts in the state of Texas can purchase whatever textbooks they prefer. But if they want state assistance in the purchase of textbooks, they’d better pick those texts that are recommended by the State Board of Education.

Publishers know that whatever books Texas approves, other states will adopt as well. Therefore the decisions by the Texas State Board of Education regarding textbooks influence what many students across the country will be reading over the

next few years. Publishers pay very close attention to what goes on in Texas.

Evolution has been a contentious issue before the State Board for decades. A few years ago, they passed a resolution that said textbooks were to be free from factual errors and that the information in the texts should allow students to "analyze, review, and critique scientific explanations, including scientific hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information."

This certainly sounds scientific and fair. I mean, who doesn't want both sides of scientific controversies presented? Any "scientist to be" needs to be able to analyze, review, and critique scientific explanations. Scientists rarely want to just take someone's word for something. Scientists tend to be skeptical in nature. That's a good thing. Students ought to be encouraged and trained to think this way.

That is, they ought to be trained to think this way about everything in science, except evolution. Evolution has become the unassailable myth of modern science. No dissension allowed. No controversies accepted. No challenges tolerated. Evolution is a fact and anybody who doesn't think so is ignorant, dishonest, or religiously motivated.

But for some reason, skepticism about evolution and Darwinian evolution in particular just won't go away. The dissenters are also growing in number and levels of education. So when the Texas State Board of Education announced its two public hearings in the summer of 2003, the battle lines were clearly drawn. Skeptics of Darwinism came loaded with careful examinations of the textbooks up for adoption, pointing out inaccuracies, falsehoods, and skimmed-over controversies. No one came to include creation or intelligent design into the textbooks.

Defenders of evolution came loaded with little else besides crude attempts to discredit their critics and scary words of warning about attempts to get religion into the science textbooks.

What’s Wrong with the Textbooks As They Are?

If you have occasion to pick up a high school biology textbook, you quickly realize that the process of writing it must be a daunting task. The amount of detailed information they contain today over a wide range of biological phenomena is truly staggering.

The reality that they contain errors or out of date material can be easily understood. You would think that authors and publishers would welcome those who spot these problem areas and take the time and effort to point them out. For the most part this is indeed the case. Except when the errors concern the presentation of evolutionary theory. Pointing out factual errors, exaggerated claims or poor logic in the presentation of evolution suddenly becomes suspect. One’s motives should be questioned. Evolution is a fact, after all, and surely no one thinks that evolution as presented in textbooks should be altered in any way.

I’m being facetious, of course. Evolution should be open to scrutiny as much as any other area of biology, but it isn’t. Some mistakes in biology textbooks have persisted for decades, despite efforts to point them out and seek their removal or correction.

A classic example involves the Miller-Urey experiment. In 1953, Harold Urey and Stanley Miller published the results of an experiment that was meant to simulate the production of biochemicals necessary for life from gasses that were thought to be in earth’s early atmosphere. Among a host of meaningless organic compounds, Miller and Urey found a few amino acids,

the building blocks of proteins.

The experiment caused quite a sensation and launched the origin of life field with a bang. Over the years, however, numerous problems showed up that invalidated the experiment. Chief among these problems was the determination that the atmosphere they used—ammonia, methane, water vapor, and hydrogen gasses—did not represent the early atmosphere. These hydrogen rich gasses were replaced with carbon dioxide, carbon monoxide, nitrogen, and water vapor. When these gasses are used, the experiment is a dismal failure. Trace amounts of the simplest amino acid, glycine, sometimes appears, but not enough to get excited about.

All this has been known since the late 70s. But over thirty years later, textbooks represent the Miller/Urey experiment as if it still represents a realistic simulation. Why? Because it's the only experiment that works. And there needs to be a naturalistic story of where life could have come from.

Other problems remain in the infamous and fraudulent embryo drawings of Ernst Haeckel, the newly discovered problems with the peppered moth story, the startling evolutionary problem of the Cambrian explosion, and many others. Some of evolutionists' most cherished examples of evolutionary principles have fallen on hard times.

A Public Hearing in Texas in July 2003

The Texas State Board of Education is a powerful group of people. Every six years they evaluate textbooks for use in the Texas public schools, and many private schools and public schools from other states follow their lead. Part of the reason for this is the extensive review process the board employs.

Not only do the fifteen elected Board members review the texts, but a committee of educators from the Texas Education

Agency also reviews them, and the public is invited to state its opinions as well. The Board reviews textbooks every year but they cycle through several categories every six years. The year 2003 was the year for biology textbooks.

I attended the first public hearing on July 9th in Austin, Texas. Citizens of Texas who wish to testify need to sign up about two weeks prior to the hearing. Each testifier is allotted three minutes, which is closely timed, and then a few board members may ask a few questions.

Three minutes isn't very long. It's about the length of one of our daily radio programs. So whatever you need to say, you'd better say it concisely and quickly. I briefly presented my scientific credentials and addressed problems with the Miller-Urey experiment, the Cambrian explosion, and the mutation/natural selection mechanism of evolution.

I kept my remarks strictly along factual lines and discussed the evidence, with no mention of a Creator or Intelligent Design. But before the meeting even started I knew I was in for a long afternoon. At noon, one hour before the meeting, a group from The National Center for Science Education (NCSE) gave a press conference warning the media to expect another attempt from pseudo-scientists to try to include creationism into the textbooks.

Actually of the forty or so people signed-up to testify, only three of us were there to criticize evolution and no one was there to argue for creation. In the minutes before the meeting there was suddenly a horde of media looking for me and asking for interviews. Thanks to the NCSE I was provided with opportunities for nearly a dozen interviews, mostly TV. I was able to explain our side of the story and correct the NCSE's distorted paranoia.

The defenders of evolution came to say that evolution ought to be left alone: don't cave in to the pressure! But who was

exerting the pressure? There were only three of us and over thirty of them. We came with scientific criticisms. They offered little else besides blatant misrepresentations and character assassinations.{1} These testimonies primarily set the stage for the September hearing.

