

CREATOR

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ROYAL BLUE

The LORD reigns, He is clothed with majesty.

Psalm 93:1a

Blue declares the supremacy of Christ. It is the color of His authority over all things, living or not. The two great testimonies of God's kingship—the Bible and creation—are richly crowned with the royalty of blue.

Earth, among all the planets of the universe, is unique. It is here that our great King came to save His people from divine wrath and usher in His kingdom. Our blue planet is a beautiful, shining sapphire in Christ's crown. And nowhere else is the color blue so prominently displayed here on earth as in our vast oceans and endless skies.

On February 14, 1990, the Voyager 1 spacecraft, then more than four billion miles from home, and well beyond our solar system, pointed its aging cameras at our planet and perceived it as a distant point of indigo light. Even at that tremendous distance, our world appeared blue! Our Lord Jesus, Creator of all things, extends this stamp of His divine ownership and authority throughout the universe. From mandrills to mankind, from sapphires to star fires, the cyan mark of Christ's dominion as King of kings has been carefully sown into the fabric of the cosmos.

Blue Skies

"Once in a blue moon" is an event that occurs with rarity. A "blue moon" is not blue at all, but is the name for a normal-looking, second full moon to occur in a calendar month, taking place every two-and-a-half years. It is possible, however, for the moon and the sun to actually appear blue. This happens when the skies are choked with smoke from a volcano, dust from a sand storm, or soot of a forest fire. The dense cloud of airborne particles allows only blue light from the moon at night, or daytime sun, to penetrate our eyes—these celestial objects literally appear blue. The appearance of this color during these disasters is a reminder, after all, that King Jesus is the Author of these calamities (Jeremiah 21:14; Amos 3:6).



Our sun is normally yellow in appearance, but in reality it produces much more blue light than yellow. Why then doesn't the sun have a bluish tint to it? The air surrounding the earth scatters much of the blue light from the sun, allowing yellow to shine through.



Sunshine, or white light, is composed of all the colors of the rainbow (violet, blue, green, yellow, orange, and red). Our Lord Jesus, however, designed the molecules in the atmosphere to selectively disperse much of the blue portion of sunlight. This is why the sky is blue. Even at night, a cloudless sky has a shadowy cobalt complexion if the moon is out.

In principle, the oceans of the world are blue for the same reason the sky is. Like air, water molecules refract the blue ingredient of sunlight, making the seas sparkle in azure hues.



STAR FIRE

Not all stars appear yellow like our own. Throughout the universe, God uses surface temperature to paint stars with a myriad of colors. If you examine a spectrum of stellar worlds, from the least intense to the hottest, color changes from red to orange, then yellow, white, and finally, blue. The coolest stars are red—a "mere" 5,000 degrees Fahrenheit (2,760 degrees Celsius). The surface temperature of blue stars, on the other hand, can reach 90,000 degrees Fahrenheit (50,000 degrees Celsius), ten times hotter than the sun!

The blue color of the hottest stars reveals the awesome power of Christ in a most vivid way. These stars function like signet rings, marking the heavens with God's royal ownership. Although our own galaxy, the Milky Way, contains mostly cool red stars—leaving Earth its most striking blue world—distant galaxies are replete with large, hot stars. The abundance of these stars causes some galaxies to appear blue, showcasing a truly awesome and regal beauty.

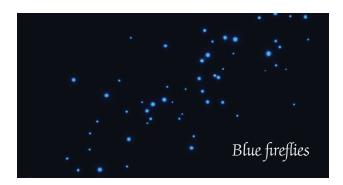


The Triangulum Galaxy

THE COMPLEXITY OF BLUE

Extraterrestrial blue is often produced by rather simple means. The energy that fuels hot, blue stars comes from the conversion of hydrogen into helium within a star's interior. Although relatively rare on Earth, a handful of Christ's creatures are blue and, when observed, leave an unmistakable impression on our minds. But unlike blue stars, the color of these animals is produced by special pigments or complex surface anatomy.

There is an unusual species of firefly in the southern Appalachian Mountains that glows blue rather than the normal yellow. Like all lightning bugs, the glow of blue fireflies is due to a unique pigment known as *luciferin* (loo - SIF - er - in). In this rare insect, our Lord Jesus "tweaks" the chemical reaction common to other fireflies, producing an otherworldly flashing of cyan light in their abdomens.



