



WHO'S CHARLIE

By Carla Kessler



Carlakesslerauthor.com
Carlakesslerauthor@outlook.com

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Who is Charlie?

Adventures of the Famous Inventor as a Boy

By Carla Kessler

Look for clues in this story to figure out who the real Charlie is.

Hints:

1. The names and locations are accurate.
2. The events were told by Charlie when he was older, so they did happen, but they are memories so the details are not exact.
3. He became a famous inventor.
4. He is no longer alive.
5. He is the inspiration for the character Thomas in *The Terracolina Trilogy*.

Stars

The crying of his baby sister woke 10-year-old Charlie at 5 AM. He'd been having a wonderful dream. He was flying and zipping through the clouds, bypassing birds and scooping down close to the ground then back up again to the clouds. Orville Wright, inventor of the airplane, was alongside him. They had some flaps attached to their arms and were gliding with ease, grinning with delight. He sat up in bed, chest tight with excitement.

"Henry, Charlie, Mary, Ellen, time to get up," came mother's expected call from the stairwell. Each of them had their chores to do before breakfast. Charlie was now old enough to milk the cow. He pulled on his pants hurriedly. He was still groggy with the joy of flying, but he wanted to get outside as quickly as possible before the sun brightened the sky and the stars faded.

Boots on, he clomped down the stairs, swung open the screen door, jumped over the porch steps into the grass and raced half-way to the barn, where the lights from the house wouldn't interfere.

Perfect! He gazed upward. The sound of steps nearby didn't distract him.

"Ahemm," his father, Henry, cleared his throat. "What can we see this morning?"

"I can see both the Big and Little Dippers. Oh, and there's Cassiopeia."

“Can you make out Pegasus?”

“Hard to see.”

“Hmmm, I have something that will help. Get Bessie milked, son, and I’ll meet you back in this spot when you return.”

Charlie ran to the barn, wondering what his dad had in mind. Bessie was impatient, stomping her feet. Her udder was awkwardly full. He kept the bucket well away from her hind feet and was done in fifteen minutes. He grabbed the handle, trying not to splash, gave Bessie a pat, and struggled out the door of the barn.

“Let me help you with that. It’s extra full this morning.” His dad was waiting.

They walked back to their viewing spot. His dad set the bucket down and lifted a strap from around his neck, handing Charlie a pair of binoculars.

“These will help. Hold them to your eyes. Turn this wheel to focus.”

Charlie had to use both hands to steady the lenses over his eyes. He turned the wheel. Slowly the Great Square of Pegasus became sharp and clear.

“I see it!”

“These are yours to use for stargazing, stream gazing, bird watching, and whatever else you need them for.”

Charlie lifted the strap over his head. “Thanks, Dad,” he whispered.

He couldn’t wait to take them to his lookout rock by the stream. He was sure he’d be able to locate more salamanders along the shore.

“Who knows what I’ll be able to spot in the water with these!” He looked at his dad.

“You must show me what you find.” The gentle tone of his dad’s southern accent softened the straight line of his firm mouth and keen eyes. The statement was both a suggestion and an expectation.

Butterfly

The two brothers frequently took off into the cotton field after school, butterfly nets flying. “I got one!” Charlie, hands cupped together, raced to the front porch where his older

brother, Henry, met him, ready for the viewing. Two sets of lifted brows leaned in. Charlie opened his hands enough for a peek.

“I think it’s a Monarch,” proclaimed Charlie.

“It’s a Viceroy,” corrected Henry.

“Oh,” Charlie scrunched his brows together. “How do you know?”

Charlie opened his hands quickly and cupped them again.

“Did you see the straight line crossing the bottom of each hindwing?” said Henry.

“Let’s preserve this one to help us with future identifications!” exclaimed Charlie.

“I’ve already got one in my collection.” Henry shrugged.

Henry was the chief bug collector of the household and he knew his stuff. Charlie had started his own collection, not as impressive, yet, but Henry had a few years on him. There was time to catch up.

“I gotta show Dad,” said Charlie.

His mother was in the kitchen, bent over the large farm sink, cleaning canning jars and listening in. She had already placed a dried jar on the kitchen table. She knew it would be added to the containers of bugs and rocks lining the stairs to the boys’ room. She never missed a chance to support their enthusiasm.

Afraid the butterfly would damage his wings, Charlie continued to hold the specimen in his clapped hands, keeping the wings together. He climbed the worn, wooden steps of the pillared porch. He scooted past the collection of bird nests lining one side of the entry by the screen door and pressed his back against it. An old spring squeaked as it pulled the frame shut. He trotted to the study where his dad was deep in his law books. Behind him, a bookshelf full of brown encyclopedias lined the wall. The gold lettering on their spines made it easy to spot where to find more information about additions to the boys’ collections. They would read up on the Viceroy later. Right now, his treasure needed to be anesthetized before more of the scales on its wings were damaged.

“What have you got there, son?” his dad’s southern drawl tempered his piercing gaze.