A Second Public Hearing in September 2003

A major player in the entire hearing process was the Discovery Institute (www.discovery.org), a public policy institute out of Seattle, Washington. Discovery sponsors a Center for Science and Culture that provides limited funding for skeptics of Darwinism and proponents of Intelligent Design. I have received two limited fellowships from Discovery to help write a new edition of my book with Lane Lester, *The Natural Limits to Biological Change.* It was Discovery that contacted me about possibly testifying at the July 9th hearing.

Because of the intense media coverage of that hearing, the folks at Discovery spent a great deal of time addressing the media, correcting their errors and explaining the real story. As the September 10th hearing approached, Discovery sent out press releases and sent a team to Texas to hold press conferences and potentially testify before the State Board of Education.

Because of all the media attention, that ranks of testifiers swelled to unmanageable portions. Over 150 people signed up to testify and they all expected their three minutes. You do the math! This was going to be a long meeting. Most of those associated with the Discovery Institute and a Texas-based organization, Texans for Better Science Education (www.strengthsandweaknesses.org), gained the early testimony slots when the board members were most alert. The meeting dragged on until 1 a.m., a full twelve hours.

Once again, those of us criticizing the textbooks came prepared with specific criticisms of the textbooks and the

other side simply wanted to say that we had no place at the table of discussion and should be ignored because we are pseudo-scientists and religious fundamentalists.

Most distressing of all was a pastor from a large Southern Baptist Church in Austin who came to tell the Board that evolution was of science and creation was of Genesis and faith and that the two had nothing to do with each other. He went on to add that he and everyone else knew that the dissenters from evolution were only there to protect their religious beliefs. He received a thunderous round of applause from the theistic evolutionists, agnostics and a theists in the crowd.

How sad that this brother in Christ was so deceived and even pretended to know why I was really there, having never spoken to me, nor had we even ever met. This broke my heart, as did other pastors who came to help but only showed their lack of knowledge about evolution and ended up hurting more than they helped.

While many evolutionists embarrassed themselves by exhibiting a childish paranoia, so did many Christians who just really didn't understand the issues. I'd love to do a Probe Ministries Mind Games Conference in all these churches—they need it.

Was Anything Accomplished?

There was heavy media interest from July through early November when the Texas State Board of Education made their final decision. Special interests from both evolutionists and those dissenting from evolution were involved.

Those who wanted to strictly follow Texas guidelines to teach evolution, but remove factual errors and include both strengths and weaknesses of evolution hoped to vote on each textbook individually. But the more liberal majority decided to vote on adopting the Texas Education Agency's

recommendation to approve all eleven textbooks. This motion passed by a vote of 11-4. Only two textbooks had made sufficient changes to be judged "conforming."{2} The other nine would have been judged "non-conforming," which would have still made them eligible to be purchased with state funds. Only a book judged "rejected" would not be purchased by the state.

This was a small setback. But some significant changes were made. The fraudulent Haeckel drawings of vertebrate embryos, suggesting far more evidence for evolution than actually exists, have been virtually removed entirely. The fraud has been known for over 100 years. Two textbooks (Holt and Glencoe) have now inserted acknowledgments that the Miller-Urey origin of life experiment was based on ideas about the earth's early atmosphere no longer accepted by scientists. Another textbook has qualified an earlier claim made about evolutionary intermediates. The original textbook claimed that "since Darwin's time, many of these intermediates have been found." The revised text now reads: "Since Darwin's time, some of these intermediates have been found, while others have not." {3}

The journal *Science* matter-of-factly reported, "In response, some textbook publishers made minor changes, including replacing embryo drawings with photos and dropping the term 'gill slits.' One also eliminated the assertion that Darwin's theory is the 'essence of biology.'"{4}

While many of these changes are small, the public perception of the debate seems to be changing as evidenced by this statement from a *Dallas Morning News* editorial from November 5th:

> *"This ought to be easy; science is supposed to deal solely in facts. But the teaching of evolution is so entangled with politics that warring factions can't even agree on the facts. (What did the flawed Miller-Urey "origin of life" experiment*

prove, if anything, for example?) This is an injustice to the people of the state, who have a right to expect their children's biology textbooks to be a straightforward presentation of the most up-to-date scientific information, facts not privileged from a religious or anti-religious perspective."

Other errors and problems still remain.{5} But this has been a good start.

Notes

1. Sample testifier statements:

   - *Steven Schafersman, President of Texas Citizens for Science: "I am aware that the Discovery Institute, a creationist organization out of Seattle, Washington, has become involved in the Texas education process just as they did recently in Kansas and Ohio. They have prepared written testimony about the books submitted here and apparently deputized a member of a Texas creationist organization, Probe Ministries, to speak on their behalf." (Hey, that's me!)*
   - *Ms. Amanda Walker: "So what we are really doing here is talking about using the political process to override the science process to suit creationists whose theories can't stand up in the global scientific community"*
   - *Dr. David Hillis, Professor of Biology, UT Austin: "The objections to evolution in textbooks that you have heard are not about science or facts. They are about pushing a religious and political agenda."*
   - *Ms. Kelly Wagner: "If you consider at all adding intelligent design to any of these textbooks, I would like you, again, this is a very, very personal*

> *question. I would like you to think, am I furthering medical research? Or am I contributing to Kelly Wagner's early death?" Ms. Wagner felt that "weakening" evolution in the high school biology textbooks would compromise medical research and therefore that research on her heart condition could be compromised.*

2. Most likely these would have been the Holt Biology book and the Glencoe Biology book, both of which made numerous constructive changes.

3. Holt Biology, p. 283

4. Constance Holden, "Texas resolves war over biology texts," *Science* Vol. 302(Nov.14, 2003):1130.

5. Use this website from Discovery for full report on the Texas debate. http://www.discovery.org/csc/texas/.

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"Is Cloning Inherently Evil?"

I have several questions about cloning.

1) I understand the dangers of cloning, which in themselves are enough to warrant banning the practice. But I'm trying to understand if there is there anything inherently evil or anti-biblical about cloning (for reproductive purposes). Is it simply a technology, comparable to in vitro fertilization, that could be used for good or evil, or is there something inherent in it that is against God's will? (Perhaps removing the nucleus of the original egg cell?…I just don't know)

2) I'm wondering about the biblical laws against sexual relations with a close relative (brothers and sisters, nieces and nephews, etc. from Leviticus 18). Is it true that children born to parents who are close relatives are more likely to be deformed? And if so, is there a known reason this occurs genetically? And to relate that to cloning, is this possibly why clones are often deformed? I wonder if the deformations are a result of problems with the "process" or if there's a "built-in" reason that cloning will always, on the whole, fall short of sperm-and-egg conception?

