

# Biblical Astronomy

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## NEW MOON REPORT

Nehemia Gordon from Jerusalem, Israel compiled the following New Moon Reports for November and December 2007 and the Ninth and Tenth months on the Biblical Calendar.

**November** – “On Sunday November 11, 2007 observers across Israel looked for the new moon but it was not sighted due to heavy cloud coverage. The moon had 2.65% illumination and 41 minutes lagtime and therefore would have been visible from Israel had there been no clouds.”

**December** – “On Tuesday December 11 2007 the New Moon was sighted from Jerusalem at 16:50 by Nehemia Gordon, Devorah Gordan, and Johann Schutte. The moon was also sighted from Herodion at 17:15 by Bruce Brill.”

It is expected that the next new moon will be visible from Jerusalem near sunset on either January 9, 2008 when the moon will be 1.23% illuminated and 8 degrees above the horizon at 5 minutes after sunset (a borderline situation) or January 10, 2008 when the moon will be 4.48 % illuminated and 19.6 degrees above the horizon at 5 minutes after sunset.

This year, the eight-day celebration of Hanukkah (also known as the Feast of Lights and Feast of Dedication) will start on sunset December 5<sup>th</sup> and will end on sunset December 13<sup>th</sup>. These dates are according to the Biblical Calendar.

## COMET UPDATES

Comet Holmes 17P is now fading away. The gases and dust cloud surrounding the comet have greatly expanded making it more diffuse. I could not spot it in the third week of November, but there was the light of the moon to contend with. There have not been clear nights here in Oregon for

the past month. There are reports that the comet became quite visible again after the moon was not a factor. I have had some difficulty finding informative updates on the comet's visibility. The best I can tell is that the comet is now near a 4<sup>th</sup> magnitude object. It is still visible to the naked eye but you really need to know where it is to see it. It is still a good binocular object according to some reports.

After its discovery during an outburst in 1892, Comet Holmes had a second outburst about five months later. If history repeats itself, we may have another splendid look at it before it finally fades away. So stay tuned for further developments.

The below photograph of Comet Holmes was taken by Johnny Horne from North Carolina on November 27, 2007.



## What Happened to Comet Holmes?

The following article written by J. Kelly Beatty is from a November 15, 2007 news release by Sky & Telescope.

“Except for the double outburst observed during and shortly after its discovery in 1892, periodic Comet 17P/Holmes has been a run-of-the-mill interloper from the outer solar system. So why, professional and amateur skywatchers have been asking out loud, did it erupt so suddenly and dramatically in late October?”

One possible explanation that's almost certainly *not* correct is that it was struck by an asteroidal fragment. Although this comet occupies the realm between Mars and Jupiter, its orbital inclination (19°) actually keeps 17P/Holmes well separated from most denizens of the asteroid belt. Moreover, counting the outbursts that occurred during and after its discovery in 1892, *three* collisions would be needed to explain all the activity.

Another unlikely scenario, proposed by the late Fred Whipple in 1984, is that the nucleus was accompanied through space by one or more satellites that "reentered" and released a torrent of dust and gas when they struck the main mass in 1892.

Other comets have erupted like this before - Comet 41P/Tuttle-Giacobini-Kresak's performance in 1973 comes to mind - though not as dramatically. Most likely, repeated warmings by the Sun caused a dusty, ice-free "crust" to form on the nucleus, sealing the interior. Over time the pressure beneath this seal steadily grew as once-frozen ice became gas, eventually breaking through and sending large chunks of crust flying into space that quickly disintegrated into microscopic dust.

At least that's the leading hypothesis. Realistically, we may never know the cause. This comet's behavior, particularly the perfectly spherical outer halo, has confounded even the experts. Remarkably, 17P/Holmes has mimicked almost perfectly the behavior seen during its discovery 115 years ago. "I have never in my experience as a cometary scientist seen such a symmetric structure in emitted material," admits Carey Lisse of Johns Hopkins University's Applied Physics Laboratory.

Colleague Harold Weaver adds, "That offset blob was very unusual. Some kind of large chunk must have come off and disintegrated." Comet

theorist Zdenek Sekanina (Jet Propulsion Laboratory) estimates that this "megaburst," most likely triggered late on October 23rd (Universal Time), shot 100 million tons of dust into space. To put this in perspective, Mount St. Helens unleashed a 500-million-ton ash cloud during its catastrophic 1980 eruption.

