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## The End of the World Might Just Look Like This



Artist Ron Miller illustrates what it might look like if an asteroid the size of the one that struck the Yucatan peninsula 65 million years ago, which left a 93-mile-wide crater and most likely triggered the extinction of the dinosaurs, hit New Jersey. © Ron Miller

Ron Miller wanted to be a scientist. “Since I was little, I have loved astronomy,” he says. “But it didn’t take me long to realize that you have to have some kind of abilities in math to be a scientist—and all numbers over 80 look pretty much alike to me.”

So, while keeping up his interest in science, [Miller](#) pursued another love, art. He earned a degree in illustration from Columbus College of Art and Design in Ohio in the 1960s. “It eventually occurred to me that I could combine the two, and do scientific artwork,” he says.

Miller tested his hand at astronomical paintings. When he heard the Smithsonian's National Air and Space Museum was opening a planetarium in the 1970s, he sent some of his artwork, effectively convincing the museum to hire him as the facility's art director. He held this post at the Albert Einstein Planetarium for five years before embarking on a career as a freelance illustrator in 1977.

In the past few decades, Miller has written and illustrated more than 50 books, his latest being *Is the End of the World Near? From Crackpot Predictions to Scientific Scenarios*. His artwork has been featured in numerous magazines, including *Air & Space*, *Scientific American*, *National Geographic* and *Discover*, and he has dabbled in film, as a production illustrator for *Dune* (1984) and *Total Recall* (1990).

About 10 years ago, Miller picked up digital art. "I resisted digital for a long time. I thought it would look generic," he says. "I did a few and showed them to my friends who said, 'Oh, these look just like Ron Miller paintings.' That's all it took to sell me on it." The artist, who hails from South Boston, Virginia, now composes most of his images in Photoshop. "This way I can do higher quality work in a much quicker time. I could do a piece of artwork that would take me a week to paint in a day," he adds.

Recently, Miller released a [series of images](#) that shows what our skyline would look like if other planets were as close as the moon is to Earth. He has also created a compelling series depicting the apocalypse. While some of the end-of-the-world scenarios are pure fantasy, most are actually scientifically plausible.

"Sometimes it takes longer to research things than it takes to actually do the picture," says Miller. He consults with scientists and other sources, so that his illustrations of rising seas, asteroids, gamma ray bursts and black holes are accurate. "I try to get things right," he stressed.

The reality is dramatic enough. See for yourself, in this selection of Miller's work:



© Ron Miller

### **A Black Hole Swallows the Earth**

*From Miller:* In this case, you have a stray black hole that wandered just a wee tad too close to Earth. I got the black hole pretty right. I have the polar jets, which its magnetic field causes. The energy pours into these things from incoming material and gets shot out [of] these plasma jets from the north and south poles. Earth has probably got about 15 minutes left, I think. Just like the Moon causes tides on Earth, the gravity of the black hole is so great that it is pulling much, much harder on one side of Earth than the other. That's the strain that is ripping the planet apart. As the planet comes apart, all of the debris is spiraling into the debris disk circling the black hole. It goes down that drain into who knows where.



© Ron Miller

### **Buried Under Ash**

*From Miller:* I found out about what the ashfall might be like if the [Yellowstone Caldera](#) did erupt. South Dakota is not that far away from Wyoming, and we are talking about hundreds to maybe 1,000 feet or more, which if I average it would bring it about up to the chins of the presidents [at Mount Rushmore]. Who knows? Even talking to the scientists, it is all very speculative. If the explosion is such-and-such size and if the winds blow the right way...speculation piled upon speculation. There is a broad range of ash depths. I picked the one that would be right for me. I came up with Mount Rushmore buried in ash.



© Ron Miller

### **Submerged Under Rising Seas**

*From Miller:* This shows sea level rise, maybe only even a couple decades from now, considering that London is pretty much at sea level to start with. We are only talking about a few tens of feet to flood the city. I made sure I covered the bus with seagull guano. Attention to detail.



© Ron Miller

### **Meteors Strike Earth**

*From Miller:* I deliberately made that big crater the same size as the [one in Arizona](#), just for scale. If the meteor that made Meteor Crater 30,000 years ago had hit Manhattan, that is the size of the hole. It is about a half of a mile wide. I drew the Arizona crater on top of a map of Manhattan. A lot of people have seen pictures of the Meteor Crater in Arizona, but it is hard to tell the scale of it because it is out there in the middle of the desert. So putting the two together, I think, gives people an idea of how awful this sort of thing might be.



© Ron Miller

### **A Tsunami Pounds the East Coast**

*From Miller:* This is supposed to be a tsunami resulting from the collapse of an underwater mountain in the [Azores](#). I did six different versions of this. I did some predicting about how big that tsunami would be, which wouldn't be anything like this. The magazine editors [who originally commissioned the piece] wanted the Statue of Liberty half way up her hips in water. In my original one, the base was still showing.

Once again, it is speculation upon speculation when you talk about some of this stuff. This is probably as reasonable as anything. Left to my own devices, I'll be a little conservative. For all I know, this is right.



© Ron Miller

### **The Sun Turns Into a Red Giant**

*From Miller:* This one we know is going to happen. The Sun turns into a red giant about 3 billion years from now. I put a Mayan stele there just because I thought it would be funny to have the only thing remaining be something Mayan [given that the [prediction](#) that the world would end on 12/21/2012 was based on the fact that the Mayan calendar ends then]. The Sun has melted Earth down, and it is not even as big as it is going to get. The Sun will probably engulf Earth eventually.



© Ron Miller

### **A Gamma Ray Burst Cooks the Earth**

*From Miller:* In this scenario, a star produces a **gamma ray burst**. Basically, it is a blast of high energy particles, almost like an x-ray beam. It would microwave Earth. These things have happened. At least one of the big extinction events, about **450 million years ago**, might have been caused by one of these things. There is no telling when the next one will be; they just sort of happen. Yippee.

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