3) How long would the cloned human embryo in November 2001 have lived in order to divide to six cells? Is that a matter of seconds, minutes, hours, days? I imagine it's very short but wondered how short.

You ask some good questions. Here are my brief responses.

> *Is there anything inherently evil or anti-biblical about cloning?*

1. The only inherent evil in cloning that I see is the resulting devaluing of the individual, since you have brought this particular person into existence for a reason that is beyond simple reproduction in marriage. This places unrealistic expectations on the clone and tells them their value lies in those expectations and not on their intrinsic value as a human being. Some hold that the process itself is evil since it clearly deviates from the God-ordained union of sperm and egg. But that is also the case with identical twins. The second twin was the result of a budding process delayed from the initial union of sperm and egg, similar to cloning.

> *Is it true that children born to parents who are close relatives are more likely to be deformed? And if so, is there a known reason this occurs genetically?*

2. Children resulting from incestuous relations do have a higher incidence of genetic deformities which is the reason for state laws forbidding them. All of us harbor harmful recessive genes in single copies that are not expressed because they are masked by normal dominant gene copies. Siblings and first cousins will share many of these same recessive genes because the genes came from the same parent or grandparent. But when close relatives have sexual relations and a child results, these shared family recessive genes can be paired in a homozygous condition which allows the recessive harmful gene to be expressed. Such children are not always born with these defects but the chances are much higher than normal.

But this probably has little to do with the problems faced by cloned embryos. Nobody really knows what is going wrong with the cloned embryos but my suspicion is that the process of removing the original nucleus in the egg and the subsequent placement of the new nucleus in the egg cell disrupts the complex and intricate arrangement of important signal proteins in the egg cytoplasm and membrane. Rearrangment of this critical spatial orientation could put important proteins in the wrong places, meaning early development signals are missed or misplaced. This would have devastating consequences for the embryo. If this is the case, then at least current cloning techniques may never be able to escape the low success rates currently experienced.

> *How long would the cloned human embryo in November 2001 have lived in order to divide to six cells?*

3. The cloned embryo which reached the six cell stage was probably no more than 3-4 days old when it stopped dividing.

Hope this helps.

Ray Bohlin
Probe Ministries

The Galapagos Islands: The Bohlins' Visit



The Galapagos Islands, off the coast of Ecuador, are where Charles Darwin received the inspiration for the theory of evolution. In observing the islands' ecosystem and how its bird and reptile inhabitants compared to similar South American cousins, Darwin assembled what has become the driving philosophy of science.

In May 2003, Dr. Ray and Sue Bohlin visited the Galapagos Islands with a different perspective, focusing on intelligent design and the natural limits to biological change. Here is their report.

1 – Why Visit the Galapagos Islands?

2 – Thursday PM: Bartolome

3 – Friday AM: Punta Espinosa

4 – Friday PM: Tagus Cove

5 – Saturday AM: Punta Moreno

6 – Saturday PM: Urbina Bay

7 – Sunday AM: Darwin Research Station

8 – Sunday PM: Santa Cruz Highlands

9 – Monday AM: Beach Visit

10 – Galapagos Wrap Up: ICR Lecture, What It All Means

The Galapagos Islands: Evolution’s Sacred Ground

Dr. Bohlin helps us understand the significance of the Galapagos Islands in the birth of the evolutionary theory of Charles Darwin. Based on personal observation on these unique isolated islands, he explains why he is not convinced that the animals of these islands make a case for the evolution of all living things.

What’s So Important About the Galapagos Islands?

The Galapagos Islands are located in the Pacific Ocean, 650 miles off the coast of Ecuador in South America. They are isolated from any other island group or land form.

What’s so important about the Galapagos Islands? Here are four reasons:

First, because they are extremely isolated, the Galapagos Islands are home for dozens of species of both plants and animals found nowhere else in the world. The Galapagos Tortoise, for example, is the largest reptile found anywhere on the planet, and it lives longer than any animal known to man. The oldest is currently over 170 years old and lives in a zoo in Australia. Other unique animals include the Flightless Cormorant, the Marine Iguana, the Galapagos Penguin, and Darwin’s Finches.

There are even unique forms of plants including numerous forms of cacti and at least thirteen species of sunflower or daisy-like plants, one of which is a “sunflower” tree with bark and no tree rings.

Second, Darwin's visit to the Galapagos for five weeks in 1835 on the HMS Beagle provided the starting point for the development of his theory of natural selection. Darwin had believed that God individually created each species. However, when he saw and studied variations between similar species from island to island, he correctly reasoned that a natural process made more sense. However, he eventually threw the baby out with the bathwater by reasoning that all species arose by a natural process through natural selection. Darwin's Finches continue to be used as a textbook example of evolution today.

Third, similar to the Hawaiian Islands, the Galapagos Islands are volcanic. There is a geological hotspot deep in the earth's crust underneath the Pacific tectonic plate where magma flows to the surface. The hotspot remains stationary. However, as the Pacific plate moves from west to east, new volcanic islands begin to appear beneath the sea until they eventually poke above the surface to create a new Galapagos island. The youngest of the islands is the island of Fernandina which is the westernmost island. It is estimated geologically to be 800,000 years old. The oldest islands off to the east are estimated to be 3 million years old.

Fourth, two major ocean currents affect the climate of the Galapagos. First, from the south comes the Humboldt Current from Antarctica. Second, a deep-water current comes from the west. Upon reaching the islands, this cold deep water current brings with it a large supply of nutrients that feed the bottom of the food chain. Consequently the western waters of the Galapagos are colder and richer in marine life. These cold-water currents keep the temperature of the islands rather moderate for islands on the equator. In the Galapagos, the waters usually range from the 60s to the 70s F (15-22 degrees Centigrade), creating a more temperate climate for these equatorial islands.

