

CREATOR

VOLUME 16

NUMBER 1

SONGS OF A-SCENT

Part 1

*Shout with joy to God, all the earth!
Sing the glory of His name;
make His praise glorious (Psalm 66:1-2)!*

The Bible captivates us with the glory of God. And the “book” of nature stimulates our five senses, wooing us to consider our Creator’s character imprinted upon creation (Romans 1:20). All of our senses relish something of Christ’s majesty (Psalm 34:8), but some of the sweetest songs “sung” on Earth are the hymns of God’s kindness, best savored by our sense of smell.

Scientists claim that our nose can identify thousands of different odors. Yet, we rarely encounter a single odor in nature—most naturally-occurring aromas are a complex mixture of scents. We might think of individual smells—vanilla, cinnamon, jasmine—as the notes on a musical scale. If we expand this a little, then the bouquet you sense standing in a spring meadow of fragrant flowers or venturing deep into a northern pine forest is a grand symphony of olfactory¹ delight.

OUR NOSE KNOWS

Everyday smells and fragrances form invisible currents in the ocean of air that we call our atmosphere. Most people, for instance, can track the smell of popcorn back to its source by following its unseen trail of scent molecules.

Our Lord Jesus has lavished people with a wonderful sense of smell that we can use both for pleasure and purpose. In years past, scent was vital to the practice of medicine and the science of chemistry. Medical doctors used their noses to detect odors associated with certain diseases, a practice that has all but disappeared. One hundred years ago, scent was a major way of diagnosing infection; now physicians rely on other methods.



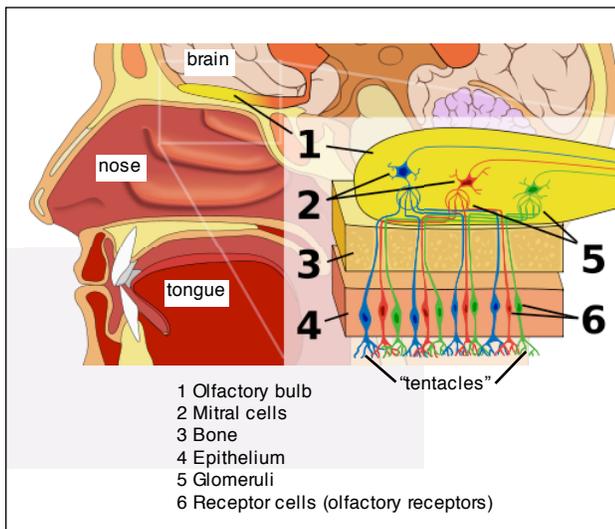
Vanilla orchid

¹ Olfactory is an adjective referring to the sense of smell.

Miasma

It was once believed that air coming from sewers, swamps, and other foul-smelling things actually *caused* disease. The word *malaria*, for instance, means “bad air.” It got this name before scientists realized that malaria was the result of a parasite transmitted in the saliva of mosquitoes.

Your sense of smell is located high in your nose, just below the floor of your brain. The human nose contains six million special cells, known as olfactory receptors. Each receptor



cell, in turn, possesses several tiny “tentacles,” which look like the arms of an octopus under a microscope. Christ designed these olfactory cells to “touch” the hundreds of scent molecules we come in contact with every day, but exactly how these smell cells then identify different odors remains an enigma to scientists.

As we draw in air through our nostrils, odors swirl around inside, forming eddies that temporarily trap scents within our nose. This makes it easier for us to detect the smells suspended in the air. But normally ninety

percent of what you breathe in does not reach your smell receptors. That’s why we sometimes “sniff” things. Sniffing increases the flow of air entering our nostrils and, therefore, the amount of odor that saturates our nose. In this sense, effort (sniffing) is needed to appreciate “the glory of God” via His gift of smell.

Unlike the tissues of our eyes and our ears—which Jesus ingeniously built to last a lifetime—the individual receptor cells of our nose live only four to eight weeks and are then replaced with new ones. Essentially God “updates” your sense of smell continuously, giving you an entirely new nose inside every one or two months.

The microscopic circuitry that integrates our sense of smell with our mind is both amazingly beautiful and mysteriously complex. Nerves in our nose send information to our brain about what is being smelled. It is in the brain, not the nose, that scents are then identified and enjoyed.

The combined senses of sight and hearing are quite precise and can be likened to a surgeon’s scalpel. Our eyes and ears scan their surroundings with the steel of a steady “intellect,” developing a “dissected” understanding of the world in which we live. It’s not so with our nose. The Lord Jesus Christ hardwired our sense of smell into those parts of our mind that control our emotions and creativity. This is probably why certain odors evoke such a strong emotional response, such as “Pee-ew!” Most people find themselves describing an odor with the flare of a New York art critic—“That cheese smells like my shoes after I’ve walked ten miles!” Our sense of smell is so strongly tied in to our emotions that it’s been said that if our eyes were to describe a piece of red paper the way we depict odors, we would probably say that the paper “looks furious.”²

² P.A. Vron, *Smell*, (New York: Farrar, Straus & Giroux, 1997).

