Look at the birds of the air; they do not sow or reap or store away in barns, and yet your heavenly Father feeds them. Are you not much more valuable than they? ... And why do you worry about clothes? See how the flowers of the field grow. They do not labor or spin. Yet I tell you that not even Solomon in all his splendor was dressed like one of these.

Matthew 6:26, 28-29

LOOK AT THE BIRDS & CONSIDER THE FLOWERS

By Dan Venberg

Illustrations by Sylvia Marit Venberg

Acknowledgments

I want to thank first and foremost my Lord Jesus Christ, for creating a natural world so full of wonder that leads me into worship. I want to thank my wife Rachel, and my children, who share my awe of the natural world, and have encouraged me in writing this sequel. I am so proud of the beautiful artwork that my daughter Sylvia Marit has contributed to this book. I want to thank my first cousin once removed, Gus Anderson for his editing contribution. I am very grateful to Tim Mathiesen and Kayla Doering who helped with design and formatting. And to you, the reader who has picked up this book: I am grateful for you. May the birds, plants, and insects featured in these pages draw you closer to the one who created them and you.

— Dan Venberg

Illustrations: Sylvia Marit Venberg
Photos: Dan Venberg
Design: Tim Mathiesen and Kayla Doering

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Introduction

Dear reader,

Thank you for picking up this devotional. I trust you will enjoy reading it as much as I enjoyed writing it. It is so good to pause and consider the wonder of God's creation and to reflect on what it teaches us.

We live in a world that provides us with an abundance of things to worry about. None of us are immune to finding ourselves anxious about something. It might be poor health, relational conflict, financial insecurity, family conflict, societal divisiveness, or any other issue among a plethora to choose from that can cause us to worry. There is nothing new under the sun. People have always suffered from worry and anxiety. Jesus, at the tail end of his famous Sermon on the Mount, acknowledges it and points us to nature as a means for us to mitigate our worrisome tendencies. In Matthew 6:25, after exhorting us not to worry, he directs our attention to birdlife: *"Look at the birds of the air; they do not sow or reap or store away in barns, and yet your heavenly Father feeds them. Are you not much more valuable than they?"* (Matt. 6:26). He follows up by directing our attention to the flowers of the field: *"And why do you worry about clothes? See how the flowers of the field grow. They do not labor or spin. Yet I tell you that not even Solomon in all his splendor was dressed like one of these"* (Matt. 6:28,29). Jesus culminates this message by assuring us that our Heavenly Father is aware of our material needs and reminds us of our spiritual need as well. He tells us that as we seek first his kingdom and his righteousness, we will find all that we need. Those things that worry us will always be there on this side of eternity. We are not exempt from pain, heartache, and anxiety. But one sure hope that we can rest in is that God loves us and cares for us deeply. Scripture tells us that as we follow him and receive his kingdom and righteousness, that we are his children and co-heirs with Christ himself (Romans 8:17); that we are engraved in the palms of his hands (Isaiah 49:16); that we are his handiwork (Ephesians 2:10); that he loves us with an everlasting love (Jeremiah 31:3); that we are fearfully and wonderfully made (Psalm 139:14); and that he takes great delight in us (Zephaniah 3:17).

So, go ahead and look at the birds! Consider the flowers! Pay attention to them. Learn about the wonder of their adaptations to the world around them. Seek to understand the way they interact with the world and how they depend on each other. And as you are amazed, remember the words of Jesus as they apply to you: "Are you not much more valuable than they?"

Within the pages of this book are 31 devotions, each highlighting a different bird, flower, or insect. The information about them is gleaned, in part, from my own experience and observation, but mostly thanks to the many researchers out there who have published their findings in books and on the internet.

The photographs are my own. The artwork is by my daughter, Sylvia Marit.