All these factors combine for a most unique experience. The Galapagos have been a "poster child" for evolution ever since

Darwin. We'll see how well that holds up.

What Evidence of Evolution Do Darwin's Finches Provide?



Click to see Ray's picture report of his trip to the Galapagos Islands

In May 2003 I had my first opportunity to visit the Galapagos Islands with a group led by several scientists from the Institute of Creation Research. Our goal was simply to see for ourselves many of the unusual animals and plants which so heavily influenced Darwin in the development of his theory of natural selection.

Look in almost any high school biology textbook and you will find some mention, if not a whole section, on what are now known as *Darwin's finches*. Darwin's finches are comprised of thirteen different species of small finches that arose from a single species that colonized the islands. The finches have adapted to differing food sources ranging from different size seeds, to insects, to cactus flowers, to even blood. The major feature of these finches that has changed is the size and shape of their beaks, but the differences are very subtle.

When we got our first glimpse of the finches we found out just how subtle the differences in beak size and shape really are. Without being able to compare two or three birds right next to each other, we found it virtually impossible to identify them. This observation confirms recent research by Princeton researchers Peter and Rosemary Grant. The Grants have come to

the Galapagos Islands every year since the mid-1970s. They have banded, measured, and weighed literally thousands of finches of nearly all species.

Of the thirteen species, six are called ground finches, and they feed on different size seeds and cactus flowers. These finches particularly differ almost exclusively in their beak size or shape. The Grants have found that these finches will "evolve" to larger and smaller beaks depending on the seed availability based on a wet or dry rainy season.

They also learned that most of these six ground finches will interbreed, and the hybrids are fertile, meaning they can also breed among themselves. This information is quite startling because it means that these six species may actually be one species. And the actual degree of change is quite miniscule. The average beak size may change by only a half a millimeter from dry to wet season. These six finches are also indistinguishable in their mtDNA.

These species are so similar in the field that some of the workers and guides from the Darwin Research Station on the Galapagos have a saying: "Only God and Peter Grant can identify Darwin's finches."

As an icon of evolution, the finches are far less than hoped for.{1} Yes, they do document the reality of natural selection. But the degree of selection is quite small and seemingly insignificant. They are a wonderful example of the ability God has given His creatures to be fruitful and multiply in a fallen world.

Why Save the Galapagos Tortoise?

The word Galapagos is Spanish for *saddle*. The islands were named for a particular variety of Galapagos tortoise known as the saddleback. These tortoises inhabit the drier islands and feed primarily on many varieties of prickly pear cactus. The

saddle refers to a striking feature of their shell that forms a large space just above the neck that allows the tortoise to reach high to grab a succulent piece of cactus.

Since the islands were named for the saddleback tortoise they are a symbol of the islands. As I mentioned earlier, these tortoises are the largest living reptiles. They are also the longest living animals in the world. There is a female Galapagos tortoise in a zoo in Australia by the name of Harriet. Harriet was reportedly taken from the Galapagos Islands by Charles Darwin himself. She eventually was taken to Australia and is reported to be 173 years old, born around 1830. This would make her the oldest living creature on earth.

Harriet is a dome tortoise as opposed to the saddleback variety. Dome tortoises eat low-lying grasses, vegetation and fruits. When Darwin came to the Galapagos Islands in 1835, there were approximately 300,000 tortoises on eleven islands. There are five different varieties on the largest island, Isabella. The five varieties are found associated with the five large volcanic craters where water accumulates and grass is abundant. The other ten varieties inhabited a specific island, one variety of tortoise per island.

The islands were a favorite stopping place for whaling ships and ships crossing the Pacific. Sailors would come on shore and round up twenty to thirty tortoises to be used as food on the long voyage. A tortoise could remain alive with little or no food or water for months, providing fresh meat for the long voyage.

In addition, as people began colonizing the islands, they brought with them rats and mice that would eat the tortoise eggs. Introduced goats and pigs competed with the tortoises for food. Consequently, the tortoise population has been reduced to around 20,000. Some of the specific island varieties have gone extinct. Lonesome George has become the symbol of the plight of the giant tortoise. He is the only

remaining member of the tortoises from Pinta Island, and he seems to be refusing to breed.

The Darwin Research Station on Santa Cruz Island in the Galapagos is involved in an extensive captive breeding program, trying to reestablish the tortoises in areas where they have disappeared. But why? If evolution is true, then let natural selection take its course. If they survive, fine. If not, that's just life in an evolutionary world. In Genesis, however, we are commanded to have rule and dominion over God's creatures. Wherever practicable, we have a biblical mandate to preserve the creatures He has made in the environment He provided for them (Psalm 104). So the Darwin Research Station is unwittingly acting on a Biblical worldview.

Strange Creatures of the Galapagos

Though the Galapagos Islands are world famous, they didn't particularly impress Darwin when he first arrived. In his book, *Voyage of the Beagle*, he wrote, "Nothing could be less inviting than the first appearance. A broken field of basaltic lava, thrown into the most rugged waves, and crossed by great fissures, is everywhere covered by stunted, sunburnt brushwood, which shows little signs of life."{2}

Though we may disagree with Darwin on many of the conclusions he drew from his observations of the Galapagos wildlife, he was nonetheless an excellent observer and rather humorous reporter. For instance, one of the well-known inhabitants of the Galapagos is the marine iguana, the only lizard in the world to feed in the sea. Darwin described it this way,

> *"It is extremely common on all the islands throughout the group, and lives exclusively on the rocky sea-beaches, being never found, at least I never saw one, even ten yards from shore. It is a hideous-looking creature, of a dirty black colour, stupid, and sluggish in its movements."{3}*

Darwin aside, these creatures are fascinating. They feed on algae and seaweed close in to shore. They swim easily with a serpentine movement with their limbs tucked close to their body. Since the water is so cool, they need several hours to sun themselves before entering the water for breakfast. They will only stay in the sea for about twenty minutes and never longer than an hour. When warming themselves, they lie perpendicular to the sun so their body is fully exposed to the sun. When maintaining their temperature they will face the sun directly and lift their chests off the ground to allow the sea breeze to provide ventilation.

The marine iguana's cousin, the land iguana eats cactus pads and leafy vegetation and never ventures toward the sea. They also didn't impress Darwin terribly much. He described them this way.