Our Lord Jesus also uses similar chemical reactions to produce blue light in marine animals. Photographer Ron Church describes one such experience he had while on a boat off Baja California: "As I lifted the bulging net from the water, I noticed it was suddenly all aglow. Like an erratic blue flame on a gas stove, a brilliant electric blue light wavered back and forth over the mass of plankton."

The creatures causing this flickering neon appearance were later identified as tiny shrimp (*Nyctiphanes simplex*). Many marine animals glimmer in the dark. On this particular occasion, Christ ensured that His royal signature would be seen in the sea even at night. For that brief moment, the shrimp shined like crown jewels, revealing the beautiful majesty of our Creator.



The yellow, orange, and red feathers of birds are usually the result of yellow, orange, or red *pigment* inside their plumage. Blue feathers, blue eyes, the scales of blue fish, and the blue face of a mandrill appear that way because the intricate *structure* of their tissues reflect blue, and not because of pigmentation.

THINGS LOWLY

The beauty of living blue is not limited to animals or sweet smelling gardens. The carrionflower (*Smilax herbacea*) is a one-of-a-kind plant that illustrates the glory of Christ's bride, the Church. It is so named because its small green flowers give off the odor of rotting flesh. Flies are attracted to this putrid smell and help pollinate this plant, which grows as a vine in eastern North America. When mature, it produces clusters of dark blue berries that resemble grapes.

¹ Church, Ron, *Bioluminescence: The Sea's Living Light*, (Oceans Magazine, Number 2:San Diego, 1970), p. 23.



Carrionflower berries

It might seem strange that God would adorn such a wretched smelling plant with pleasant blue berries. We know that the Lord uses symbols in His Word to communicate truth (see Zechariah 3:8). Understanding the symbolic language that Christ's Spirit uses in Scripture can be difficult, but it is often rich in meaning. So, too, our Creator sows symbols of truth in nature, and comprehending them is equally challenging. Might the cluster of dark blue carrionflower berries symbolize God's people who have been rescued from their foul sin (represented by the horrible smelling flowers), and who now bear His royal fruit (1 Peter 2:9)?

Overall, blue—as a reflection of Christ's royalty—is used sparingly in the plant kingdom.² Wildflowers that are genuinely blue, for instance, are quite uncommon. This selective use of blue in flora, as well as in fauna, hints at the peerless position God has as the universe's Supreme Monarch. There is one Ruler over all, unique in every way. He, therefore, does not herald this royal message willy nilly among His creatures, but only with great care!

Exodus 24:10

And they saw the God of Israel; and under His feet there appeared to be a pavement of sapphire, as clear as the sky itself.

Of all the Lord's creations, what better represents the singular majesty of God on His throne than gemstones (Revelation 4:3)? Sapphire is a rock known as *corundum*. Corundum is very hard . . . it ranks nine on the Mohs scale, and only diamonds surpass it in toughness. In its pure state, corundum is colorless, yet God also created many colored varieties. Roughly speaking, corundum is divided into two gems types: rubies and sapphires. Rubies are bright red; sapphires can be yellow, green, pink, or purple. Blue sapphires are prized most and result from our Lord Jesus adding just a pinch of iron or titanium to the body of the clear corundum crystal. A ruby, on the other hand, is corundum stained with chromium.



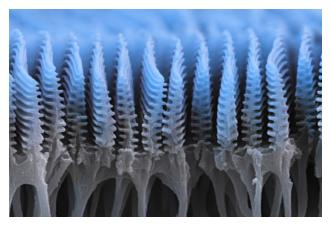
Logan Sapphire

² So, too, God displays His glory sparingly among people. In the OT, the mark of His majesty was limited to the Jewish nation, and eventually to a remnant of those people. In Numbers 15:38, the Israelites were told to wear tassels made of blue cord to remind them of their God and His commands.

LIVING RAINBOWS

It was hinted earlier that when feathers appear blue, it's because their divinely woven microscopic architecture reflects blue light in a very sophisticated way. These feathers contain no pigment. When the color of an organism is produced in this way, it is known as a *structural color*.