What Precision!

Just how precise are the senses God has given us? Our eyes identify photons, which allow us to “see” on a *subatomic* or *quantum level*. We detect smells on an *atomic* and *molecular level*. Our noses can distinguish between two odor molecules that differ only in the position of a single atom!

It’s fairly well known that women smell better than men (in more ways than one). When tested scientifically, women outscore men in their ability to detect odors and to name various scents.

Our sense of smell also varies from one day to the next, one moment to the next. A pleasant odor might lead us to say “Ahh!” Yet that same odor may be virtually undetectable 30 minutes later, even if its concentration hasn’t changed. A bakery presents a “carnival” of wonderful fragrances the second we walk through the door, but its aroma of cakes and cookies quickly become less intense the longer we survey them. People living in “cow towns” never seem to complain about the intense bovine smell, while visitors often remark that they can “taste” the odor of cow manure permeating the air.

Contrary to conventional wisdom, blind people have no greater olfactory skills than sighted folks, but the loss of vision does produce a heavier reliance on one’s sense of smell.

FOOD FOR THOUGHT

Smell has a powerful effect on our mind. Generally speaking, we think and function better in an aromatic environment, such as a

coffee shop. The scent of lavender has been shown to help students solve math problems. Even the smell of lemons seems to motivate employees to work harder and make fewer errors on the job. And the fragrance of jasmine is thought to improve one’s sleep.

Along with ties to our emotions, Jesus has mysteriously woven our sense of smell into our memory. Not surprisingly, certain aromas—such as those associated with home-cooked meals—trigger powerful childhood recollections. It is actually possible for someone to recognize a scent that they haven’t smelled for 40 years.

DOG SENSE

Our Lord Jesus has blessed people with an amazing ability to smell, yet dogs are the domestic kings and queens of this keen sense. The family pooch can smell odors hundreds of times better than its master. Of course, what a dog finds pleasant may not be what we find appealing!



Did you know that most dogs detect vinegar at one-millionth of the concentration people can? A bloodhound—jokingly called “a



nose with a dog attached”—has 230 million scent receptors in its nose, almost 40 times as many as humans. Legendary at tracking scents, some bloodhounds can follow an odor over a distance of more than one hundred miles in order to locate its source. (Incidentally, it is no accident that canines usually do their sniffing an inch or two above the ground because many odors are heavier than air and are therefore concentrated there.)

THE SMELL OF THE WILD

Though Jesus blessed people and dogs with a wonderful sense of smell, He also equipped many of His other creatures with extraordinary noses as well:

- Mammals—especially rodents, rabbits, and bears³
- Pigeons
- Snakes
- Newts and salamanders
- Eels, minnows, and most other fish
- Insects

Almost all mammals have an excellent sense of smell. One notable exception is the whale. It's thought that baleen whales (those whales that eat small sea creatures such as krill) can detect odors only poorly, compared with people. Toothed whales—dolphins, porpoises, orcas—lack any ability to smell. They rely heavily on sight and hearing to navigate their world.

It was long believed that all birds were “odor blind,” that is, they couldn't smell a thing. Studies on the pigeon have shown the opposite to be true. Scent detection among birds varies from one species to another—some detect odors well, others do not. Since odors tend to collect near the ground, it's difficult for high-flying birds to apply their sense of smell

(good or bad) because winds disperse scent molecules very quickly before these odors reach any significant height above the earth.

During a recent vacation, my wife and daughter observed a vulture snacking on a dead skunk. How can any animal eat such foul-smelling fare?! Black vultures are “anosmic” (an - OZ - mik)—they smell little or nothing. Considering what some of these birds eat, this lack of olfactory ability is an incredible mercy from our Lord Jesus!

God designed snakes with a rather unique way of sensing their environment; these slithery reptiles smell using their tongue. A snake “licks” the air in order to pick up



Australian rough scaled snake

aromatic molecules suspended in it. The odor molecules that stick to its moist tongue are then flicked back inside to be analyzed by a miniature chemical laboratory located in the roof of its mouth.⁴ Jesus also supplied snakes with tongues that are split at the tip or “forked,” so that they can determine the direction a smell is coming from (it's analogous to having two ears).

What has scales, swims in water, and lacks a nose? The answer is a fish. It may have no nose, but God did supply the fish with nostrils and it can track odors. Scent molecules

³ A grizzly bear has the finest sense of smell of all mammals. This ursine's nose is seven times more sensitive than that of a bloodhound!

⁴ Jacobson's organ
The Australian rough scaled snake is one of the most dangerous snakes in the world.

move more slowly in water than in air, so a fish's sense of smell is probably not as acute as that of animals that sniff the wind. A few fish, however, are legendary at locating the exact spot where they were born, even over a distance of many miles upstream. The homing skills of an ocean-going salmon border on miraculous. Using its sense of smell, a salmon can pinpoint the precise spot in a stream where its mother laid her eggs. What can we possibly compare this to...a person using his nose to find his natural mother, whom they have never met, in another state 20 years after being adopted?!