> *"We will now turn to the terrestrial species, . . . Like their brothers the sea-kind, they are ugly animals, of a yellowish orange beneath, and of a brownish red colour above: from their low facial angle they have a singularly stupid appearance. . . . In their movements they are lazy and half-torpid."*{4}

Evolutionists suggest that these two species derived from a common ancestor over ten to twenty million years ago (although the oldest island is only 3 million years old!). But we learned that these two species would interbreed on occasion. The hybrids live for only seven to eight of the usual forty years, and their eating habits are strangely intermediate. The hybrids will eat cactus but not leafy vegetation, and will eat seaweed and algae but only at low tide when they can scramble over the rocks to get it. They won't enter the water. This level of hybridization makes it unlikely they are as old as evolutionists suggest.

Evidence for Evolution on the Galapagos Islands?

Thus far we have reviewed some of the amazing animals and plants found on the Galapagos Islands in the Pacific Ocean. The mockingbirds, tortoises, and finches played a role in the formulation of Darwin's theory of natural selection. The Galapagos Islands and their varied and diverse wildlife continue to serve as examples of evolutionary change.

In my brief five-day visit to the Islands, I made a number of observations that cast doubt on the evolutionary significance of these islands.

Earlier this week we talked about Darwin's finches. These thirteen finches most likely are descended from a flock of more than thirty finches that colonized the islands about 2 million years ago according to evolutionists. They vary considerably in their beak size and shape as they have adapted to different food sources. As much as these finches have been studied, there is still a great deal we don't know.

For instance, we know nothing of the genetics of beak size and shape. It's certain that beak size is a heritable trait, but just what the genetic cause of the variation is, we don't know. As we said earlier, there may be as few as six actual species of finches on the islands, not thirteen. The changes in beak size and shape may simply have been due to genetic variation the original flock carried with them to the islands in the first place.

The changes between species are very small as we found out trying to identify them. The selection that has been documented varies only from dry to wet years and no overall trend has been observed. So Darwin's finches are not much of an example of evolution after all.

Another strange creature on the Galapagos Islands is the

flightless cormorant. Cormorants are birds that inhabit the shores of lakes, rivers, and oceans. They usually feed by diving into the water for fish. Cormorants will then perch above the waters surface and dry their feathers by holding their wings out for maximum air exposure. Flying requires dry wings.

The flightless cormorants of the Galapagos have wings so reduced that they are unable to fly at all. They catch fish by swimming in the water much as a penguin does using their large powerful feet for propulsion. The reduced wing size is probably due to a single mutation that short-circuits wing development in the cormorant chick. The change is indeed quite dramatic, but the change involves a loss of a feature, not the gain of a new adaptation. This is often the case in the origin of new adaptations. Something is lost, not gained. Evolution must be able to explain the gain of new features, not simply explain how an organism managed to survive when it lost an important structure. So even the dramatic case of the flightless cormorant is not real evidence for evolution.

The Galapagos are a naturalist's wonderland. They guard their mysteries in a shroud of isolation and time. They are a good example of the fact that there is much to learn about the world God created.

Notes

1. Jonathan Wells, *Icons of Evolution* (Washington, DC: Regnery Publishing 2000), p. 159-175.

2. Charles Darwin, *The Voyage of the Beagle*, Harvard Classics (Cambridge: Harvard University Press), p. 377-378.

3. Ibid, p. 390.

4. Ibid, p. 392.

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“Can’t Homosexuality Be Seen as Population Control?”

From an evolutionary perspective, wouldn’t homosexuality be seen as a population control? This would then make it useful, contradicting to your assumptions made in the obviously biased partial commentary.

Many evolutionary biologists have wrestled with the widespread presence of homosexuality in human populations. Essentially, their quandry is not that homosexuality is present in large numbers (2-3% at most in any population), but that it is found in virtually all cultures and societies at least to some degree. Evolutionarily, this implies that there is some evolutionary benefit and some genetic component, which usually means it contributes to survival and reproductive success in some way. But how can that be when homosexuals reproduce at a far lesser rate than heterosexuals? The original sociobiologist, E. O. Wilson, stated the problem this way: “The homosexual state itself results in inferior genetic fitness, because of course homosexual men marry much less frequently and have far fewer children than their unambiguously heterosexual counterparts.” (*Sociobiology: The New Synthesis*, Belknap/Harvard, 1975, p. 555.) Evolutionary explanations require an immediate genetic benefit for the individual expressing the trait or behavior. Things such as “population control,” as you suggest, require a cooperative spirit (technically referred to as group selection) that is normally considered outside direct genetic influence and is therefore rejected by most evolutionary biologists.

Most evolutionary biologists have tried to deal with the problem by one of two suggestions. First, the genes involving

homosexuality (if there are indeed any at all, but so far there is no evidence for any) could be advantageous somehow in the heterozygous state (individuals who have one copy of a gene leading to homosexuality but not both and therefore not truly expressing the trait), and therefore the gene or genes are kept in the population that way even though when both copies are expressed in the same individual (homozygosity) reproduction is prevented. Second, some have suggested that homosexuals may gain a genetic fitness by being primarily helpers in raising offspring of their brothers and sisters, therefore preserving their own genes through aiding the survival of their nieces and nephews who carry about 1/8 of their own genes (technically referred to as kin selection). Aiding the survival of eight or more such nieces and nephews preserves a full complement of your genes into the next generation which is how natural selection supposedly works. Both of these options may at first sound reasonable but, neither of these options has a shred of evidence in support of it.

Respectfully,

Ray Bohlin, Ph.D.
Probe Ministries

“How Do Christians Respond to the Fact of Evolution?”

After reading one of your articles on Creation vs. Evolution I understood every aspect of their respective arguments, I was just a little a confused as far as Christian responses to the arguments. Do Christians acknowledge evolution but then just say that God has pre-ordained this evolution to happen? Or do

Christians just ignore the fact that evolution exists? Maybe I am making this too complicated. If Christians can see that an organism changes over time to adapt with the environment for absolutely no apparent reason, does this mean that they acknowledge this change happened for no apparent reason thus evolution, or just that God made this change possible?

