

# CREATOR

VOLUME 12

NUMBER 4

## CICADA JOY

*Then all the trees of the forest will sing for joy.  
Psalm 96:12b*

Please allow me to share with you the wonderful story of a strange creature that Jesus made. It stars a bug by the name of *cicada* (sih - KAY - dah)—an insect which is impossible to ignore.

The life span of a cicada is unusually long. Most insects have very short lives: flies live only a month, and honeybees are known to survive six short weeks. In fact, most insects live out their entire existence in less than one year. Not so with the cicada.

Depending on the species, cicadas grace our planet from two to as many as seventeen years! They're not the oldest of all insects—that honor goes to the beetle. (Some grubs live fifty years or more.) But the cicada certainly can be considered an “elder statesman” of the bug world.

You would think that with such long life spans, cicadas and people would cross paths the year round. But the public appearance of most cicadas is limited to a few weeks each summer because they live nearly all their lives underground. This may seem strange for an insect that spends its days as an adult high in the treetops.

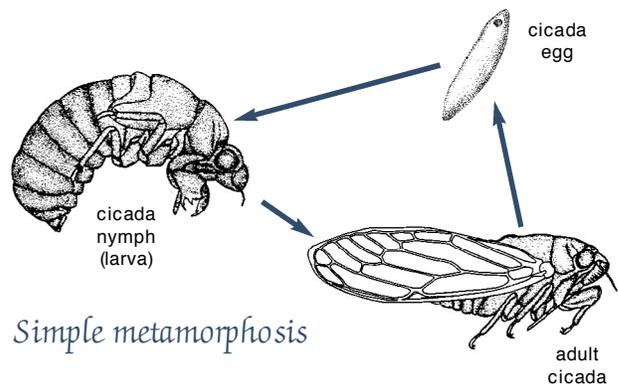
The best way to understand the mysterious habits of the cicada is to examine its life cycle.

But let's first look at how a typical insect develops.

Most insects begin life as an egg, and each of the million or more different insects God has created experiences one of three types of *metamorphosis*. Metamorphosis is an English word that comes from a combination of two Greek words—*meta* (change) and *morphe* (form or shape), which together mean “to transform.”

The classic example of insect metamorphosis, or transformation, is found with the butterfly. A butterfly starts its life as an egg, hatches into a caterpillar, eventually forms a pupa (known as a chrysalis), and emerges as a butterfly—an adult insect. This series of stages is known as *complete* metamorphosis because our Lord Jesus radically changes the caterpillar into something *completely* different—in this case, a butterfly.

A second type of insect transformation is known as *simple* (gradual) metamorphosis. This is what occurs in cicadas and most water-borne insects, such as dragonflies. At the beginning of simple metamorphosis, the insect hatches from



---

an egg into a larva, or nymph. The nymph has some of the features of a mature insect, but in many cases is strangely different from the adult. Frequently, nymphs live a long time underwater (this is true for dragonflies) or underground (as is the case for cicadas). The adult insect eventually emerges after the nymph has had sufficient time to develop.

Some insects undergo *no* metamorphosis. This is what we see in springtails\* and silverfish, for example. A baby springtail hatches from an egg and looks remarkably like an adult springtail—only smaller and somewhat cuter. (You may be of the opinion, however, that insects can't possibly be considered cute!) Over the course of its childhood, the young springtail grows and comes to look more and more like its mom and dad.

Back to the cicada. As we've learned, the cicada undergoes simple metamorphosis and spends most of its life as a subterranean nymph. The 17-year cicada, found in the eastern half of the United States, exists as an egg for six weeks and as an adult for about six weeks. The rest of its 17-year life span is spent as a nymph, slowly maturing underground.

The female cicada lays her eggs—which resemble grains of rice—under the bark of twigs belonging to early summer trees. Several weeks later, numerous tiny nymphs hatch out of these eggs.

The ant-sized nymphs drop to the ground and immediately start burrowing into the soil with their miniature, lobster-like claws.\* Once they've reached a depth of 18 to 36 inches (one-half to one meter), they locate a fresh tree root and start feeding.