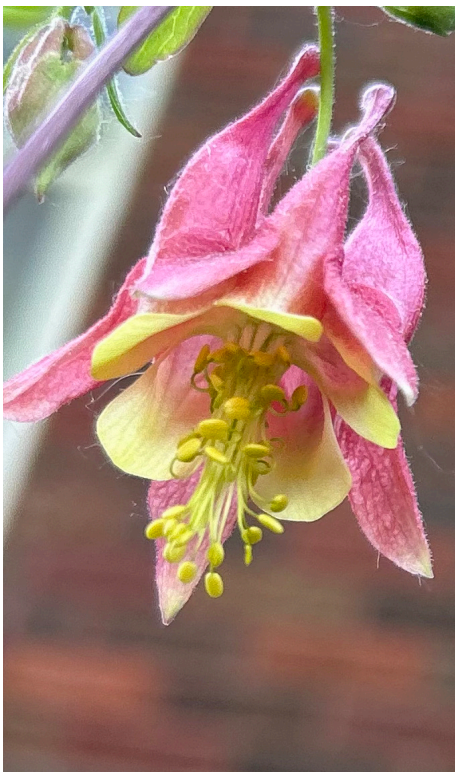
Whether you read these every day for a month, or all in one sitting, may these lessons draw you into worship of God, who cares for the birds of the air, clothes the flowers of the field, and loves you so much more!

Dan Venberg

The Eastern Columbine and the Ruby-Throated Hummingbird

The Eastern columbine, with its striking statement of color and form, never ceases to awe. Its five yellow petals, each with its dramatic upward-thrusting spur, and its skirt-like red sepals surrounding the cluster of yellow stamens dangling below, are the inspiration behind the name. The Latin term "*Aquilegia*," which refers to the genus of the columbine family, comes from the root word "*aquila*," meaning "eagle." The obvious connection is the flower's resemblance to the claws of an eagle.

The Eastern columbine has a unique connection to one of North America's most beloved birds, the ruby-throated hummingbird. The Eastern columbine is one of the first flower blossoms available to ruby-throated hummers as they migrate each spring. It is no coincidence that the range map for the Eastern columbine can be neatly overlaid with the U.S. portion of the ruby-throated hummingbird's range map. This interdependent relationship between the Eastern columbine and hummingbird is



a beautiful example of *mutualism*, where two organisms work together, mutually benefiting each other. The Eastern columbine produces nectar with almost twice the sugar content of other columbine species with blue or yellow flowers. Ruby-throats are more attracted to the red/orange color spectrum, and as they hover and collect the sugar-loaded pollen of the Eastern columbine, they are better fueled for their frenetic lifestyle and long migration routes. The columbine, in turn, benefits as the hummingbirds travel from flower to flower, collecting the sticky pollen on their bills and then transferring the pollen to other flowers, thereby pollinating new blooms and perpetuating the species.

Hummingbirds are not the only visitors of the Eastern columbine in search of its sweet nectar. Various bumblebee species will burrow themselves into the flower and use their long tongues to reach the nectar. Their almost comical, frantic burrowing into the flower to reach the nectar is ideal for picking up ample pollen, which they then deposit on subsequent flowers. One exception is the rusty-patched bumblebee that will, seemingly out of laziness, simply chew a hole in the top of the nectar "claws" to access the sweetness without the bother of burrowing into the flower. By doing so, they don't serve any pollination role, but we will give them a pass since the rusty-patched bumblebee is on the Federal Endangered Species list. More about bumblebees in the next devotional!

The Eastern columbine has also been appreciated for its pharmaceutical benefit. Native Americans prepared infusions from the columbine to treat heart trouble, kidney problems, headaches, and fevers. Their crushed seeds are aromatic and have been used for perfume, and was believed by some to be an effective love potion!

There is also some interesting lore and tradition surrounding the columbine. In Shakespeare's Hamlet, Ophelia says, "*There's a fennel for you and columbine*s." The latter reference is to be inferred as "folly," the connection being the resemblance of the columbine flower to a court jester's hat. In other lore, the columbine flower was a symbol of fortitude; perhaps, again, in reference to its strong, eagle-like claws.

In Christian tradition, the columbine flower was associated with the praise of God. The columbine's spurs were considered reminiscent of five doves, thus representing the Holy Spirit. The tripartite leaves, characteristic of columbine, were understood as symbolic of the Trinity. In art, a motif of three columbine flowers symbolized the three Christian virtues of faith, hope, and love.

In the Sermon on the Mount, Jesus tells us to "consider the lilies..." (Matthew 6:28). The context is his exhortation for us not to worry, because just as God cares for the birds of the air and clothes the flowers of the field in a way that surpasses even the wardrobe of King Solomon, so too, he cares for us. Dear friend, may you trust in his multifaceted provision today!