Christians respond differently to the questions you propose. Some Christians, indeed, suggest that God ordained the evolutionary process as His means to create. These usually refer to their position as *theistic evolution* or *evolutionary creation.* As far as I know, no Christian ignores that "evolution" happens. All recognize microevolution as a real process in response to environmental change. This does not require mutation or the establishment of new genetic or morphologic systems. Change over time is only one form of evolution, which no one objects to. What we believe there is insufficient evidence for, is the notion that all life forms today are descended from a single original life form that itself evolved from purely chemical precursors around 4 billion years ago.

I hope this helps.

Respectfully,

Dr. Ray Bohlin
Probe Ministries

"How Do I Find Someone to

Mentor Me?”

Hello Ray!

I am not sure if you know who I am, but I was one of the participants in your singles conference at _____.

I just spent some time on the Probe website and was reading one of Lou Whitworth’s articles on being God’s man (king, warrior, mentor and friend).

I know you spoke to us about having a mentor in your life. Since then, I have heard two of our pastors and Chuck Swindoll speak about the need for mentoring as well. I am really trying to allow God’s will to direct my life and this subject keeps coming up. I believe this is a step He wants me to take, but I am not sure how to go about it. Would it be possible for you to help me find a mentor? If not, would you know someone who could help me?

Any assistance you could provide me is be sincerely appreciated.

Hi _____,

A mentor generally needs to be someone who is at least 10 to 15 years older and someone whose walk with the Lord you respect. Asking someone to be your mentor can be a little intimidating. But just asking if you can meet together to pray and enjoy some fellowship sounds a lot more doable to other men. Is there anyone you admire from afar? If no one comes to mind I would suggest inquiring of a pastor for suggestions. They often know of older saints who would be willing to enter into this kind of relationship but don’t know of anyone interested.

It’s a real problem in the church and there are a lot of men willing to be mentored but a shortage of those willing to

share their life's lessons with someone younger (often for fear of not looking so good in the process—a mentor needs to be real enough to admit failures but also have a healthy view of their strengths). They have no model to follow themselves. All that to say it is not likely that this will be a quick and easy search. Above all pray for the Lord's direction and for Him to prepare someone even now.

I commend you for sensing this need and reaching out to try and fill it!

Respectfully,

Ray Bohlin
Probe Ministries

PBS Evolution Series

Darwin's Dangerous Idea

Some evolutionists are definitely worried. Creation, intelligent design and a general dissent concerning Darwinian evolution continue to gain ground—so much so that a deliberate counterattack has been launched. Using scientists from around the world, professional defenders of evolution, beautiful nature photography, computer graphics and simulations, the prestige of the PBS NOVA series and the financial backing of Microsoft billionaire Paul Allen, a monumental defense and celebration of evolution has been produced.

The new PBS Evolution Series is a seven part, eight hour documentary originally aired on PBS stations around the country in late September of 2001 and rebroadcast in May and June of 2002. Accompanying the video series is an interactive

Web site, 360-page companion book, coordinated teacher training and education, and a determined publicity campaign aimed at getting the series into the nation's high schools.

The explicit goals of the series are to help students understand the critical importance of evolutionary theory in understanding so many scientific and health issues of today—from AIDS to antibiotic resistance to fighting agricultural pests to even how we choose a sexual partner. The producers set out to establish the overwhelming evidence behind evolution and the soundness of the science behind it. They specifically sought to pursue solid science journalism and forego the religious realm.

Essentially, the series has failed on all counts. This beautiful documentary is loaded with speculation, exaggerated evidence and claims, glossing over of legitimate controversy, and a persistent hostility towards any religious perspective deemed incompatible with evolution.

Episode One begins with a dramatization of a conversation between Charles Darwin and Captain Robert Fitzroy of the HMS Beagle in South America as Darwin is purchasing a fossil. The fictitious conversation clearly pokes fun at the Biblical account of the flood. Darwin was nowhere near as skeptical as portrayed, and Fitzroy was nowhere near as literal either. This opening scene lays the groundwork for a continual assault on history and the evidence to make evolution look as positive as possible and opponents of evolution as silly as possible.

This two-hour opening episode crosses paths with religion several more times in discussions of the philosophical meaning of evolution in an interview of Kenneth Miller, a Darwin defender who finds no incompatibility between his Christian faith and Darwinian evolution. In this opening episode the producers present a confusing contradiction. On the one hand Darwin's dangerous idea precludes any true meaning to life and on the other hand, Darwinian evolution is completely

compatible with an informed Christian faith. For more detailed analysis of this episode consult the Discovery Institute's free Viewer's guide available on the Internet at www.reviewevolution.com.

"Great Transformations" and "Extinction"

Perhaps the most foundational episode is Episode Two: The Great Transformations. One's expectation would be the presentation of numerous persuasive transitional forms demonstrating without doubt, the common ancestry of all life. Instead we are treated to a certainty based on the usual arguments from authority, selective fragmentary fossil evidence, and speculative molecular mechanisms.

The opening segment presents the mounting evidence for the amazing transition from a terrestrial wolf-like vertebrate to modern aquatic whales. Lots of fossils and reconstructions are paraded before us, unfolding the supposed story of whale evolution. Complete skeletons are pictured with no indication that they are based on very partial fossil finds. The overall transitional series is discussed with certainty despite the fact that evolutionists themselves admit that the known members of the transitional series are not thought to be the actual members of the transitional series but just representative of what the actual transitional species may have looked like.{1} Also missing is the admission that, by the very nature of fossils, it can never really be known if any one fossil was ancestral to another.

Also featured in this episode is the stunning Cambrian explosion of animal life forms featuring Simon Conway Morris. Morris freely admits that "this sudden appearance of the fossils led to this term, the Cambrian explosion. Darwin, as ever, was extremely candid, he said, Look, this is a problem for my theory. How is it that suddenly animals seem to come out of nowhere? And to a certain extent that is still something of a mystery." As the segment develops, no attempt

is made to explore or resolve this mystery. The experts make only vague references to evolution tinkering with what already exists. But even tinkering is a design activity, design with a purpose. Natural selection would be better described as a blindfolded man trying to navigate a minefield.

