

Mosquitos: Designed By God

ROMANS 1:20

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Madison, Wisconsin
June 29, 2014



Over the next several days, whether we are headed to camp or stay here in the Madison area, most of us will probably encounter a good number of some very special creatures. Some of us, of course, will encounter more of these than others. As we begin a brief study of God's word this morning, and as we think about these songs we have been singing about God's creation, I would invite you to turn with me to Romans 1:20 (p. 1759).

I. **As we make our way to that passage, I would like for us to start out by asking: WHY DID GOD CHOOSE TO CREATE SUCH HORRENDOUS LITTLE CREATURES?**

As believers in God and his word, we believe that God created mosquitos on the fifth day, along with all of the sea creatures and everything that flies in the heavens. The word "mosquito," by the way, literally refers to a "small fly," a small creature that flies. Why, though, did God create such a nuisance? Over many years, mosquitos have killed millions and have literally changed the course of world history, time and time again. We think of horrible diseases like malaria and the West Nile Virus, among many others. We think of Alexander the Great who basically conquered the world, but died – not on the battlefield, but instead, in bed, suffering from malaria. In our own national history, we think of Napoleon, who sent troops to New Orleans to reinforce his claim on Louisiana and to put down a slave rebellion in Haiti. Of the 33,000 French troops that were sent, 29,000 were killed by yellow fever. Louisiana joined the United States and Haiti became independent. Even as recently as Vietnam, 53 out of every 1000 soldiers were hit with malaria.

Today, mosquitos are generally a nuisance – the bites, the itching, the constant buzzing. Some would look at all of this and would claim that maybe God made a mistake in creating these little creatures. Others might look at the disease and death and perhaps claim that this is evidence that there is no God. This morning, though, I would suggest another option, and that is: These little creatures were originally created to be good, perhaps originally designed to feed – not on people, but on nectar and sap from various plants (as many mosquitos still do today). We remember what the Bible says in Genesis 1:31, that ***"God saw all that He had made, and behold, it was very good."*** Mosquitos, at one time, were ***"good."***

How, then, did mosquitos, perfectly designed and created by God, become such a menace? We need to remember that Adam and Eve never faced death and disease until they disobeyed God. Only when sin entered the world did we start dealing with thorns and thistles and so many of the other frustrations that go along

with living in a cursed and fallen world. The way I see it, then, mosquitos are a reminder that this world, once perfect, has now taken a horrible turn for the worse. Mosquitos, then, as we know them today – with the frustration, and disease, and even death, they bring – these little creatures are now a reminder that the creation itself is no longer good and pure, as it once was at the beginning.

II. **Even with this in mind, though, WE LOOK AT THE MOSQUITO ITSELF, AND WE ARE AMAZED AT THE DESIGN THAT WE SEE EVEN IN THIS TINY LITTLE CORNER OF GOD’S CREATION.**

And this is where we get to Romans 1:20. Hopefully all of us have our Bibles open to this passage, so I would like for us to look together at Romans 1:20. Notice, please, the words of Paul – Romans 1:20, ***“For since the creation of the world His invisible attributes, His eternal power and divine nature, have been clearly seen, being understood through what has been made, so that they are without excuse.”*** As we bring our thoughts to a close this morning, and as we consider God’s creation, I would like to point out just one small aspect of the mosquito that surely serves as evidence of God’s design. I am referring to the mosquito’s proboscis, the mouthparts, the part that jabs into us, the part we really don’t like.

We know that through the centuries, mankind has developed many ways of drawing blood – needles and test tubes, needles and hoses and plastic bags like those that are used for donating blood, or even the little spring-loaded pokers used by diabetics for testing blood sugar – and yet I would suggest that none of these methods come close to the needle designed by God and placed on the front end of bazillions of mosquitos all over the face of this earth. And again, lifetimes of research have been done on this. Researchers right now, in fact, are studying mosquitos in an attempt to duplicate what God has done so that we can make drawing blood much less painful than it is right now. Because, when we think about it, most of us do not actually feel the bite itself.