The Bumblebee

The bumblebee is neither bird nor flower, but if we are going to talk about the flowers and the birds, we should talk about the bees too, right?!

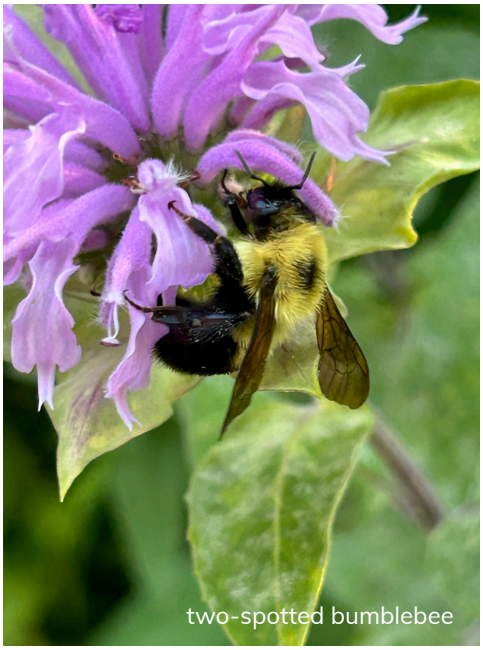
There are an estimated 250 different species of these fat and furry bees on the planet. 46 of them live in North America alone. Pictured here are three different species on three separate flowers, namely the two-spotted bumblebee (*Bombus bimaculatus*) on a wild bergamot, the yellow-fronted bumblebee (*Bombus flavifrons*) on a meadow sage, and a yellow-faced bumblebee (*Bombus vosnesenskii*) on a California poppy.

Bumblebees are super pollinators, and the ladies do all the hard work. That's right. All those bumblebees that you see working your yard flowers are likely female, and they take their work seriously! They use their large size and their fast wing beat (150 times per second!) to vibrate the flowers that they visit, forcing them to give up their pollen. This unique ability among bumblebees is known as "buzz pollination." As they travel from flower to flower, some pollen rubs off on other flowers, and pollination happens.

Another benefit to the relatively large size of the bumblebee is that it allows them to generate heat faster. As a result, bumblebees can fly earlier and later in the day, as well as to cooler, higher altitudes, in contrast with their cousins, the honeybees, who are more limited in the time of day and elevations in which they can be actively foraging. Bumblebees also have the courtesy to leave their chemical signature behind on the flowers they visit, deposited through their feet. This communicates to other bees that the flower in question has already been visited, thereby making the pollination process even more efficient. Bumblebee workers have excellent built-in GPS. They can fly over two kilometers to find food and will always know exactly how to find their way back home.

After a busy excursion of foraging, the worker girls will return to the hive (often found in an underground cavity) with their cache of pollen to feed the queen bee and the younger bees that are hatching throughout the summer. The male bees (called drones) will venture out and forage, but their main task and hope is to mate with the new queens that come out later in the summer. Both drones and working females have relatively short lifespans (an average of 28 days). Only the queen will live longer, going into an over-winter hibernation alone, and in the spring will wake up to start a new summer hive.

Bumblebees are super important to us. They may not be the most glamorous of insects, but they are extremely industrious. Up before dawn, hard at work after the sun has set, bumblebees are the world's most proficient pollinating practitioners. Their technique is efficient. Their furry coat is ideal for gathering pollen. Their fat bodies, resembling Mack trucks, allow them to carry a lot of pollen cargo. They fertilize our favorite flowers and pollinate a third of the plants that we eat, including


two-spotted bumblebee


yellow-fronted bumblebee


yellow-faced bumblebee

tomatoes, eggplants, peppers, melons, raspberries, blueberries, strawberries, and potatoes. Without super pollinators like the bumblebee, food productivity would plummet, many wildflowers would become extinct, and our food security would be severely compromised. Albert Einstein is quoted as saying, "*If the bee disappeared off the surface of the globe, then man would have only four more years of life left. No more bees, no more pollination, no more plants, no more animals, no more man.*" That might be a little extreme, but there is no doubt that the bumblebee is a considerable gift.