Episode 3 explores the evolutionary significance of extinction. Both the great Permian extinction of 250 million years ago and the KT extinction of dinosaur fame of 65 million years ago are explored and make fascinating stories. Their relation to evolution is obscure, however. Mass extinctions supposedly open up the playing field for new and diverse species to evolve due to less competition. But Darwinian natural selection supposedly thrives on competition. The segments on biological invaders, while important in and of themselves, have little to add to the evolutionary debate. Biological control has been practiced for centuries with no knowledge of evolution.{2} Once again, we witness lots of authoritative posturing but little evidence for evolution.

"The Evolutionary Arms Race" and "Why Sex?"

For many years medical authorities have been warning of the dangers of infectious bacteria becoming resistant to antibiotics. The overuse and misuse of antibiotics in western society has led to an increase in the number of strains of bacteria that are resistant to our primary defense against infection. In Episode Four of PBS's Evolution Series titled "The Evolutionary Arms Race," we are told this is evolution in action.

First, this statement leads to the conclusion that knowledge of evolution is essential to designing adequate health care. And second, labeling antibiotic resistance as evolution in action implicitly states that evolution is a fact, since antibiotic resistance is a fact. This is another case of a

selective use of evidence. What the producers of *Evolution* don't say is that the mechanisms for antibiotic resistance have been known for years. Usually the capacity to resist antibiotics has always been in the bacterial population and does not result from mutation. Even when a mutation is responsible, a new function is never evolved, just the damaging of an existing function. Sometimes the mutation results in the antibiotic being expelled from the cell faster or taken in more slowly. This doesn't create a new species and doesn't fundamentally change the organism.

Another factor left out of the discussion is that antibiotic resistance always comes with a cost of its own. Antibiotic resistant bacteria are always inferior to the original wild-type bacteria. Their growth is stunted. Sometimes these costs can be compensated for but also at additional costs. Resistant bacteria are not better bacteria. Remove the antibiotic and they quickly lose out to the original wild-type bacteria. Therefore, to suggest that in the case of resistant tuberculosis that the bacteria evolved right inside the human host is highly misleading. The bacterial resistant forms were already present, the bacterium has not changed or evolved at all.

While the episode gives numerous examples of natural selection on a micro scale, the evidence discussed tells us nothing of how antibiotic resistance arose in the first place or how ants, molds, fungi, and bacteria first became intricately associated.

The fifth episode contains perhaps the least science and relevance to evolution, but will certainly be the most entertaining and even titillating for high school students. The episode "Why Sex" tries to ascertain the purpose and even evolution of sexual reproduction. While containing some helpful information and case studies, the program is full of speculative storytelling and an overload of sexual displays and sexual acts from fish to lizards, to birds, to chimpanzees

and even a highly unnecessary and suggestive encounter between humans.

Also included is a highly controversial, yet factually presented discussion of evolutionary psychology and one researchers ideas that all forms of human artistic endeavors are little more than sexual displays. Some of their own previously used evolutionary experts would find most of this episode an incredible waste of time and money.

“The Mind’s Big Bang” and “What About God?”

The uniqueness of human beings presents a difficult evolutionary puzzle. So much of who and what we are is categorically different from other animal species that trying to account for it by mutation and natural selection presents a tough challenge. In Episode Six, “The Mind’s Big Bang,” we unfortunately don’t get much of an answer.

The episode begins by documenting the amazing human capacity for art in the caves of France. This launches a long series of segments that document the early appearance of artistic expression that has its roots in the development of tool making. Eventually this explosion of capacities rooted in the brain is traced to the remarkable development of human language. As in other episodes there is lots of speculation about the selective advantages of language, but this tells us nothing of how language evolved. The discussion gives the impression that if we can just discover what language is used for, we will know how it evolved. This is typical evolutionary story-telling masquerading as science.

The Cambridge Encyclopedia of Language candidly admits that “For centuries, people have speculated over the origins of human language. . . . [but] the quest is a fruitless one. . . . We have no direct knowledge of the origins and early development of language, nor is it easy to imagine how such

knowledge might ever be obtained."{3} The Discovery Institute's Viewers Guide also notes that we are told that language was the key to our becoming human. In Episode Two, however, we were told it was the ability to walk on two legs and in Episode Five it was using our brains to choose sexual partners. This confusion of "key events" exposes them for the speculation they truly are.{4}

The final episode "What About God?" reveals the entire series as the propaganda it is meant to be. Here we meet the old science vs. religion argument in all its glory. The Evolution producers go to great lengths to distort the controversy to their own ends. The Scopes trial and the Sputnik-induced revolution in science education are neatly packaged and distorted as science vs. religion. The inquiring and passionate science students and professors who have no quarrel with evolution are favorably portrayed against uneducated parents and naïve Bible literalists. Theistic evolutionist Keith Miller is pictured as a liberator to Wheaton College students who don't want to be perceived as unintelligent.

What becomes unmistakably clear in this episode is that the reigning naturalistic stranglehold on science education is to be maintained at all costs. Those who oppose it, risk being branded as dangerous or stupid or ignorant or all three. Censorship of facts contrary to evolution is justified in the name of science. The bottom line is that "It's OK for people to believe in God, as long as their beliefs don't conflict with Darwinian evolution. A religion that fully accepts Darwin's theory is good. All others are bad."{5}

The PBS Evolution Web Site

Located at www.pbs.org/wgbh/evolution, the PBS Evolution Web site is a goldmine of information and teaching suggestions along with interactive games and exercises aimed at sharpening one's evolutionary skills. But visitors should also expect that much of the information contained here employs the same

sleight of hand that the video series uses in relating evidence for evolution. With such a great volume of information available at the *Evolution* Web site, I will direct my attention to one article as an example. Under the main heading of "Change," an essay is offered critiquing Intelligent Design. The essay is authored by Kenneth Miller, a Brown University biology professor, featured in the first episode as a Roman Catholic who sees no problem with evolution.