Just to summarize what happens here, the mosquito has “palps” hanging down up near her mouth, and I say “her,” obviously, because only the females bite. But these palps pretty much detect carbon dioxide. That is how they find us! Scientists tell us they can detect carbon dioxide from up to 35 meters away. By the way, my understanding is that most mosquito repellants do not really set up any kind of a barrier; instead, most repellents simply disguise our carbon dioxide, keeping us from smelling like we need to have our blood drained! She also finds us using her antennae (sticking out straight ahead in the diagram here). The antennae are highly sensitive to wind and the vibrations made by noise. So, they first sense the carbon dioxide, and then they hone in on sweat, and lactic acid, and heat as they decide exactly where to land. To avoid getting bitten, as a camp director I would encourage all children to spend the entire week totally quiet and perfectly still. Personally, my plan is to get right in the middle of a huge pack of hot, screaming children, and then just stay perfectly still myself. But assuming we ever breathe, move, or make noise, once she finds us, she comes in for a landing. At that point, her lips slide up and away from the needle-like mouthparts (almost like pulling a knife out of a sheath), and the mouthparts are basically two halves of a serrated needle that slide back and forth on the way in. We think: That is terrible! However, because of the way this process is designed, we hardly feel it. Researchers tell us that the serrated edge at the tip of the sheath actually means that less surface area ever really touches our skin on the way in. If you can imagine laying a serrated knife on your skin, only certain points actually touch the skin, so there is less to hurt! The part that actually goes into our skin actually serves as a kind of bushing for the needle to go on in with a minimal amount of contact.

I have posted a link to a video on the church’s Facebook page, an amazing video where scientists actually anesthetized a mouse and then watched a mosquito take a bite out of that mouse under a microscope. We think mosquitos just stick that thing in and suck, but that is not what happens! Instead, they stick it in, then

they probe around until they find a vein, then they puncture that vein and suck it dry! Absolutely amazing to watch it happen! The average bite takes about 4 minutes if it is not interrupted.

As I understand it, the reason why the bites itch is because she injects us with her saliva before she takes our blood – this is what we feel, and the reason for the injection is: Her saliva is designed to prevent our blood from clotting. Without this, imagine a mosquito taking a huge gulp of blood and having it clot on the way down. The whole thing would get instantly clogged. And the reason for the itch is: When she then sucks out her own saliva mixed with our blood, she leaves some of that saliva behind, and many people have an allergic reaction to the saliva. That is why some people don't seem to be bothered. I, personally, do not seem to be allergic to mosquito spit! So, I don't like getting bitten, but I usually don't swell up like my wife does. She apparently has a mosquito-spit allergy! This, by the way, is how mosquitos spread disease. They are infected, they inject their infected saliva, and then they fail to suck it all out, leaving malaria, or West Nile (or whatever it is), behind.

Much research has been done on this. Researchers tell us that those with blood type "O" are twice as likely to get bitten as the rest of us, as are those with high cholesterol, as are pregnant women, as are those who eat beer and cheese. I think we understand why mosquitos do so well here in Wisconsin! A pregnant woman with blood type "O" who eats cheese and has high cholesterol basically has no chance out there in the woods!

The point here is: This amazing creature was designed by God – not designed to torment us, necessarily, but designed to feed very efficiently. Only after the first sin did God tell mosquitos that humans are fair game. And again, scientists right now are working to copy God's design.

Conclusion:

This morning, we have studied one small (almost microscopic) part of God's creation. I hope we agree with Paul that in the creation, God's ***"...invisible attributes, His eternal power and divine nature, have been clearly seen, being understood through what has been made."*** As Paul went on to explain, the creation leaves us ***"without excuse."***

The Bible explains that even before God created the world and everything in it, he had a plan for our salvation. And the plan is: He would send his only Son as a sacrifice for our sins. We sometimes sing, "At the Cross," and we sing a line in that song, "When Christ the mighty maker died, for man, the creature's sin." Christ, our creator, died for our sin. We respond to that sacrifice in faith – turning away from sin, turning our lives toward God, having a change of heart concerning sin, confessing our belief in Jesus as the Son of God, and by allowing ourselves to be buried with Christ in baptism, for the forgiveness of our sins. If you have turned away from God and need to come back, we would invite you to let us know, and we would be honored to go to God in prayer on your behalf. If you are ready to obey the gospel, though, we would love to help you with that as well. We would invite you to let us know about your decision as we sing this next song. Let's stand and sing...

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