

# A Bug's Life

## The Glory Of The Designer In The Insect World

**Introduction:** (Scripture Reading: Psalm 148:7-13)

1. They are creepy and crawly little creatures. They give us the heebie-jeebies. We spend good money to keep them out of our house. Their presence gives guys a chance to race in with an old shoe as a caped superhero to rescue our brides! They are bugs. We often see them as ugly, disgusting, and worthless... but they aren't! They are glorious and purposeful creatures created by our God!
2. When God created each part of this world He made the observation that it was good. This includes bugs! They aren't pointless, God created them with purpose! These crazy creatures tell us not only that there must be a designer behind them, but they remind us of some great things about our God!

### A. Insects Full Of Design And Purpose

1. Is it stick or leaf? Nope, it's a special kind of insect that belongs to a group called Phasmids
  - a. They are the undisputed masters of camouflage. When you first catch a glimpse of these creatures you think you are looking at a stick or leaf, then suddenly, out pop six legs and it scampers off or out pop a pair of wings and it flies off. Had it not moved, you would've never seen it!
  - b. The detail in these creatures are incredible. It's not just being shaped like a leaf or twig or being green or brown... they have little specs of color that make them look like a leaf or twig with fungi growing on it or places that are rotting or having imperfections (1)
  - c. These insects are incredibly complex. Intricately designed. They blend into their surroundings perfectly to help them escape the capture from would be predators.
  - d. Various types: *Sipyloidea sipyilus*, *Phyllium bioculatum*, *Lonchodes strumosus*,
  - e. Evolutionists contend these creatures with their amazing camouflage evolved over time and developed their camouflage as natural selection and survival of the fittest took place. But if this camouflage grants their survival, how did they survive as it developed?
  - f. Quote: "How is it then that they are so different, one mimicking exactly the common crooked twigs lying on forest floors, the other a diseased, damaged leaf, another a rotting stem, yet all with the same habit of camouflage, to the same degree of perfection? What is the probability, even given all the selection in the world, of all the right "genetic accidents" occurring at the right time and in the right sequence, in all of these separate lines? (1)
2. Dragonflies don't just land on fishing bobbers, as they take flight they glorify their Designer!
  - a. Dr. Z. Jane Wang, professor of theoretical and applied mechanics at Cornell University, presented her findings at the annual meeting of the American Association for the Advancement of Science. She pointed out that creatures in the natural world were more efficient flyers than what man creates with his engineering. She called dragonflies "marvels of engineering" (2)
  - b. Most flying creatures have two wings, but dragonflies have four. This allows them to fly up to 37mph. They can hover in place and go immediately into reverse. But how?
  - c. Wang reported: ""Dragonflies have a very odd stroke. It's an up-and-down stroke instead of a back-and-forth stroke.... Dragonflies are one of the most maneuverable insects, so if they're doing that they're probably doing it **for a reason**" (2)
  - d. Quote: "They appear to twist their wings on the downward stroke, creating a whirlwind of air that flows across the wings, facilitating the lift that keeps them flying... while chasing its prey, dragonflies "shadow their enemies in complex manoeuvres that military fighter pilots can

- only dream of. Their tricks create the visual illusion that **they're not moving**... the quick aerial movements allow the dragonfly to disguise itself as a **motionless object**" (2)
- e. The military has noticed this incredible bug. They have studied the possibilities of imitating them in engineering applications for helicopters & planes. The 1<sup>st</sup> helicopter was called a dragonfly
  - f. Wang called dragonflies "marvels of engineering" and we know who that Engineer is! She said they fly the way they did for a reason and we know what reasonable mind created them!
3. We played with them as children and still watch them in wonder as the sun sets... they're lightning bugs!
    - a. How does a beetle bum become a beacon? These bugs have an amazing ability to turn on and off light called bioluminescence. The last two or three segments of the abdomen make up the glow organ. Here, underneath the exoskeleton, are specialized cells called photocytes (3)
    - b. These light cells need several ingredients to make light. One is a chemical called luciferin (remember Lucifer, who was the "angel of light"). A second ingredient, called luciferase, causes the luciferin to break down and produce light. A third ingredient... the molecule ATP (adenosine triphosphate)... provides the energy to drive the chemical reaction. It is believed that oxygen sets off the reaction and the bug chooses when to release oxygen to its bum (3)
    - c. Why do they do this? It is true that their beacon warns predators that they will taste bad... but its main function is for mating. Their flashing has a pattern to it. The male flashes a Morse code like pattern. The female flashes back. Then the male takes off to her.
    - d. Some lightning bugs have a more sinister usage of their lights. The female Photuris copies the male light pattern of another species. When he arrives she ambushes him and kills him.
  4. Some people pay good money for solar panels, but the Oriental Hornet was created by God with his own!
    - a. As things heat up, some insects tone down their activity, but not the oriental hornet. In fact, during the heat of the day is when he does his hardest work. He builds his nest, his most intense work, when the sun beams are at their peak. (4)
    - b. Researchers at the Tel Aviv University in Israel recently discovered something cool about these creatures: "the team zoomed in on the brown and yellow stripes on the hornet's abdomen. Although the surface, or cuticle, appears smooth, it actually contains layers and layers of microstructures that appear to "harvest parts of the solar radiation."<sup>1</sup> In other words, the hornet may be a flying solar panel." (4)
    - c. "Up close, the brown stripes reveal a ridge-like structure, somewhat similar to a terraced hill. As light rays pass through each layer, the structures split the light and trap extra energy for conversion into electric power. The yellow stripe also has many layers that trap light, although the structures are different." (4)
    - d. Is it just because this hornet got warm that it gained more energy or is there more to it? So researchers put some of the yellow pigment into a solar cell and sure enough, it captured solar rays and converted it to electric energy! Scientists believe that by copying what these hornets do they can develop a more economical way to convert solar energy for our use
    - e. But there's more: "Yet another technological marvel with potential application to human technology is the hornet's ability to remove all that extra heat. Like a modern refrigerator, this versatile vespine houses a sophisticated heat pump that keeps it from overheating" (4)
  5. While most creatures run away from roaring flames, the Melanophila beetle loves a good forest fire!
    - a. This beetle's name means "black loving" because it loves freshly charred timber. This is where the females go to lay their eggs. They will even arrive while the wood is hot and smoldering
    - b. See their specific design: "Two design features help the *Melanophila* beetle find its way to a fire and avoid flying embers once it gets there. First, super-sensitive antennae can "smell" or detect just a few parts per billion of smoke particles in the air. This is equivalent to sensing a single drop of chemical in a 10,000 gallon (38 kl) swimming pool. A second feature is specialized infrared sensors that can detect heat radiation from distant forest fires." (5)

