

The journey continues to the other side of the United States as Matt and Tiffany venture up into the mountains just outside of Tucson, AZ.



Discussion Leader: *Dr. Stan Hudson was a geology major at the University of California at Riverside before becoming a Christian. He then shifted his studies to theology, eventually earning a Doctor of Ministry degree at Fuller Theological Seminary. Today he combines both interests, co-hosting the weekly radio program "Sink the Beagle," a light-hearted approach to creationism and evolution issues. He currently pastors two churches in the university towns of Moscow, Idaho and Pullman, Washington.*

This program took Matt and Tiffany to the Kitt Peak National Observatory in Arizona. There they met young astronomer John Feldmeier, who became their guide. As they looked at a huge telescope and the complicated camera equipment used by scientists there, they began to delve into questions about the universe.

DEFINITION:

BIG BANG — The reigning theory of how the universe was created. From the 1940s through the 1960s it overtook the previous "steady state" model, especially because of the increase of evidence that the universe is expanding. The assumption is that if you "wind back" an expanding universe to a starting point it had to follow a huge explosion of matter. It is a theory that is not supported by all of the data, but is generally not questioned by the majority of astronomers. Still, science has yet to explain what could have caused such an explosion. Interestingly, the Bible also declares that the universe is expanding: {God} "Who stretches out the heavens..." Isaiah 40:22, 44:24. Literally, the Hebrew words mean in the present tense: "IS stretching."

1 QUESTION:

The "Big Bang" theory about the origins of the universe had its roots in a discovery made at Mt. Wilson observatory in Los Angeles (!) in the 1920s by Edwin Hubble. What was it he discovered?

ANSWER:

That other galaxies seemed to be moving away from our Milky Way galaxy at a rapid rate.

If everything is basically moving away from each other, if you go back into time the universe was smaller. Go back even further and the universe was very compact, as the theory goes. What could have caused it to expand so much? A "BIG Bang." Edwin Hubble was the originator of the term, even though he used it cynically at first.

2 QUESTION:

Astronomer Mart De Groot explained the model. "In the beginning" the universe's matter was tremendously compressed, producing incredible heat; this led to the explosion/ expansion. This explosion has been (cynically!) referred to by creationists as the time that "nothing blew up into something!" However, is a "Big Bang" a reasonable model to explain an expanding universe, especially if you are only able to use naturalistic models?

ANSWER:

Yes! Since the universe apparently IS expanding many observations fit the model fairly well.

3 QUESTION:

Get your mind around this concept: not only is the matter in the universe expanding, physicists tell us so is space itself. That is, there is nothing outside the universe (not a vacuum—absolutely nothing at all!). How easy is this to understand?

ANSWER:

This does not compute! On the other hand, what else is at the edge...a wall? That might be even harder to imagine!



5 QUESTION:

According to this model, the first moments of that explosion produced gases (hydrogen and helium) that eventually coalesced into today's galaxies. Lithium and beryllium were formed early...and over time other heavier elements. Remember, evolution is understood to mean more than just life forms. First there was elemental evolution (simple to complex atoms)... then molecular evolution (atoms into molecules and compounds). Following this was the important changing of non-living compounds into life forms. After that simple life developed into the complexity and diversity we see today. All of this started with an enormous explosion, which doesn't usually organize things very well. Do you think faith is a factor in this model?

ANSWER:
Duh!

6 QUESTION:

How old is the universe, give or take, according to the standard model? When did the Big Bang supposedly happen?

ANSWER:
Fifteen billion years ago.

7 QUESTION:

A depressing thought was presented that, since light is traveling from an incredible distance to reach our telescopes and eyes, many of the sights we're seeing are of objects that no longer exist! In evolutionary thought the universe sort of recycles itself, with the death and birth of stars and galaxies. How does that thought hit you?

ANSWER:

A directionless, Godless universe is among the most depressing of ideas. The Book of Daniel in the Bible combats the thought that God is not in the directing business. It says that the Creator "raises up nations and kings." Babylon, the symbol of human defiance of God's authority, is still with us at the end of time. Babylonian thought can be summarized as that which marginalizes God's involvement with the world (and the universe, too?).

8 QUESTION:

Astronomer John put some hope in the discovery of life in the universe. This is indeed what NASA programs are often about, like the missions to Mars. The thought is that if life is found somewhere else it would support evolution; if conditions are similar to earth's earliest time, maybe life would spring up there, too. Do you think that space missions should be focused on finding life?

ANSWER:

It's hard to get excited, given the agenda of supporting evolution. Perhaps looking for minerals and other things that would generally benefit mankind more might be a better spending of time and money?

4 QUESTION:

According to Astronomer John "physics can take us back to within 10 to the -34th fraction of a second" from the Big Bang. Before that they can't understand what happened. In other words, no one can understand just how that original ball of matter got there in the first place. Can creationists believe in this kind of beginning?

ANSWER:

Some do. Scientists teach, of course, that the Big Bang took place *without* any help from a Supreme Being. Some theists (believers in God) think God used the Big Bang to create matter. But it's not easy to support this from the Bible. The Big Bang is part of the theory of evolution, only at a cosmological level. Most other parts of the theory of evolution don't harmonize well with Scripture.

DEFINITION:

MATERIALISM—The belief that material is "all there is" and that it produces new material (without the need of God) by time and chance happenings influenced by natural law. This is fundamental to all forms of natural evolution, starting with the Big Bang and proceeding to atomic evolution, chemical evolution and biological evolution.



9 QUESTION:

John also joked that it was important to keep an open mind about origins. He said that one should “keep their mind open, but not enough for their brains to fall out!” Good advice in the areas of origins?

ANSWER:

It's nice to hear, but it's not always practiced in some sciences...and some religions, for that matter!

10 QUESTION:

Physics Professor Clark Rowland said he found it not impossible to study how things work in nature and still believe in the God of the Bible. Do you agree?

ANSWER:

Since the founder of modern science and physics, Sir Isaac Newton, was definitely a believer in the God of the Bible, it's indeed possible.

11 QUESTION:

When Tiffany pressed John about how he put science and religion together, John answered with what many consider as the best approach: he separates them entirely. That is, spirituality is meant to deal with morality, science with the natural world. He placed music, ballet and ethics into the spiritual realm, too (these are not easy to explain from evolution). Do you think that this is a good approach?

ANSWER:

It's the method of choice for many; and it helps some people avoid uncomfortable questions and their ramifications. This is also the way that many court decisions have dealt with the controversy about what to teach in public schools on origins; *only naturalism* can be taught, which is considered science. Anything else is an intrusion of religion into science; they “must be kept separate.” However, it's hard to *completely* separate them, since both deal with ultimate reality.

12 QUESTION:

Although the Bible is certainly not a science textbook, it often contains statements that have scientific import. On today's topic this text is surprisingly up to date (though written seven centuries before Christ): “[God] stretches out the heavens like a curtain, and spreads them out like a tent to dwell in.” Isaiah 40:22 (see also Isaiah 44:24). The verb *stretches out* is in the present active tense; that is, it can be translated “IS STRETCHING OUT the heavens.” How could Isaiah know about this?

ANSWER:

This implies a greater source than just men for the Bible.

