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The Vapor Canopy Theory - Is It in Trouble?

by Warren Krug (May-August, 2003)

In 1874, a Quaker schoolteacher by the name of Isaac Vail proposed a novel scientific idea—that following the last ice age, a canopy of ice clouds covered the Earth for thousands of years. **1** This canopy theory was picked up and refined within the last few decades by modern creation scientists who saw in it possible answers to some puzzlements mentioned in the first few chapters of Genesis as well as some discoveries by scientists about the early Earth. But more recently, the idea of a canopy of water, water vapor, or ice around the primeval Earth is being seriously questioned by some creationists who think they have found major flaws in the theory.

Why the Water Canopy Theory Became Popular

As proposed years ago by its defenders, the water vapor canopy theory was a neat idea that addressed several issues raised in Scripture and in science concerning the early Earth. These arguments, most of which were popularized in the creationist classic, The Genesis Flood, by Whitcomb and Morris **2**, were enumerated by astronomer Donald B. DeYoung **3** as follows:

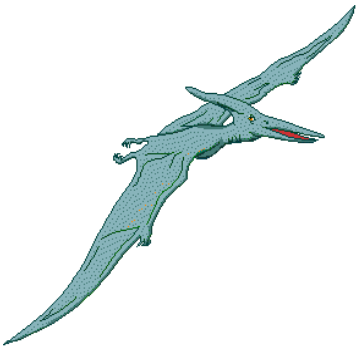
1. The initial separation of water above and below the firmament (expanse, sky, atmosphere) may refer to the creation of a water canopy. The canopy, if it existed, would have to be transparent for the sun and especially the moon and stars to provide light and to serve as markers. Water vapor is, of course, transparent.

2. Genesis 2:5-6 indicates that at least prior to the creation of Adam, rain did not fall but that the plants were nourished by springs coming up out of the ground. The Bible does not actually mention rain until the Flood, and a canopy by providing a greenhouse effect could have lessened the need for the water cycle. If Noah was the first person to see a rainbow, which God's promise to him seems to imply but doesn't absolutely prove, that would add further strength to the canopy theory.

3. Gen. 7:11-12 tells us it rained for forty days and nights. Such a lengthy deluge would be impossible today because there isn't nearly enough moisture in the present atmosphere; therefore, there had to be much more water in the heavens of Noah's time.

4. Many ancient cultures have legends that seem to describe a canopy-type phenomenon. For example, the Babylonian creation account, Enuma Elish, mentions fog, clouds, or mist covering the early Earth.

5. Such fossils as palm trees in Alaska, crocodiles in New Jersey, and petrified wood in the desert suggests a warmer climate in the past and perhaps a more uniform worldwide climate which a canopy might have provided. Although Genesis mentions seasons in relation to the creation of the heavenly bodies, seasonal heat or cold as such are not mentioned in Scripture until after the Flood.



6. A canopy might have provided an increased atmospheric pressure, heavier air in other words, that would have allowed the prehistoric flying reptiles such as the pteranodon to have taken flight. It is doubtful that these creatures would be able to fly in today's thinner atmosphere.

7. A canopy might be the answer to the long ages of the early humans as well as the gigantism found in some plants and animals in the fossil record. The canopy would have absorbed much of the harmful radiation that is known to have damaging effects on organisms. With less radiation reaching the surface of the Earth, living things could have lived much longer and in the case of some species, grown to giant sizes. Also, increased air pressure and/or oxygen according to some studies has been found to be beneficial.

The Case Against the Water Vapor Theory

As the water vapor theory increased in popularity among creationists, creation scientists began putting it to the test and found several problems with it. A website called www.creationscience.com **4**, which appears to be associated with Dr. Walter Brown, lists several of these objections.

1. *The Pressure Problem.* A canopy holding 40 or more feet of liquid water or its equivalent in vapor or ice would increase the atmospheric pressure all right, but this would make the increased oxygen and nitrogen toxic to many animals including humans. Most canopy theories now limit the thickness of water in the canopy to less than 40 feet.