INSECTS

Christ further demonstrates His amazing skills as Creator by weaving into His tiniest creations special odor detection devices called



antennae (an - TEN - nee). Despite their small size, insects better distinguish between similar-smelling chemicals than people can, and detect airborne molecules in much lower

concentrations. A gypsy moth, for instance, is able to smell another gypsy moth from a distance of six miles/ten kilometers. (We have all met someone who possessed powerful body odor, but nothing that would carry six miles!)

As with most insects, ants use their antennae to locate food and find their way home. Entomologists⁵ have discovered that ants—like snakes—actually smell in stereo, not unlike a person seeing in three dimensions (3-D). Desert ants are able to map out their local surroundings using smell alone.

THE KINDNESS OF CHRIST

There are a variety of reasons why Jesus graciously gifted people, and most animals, with an ability to detect odors. Here are a few examples:

- **Communication**—Moths and butterflies can identify and find others of their own species by the chemicals (pheromones) they give off.
- **Defense against enemies**—It's well known that skunks defend themselves by spraying a would-be predator with a powerful cocktail of sulfur-containing chemicals.⁶
- **Warning of danger**—The kindness of our Creator is displayed in the many unpleasant odors of spoiled food, which usually discourage us from eating something that could make us sick.
- **Finding food**—Primates and cats hunt primarily by sight, but other mammals locate food almost exclusively by smell. A grizzly bear can sense a meal from as far away as 18 miles (29 kilometers).
- **An aid in digestion**—The aroma of food being cooked on a stove causes the machinery of our digestive tract—stomach, pancreas, liver, intestines—to “kick into high gear” as it

⁵ Entomologists are scientists who study insects and spiders.
⁶ Read about skunks and the chemicals they spray in *HIDDEN TREASURES* Volume 3 Number 4.

prepares for receiving a meal. This helps maximize the extraction of essential nutrients from our food.

• **As a means of finding home**—It is thought that mother bats find their babies amidst hundreds of “bat nurseries” by the unique sounds their pups produce and the pups’ own special scent.

THE SMELL OF DANGER

Jesus frequently uses aromatic compounds (which is a fancy way of describing scents) to warn His creation of potential danger. Cats produce a scented protein that sends mice into a tizzy. How this protein triggers the mouse’s fear response is not entirely clear. Snails and mussels living in the sea seek refuge when they smell a much larger starfish (sea star) approaching. A hungry pike gives off a body odor that smaller minnows recognize, causing them to flee and avoid being the pike’s next meal. Our Creator is so kind to the weak!

SWEET WORSHIP

We might think of natural odors—especially the rich fragrance of field and forest—as an expression of “chemical worship.” Like the notes of a hymn or spiritual song, which are the means of musical praise, many of the odors produced by plants and animals form a symphony of scent venerating our Lord (see *kids’ kreation* #66). This should not surprise us, for God has commanded the use of fragrance in His worship ever since the beginning of true religion (Exodus 25:6).

So should we think of natural fragrances as “songs of ascent” offered to our Creator? Yes! Throughout the Bible, the sense of smell and the worship of God go hand-in-hand. King David compared his prayers to the incense⁷ burned twice a day in the temple of God

⁷ Incense used in the temple was composed of stacte or opobalsamum, onycha, galbanum, and pure frankincense.



(Psalm 141:2). Do you recall the gifts our King Jesus received after His birth and just prior to His death? They included sweet-smelling spices and myrrh (Matthew 2:11b; John 12:1-3). And the Apostle John records in the book of Revelation that our petitions before the Lord are the pleasing aroma of Heaven (Revelation 5:8). These prayers are joyously joined to the music of harps and the praise of every living creature (verse 13)—all ascending as an acceptable sacrifice to our Creator and Savior. The sense of smell is obviously very important to God and has a special place in creation’s worship of Him.



RICK DESTREE
Editor

CHRIS KAWA
Theology Editor

KELLEY CARLSON
COLLEEN DESTREE
Art/Layout

GRETCHEN GANZEL
MAGGIE RICHARDSEN
Editorial Proofing

REED EVANS
Printing

VISIT US AT OUR WEB SITE:
www.hiscreation.com

CREATOR is published quarterly by **HIS CREATION**, PO Box 785, Arvada CO 80001-0785. Copyright © 2010 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.

PHOTO/ILLUSTRATION CREDITS

- 1 Vanilla orchid—© 2010 kschrei/Shutterstock
- 2 Nose—Chabacano
- 3 Bloodhound—© 2008 Deborah Cheramie/iStockphoto
- 4 Snake—© 2009 Wesley Tolhurst/iStockphoto
- 5 Moth—© 2008 Cathy Keifer/iStockphoto
- 6 Incense—© Dscmax | Dreamstime.com