The National Aeronautics and Space Administration (NASA) has a poster that reads: "*Aerodynamically a bee's body is not made to fly; the good thing is that the bee doesn't know.*" The laws of physics would imply that a bee should not be able to fly, that the breadth of its wings is too small to keep its huge body in flight. But the bumblebee does not seem to be disturbed by this conundrum of physics or logic. It flies anyway, and seemingly with little effort. In fact, bees can fly forward, backward, hover in place, and change direction rapidly.

There are voices out there that tell us that we are not good enough to merit the love and grace of God, that we are inconsequential, that our lives are insignificant specks on the spectrum of eternity. But the Bible tells us otherwise. 2 Corinthians 5:17 tells us that if we are in Christ, we are a new creation; that "*he who began a good work in you will carry it on to completion until the day of Christ Jesus*" (Philippians 1:6); that God has loved us with an everlasting love (Jeremiah 31:3); that our merciful God "*made us alive with Christ even when we were dead in transgressions...*" (Ephesians 2:5); that "*we are more than conquerors through him [God] who loved us*" (Romans 8:37); that we are God's handiwork, created in Christ Jesus to do good works, which God has prepared in advance for us to do (Ephesians 2:10). Dear friend, consider the way God has created the bumblebee and integrated its role into providing for you, and remember that your God cares for you even so much more!

The Jack-In-The-Pulpit

We have a couple resident Jack-in-the-pulpit plants in our Minnesota yard, and I love seeing them bloom in the springtime.

This is one interesting plant! Though not brilliant in its foliage or flowers, it is beautifully unique in its character. Following are just some of the cool facts worth considering when it comes to the Jack-in-the-pulpit.

These are long-lived and slow-growing perennials, often living multiple decades. They have a unique floral structure that gave rise to their name, a "*spadix*" (a conical spike of very small flowers), enclosed by a pin-striped "*spathe*" (a modified leaf that surrounds the spadix). Together, these can lend to the resemblance of a figure standing in an old-fashioned canopied pulpit, thus the endearing name given to the plant.

Jack-in-the-pulpits are a little toxic, their parts being saturated with crystals of calcium oxalate, a skin irritant. But that doesn't deter black bears, who seek them out, digging up the underground bulbs of the plants (called "*corms*"). Jack-in-the-pulpit corms are seemingly a favorite snack for black bears. Or, perhaps they are sought out because of the apparent laxative effect. But I should add that it is not recommended for people who are seeking laxative relief.

Interestingly, the Jack-in-the-pulpit have a rare and unique adaptation that sets them apart: that being the ability to alternate between male and female, even changing back and forth from year to year. The fancy name for this is *sequential hermaphroditism*, or *dichogamy*. This is not because they are somehow confused about their gender, but rather an adaptation that allows them to

maintain healthy populations. Depending on the success of reproduction in the previous years, these super transformers will adapt to ensure their ongoing health and survival. Another reason for periodic gender changes in the Jack-in-the-pulpit might be due to the health of the surrounding ecosystem. Female plants that are producing seeds require lots of energy that is derived from sunlight and soil nutrients. If their energy source is in short supply, a plant may change to male the following season to allow for a period of relative rest and renewal, as the male reproductive process requires less energy.

The pollination of the jack-in-the-pulpit is also fascinating. It occurs when small fungus gnats crawl into the "pulpit," attracted by the mushroom-like scent emitted by the spathe. The gnats get disoriented in the pulpit and head towards the pale-yellow base. If the gnats happen into a male flower, they can escape through a hole at the bottom, after picking up some pollen. If they then make their way into a female plant, they will find no escape hatch and will pollinate the female as their last "fruitful" service before they die.

This plant is truly a "Jack-of-all-trades," and in many ways, paradoxical. It is both beautiful and deadly; both male and female; both a poison and a food. We can learn from Jack-in-the-pulpit and its paradoxical character. Life is full of paradoxes. And paradox is good. For example, the more you fail, the more likely you are to succeed; the more you learn, the more you realize how little you know; the less you care about others, the less you care about yourself; the more you try to argue with someone, the less likely you are to convince them of your perspective.

