Life on Another Planet-Just Around the Corner?

In late April [2007], a group of European scientists made an announcement that created quite a stir in the mainstream media. For the first time, a planet which could potentially support life has been discovered outside of our solar system. One newspaper headline read "Scientists find potentially habitable planet—Discovery a big step in search for life in universe"{1}. Such an announcement raises important questions:

> *Is this newly discovered planet really a likely host for life?*
>
> *Does this discovery imply that the earth is not unique is its ability to support complex life as promoted by most proponents of Intelligent Design?*
>
> *If this planet does (or did) host life, would that detract from or support our belief in a transcendent creator?*

By considering these questions, we realize that this discovery provides more support for the theory of Intelligent Design than for Darwinism.

A Potentially Habitable Planet?

This planet orbits the red dwarf star, Gliese 581 and has been designated as 581 c. It cannot be seen from earth. It was detected by examining the effect its gravity had on the light emanating from its star. Based on that data, these scientists projected that this planet may have temperatures between 32 and 104 degrees. With this temperature range and at 1.5 to 2 times the diameter of earth, it might be able to hold liquid water. In addition, its red dwarf star appears to be quite old and stable, suggesting that its planets may have been around

for billions of years. Thus, some of the characteristics necessary for a naturalistic explanation of life may be associated with this planet.

However, a habitable planet requires much more than "just add water"{2} plus time. Further analysis of Gliese 581 c indicates that it probably has many characteristics unfavorable to life. Examples include:

> *It does not rotate around its axis, meaning one side is always in the sun while the other side remains in constant darkness. Some scientists are now suggesting that its surface temperatures will be much hotter than the original estimates.*
>
> *Since it orbits a red star with lower levels of electromagnetic radiation than our sun, this greatly limits the effectiveness of photosynthetic reactions.*

Uniqueness of Earth

On the Reasons To Believe Web site{3}, astrophysicist Hugh Ross has posted several articles identifying characteristics of our galaxy and earth that are necessary for life. In one paper{4}, he estimates the probability of the universe having a planet like earth exhibiting all 322 characteristics identified as critical for life. A high level analysis of the list in his paper indicates that Gliese 581 c may satisfy 112 of these characteristics (primarily because it exists in the same universe and galaxy as earth). Gliese 581 c is the first out of 220 planets identified outside our solar system that exists in the habitable temperature zone.{5} That leaves at least 210 questions unanswered such as:

> *Does it have a large enough moon to create tidal patterns?*
>
> *Does it have just the right size, protecting planets to reduce the number of asteroid hits?*

Does it have the right thickness of crust?

Does it have the right atmosphere?

Does it have the right mixture of minerals?

Using the probability estimates for each remaining characteristic, a conservative estimate for the probability that this planet could support life is 1 in 10^{199} (1 with 199 zeros after it). Please remember that this extremely low probability (essentially zero) is simply to have a planet that is habitable. It does not include the similarly minuscule probability of even the simplest life forms arising from inorganic matter. As renowned astrophysicist Stephen Hawking stated, "I expect there will be planets like Earth, but whether they have life is another question. We haven't been visited by little green men yet."{6} Since we can be virtually certain that this planet does not support any life, we may not want to spend the effort to travel to it—especially, when with current technology, it would take over 400,000 years to reach this planet.

Life on another planet—What would it mean?

Would finding life on another planet be a victory for Darwinism and proponents of naturalistic evolution as the sole force behind life as we know it? Quite the contrary! Given the extremely small probability of finding another habitable planet in our universe, multiplied by the equally small probability of life generating spontaneously on a habitable planet, finding life on another planet would have to be considered a miracle.

In other words, finding even the simplest life forms on another planet would greatly increase the scientific evidence for intelligent design. Only a transcendent intelligent

designer would be able to overcome those long odds to create life in multiple places in the universe. The theological implications of such a discovery would depend upon the nature of the life forms and will be left for future ponderings.

Bottom Line

The discovery of Gliese 581 c is an interesting event in astronomy which, if anything, further supports our view that the earth is very likely unique in its ability to support complex life. If life is ever discovered on another planet, it will further strengthen the position of intelligent design as the best theory to explain the evidence.

Notes

1. *Dallas Morning News*, April 24, 2007.

2. Jay Richards, Acton Institute, formerly with The Discovery Institute, the institutional home of the Intelligent Design movement.

3. www.reasons.org

4. Hugh Ross, "Probability for Life on Earth, 2004 April Update", Reasons to Believe, 2004.

5. It is interesting to note that Ross's paper allocated a probability of 1 in 1,000 to that same factor, which is the same order of magnitude as 1 out of 220. So if we used 1 out of 220 instead, the calculated probability would be less than 1 in 10^{198}.

6. *Dallas Morning News*, April 24, 2007.