**Works Cited-Bible Study**

**Title: Christ’s Return and the Millennial Earth**

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Many readers of the Bible are unaware of the magnitude of catastrophism that is mentioned in the scriptures. The Bible is a very catastrophically oriented book. Some of the themes discussed may be considered overly dramatic. In reality, what actually occurred is probably beyond human comprehension. There have been many past catastrophes and there are many yet to occur. The following are just a few examples in the Biblical and scientific record

Biblical References dealing with Catastrophism

Psalm 46:1-3 God is our refuge and strength, A very present help in trouble. Therefore we will not fear, even though the earth be removed, and though the mountains be carried into the midst of the sea: Though its waters roar and be troubled, Though the mountains shake with its swelling.

Psalm 74:13-17 You divided the sea by Your strength; You broke the heads of the sea serpent in the waters. Your broke the heads of Leviathan in pieces, and gave him as food to the people inhabiting the wilderness. You broke open the fountains and the flood; You dried up mighty rivers. The day is Yours, the night also is Yours; You have prepared the light and the sun. You have set all the borders of the earth; You have made summer and winter.

Psalm 97:1-5 The Lord reigns; Let the earth rejoice; Let the multitude of isles be glad! Clouds and darkness surround Him; Righteousness and justice are the foundations of His throne. A fire goes before him, And burns up His enemies round about. His lightnings light the world; The earth sees and trembles. The mountains melt like wax at the presence of the Lord of the whole earth.

Psalm 104:1-9, 31-32 Bless the Lord , O my soul! O Lord my God, You are very great: You are clothed with honor and majesty, Who cover Yourself with light as with a garment, Who stretch out the heavens like a curtain. He lays the beams of His upper chambers in the waters, Who makes the clouds His chariot. Who walks on the wings of the wind. Who makes His angel spirits, His ministers a flame of fire. You who laid the foundations of the earth. So that it should not be moved forever, You covered it with the deep as with a garment: The waters stood above the mountains. At Your rebuke they fled: At the voice of Your thunder they hastened away. They went up over the mountains; They went down into the valleys (margin: The mountains rose up; the valleys sank down). To the place which You founded for them. You have set a boundary that they many not pass over, That they may not return to cover the earth...May the glory of the Lord endure forever: May the Lord rejoice in His works. He looks on the earth, and it trembles; He touches the hills and they smoke.

Psalm 114 When Israel went out of Egypt, The house of Jacob from a people of strange language, Judah became His sanctuary, And Israel His dominion. The sea saw it and fled; Jordan turned back. The mountains skipped like rams. The little hills like lambs. What ails you, O sea, that you fled? O Jordan, that you turned back? O mountains, that you skipped like rams? O little hills like lambs? Tremble, O earth, at the presence of the Lord, At the presence of the God Jacob, Who turned the rock into a pool of water, The flint into a fountain of waters.

Job 9:5-8 He removes the mountains, and they do not know when He overturns them in His anger: He shakes the earth out of its place, and its pillars tremble: He commands the sun and it does not rise; He seals off the stars; He alone spreads out the heavens and treads on the waves of the sea.

Job 38:4, 8-11 Where were you when I laid the foundations of the earth...Or who shut in the sea with doors, When it burst forth and issued from the womb: When I made the clouds its garment, And thick darkness it swaddling band: When I fixed My limit for it, And set bars and doors: When I said, This far you may come, but no further, And here your proud waves must stop!

The return of Jesus Christ occurs during a time period of global catastrophes. Some events that are prophesized to occur when he returns includes; earthquakes, tidal destruction, heavenly signs, tectonic readjustments, and various other catastrophic events. Jesus returns during a great crisis period often called the "Day of the Lord," that engulfs the totality of the earth.

Isaiah 2:17, 19-21 The Lord alone will be exalted in that day (Day of the Lord)...They shall go into the holes of the rocks, And into the caves of the earth, From the terror of the Lord And the glory of His majesty, when He arises to shake the earth mightily. In that day a man will cast away his idols of silver and his idols of gold which they made, each for himself to worship, To the moles and bats, To go into the clefts of the rocks, And into the crags of the rugged rocks, From the terror of the Lord And the glory of His majesty, When He arises to shake the earth mightily.

Isaiah 24:1, 4-6, 18-21 Behold the Lord makes the earth empty and makes it waste, distorts it surface and scatters abroad its inhabitants...The earth mourns and fades away, The world languishes and fades away; the haughty people of the earth languish. The earth is also defiled under its inhabitant, Because they have transgressed the laws changed the ordinance, Broken the everlasting covenant. Therefore the curse has devoured the earth and those who dwell in it are desolate. Therefore the inhabitant of the earth are burned, And few men are left...For the windows from on high are opened, and the foundations of the earth are shaken. The earth is violently broken, The earth is split open, The earth is shaken exceedingly. The earth shall reel to and fro like a drunkard, And shall totter like a hut; It transgression shall be heavy upon it. And it will fall, and not rise again.