A cicada nymph has no teeth or jaws, but gets nourishment by sucking sap out of tree roots using a straw-like mouth part. Over the course of many months, it goes through several phases (stages) as it matures. Each time a cicada

nymph is ready to continue to the next nymphal stage, it sheds its entire exoskeleton (skin) and grows. As this happens, the Lord Jesus also changes its appearance slightly.

Two to 17 years later, depending on the species of the cicada, the nymph has grown sufficiently and is ready to transform into an adult. What happens next is a complete mystery to scientists and lay people alike.

At some point in the spring or early summer of its final year of life, the cicada nymph ceases feeding and digs its way toward the surface of the ground. It stops an inch or so (two or three centimeters) shy of the surface and waits. It tarries there for several weeks, if need be, for just the right time to emerge from the ground.

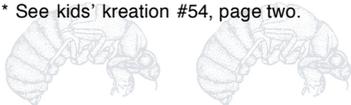
Science has no explanation for how these little bugs, with brains the size of pinheads, know when to come out of the ground. The only rational explanation is that Jesus, their Creator, calls them forth in a voice we cannot hear.

In the eastern U.S., the mass exodus of the *periodical cicada*\*\* is nothing short of spectacular. As many as **40,000 cicadas** have been observed coming out of the ground beneath **just one tree!** It has also been estimated that each acre of land sees as many as one million nymphs exit their subterranean world all at the same time! What happens next is no less marvelous.



Cicada  
nymph on  
author's  
thumb

\* See kids' kreation #54, page two.



\*\* *Magicicada* sp.



Once above ground, each cicada nymph uses its oversized claws to lumber its way to the nearest tree trunk. (I have included a photo of a cicada nymph that my wife and kids found while we were picnicking in Oklahoma City.) At this point, the nymphs can't be distracted—they are absolutely determined to reach their goal. If they cannot find a tree, nymphs will climb up onto a fence post or telephone pole, or whatever vertical perch is available. Within an hour of emerging, the nymphs have securely attached themselves to something. They are now ready for their final transformation.

First, the nymph fills itself with air, splitting open the skin on its back directly below its head. Over the course of the next 60 minutes, an adult cicada emerges from the nymphal exoskeleton. It wiggles out headfirst; its crumpled wings and six jointed legs follow soon after. Once free of the nymphal skin, it pumps blood into its shrunken wings in order to unfurl them.

A fully-emerged, adult cicada has all the attributes of a typical insect: it possesses six legs and two pairs of wings; it has two bulging, compound eyes and three simple eyes known as ocelli (oh - CELL - ee). Adult cicadas nourish themselves with the juices from tree branches, using a tube God gave them which looks like a hinged straw.

Our Heavenly Father fashioned over 2,000 different kinds of cicadas. And cicadas are found in most countries around the world. What a God of immense variety and creativity He is!

The absolutely stunning appearance of the adult cicada just after emerging, reflects the far greater beauty of its Creator, our Lord Jesus Christ. Its countenance at this point has been described by some as "other worldly" and "ghostlike." Maybe God is giving us an ever-so-brief glimpse at what the creatures of the new Heaven and the new Earth might look like?! (See 2 Peter 3:13.)

There's no biological reason for its bright colors. This is a very vulnerable time in its adult



life—it would seem that this striking appearance might only attract its chief enemy, birds. Yet, remarkably, most young cicadas survive! Within a few hours of this "rebirth," the adult cicada takes on darker, blander coloration—usually green, brown or black. The cicada then uses its newly released wings to fly high into the trees where it spends the rest of its life.

The life cycle of the cicada proclaims Jesus as a God of great mystery and patience. We have no idea why the tiny nymphs are compelled to fall to Earth and burrow underground, content to be in utter darkness for years. And what enigmatic voice does God use to call them out from the soil and into the daylight? Why would our Lord Jesus paint the emerging cicada with such brilliant colors only to have them fade so quickly? It is certain that this brief display of glory advertises the Lord's much-greater splendor. It also reminds us that God is a jealous God (Exodus 34:14)—He wants us to be satisfied in Him and not just the fading beauty of this world!