2. *The Heat Problem.* If the water from a vapor canopy were to fall, enough to form a 40-foot layer upon the Earth, the temperature would rise about 810 degrees! Just as a spacecraft generates tremendous heat upon reentering the atmosphere, molecules of water or ice falling from orbit would do the same. Also, due to the greenhouse effect, heat would be trapped under a canopy, more water would evaporate, and the greenhouse effect would accelerate, thus leading to a "runaway greenhouse effect." This runaway greenhouse effect can be seen on the cloud-covered planet Venus which is about 700 degrees hotter than one would expect for a planet that distance from to the Sun.

3. *The Light Problem.* A canopy having only 40 feet of water would reflect, refract, absorb, or scatter most light trying to pass through it. Under such conditions, a person could only see stars if he looked straight up as through a keyhole. Yet, it would seem necessary for early man to have seen entire constellations and note their movements from season to season if the stars were to serve as markers.

4. *The Nucleation Problem.* To form raindrops, microscopic particles called "condensation nuclei" must be present for condensation to occur. However, falling rain tends to sweep away these nuclei, clean the atmosphere, and reduce further condensation. This argument says that rainfall from a canopy could not long be maintained.

5. *The Support Problem.* What kept the canopy from falling? A vapor or liquid canopy would mix with the atmosphere just as steam does and diffuse throughout the atmosphere. An ice canopy would vaporize into the vacuum of space just as dry ice does at atmospheric temperature and pressure.

6. *The Ultraviolet Light Problem*. While ozone in the earth's upper atmosphere blocks the sun's destructive ultraviolet light, a canopy surrounding the atmosphere would be exposed. Water in the canopy would dissociate into hydrogen and oxygen, destroying the canopy.

Some of the arguments in favor of the water vapor canopy theory have also been questioned. For instance, if there was a canopy that helped prolong life by reducing radiation, why do people living at sea levels today under a heavier layer of atmosphere live no longer on average than people living at high altitudes? Why did Noah live another 349 years after the Flood if the protective canopy was gone? Also, too much oxygen has been found to be harmful. Currently, we hear a lot about the health benefits of anti-oxidants. An alternate explanation for the long life spans is found in genetics rather than the climate. **5**

Creation scientists, especially those at the Institute of Creation Research, continue to try to work out the problems with the theory. For instance, ICR reports **6** that a graduate student, using a numerical climate model, showed that a vapor canopy could be sustained by solar heating, but the organization admits that they haven't licked the heat problem. Dr. Larry Vardiman has suggested that the canopy could have consisted of ice particles distributed in equatorial rings around the earth. **7**

One criticism of the water vapor canopy theory—that the canopy couldn't possibly hold enough water to have caused Noah's Flood—is outdated, because those who hold to the canopy theory now recognize that most of the floodwaters came from the breaking up of "the fountains of the great deep."

There are other theories which could explain the events relating to Noah's Flood. Some scientists have speculated that a series of volcanoes may have erupted at the time of the Flood, throwing "prodigious" amounts of water into the air, the source of the water that fell from the sky. **7** Dr. S.A. Austin and others have proposed a catastrophic plate tectonics model for the flood in which the movement of the plates caused the ocean floor to rapidly lift up leading to massive flooding. **8** Dr. Walter Brown finds fault with both the catastrophic plate tectonics and the canopy models and proposes his own—the hydroplate theory—in which he talks about the Flood in terms of the Mid-Oceanic Ridge. **9**

In Conclusion

Any scientific theory, especially one that deals with prehistoric times, must always be considered at least somewhat tentative, whether it is proposed by evolutionist or creationist. New research and thinking can undo the theory or at least place it in less-credible light, which apparently has happened to the venerable water vapor theory. This doesn't mean the theory is necessarily dead and buried. Due to the nature of science, there is always the possibility that new research could counter the arguments against it or modify this theory sufficiently to make it more acceptable.

In the meantime, we must remind ourselves once again that the only source of information about the early Earth that never needs revision is the Word of God. While the Book of Books may not tell us everything we might want to know about the world of long ago, it does tell us everything we need to know about the world to come, and that is much more important. *LSI*

References

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