Studies with ground-based observatories show that Comet Holmes has been emitting a rather typical combination of water and other compounds. Weaver, Lisse, and others managed to commandeer the Hubble Space Telescope for one orbit's observations on each of three nights in late October and early November. [The blandness of these images](#) argues that the nucleus didn't break apart wholesale, as was the fate of [Comet 73P/Schwassmann-Wachmann 3](#) in April 2006.

Follow-up infrared observations with the Spitzer Space Telescope on November 13th should provide some compositional constraints on the vast cloud of dust particles that made Comet Holmes appear so bright.

"The Spitzer spectra show that the dust coming off the nucleus is fine-grained silicates, with a mineralogy similar to Hale-Bopp's," says William Reach (Caltech). The observations, spanning wavelengths of 5 to 40 microns, targeted the area closest to the nucleus. Unfortunately, Spitzer didn't get to check out the blob of matter seen moving outward soon after the outburst because, Reach adds, "at the time of our proposal we didn't know where that stuff was going to be!"

One clue to what has triggered the outburst now — and not, say, during its previous appearance in 1999 — may be its vacillating perihelion distance. As master comet chronicler [Gary Kronk](#) noted recently in an online posting, "The comet's orbit was altered by Jupiter during December 1908 so that the perihelion distance increased from 2.12 AU to 2.34 AU. The comet was lost until 1964 and it remained faint during that apparition."

"An approach to Jupiter during April 1968 decreased the perihelion distance back to 2.16 AU," Kronk continues, "but no outbursts were observed at any apparition between 1972 and 2000. Another approach to Jupiter in January of 2004 decreased the perihelion distance to 2.05 AU, [followed by] an outburst at the very next apparition."

Coincidence? Perhaps not!"

Another comet that is now heading toward its closest approach to the sun and Earth is Comet Tuttle 8P. This comet is expected to brighten to just

within naked eye visibility but will still be too dim for most to see with the naked eye. This should be a real nice binocular object if you know where to find it. Some expect it to brighten to a magnitude 5.5. All of my models show its brightest magnitude at 5.7 (rounded to the nearest 10<sup>th</sup>). The comet will be at this magnitude from January 4<sup>th</sup> to January 6<sup>th</sup> 2008, being slightly brighter of the three evenings on January 5<sup>th</sup>.

Comet Tuttle is a periodic comet with an orbital period of about 14 years. P.F.A. Mechain from Paris, France discovered the comet on January 9, 1790. Horace Parnell Tuttle of Harvard College Observatory, Cambridge, Massachusetts re-discovered the comet on January 5, 1858. The comet is named after the latter.

**Chart 452** shows the path of Comet Tuttle 8P from December 20, 2007 to January 7, 2008. The comet starts off in the constellation *Cassiopeia* on December 20 and blazes a trail through *Andromeda* and *Pisces*, heading toward *Cetus* the beast from the sea. *Cassiopeia* represents the delivered bride of Messiah, making herself ready for the marriage supper of the Lamb. *Andromeda* represents the captive bride before and during the time of her deliverance from the beast. The comet passes through the bands of *Pisces* near where the lamb is loosening or breaking the bands. It will be at its brightest near that point in the sky. See Chart 452 to see where the comet will be between January 4<sup>th</sup> and 6<sup>th</sup>.

As mentioned in the November 2007 issue of *Biblical Astronomy*, the constellation *Perseus* or *Peretz the breaker*, represents Messiah delivering His bride. Comet Holmes 17P is now on a curved path through *Perseus* and will reach a very close conjunction to the star *Algol (the evil spirit)* in *Rosh Satan* or the head of Satan on January 22, 2008. On January 22, Comet Tuttle will be too far south to be seen from the northern hemisphere and will not be in any particular constellation. At any rate, these two comets are putting on a great display that has its main emphasis on deliverance from the beast. If Comet Tuttle were to have a bright outburst, that would be really awesome. We will see what happens.

## MARS AT OPPOSITION

The planet Mars will reach opposition (its closest approach to the earth for the year) on December 24<sup>th</sup>. Near that time, Mars will be in a

very close conjunction with the full moon. Mars will be at its brightest magnitude since 2005 at magnitude -1.6 during opposition. This will be its brightest magnitude for the next nine years.