Jesus is so good to us—if we are attentive, and willing to stop and look up into the trees and the skies, we will get a glimpse of His wonder (Psalm 19:1-4). May the cicada remind us that ours is a mysterious, glorious, and—yes—jealous Creator! □



---

# O FOR A THOUSAND TONGUES TO SING!

Great is the LORD, and most worthy of praise.  
Psalm 48:1a

Have you ever been captivated (or annoyed) by someone's singing? To this day, I remember hearing a young lady sing "The Lord's Prayer" at our church's evening service some 30 years ago. I was a single college student at the time. Her voice was pure and sweet, and her rendition of "The Lord's Prayer" matched her beautiful appearance. Whether God was glorified in my heart by her singing, I don't know. But, I do know that I was attracted to her all those years ago.

For better or worse, this may be an accurate reflection of what happens in nature when animals of all kinds sing to their Creator, our beloved Lord Jesus. It is commonly known that wolves howl, and the number of bird calls the world over are too numerous to count! Deep in the ocean, marine biologists have recorded the eerie and enchanting songs of humpback whales. And entomologists\* have extensively studied insects and the symphonies they produce—most notably, the songs of crickets, katydids (KAY - tee - dids), and cicadas (suh - KAY - dahs).

Secular scientists would have us believe that all these animal melodies are simply songs to attract a mate and nothing more. ***There is little research to support this notion.*** I don't deny that singing has a powerful and mysterious effect between the males and females of God's creation—I have personally experienced this! But I am also convinced that Jesus has given His creatures a voice, first and foremost, to saturate the earth with the sweet worship of His name!

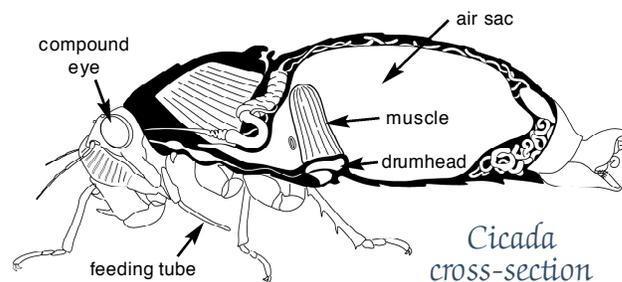
Of all insect songs, the performances of cicadas stir my emotions most. They evoke

memories of my childhood, echoing in my mind with other long-ago sounds of summer. It was, after all, my favorite time of year!

Each of the 2,000 different cicada species Jesus created sings its own unique song to Him. These cicada melodies are simple by our standards, but are usually sung with a gusto that rivals opera's best soprano or tenor. Recordings of male cicadas indicate that many species reach a volume in excess of 120 decibels. To put this in perspective, a jet engine generates about 120 decibels! Some cicadas are loud enough to hurt our ears. Like the voice of God that "shakes cedars," their worship of Christ is nothing short of exuberant!

Cicadas produce music using a set of "drums" God gave them. Crickets and katydids, on the other hand, make their sweet songs by rubbing body parts together—normally, wings and legs. They're considered the "fiddlers" of creation.

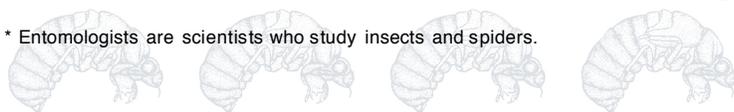
Our Heavenly Father wove two drumheads into the body of every male cicada. Each is located at the base of the cicada's wings in the



front part of its abdomen. These drumheads, or ***tympani***, are found solely in male cicadas, because it is only the males that can sing. Female cicadas are mute.

The Lord also placed a large, air-filled sac in the abdomen of each cicada. This air sac takes up almost the entire belly of the insect (see illustration). The cicada's internal organs are literally pushed to the side to make room for this chamber.