Structural colors among animals, in general, are much less common than pigmentation. (This is why blue creatures are rarer than animals of other colors.) A few marine organisms and tropical frogs are blue from pigmentation, but they are the exception. Christ's creation of the microscopic structures that cause an animal's blue appearance is quite varied and remarkably complex. The physics behind the blue of a peacock's neck and a mandrill's face are the same, yet, the tiny "prisms" on the surface of each animal are very different. Side note: When we refer to these structures as microscopic, we should really say that they are ultramicroscopic. They are so miniscule that they can only be seen with an electron microscope.



Surface view of a Morpho butterfly wing scale (extreme magnification)

The most spectacular example of structural color is *iridescence*, and fortunately many examples exist in nature. If you



examine closely, a hummingbird's feathers are iridescent, so are the eyes of many flies. The shared characteristic of these creatures is that they have not one, but several colors on display, depending on how you look at them. The wings of some iridescent butterflies, for instance, are blue when viewed head on. Seen at a slightly different angle, they appear violet, then change to green when that angle is yet again shifted. This protean nature of iridescence is its trademark.

It is difficult to fully appreciate the incredible genius and super-miniature engineering that Christ Jesus applies to the construction of iridescent animal tissues, which in the case of a blue butterfly is its tiny scales. Those parts of the peacock's feather that produce its blue colors are so small and so perfectly made that man simply cannot reproduce them, despite all his technology. Man has been able to come up with iridescent paint, but the way it is produced is quite simple compared to God's design.

Let's now take an incredible trip into the life history of just one iridescent animal. This journey is so amazing that, if it were not observed, *it would be thought truly impossible*.

THE BLUE EMPEROR BUTTERFLY

Anyone who has ever visited Papua New Guinea has had the rare privilege of peering into its royal treasury of living things. It is here that we find the iridescent Blue emperor butterfly (*Papilio ulysses*). There may be no more beautiful animal on earth. If we study this fascinating creature, and the mindboggling way it changes from a caterpillar into a butterfly, our awe for God will increase. Like the blue stars of night, these cerulean insects exquisitely exhibit the radiance of their King.



Blue emperor butterfly (Papilio ulysses)

Author Hilda Simon summarizes the amazing construction of iridescent butterflies: "The egg has the blueprint, not only for the spectacular and incredibly complex metamorphosis of the caterpillar into pupa and butterfly, not only for the insect's final shape, size, vital organs, and functions, but also for the hundreds of thousands of scales that cover both sides of the wings, for the intricate patterns of the lower wing surface, and for the tens of millions of submicroscopic structures arranged to optical perfection to produce . . . color!"

The means by which a caterpillar turns into a butterfly is called *metamorphosis*. Many insects go through four stages in their life cycle: egg ⇒ larva ⇒ pupa ⇒ adult. In the case of the Blue emperor, the larva is a caterpillar, and the adult is the winged insect. The place where the "ugly ducking turns into a swan" is the pupa. The real mystery lies here, for it is in the pupa that something truly miraculous happens.

Most insects start as eggs. Butterfly and moth eggs then hatch into tiny caterpillars. A caterpillar's primary goal in life is eating, so it may increase in size. Many of us are all too familiar with the voracious appetites of caterpillars and the damage they can do to trees, garden plants, and crops. They feed ravenously for a month or so, shedding their skin several times to make room for their rapidly expanding bodies. Eventually the caterpillar stops eating and looks for a place to turn into a pupa. This often occurs while hanging from the branch of a small bush or tree.



Chrysalis of jay butterfly (Graphium doson)

A butterfly pupa is called a *chrysalis* (KRIS - ah- lis). In this stage, the body of the full-grown caterpillar is liquefied, that is, broken down by chemical reactions. What was once the well-defined organs and complex tissues of a caterpillar, become an

³ Simon, Hilda, *The Splendor of Iridescence: Structural Colors in the Animal World*, (Dodd, Mead & Company: New York, 1971), pp. 214-215.

⁴ Some insects, like aphids, bear their young live.



unrecognizable bouillabaisse inside the young pupa. It is as if the Lord Jesus Christ whirls the insides of the caterpillar in a blender.