The essay is titled "Life's Grand Design" and purports to explain how evolution accounts for the design of nature far better than an intelligent designer would. His entire discussion revolves around the design of the human eye.{6} On page one Miller presents the problem. The eye is exquisite in its design, accomplishing the wondrous effect of color vision with a very complicated design. How could it possibly have evolved one step at a time? On page two, Miller begins his response with the standard blind watchmaker explanation from Richard Dawkins. Miller emphasizes the gradual slight improvements and that all those that are positive will be selected. This is not necessarily true. It is well known that some genetic changes will be so slight that they do not offer a significant enough selective advantage and therefore, will be lost. Miller ignores the uncomfortable details.

Miller then describes how easy it would be to build an eye from just a few light-sensitive cells. But he starts with "light- sensitive cells." Where did these come from? How did they become light sensitive? The molecular mechanism of light sensitivity is quite complex and one of Michael Behe's examples of irreducible complexity. But once again Miller ignores the uncomfortable details. Miller states, "it is possible to draw a series of incremental changes that would lead directly to the lens and retina eye." But you know, I'm not interested in whether it can be drawn. I want to know how it would evolve biologically.

Finally Miller delivers the *coup de grace*; the eye exhibits design flaws that any engineer would never employ. You see, the human eye seems to have things a little backwards. The light- sensitive cells face the back of the eye or the retina, instead of the front of the eye where the light comes from. Therefore, the incoming light must pass through the nerve cells and blood vessels first, potentially distorting the image. Not only that, but the nerve cells eventually bunch together before punching through the retina en route to the brain, therefore creating a dangerous blind spot. Surely an intelligent designer wouldn't do it that way. The eye is therefore a great example of evolution at work. Evolution simply arrives at the best available solution.

But again, Miller ignores the details. He doesn't reveal that the layer of cells behind the nerve cells, behind the blood vessels and behind the photoreceptor cells, is an immensely important group of cells we will abbreviate as the RPE (Retinal Pigmented Epithelium). The RPE is necessarily in close proximity to the photoreceptor cells, the rods and cones, because the RPE replenishes the necessary molecules for vision. With the RPE at the very back of the retina, these cells act as an absorptive layer to get rid of excess light. Without the RPE we would be blinded by ordinary sunlight. Also the absorption of excess light sharpens our vision. So the designer has a dilemma. Both the nerves and blood vessels must be in front of the rods and cones or the RPE must be in front because both must be in direct contact with the photoreceptor cells and they all won't fit and function together. Something will get between the light and the light sensitive cells. Putting the blood vessels and nerves in front of the rods and cones creates a very mild light filter, but does create a blind spot where the nerves bundle together. However, putting the RPE between the light and the rods and cones would create a much more detrimental filter and diffusing agent. The vertebrate eye is structured properly when all factors are considered.

“The vertebrate eye provides an excellent example of functional– though non-intuitive design. The design of the retina is responsible for its high acuity and sensitivity. It is simply untrue that the retina is demonstrably suboptimal, nor is it easy to conceive how it might be modified without significantly decreasing function.”{7}

As we have seen in this essay, evolution can offer some impressive evidences on first glance. But time and time again, the intricacies of design are in the details.

Notes

1. The story of whale evolution has indeed grown more sophisticated over the last 10-15 years. Indeed, this was one transition that many creationists had a great deal of fun with. How could a land mammal evolve into a whale? How could the transitional forms possibly be functional on land or in water? If one were to scan the presumed transitional series (found on page 138 of *Evolution* by Carl Zimmer, Harper Collins, 2001) it is quite impressive evidence for evolution. The transitional series, while a little jerky with certain gaps remaining, appears gradual enough and the fossils seem to appear in the expected order and strata. But as always, the truth is in the details. Two recent articles investigate the evidence with some detail and rigor. Ashby Camp has written a fine summary (last modified March 11, 2002) and critique of the fossil evidence for whale evolution that is available from the TrueOrigins website at www.trueorigins.org/whales.asp. Also, John Woodmorappe has analyzed the mixture of characters in some of the whale-like fossils in his article “Walking whales, nested hierarchies, and chimeras: do they exist?” in *TJ* 16(1) 2002: 111-119. *TJ* was formerly *Creation Ex Nihilo: Technical Journal.*
What we learn from these articles is that the true land mammal ancestor of whales is still in dispute. The pakicetids, the first “intermediate,” are true land mammals with a few

potential aquatic features in their inner ears. The next group known as ambulocetids show some aquatic features but other features distance them from actual whale ancestors. Many of these are not in the proper stratigraphic position. The pakicetids and ambulocetids are all less than 10 feet long; the fully marine Basilosaurus are all over 50 feet in length. Even by evolutionary standards there isn't enough time between these species to evolve even this simple increase in length. None of the species depicted on page 138 of Evolution are thought to be actual ancestors of modern whales. The diagram is actually drawn to indicate this fact but most people looking at it won't come away with that impression. Each species is diagrammed as an offshoot of the lineage but not an actual transitional form. How come we always find just "types" of ancestors and never the ancestors themselves? Some character or another always disqualifies the intermediate in question. There seems to be a deeper lesson here that most evolutionists are unwilling to face.

2. The documentation of human interference in the ecosystems of Hawaii and Thailand are summed up with a plea to slow down the rate of human induced extinction and allow nature to take its own more natural and easy-paced course. This implies, however, that humans are somehow outside the loop of nature. If we are just another biological species, then we are only acting according to our own biological nature. How or why should this be suppressed? As in past mass extinctions, the strong, opportunistic and lucky will survive. Perhaps that includes us, perhaps not. In the naturalistic worldview of the series, what's the difference? This is another example of stealthily applying a Christian worldview that gives intrinsic value to nature while maintaining the guise of naturalism. In a naturalistic worldview, nature just is. Choosing to interfere on nature's behalf indicates intrinsic value and worth that can only come from outside nature itself. In the Christian worldview, this comes from God.

3. David Crystal, *The Cambridge Encyclopedia of Language,* Second Edition, Cambridge: Cambridge University Press, 1997, p. 6,290.

4. www.reviewevolution.com, p. 92.

5. Ibid, p. 107.

6. www.pbs.org/wgbh/evolution/change/grand/, p. 1-6.

7. George Ayoub, On the design of the vertebrate retina, *Origins and Design,* Vol. 17(1): 19-22. This article can also be found on the web at www.arn.org/docs/odesign/od171/retina171.htm.

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