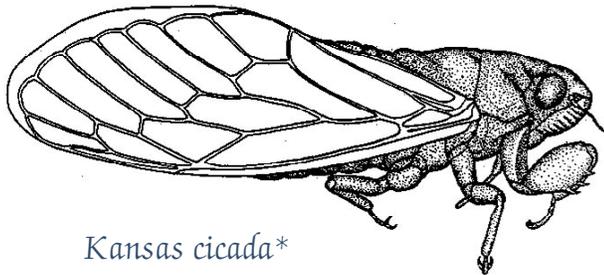
\* Entomologists are scientists who study insects and spiders.



The air sac of the male cicada acts as a resonating chamber, amplifying the sound produced by the drumheads. It also improves the quality of the tune played.

Two large muscles are located inside the male cicada's abdomen, each attached to one of the drumheads. He makes music, not by beating his drums from the outside with a stick as a concert percussionist does, but by flexing these abdominal muscles on the inside. This causes the tympani to vibrate, producing a very distinctive sound.

The quality of the cicada's "voice" varies from species to species. And the songs of cicadas can be described in a number of different ways. The melody of the Great Western Cicada, which lives in Colorado and the American West,



Kansas cicada\*

is raspy and composed of a series of sharp "zwing, zwing, zwing, zwings." Some cicadas offer up a softer, sustained "purring" sound which may last 15 or 20 seconds. (You may have a unique way of describing the summer songs of cicadas that live near you.)

The individual members of periodical cicadas\*\* in the eastern U.S. have had their songs described as a "burring" noise lasting 15 seconds or so. Most cicadas sing solo. But periodical cicadas, like crickets, sing in harmony with one another. The combined voice of these cicadas is known as **chorusing**. In some locations, millions of male cicadas "burr" together, forming the world's greatest choir! It can be deafening, but their worship of Christ Jesus is impossible to ignore.

Some of the smaller species of cicadas

\* *Melampsalta calliope* (Beamer 1928)  
\*\* *Magicicada* sp.

found around the world produce sounds so high in pitch that they can't be heard by the human ear. But God hears them!

Most cicadas begin their singing early in the morning and continue well into the evening. As they become immersed in darkness, they give way to the tunes of crickets and katydids—this allows cicadas a chance to rest. Like the faithful temple priests of the Old Testament, crickets and katydids continue the praise of God throughout the night. For insects, then, worship is serious business—going on 24 hours a day!

The ancient Greeks and Romans were attracted to cicada hymns, and frequently placed male cicadas in tiny cages so that their wonderful melodies could be enjoyed at home. The Chinese also kept pet cicadas, for the same reason. A Chinese poet once described the cicada's song as "a single note, wandering in strange keys." Their tunes may be unusual, but they communicate a rich and powerful worship of their Creator, the Lord Jesus Christ.

In nature, adoration of the Almighty is infectious. And I believe that we are attracted to this worship because Jesus Christ is worthy, worthy to be praised! If we refuse to exalt God, He has created a numberless army of animals who will. How sweet, however, is the praise that comes daily from the hearts of God's own children!

*Let every creature praise His holy name  
for ever and ever (Psalm 145:21b).*



**Interesting cicada web sites:**

- [www.cicadamania.com/](http://www.cicadamania.com/)
- [www.naturesongs.com/](http://www.naturesongs.com/)
- Australia** — [www.abc.net.au/science/scrabblygum/February2001/default.htm](http://www.abc.net.au/science/scrabblygum/February2001/default.htm)
- Japan** — [http://homepage2.nifty.com/saisho/cicadasong\\_e.html](http://homepage2.nifty.com/saisho/cicadasong_e.html)
- Southeast Asia** — [www2.arnes.si/~ljprirod3/asian\\_cicadas.html](http://www2.arnes.si/~ljprirod3/asian_cicadas.html)
- Eastern Europe** — [www2.arnes.si/~ljprirod3/cikade.html](http://www2.arnes.si/~ljprirod3/cikade.html)
- South Africa** — [www.ru.ac.za/academic/departments/zoento/Martin/cicadidae.html](http://www.ru.ac.za/academic/departments/zoento/Martin/cicadidae.html)
- Borneo** — [www.groms.de/data/zoology/riede/cicada.html](http://www.groms.de/data/zoology/riede/cicada.html)
- North America (Periodical cicada)** — [http://insects.ummz.lsa.umich.edu/fauna/michigan\\_cicadas/Periodical/Index.html](http://insects.ummz.lsa.umich.edu/fauna/michigan_cicadas/Periodical/Index.html)



---

# TILL THERE WAS YOU

God, who is rich in mercy, made us alive with Christ even when we were dead in transgressions.