**Chart 453** shows the positions of Mars and the full moon when Mars is at opposition as seen from Jerusalem, Israel at 6:00 a.m. on December 24, 2007. There is less than 1/6<sup>th</sup> of a degree between Mars and the moon.

The best time to view Mars and the Moon at their closest point in the Western Hemisphere is in the evening sky. You can see them dance together all through the evening on December 23. The light of the full moon will take away much of the brightness of Mars. When Mars reaches opposition on December 24, the moon will be further away from Mars allowing for a brighter view of the planet, though still not optimal.

The moon will occult (pass over) Mars as viewed from NW Canada, Alaska, northern Russia, eastern Europe, and NE British Isles in the evening/morning of December 23/24.

The conjunction of *Mars* and the moon on December 23/24 will occur in the sign and constellation *Gemini*. Both are within the borders of this constellation though they lie between *Gemini* and *Auriga* and are above *Orion*. One portrayal of *Gemini* is that of Messiah with His bride. Another is that of Y'shua coming as a servant and a sacrifice to do his labors set before him in the left figure, and Y'shua coming back to do battle with his enemies and to rule as King of Kings in the right figure. *Auriga* represents the Great Shepherd Y'shua protecting His flock from the wrath of God that is poured forth on His enemies. *Orion* portrays Messiah crushing his enemy under His foot.

The planet *Adom (Mars)* represents the atoning blood of Messiah Y'shua and also blood and war. The moon is Yahweh's faithful witness (Psalm 89:35-37).

The portrayals of the two comets and the opposition of Mars in conjunction with the full moon clearly portray Messiah coming to deliver His bride and protect His sheepfold while the wrath of God is poured out on his enemies as Y'shua makes war against them. The planet *Adom (Mars)* also represents Michael the warrior angel who makes war against the dragon in Revelation 12.

This is a clear portrayal of the above events but when these events are to actually occur only our Heavenly Father knows.