Matthew 24:29 Immediately after the tribulation of those days the sun will be darkened, and the moon will not give its light; the stars will fall from heaven, and the powers of the heavens will be shaken.

Luke 21:25-27 And there will be signs in the sun, in the moon, and in the stars; and on the earth distress of nation, with perplexity, the sea and the waves roaring; men's hearts failing them from fear and the expectation of those thing which are coming on the earth, for the powers of the heaven will be shaken. Then they will see the Son of Man coming in a cloud with power and great glory.

Future prophetic events seem to indicate destruction coming from the sky. Possible scenarios include the earth being struck by meteors, comets, and its orbit being perturbed by the passing of various astronomical bodies. This would devastate the earth through gravitational and tidal forces. Astral impacts would likely have earth wide consequences for humanity and the ecosystem. The following are examples as described in the book of Revelation.

Revelation 6:12-17 I looked when He opened the sixth seal, and behold, there was a great earthquake; and the sun became black as sackcloth of hair, and the moon became like blood. And the stars of heaven fell to the earth, as a fig tree drops it late figs when it is shaken by a mighty wind. Then the sky receded (margin: split apart) as a scroll when it is rolled up, and every mountain and island was moved out of it place. And the king of the earth, great men, the rich men, the commanders, the mighty men, every slave and every free man, hid themselves in the cave and in the rocks of the mountains, and said to the mountains and rocks, "Fall on us and hide us from the face of Him who sits on the throne and from the wrath of the Lamb! For the great day of his wrath has come, and who is able to stand?"

Revelation 8:7-12 The first angel sounded: And hail and fire followed, mingled with blood, and they were thrown to the earth. And a third of the trees were burned up, and all green grass was burned up. The second angel sounded And something like a great mountain burning with fire was thrown into the sea, and a third of the sea became blood. And a third of the living creatures in the sea died, and a third of the ships were destroyed. Then the third angel sounded; And a great star fell from heaven, burning like a torch, and it fell on a third of the rivers and on the springs of water. The name of the star is Wormwood. A third of the waters became wormwood, and many men died from the water, because it was made bitter. The fourth angel sounded; And a third of the sun was struck, a third of the moon, and a third of the stars, so that a third of them were darkened. A third of the day did not shine, and likewise the night.

Revelation 16:18-21 And there were noises and thundering and lightning; and there was a great earthquake, such a mightily and great earthquake as had not occurred since men were on the earth. Now the great city was divide into three parts, and the cites of the nations fell. And great Babylon was remembered before God, to give her the cup of the wine of the fierceness of His wrath. Then every island fled away, and the mountains were not found. And great hail from heaven fell upon men, each hailstone about the weight of a talent (75 pounds). Men blasphemed God because of the plague of the hail. Since that plague was exceedingly great.

Revelation 18:21 Then a mighty angel took up a stone like a great millstone and threw it into the sea, saying, "Thus will violence the great city Babylon shall be thrown down, and shall not be found anymore."

Scientific References dealing with Catastrophism

These citations from various scientific journals deal with the catastrophic effects that have been suffered by the earth during various cometary and planetoid impacts. Notice how closely the scientific descriptions match the previous Biblical catastrophes.

Some of the common themes include animal life being destroyed. The ocean waters being poisoned or made unfit for the marine organisms that inhabit them. The darkening of the skies because of ejecta and atmospheric dust which would turn the moon and sun red. The falling of stars from heaven (shooting stars) which would be a result of the smaller rocks and space debris burning up as they enter the earth's atmosphere, this material would accompany a large comet or meteor. Large asteroids or planetoids would have catastrophic effects on the crust of the earth and would initiate earthquakes and tsunamis which would cause marine upheavals. These upheavals would devastate coastal areas and destroy shipping and marine trade. Due to the large amount of kinetic energy and frictional heating oceanic island and mountains which are on the edge of large tectonic plates would be repositioned or disappear. Because of the pollution of the sea and it chemical rearrangements the oceans would take on a red blood-like color and much marine life would be killed. As a result of all of these astral catastrophes people would hide in caves and rocks of the earth to seek protection.

Hsu KJ. Terrestrial catastrophe caused by cometary impact at the end of the Cretaceous. Nature. 285:210-13. 1980.

Mass extinctions at the end of the Cretaceous has been related to the impact of meteorites, asteroids, or comets. The two groups of organisms most affected are large terrestrial animals and calcareous marine plankton...Impact craters are not uncommon on the surface of the Earth...The preceding analysis showed that a cometary impact may kill by three different means: large land animals could be killed by atmospheric heating, marine organism could be killed by cyanide poisoning, calcareous marine plankton might further suffer because of a catastrophic rise of the CCD (calcite compensation depth) of the oceans. If the comet fell into the ocean, the dissolution of it nucleus should have released a large quantity of hydrogen-cyanide, methyl-cyanide, CO2 and possibly also CO. The dissolved constituents should ascend with the warm water mass heated by the fallen comet, and should find their way into a surface current system and remain relatively concentrated there. Cyanide is a powerful inhibitor, arresting cellular respiration by inactivating metallo-enzymes in the respiratory process. As this process is fundamental to all living organism, cyanide dissolved in sufficient concentration could kill all kinds of marine organism, including nannoplankton...leading to a virtual extinction of the calcareous planktonic life. Furthermore, phytoplankton formed the basis of the food chain for higher organisms, so that their mass mortality should cause starvation of those marine organism that that escaped cyanide poisoning.