According to Peter Farb, in his book *The Insects*, the pupae appear dead, but in reality "are engaged in [a] furious rearrangement of their tissues." The caterpillar's muscles, skin, antennae, intestines, mouth, and legs disappear, partially or completely. In their place, new organs are rapidly created. Others, such as nerves, air passages, heart, blood vessels, and "kidneys," do not vanish, but are revamped. The insect's brain becomes enlarged and rearranged. The iridescent wings and eyes of the butterfly, not present in the caterpillar, must be made from scratch.

These changes occur for very specific reasons. The Lord God tirelessly engages in a four-week-long building project, remodeling the caterpillar's stomach, for instance, because the Blue emperor butterfly has a rather different diet than its larva. As a caterpillar, it munched leafy plants, but as a butterfly it will drink the nectar from flowers using its straw-like tongue. Christ must also totally redesign the muscular system to accommodate the butterfly. The muscles used by the caterpillar for slow,

5 Farb, Peter, The Insects, (Time Incorporated: New York, 1962), p. 58.

methodical movement are very different from the muscles needed by the butterfly to flap its wings and move its six new legs. The caterpillar's heart is modified to allow the delicate veins of the butterfly's enormous and intricate wings to course with blood. Countless alterations must thus take place to transform the lumbering larva into a graceful flying insect.

For a time, parts of the old caterpillar nervous system are found side by side the brand new nerves of the undeveloped butterfly. How can two nervous systems exist at the same time in the same creature? We simply do not know, but we must remember that "all things are posssible with God." Many of the nerves formed within the pupa remain dormant until the butterfly emerges. How the insect knows when to turn the new nerves on, and the old ones off, is a biological mystery. Phenomenal as it may seem, the caterpillar nervous system remains until it is no longer needed and then it simply disappears.

A further testimony to the amazing divine control of a Blue emperor's metamorphosis is found in the fact that not all of the caterpillar's organs and tissues are dismantled at the same time. Some muscles and nerves, for example, are dissolved early in the pupa's existence. Other larval muscles and nerves, because they are needed for a while, are not eliminated until later in metamorphosis.

Astonishingly, it is during this short time span that the beautiful wings of the Blue emperor are born, each frosted with hundreds of thousands of brilliant blue scales. Every scale possesses a thousand carefully designed ultramicroscopic optical structures. It is difficult to believe, but millions of sophisticated blue prisms are manufactured in the dark recesses of the pupa in just a matter of days!

The transformation of the Blue emperor

6 Mark 10:27

butterfly—indeed, all butterflies and moths—is truly remarkable and not well understood by scientists. For decades, biologists have been trying to comprehend the nature of these tremendous changes. Peter Farb notes, "Obviously there must be some control center that directs this complex dissolution of the larva and the assembly of the pupa-adult, nourished by these raw materials, into what amounts to a new organism." For those who can accept it, the control center is the hand of Christ!

It is only through laborious research that scientists have gained any understanding as to how a caterpillar is converted into a butterfly. Again, Farb puts it this way, "The human mind has long been unable to comprehend the strange growth and development of most insects from an egg to worm-like larva, then to an inert pupa, and from that to emergence as a winged adult." It is almost as if God dares us to explain metamorphosis.

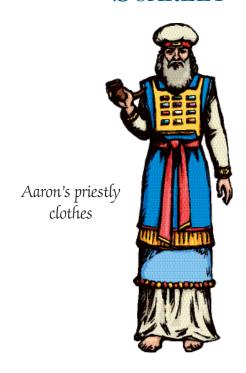
What makes matters more difficult for those trying to fathom the development of lepidopteran anatomy and physiology is that Christ works in the pupa of one insect quite differently than in the pupa of another. Physician and biochemist Michael Denton concludes that "the ways in which the adult organ systems are formed during metamorphosis are bewilderingly diverse in different species."

All creation praises its Maker (Psalm 103:22), and Christ's dominion is not limited to the Blue emperor, nor things blue. But the Blue emperor butterfly is a beautiful symbol of God's royal presence throughout nature and, in this sense, its name is well chosen. The miraculous changes which occur during this insect's metamorphosis provide a wondrous example of the infinite care God gives to every detail of His creation. And

7 Farb, Peter, *The Insects*, (Time Incorporated: New York, 1962), p.59. 8 ibid, p.55.

despite our ignorance, we can be comforted by this love and attention. He rules over the simple things of the world and the complex, the powerful and the weak. When our eyes are opened to Christ's inner workings within the pupa of the Emperor butterfly—to produce the stunning electric blue color of its wings—we can again stand in awe of Christ Jesus, our incomparable Creator!