The Bible is also full of paradox. We read that the first will be last (Mark 9:35), that life comes from death (Romans 5:18), Christ was fully God and fully human (John 1:14), rich poor men (2 Cor. 6:10), weak strong men (2 Cor. 12:10), joy in trial (James 1:2)... Like the paradoxical beauty and richness of character of the Jack-in-the-pulpit, so too is the spiritual and beautiful richness of Biblical paradox. Dear friend, consider the Jack-in-the-pulpit, pause for a moment, and reflect on and investigate the truth of the gospel, which in itself can be a paradox... simple yet profound –a free gift that came at great cost.

The Common Milkweed and the Monarch Butterfly

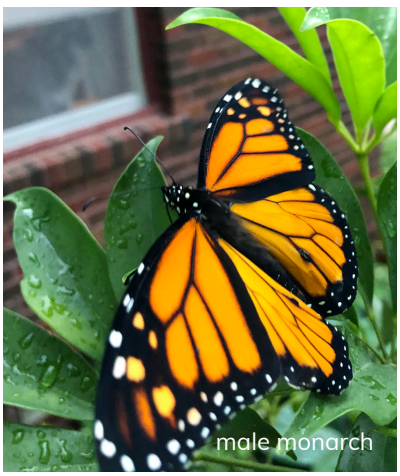
The connection between the monarch butterfly and the milkweed is well documented. But digging a little deeper into the connection that this native North American plant has with this particular butterfly reveals some significant WOW factor. Monarch moms will only lay their eggs on milkweed plants, and the resulting caterpillars absolutely love feeding on the leaves of the milkweed on which they are hatched. In fact, they are so voracious in their appetite that they will eat 200 times their birth weight in a matter of 10-14 days before they transform into the chrysalis stage! That's like a seven-pound human baby going through 1,400 pounds of milk in the same time frame! And all that milkweed, which contains a toxin called cardiac glycoside, results in both caterpillar and butterfly to be very distasteful to would-be predators. Like bees and hornets, the black and yellow coloration serves as a warning color combination that scares away predators.

The adult butterflies pictured here represent a male and a female. The one on the umbrella plant to the right is a male, distinguishable by his thinner wing venation and two pheromone "love dust" sacs on its lower wings, used in courting. The one on the blazing star (middle picture) is a female.

The female pictured here hatched in late August in my yard in Minnesota and has no interest in expending energy in procreation and egg production. Why? Because she is either the third or likely fourth generation of monarchs hatched this summer, and due to shorter days and colder nights in late August, her reproductive system is in a "back burner" mode. She instead has her mind and


caterpillar


female monarch


male monarch

body set on migrating. As a result, she is spending more time drinking nectar from plants like this blazing star, “bulking up” for her mind-boggling journey ahead. This delayed reproductive maturity is known as “diapause.” She will soon embark on a 2,750 mile journey to a specific spot in the Sierra Madre highlands of central Mexico. And she has never been there before! But she will find it! Just like her great-grandparents that last made the trip. She will make the trip over multiple weeks, taking advantage of thermal currents and her strong wings. She will encounter many dangers on the way, including weather, fast-moving cars, and lack of nectar “fuel” to keep her going. She will use an internal compass, aided by her antennae and her eyes, to keep track of where the sun is in the sky relative to the time of day, to help her navigate to her destination. If she makes it, she will join a kaleidoscope of millions of other monarchs that will gather in clusters of oyamel fir trees in the mountains of Mexico in an ideal microclimate to overwinter. Then, in the spring, she will mate and start the journey back north. But she will likely only make it just north of the border to the southern States, where she will lay eggs and die. Her offspring will go through their larva (caterpillar), pupa (chrysalis), and butterfly metamorphosis and make it up to the Central Plains, repeat the process, and the next two generations will make their way back to the northern States and into southern Canada. Interestingly, the fourth generation that migrates lives up to nine months, whereas the first generations that are mostly focused on egg production and the staged trip north commonly live only one to two months.

The life stages of butterflies remind us of the transformation that comes through faith in Jesus Christ. 2 Corinthians 5:17 tells us that anyone who is in Christ has become a new creation. The old life is gone, and the new life has begun. The same God who takes a caterpillar and changes it into a butterfly is the same God who is mighty to save all who believe in him and transform them from people dead in sin to alive in Christ. Dear friend, may the story of the butterfly draw you today into a fresh awe of Jesus Christ, who makes all things new.