Ephesians 2:4b-5a

My eyes flooded with tears. You can imagine my surprise when I found myself welling up with an unspeakably deep love for Jesus as I watched, of all things, *The Music Man!* My tears, however, had little to do with the movie my wife Colleen and I were enjoying together—rather, it was one particular song, “Till There Was You.”

Have you ever been deeply moved by the words of a song? For me, the great hymns of the Faith are what usually stir my soul. Now I had heard this romantic tune played many times during my life. At that moment, however, it ignited in me a deep thankfulness for who Christ is and how dependent I am on Him. I wept because the words described so perfectly what I have experienced since becoming a follower of Jesus:

There were bells on the hill  
But I never heard them ringing  
No, I never heard them at all  
Till there was you.\*

As a child, I heard cicadas sing on many occasions, but I had never found pleasure in their striking worship of Christ Jesus, their Creator. I had seen roses bloom and die, but I had never known the precious beauty, love, and holy jealousy of my Lord... until now.

Do you hear it? Do you hear the bells praising God, or are they just church bells to you? If the latter, it is possible that you have never been confronted with the Glory of Reality—God’s only Son, Jesus Christ.

Christ died on a cross for sins, but there was a time when I did not believe this. The Bible says that I was dead in my trespasses (Ephesians 2:1)—I was a spiritual corpse! Then Christ’s Spirit made me alive, and I understood what He’d done for me. He died for *my sins*. Not only did He die, but He rose up for me, *slaying death* so

that I might have eternal life—Christ’s life.

Do you want to experience—I mean really experience—the praise coming from bells and the sweet worship of cicadas? Then allow God to lead you to *repent* of your sins. *Believe* that Jesus is God, that He died for your wickedness, and rose to give you His life. He will supply you with courage enough to *leave* your old life behind and *follow Him*. You will experience great trouble in this world, because the world hates Christ and His followers, but you will also truly hear the birds sing for the first time!

There was love all around  
But I never heard it singing  
No, I never heard it at all  
Till there was *You!*

“Dear Father in Heaven, I confess that I have lived my life in rebellion against You, and this is sin. Please forgive me through Your Son, Jesus Christ—through His death on the cross. Jesus, please come into my heart right now. I embrace You as my God and my Savior and my Life. Show me how to live the way You want me to live and allow me to hear Your praise throughout the universe! In the name of the Lord Jesus Christ, I pray. Amen.”

Man for all his genius is but an echo  
of the original Voice.

A.W. Tozer



**HIS**  
CREATION

DR RICK DESTREE  
*Editor*

PASTOR HUGH FITZPATRICK  
*Consultant*

KELLEY CARLSON  
COLLEEN DESTREE  
BRIAN KOOSER  
*Contributing Artists*

GRETCHEN GANZEL  
RACHEL WILEY  
*Editorial Proofing*

REED EVANS  
*Printing*

VISIT US AT OUR WEB SITE:

[www.hiscreation.com](http://www.hiscreation.com)

**CREATOR** is published quarterly by **HIS CREATION**, PO Box 785, Arvada CO 80001-0785. Copyright © 2005 by **HIS CREATION**. All rights reserved. **CREATOR** is offered without charge; however, donations are greatly appreciated!

Unless otherwise identified, Scripture taken from the **HOLY BIBLE, NEW INTERNATIONAL VERSION**. Copyright © 1973, 1978, 1984 International Bible Society. Used by permission of Zondervan Bible Publishers.

PRINTED ON RECYCLED PAPER