Blue, Purple & Scarlet



The Lord placed the color blue on Earth as a banner announcing that He is a jealous God, in fact, His name is Jealous (Exodus 34:14). Only the Levitical priests of the Old Testament were allowed to wear special blue garments. This same mark of Christ's sovereign kingship is very clearly displayed over sky and sea as well. Yet this royal seal is sparingly seen in plants and animals because God rarely shares this particular glory with another. Though rare, let us be thankful then

⁹ Denton, Michael, *Evolution: A Theory in Crisis*, (Adler & Adler: Bethesda, 1986), p. 148.



Beautiful bioluminecent creatures along a beach at night

that Christ Jesus gives us blue creatures and blue flowers to enjoy and remind us of His sovereign reign!

Because God rules with absolute authority over all creation, any disobedience to His Word and His commands is *an infinte offense*, punishable by death. The late Dr. R.C. Sproul taught that sin is cosmic treason; when we sin, we are committing treason against Him who is enthroned above all the universe (Ephesians 4:10).

And because of our sin, it is impossible for us to come to God and be at peace with Him through our own efforts. How then, can we be forgiven for our sins if we desire to be forgiven? What things will appease God's anger at us? The evil we have done throughout our lives is so great that it mars us like a red indelible marker or bloodstained cloth. Please don't be deceived—even a "good" person is wicked in God's sight.

There is only one way for our guilt to be removed so that we may be at peace with God for all eternity:

"Come now, let us reason together," says the LORD, "Though your sins are as scarlet, they will be as white as snow; though they are red like crimson, they will be like wool."

Isaiah 1:18

God's Son, Jesus, willingly clothed Himself in the sins of His people and then received the punishment from His Father for those sins on a cross, a punishment we, ourselves, deserve. It is no accident that prior to His crucifixion and death, Christ's executioners "stripped Him and put a scarlet robe on Him." He became stained with our sin, so that we could become white.

When the blue of His royalty is overlaid with the scarlet of His sacrifice, the color purple is seen. In the book of Exodus, weavers and craftsmen were instructed to adorn God's house and His priests with blue, purple, and scarlet. Purple can then be symbolically understood to represent the inseparableness of the Lord's wrath and His mercy, His justness and His salvation. He is both a righteous King and a merciful Savior. The Almighty cannot be fractured in two as some have attempted to do in their minds. "I believe God is love and would never send anyone to hell," cries out one who believes God is soft on sin. Conversely, there are those who have forgotten His mercy and are trapped in the pain of their guilt, not realizing that God provides the way for ALL our sins (past, present, and future) to be forgiven (Colossians 2:13).

But Christ Jesus did not die on the Cross in vain. Not everyone's sins are pardoned. Only pardoned are those who humble themselves before God, repent of their sins, and believe that God's Son died and rose to life. Hell is very real—more real than our present world. And it is the destiny for those who would mock God by saying that He doesn't exist or that there are other ways to heaven. Christ is the only way! In Scripture, Jesus stated this with the greatest clarity: "I am the way, and the truth, and the life; no one comes to the Father but through Me" (John 14:6). Your heritage won't save you, your politics, or your "good" works. God says

10 Matthew 27:28

that "all our righteous deeds are like a filthy garment" (Isaiah 64:6). You must, therefore, repent of your sins and believe in your heart that Christ Jesus is Lord!

Christ reigns over Earth whether people honor Him or not. He is a jealous God (Exodus 34:14) and though He will not save everyone. He does save perfectly and completely all those His Father has chosen to save. The "blue seal" of His royal ownership is stamped on the hearts of His people as evidenced when we repent of our sins and believe in Him. In response to all Christ's benefits to those of us who believe in Himforgiveness of sins, eternal life, fellowship with the Triune God, the privilege of prayer, the revelation to us of His glory seen in creation, the Bible, and divine providence we owe Him our entire allegiance and complete obedience, for He is our holy, beautiful, and loving Majesty forevermore! Amen.





And the LORD their God will save them in that day
As the flock of His people;
For they are as the stones of a crown,
Sparkling in His land.
For what comeliness and beauty will be theirs!
Zechariah 9:16-17a



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