**Yahweh Bless you through Y'shua.**



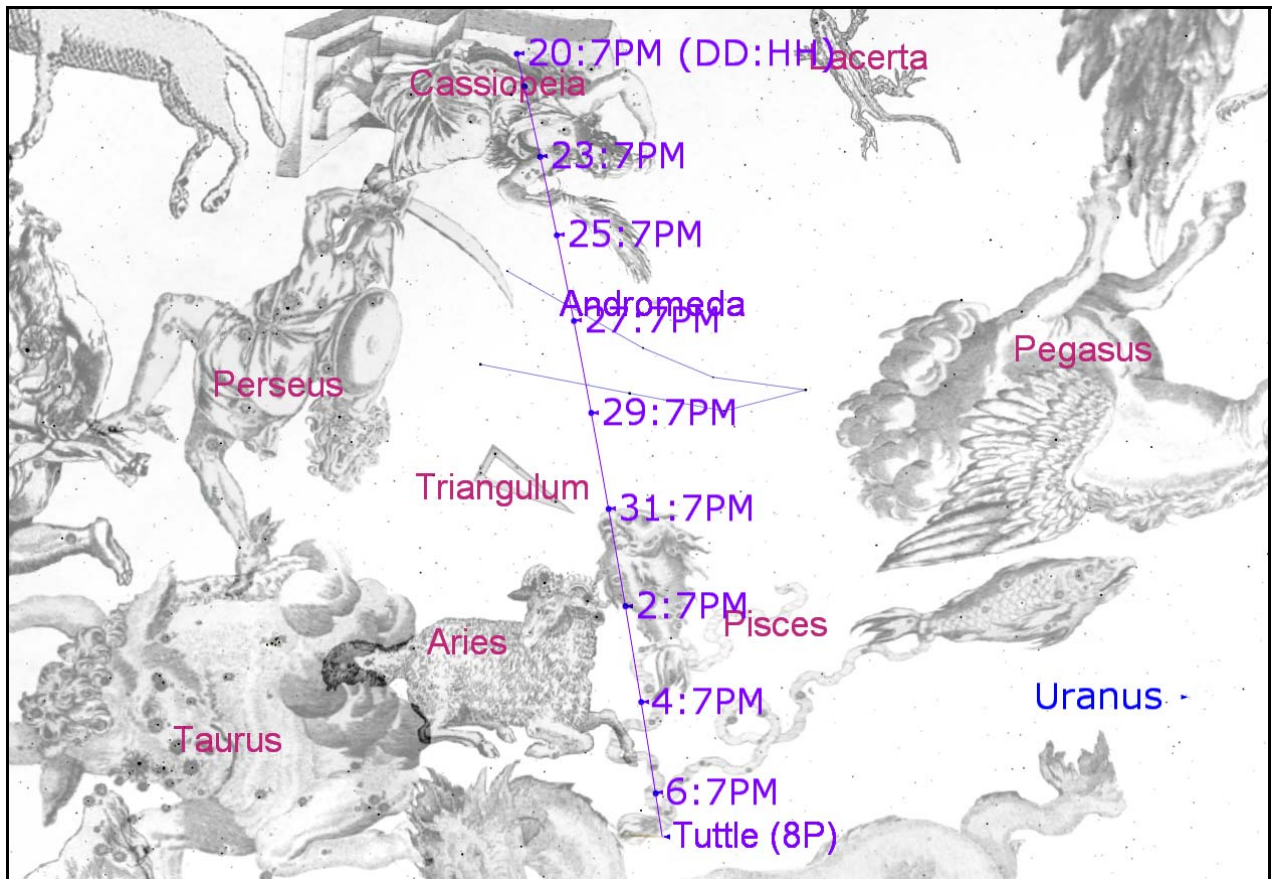


Chart 452 – Path of Comet Tuttle 8P from