- c. These beetles have been found tracking fires miles away. As a result, the United States military has been studying them hoping to imitate their design to detect enemy planes & hide their own
- 6. The idea of a zombie apocalypse has almost become a fad in our culture with the video games, tv shows, guns and ammo lines, and even preppers who treat act as if it is a possible reality. Maybe it's not just something that belongs in science fiction novels, well, at least if you're a Carpenter Ant
  - a. Quote: "Real life zombies, like those in fiction, must ensure the spread and survival of the parasitic pathogen that creates them. If the parasitic hosts all go extinct, so will the parasites. Thus, through a tactical duel with death, carpenter ant colonies uniformly infected with a zombie-making fungus survive and thrive without succumbing to a zombie apocalypse. The colonies survive even as token members are driven to unnaturally position themselves where their spore-shedding corpses can rain down infectious fungal spores on their former fellows." (6)
  - b. So a carpenter ant gets infected by this fungus. It climbs up to a spot above an active ant trail, latches onto a leaf or something else, and then dies. Their corpse stays there and the fungus continues to grow on the ant. Over time a long stem like object grows out of the ant. It develops a head & in 7-10 the head ruptures raining fungi spores on the oblivious ants below
  - c. "Penn State researchers discovered that the inherent *limitations* of the fungus's ability to reproduce work to its advantage. Because the fungus is strictly limited in the locations where it can disperse its spores, life in the ant colony can go on as usual while a few hapless foragers are siphoned off during their daily ventures." (6)
  - d. The way this works is in perfect balanced. There's just enough ants infected that the fungi is able to continue to survive & the ant population is not decimated. When studied in the Brazilian rainforest, scientists found 100% of the ant colonies were infected but none were wiped out
  - e. These carpenter ants keep things in check through social immunity. If the scientists placed an infected ant into the mound, healthy ants killed it. Scientists placed infected ants in the nest but the spores would never release. If placed higher in the air, they wouldn't release either

## B. Observations From These Creatures:

1. Our God truly is an AWESOME God! Even the creatures that we tend to overlook or even avoid declare His glory. We see God's wisdom, creativity, power, and purpose! We need to open our eyes to the world around us more. We need to see the amazing things He surrounds us with! **(Psalm 148:7-13)**
2. But sadly we live in a culture that is becoming less and less aware of God. So many in the scientific community reject the concept of God. Yet they study God's amazing creation, filled with wonder at the engineering feats even in insects, and try to imitate them. There is even an entire field of study known as Biomimicry dedicated to this. The fool has said in his heart there is no God! **(Psalm 53:1-3)**
  - ➔ How can you study biomimicry and not see the Master Engineer behind the engineering, the Creator behind the creativity, and the Infinite Mind behind the purposefulness.
  - ➔ You cannot even hide under a rock to escape God's glory, for even there you will find creepy crawly bugs declaring God's glory. No one has an excuse for not seeing God!
3. All of God's creation exhibits incredible planning and purpose. Even these insects we often take for granted are specially designed by God. They are perfectly designed with purpose by the Creator. You know what? You are too! We too have a purpose God has designed us to achieve. We too have everything we need to fulfill that purpose. Are we glorifying God? **(Romans 8:29-30; Eph 1:5-10)**

## Sources:

- (1) <https://answersingenesis.org/creepy-crawlies/insects/the-impossible-insects/>
- (2) <http://www.apologeticspress.org/APContent.aspx?category=12&article=1796>
- (3) <https://answersingenesis.org/creepy-crawlies/insects/lightning-bugs-the-beetle-beacons/>

- (4) <https://answersingenesis.org/creepy-crawlies/insects/solar-powered-hornets/>
- (5) <https://answersingenesis.org/creepy-crawlies/insects/fire-chasing-beetles/>
- (6) <https://answersingenesis.org/creepy-crawlies/insects/zombie-ants-and-genesis/>