...on land, the large vertebrates would perish under almost instantaneous thermal stress...the ejectas excavated by a large fallen comet may equal or even exceed, the mass of the comet, and much of the fine dust might reach the stratosphere to block out solar radiation thus causing glaciation.

Alvarez L. et al. Extraterrestrial cause for the Cretaceous-Tertiary extinction. Science. 208:4448:1095-1108. 1980.

What happened during the Krakatoa explosion can be expected to happen to a much greater extent during the impact of a larger asteroid. An interesting difference is that extreme atmospheric turbulence would follow the impact. The asteroid would enter the atmosphere at roughly 25 km/sec (15 miles/sec) and would "punch a hole" in the atmosphere about 10 km (6.2 miles) across. The kinetic energy of the asteroid is approximately equivalent to that of 108 megatons of TNT (108 megatons = 100,000,000,000,000 tons).

Although it is impossible to make an accurate estimate of the asteroid's size...We conclude that the data are consistent with an impacting asteroid with a diameter of about 10± 4 km (between 3.72—8.7 miles in diameter)...A temporary absence of sunlight would effectively shut off photosynthesis and thus attack food chains at there origins. The animals at successively higher levels in this food chains were also very strongly affected, with nearly total extinction of the foraminifer and complete disappearance of the...ammonites, and marine reptiles. A second food chains is based on land plants, among these plants, existing individuals would die....the large herbivorous and carnivorous animals that were directly or indirectly dependent on this vegetation would become extinct. Russell states that "no terrestrial vertebrate heavier than about 25 kg (55 pounds) is known to have survived the extinctions.

Chapman CR. Impacts on the earth by asteroids and comets: assessing the hazard. Nature. 367:33-40, 1994.

Above the threshold for global catastrophe, the number of fatalities is › 1.5 billion. As meteoroid size approaches that of the K/T object virtually the entire population of the planet is likely to perish in the aftermath of the impact. For example, just above the nominal threshold of 2 × 105 MT (MT = megatons of TNT, 1 MT = 1million tons of TNT therefore 2 × 105 MT = 200,000,000,000 or 200 billion tons of TNT!), the expected average local causalities from the direct blast are about 3 million (up to 30 million, if tsunamis were included), while indirect casualties are 1.5 billion, or a factor of 500 greater...A globally catastrophic impact, however, exceeds all other disasters in that such an event could kill much of the world's population over the course of a few months or years.

Napier WM. Clube SVM. A theory of terrestrial catastrophism. Nature. 282:455-59. 1979.

These large impacts (of planetoids) must inevitably have global consequences, directly through the effects of blast and indirectly through the injection of dust and NO (nitric oxide) into the stratosphere...For land impacts, the smallest overpressure likely to be experience anywhere on Earth is ~0.25 kg wt cm-2...peak overpressures of this magnitude completely destroy forests. As large land vertebrate of small strength/weight ratio would be preferentially killed, such a blast wave could have been the prime cause of the Cretaceous-Tertiary extinction. The survival of animal life associated with underground habitat and the rapid regeneration of vegetation from roots and seeds would be consistent with the hypothesis. An impact of this energy would also excavate ~1018 g (1,102,311,310,924 tons—1 thousand billon tons) of material much of which would reach the stratosphere as a fine dust and block out sunlight, with catastrophic effects on food chains. If the settling time were ›10 yr, the build up of ice could be ~0.3km in depth (1,000 feet) and continental glaciation might be initiated. Analogy with nuclear explosions suggest that ›1015 g of NO (11,023,113,109 tons-11 billon tons) would be injected into the stratosphere, thereby destroying the ozone layer. The biological effects of the UV deluge to be expected as the sky cleared are likely to be drastic.

Spray JG. Kelley SP. Evidence for a late Triassic multiple impact event on Earth. Nature. 392:171-73. 1998.

Evidence for the collision of fragmented comets or asteroids with some of the larger (jovian) planets and their moons is now well established following the dramatic impact of the disrupted comet Shoemaker–Levy 9 with Jupiter in 1994. Collisions by fragmented objects result in multiple impacts that can lead to the formation of linear crater chains, or catenae, on planetary surfaces. Here we present evidence for a multiple impact event that occurred on Earth. Five terrestrial impact structures have been found...These structures may thus represent the remains of a crater chain at least 4,462 km long (2,772 miles)...We therefore suggest that the five impact structures were formed at the same time (within hours) during a multiple impact event caused by a fragmented comet or asteroid colliding with the earth.