December 20, 2007 to January 7, 2008

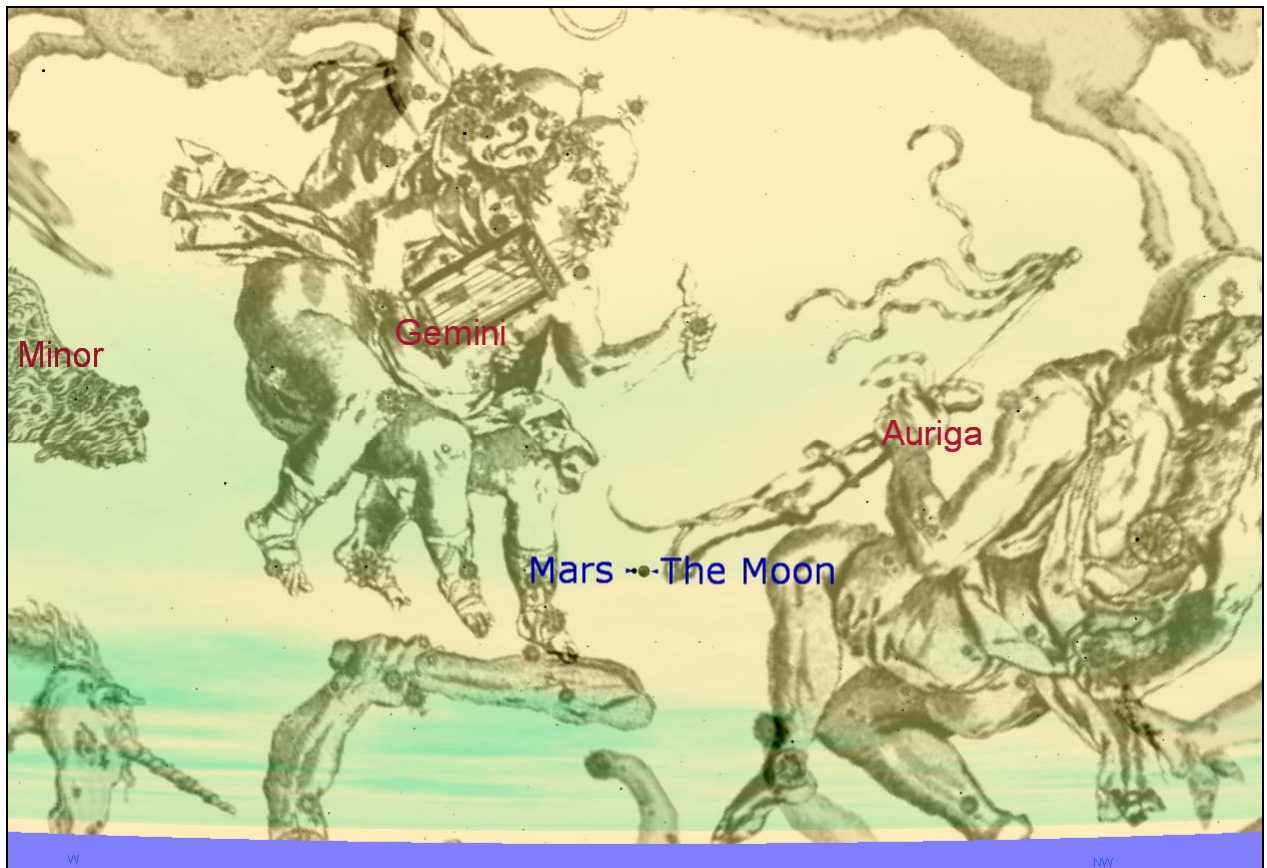
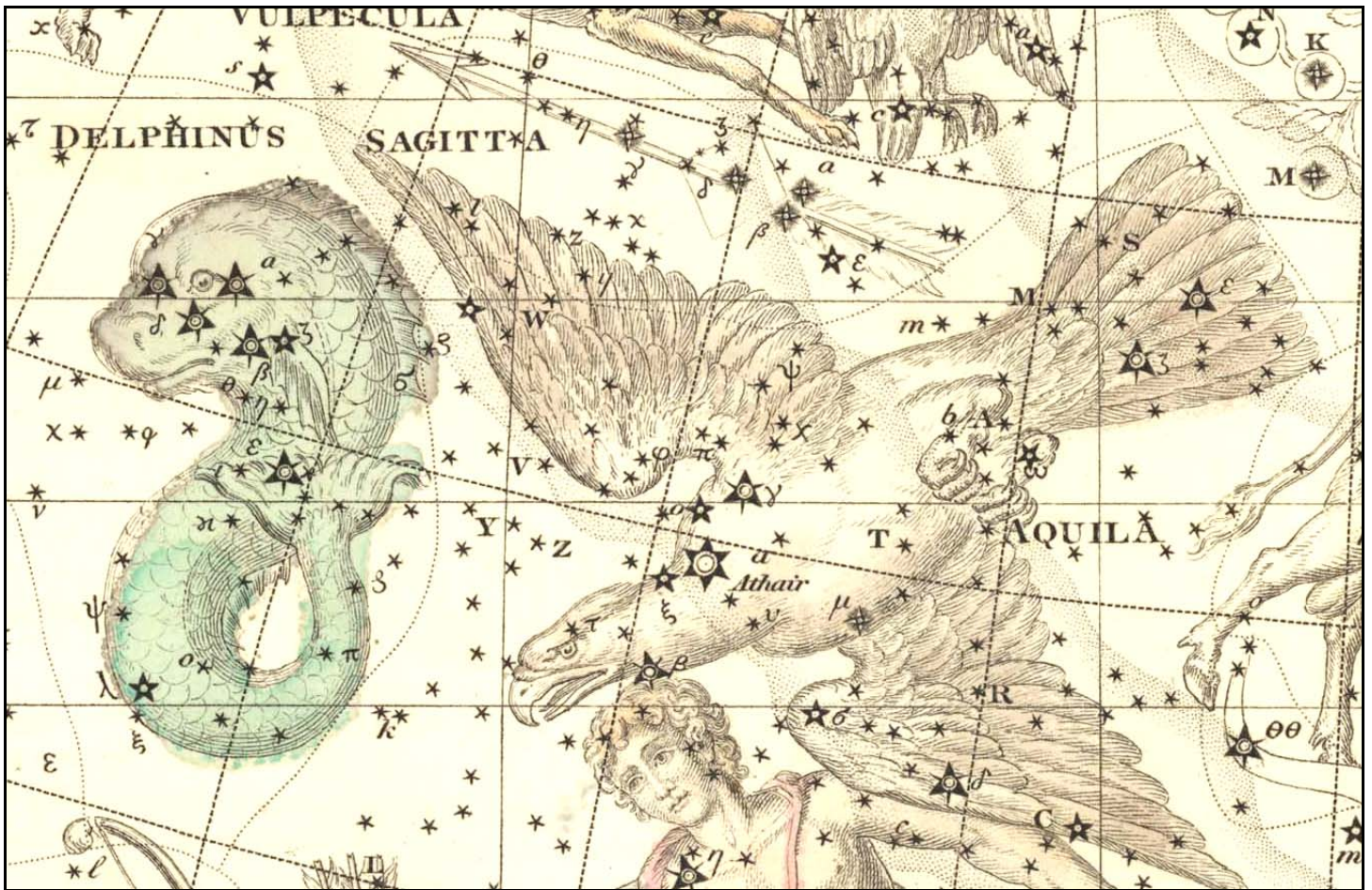


Chart 453 – Mars and the full moon as seen from Jerusalem at 6:00 a.m. on December 24, 2007





## **SAGITTA (the Arrow) AQUILA (the Eagle) DELPHINUS (the Dolphin)**

*The arrow of God sent forth; The smitten one falling; The dead one rising again*

Decan constellations of the Sign *Capricornus (Gedi)*.

### **Other Ancient Names for Sagitta**

*Sham* (Heb.) – *destroying*, or *desolate* – Anciently said to be the Arrow that slew the Eagle.

### **Complementing scriptures to this constellation picture**

Psalms 38:2 (KJV) – Thine arrows stick fast in me, And Thy hand presses me sore. (also read Isaiah 53:4,5).

Job 6:4 (KJV) – For the arrows of the Almighty are within me, the poison whereof drinketh up my spirit: the terrors of God do set themselves in array against me.

This arrow represents the arrow of God's wrath sent forth toward his enemies. Messiah Y'shua took the strike of this arrow upon himself to save those who would believe in Him. He took God's wrath on himself so it would not fall on us who were deserving of it. Those who are now in Messiah are not appointed to the wrath of God because of what Y'shua accomplished on the cross. This is a large part of the "Good News."

There are eighteen stars in this constellation, the four brightest being of the 4<sup>th</sup> magnitude. There are no names of the stars in this constellation that have survived through the ages.

## **Other Ancient Names for Aquila**

*Tarared* (Heb.) – *wounded*.

## **Complementing scriptures to this constellation picture**

Psalms 38:10 (KJV) – My heart panteth, My strength faileth Me, As for the light of Mine eyes it is gone from Me. (Add this to Psalm 38:2 above to get the complete picture of Sagitta and Aquila).

Zechariah 13:6 – And *one* shall say unto Him, What are these wounds in Thine hands? Then He shall answer, *Those* with which I was wounded *in* the house of My friends.

## **Stars in Aquila and the meaning of their names**

*Al Tair* (Arab.) – *the wounding*.

*Al Shain* (Arab.) – *the bright*, from a Hebrew root meaning *scarlet colored*, as in Joshua 2:18.

*Alcair* (Arab.) – *the piercing*.

*Al Okal* (Arab.) – *wounded in the heal*.

From E.W. Bullinger's *The Witness of the Stars* – "How can the united testimony of these names be explained except by acknowledging a Divine origin? even that of Him who afterwards foretold of the bruising of the Virgin's Son in the written Word; yea, of Him "who telleth the number of the stars and giveth them all their names."

This constellation picture of a smitten and falling eagle represents Y'shua who was wounded and killed by the arrow of God's wrath, taking the wounds of our transgression upon himself. He was wounded and died for our transgressions. But this is not where it ends. The following picture completes this portrayal of *the Gedi*.

## **Other Ancient Names for Delphinus**

*Dalaph* (Heb.) – *pouring out of water*. In Arabic *coming quickly*.

*Scalooin* (Arab.) – *swift (as the flow of water)*.

*Rotaneb* (Syriac) – *swiftly running*.

The following is from E. W. Bullinger's *The Witness of the Stars* concerning Delphinus – "It is always figured as a fish full of life, and always with the head upwards, just as the eagle is always with the head downwards. The great peculiar characteristic of the dolphin is its rising up, leaping, and springing out of the sea.

When we compare this with the dying goat and falling eagle, what conclusion can we come to but that we have here the filling in of the picture, and the completion of the whole truth set forth in CAPRICORNUS?

Jesus "died and rose again." Apart from His resurrection His death is without result. In His conflict with the enemy it is only His coming again in glory which is shown forth. But here, in connection with His people, with the multitudes of His redeemed, Resurrection is the great and important truth. He is "the first-fruits of them that slept"; then He, too, is here represented as a fish. He who went down into the waters of death for His people; He who could say "All thy waves and thy billows are gone over me" (Psa 42:7), He it is who rises up again from the dead, having died on account of the sins of His redeemed, and risen again on account of their justification (Rom 4:25)."