“It’s a Viceroy, and I need some of that ethyl acetate to anesthetize it quickly so I can preserve it intact.” Charlie’s dad always had supplies to help the boys in their pursuit of new discoveries.

His dad turned in his chair and opened the doors to a cabinet on the side wall near his desk, pulling out a small bottle. The ethyl acetate would quickly and calmly put down Charlie's specimen. It was more humane than the rubbing alcohol he had tried once. He and Henry did not need to beg much to get their dad to buy some. Although a lawyer in practice, he too was a nature lover and scientific thinker. Charlie often thought his dad would have been a scientist had there been the opportunity.

His mother stood quietly at the door to the study, jar in hand. Her eyes smiled calmly at Charlie as she set the jar down on a side table. His dad produced the ball of cotton, grown in their own fields, and dropped it into the jar. He squeezed the dropper top, sucking some ethyl acetate out of the container and released a few drops onto the cotton ball. Charlie opened his hands. Pinching the wings carefully together he lowered the Viceroy into the jar. His mother handed him the lid. The orange and black wings opened slightly, then the butterfly quickly fell sideways.

"He is beautiful!" Charlie stared through the jar with a mixture of sadness and awe. "I will mount him carefully, so I don't have to capture any more of this species for my collection."

Nest

Charlie raced upstairs to his room. He tore a piece of school paper from his composition book, trimmed the edges and folded it into a triangular envelope. Skipping back downstairs with the folded container, he slipped back into his dad's office, opened the jar lid, lightly pinched the top of the Viceroy's forewings together as he pulled it out and slipped it into the small envelope, folding the top over to seal it in.

His dad, head down, was studying his law books again and Charlie could hear the clanking of dishes as his mother finished up in the kitchen. He returned to the stairs. His collection box, lined with moth balls, was on the bottom step, right side. Henry's, on the left side, was currently empty. He would let his catch dry out for a few days and as soon as Henry had a new specimen of his own to mount—what would he find next?—he would get his brother's help hydrating and mounting his Viceroy.

The day was not over, and Henry was outside finding who knew what. Charlie placed the butterfly in his box. He pushed the screen door open slowly, paused and searched for the bobbing head of his brother amongst the cotton plants. A familiar fluttering of wings to his right and a string of whistling sounds distracted him. "*Cheerily, cheer up, cheer up, cheerily, cheer up,*" the robin chanted.

The nest!

He had spotted it in the old apple tree at the edge of their lawn yesterday.

I hope it has eggs. Maybe four or five!

He watched the robin fly back to the tree. He waited. The plump, rust-red-breasted bird headed to the field a few minutes later.

Maybe they've already hatched? Now's my chance!

He ran to the tree and peered up, shielding his eyes with his hand. Thin sticks and bits of grass stuck out from the crevice where the trunk had split, cradling the nest. He held still and listened.

No sound.

A faint swish, swish of tall grass grew louder behind him.

Uh oh, Henry. Gotta be first.

Charlie clutched a low branch and swung a leg, kicking hard several times until his foot caught on an adjacent limb. He pulled himself up just in time.

"I noticed the nest too, a couple of days ago." Henry spoke matter-of-factly. "Hey Charlie, I'm pretty sure nothing has hatched yet. Don't get too close. You'll scare the mother away."

"Yeah, I know," Charlie said in a quiet tone.

He climbed several more limbs, dislodging a few chunks of dried moss, until his head was just floating above the nest, from the other side of the scabbed trunk. Stretching a little taller he could make out three beautiful sky-blue eggs. He sniffed in excitement then let out a sigh. His mind spun.

Why would a robin have such brilliant blue eggs? Any predator can see them. There has to be a reason.

He lowered himself and dropped to the ground next to his brother.

"I'd like that nest for my collection when the chicks leave," stated Henry. "I believe I saw it first." Charlie's shoulders sagged. He looked at his brother, then at the ground.

The two sauntered back to the porch and settled on the brick wall in front. Legs swinging, they sat in silence, watching the robin swoop back to her nest.

“Why do you think those eggs are so blue? Other birds have eggs that are camouflaged,” Charlie broke the stalemate.

Henry ruminated a bit, “Bluejays and house finches have blue eggs too.” Henry took his time responding.

“What do they have in common?”

“They all build their nests in trees, not on the ground or in bushes. Probably safer from predators in that way.”

“So their nests are closer to the blue sky,” Charlie paused, “but that wouldn’t do much good. There could still be plenty of predators around. There’s got to be another reason, I mean something that makes more sense.”

They slipped off the wall, heading for the study and the encyclopedias.

Questions

Both boys squeezed into the stuffed chair in their father Henry’s study. Being skinny had its advantages. The leather-backed encyclopedia lay across two laps. Four bare knees peeked from under the top edge of the volume. The quietness of focused reading filled the room — Father Henry with his law books, the boys with their encyclopedia.

Charlie glanced from the book and waited as his brother finished.

“So it’ll be about two weeks before they hatch,” Charlie whispered, awe and excitement tightening his throat.

“That was the mother robin we saw fly back,” announced Henry. “It says she only leaves the nest for 10 or 15 minutes at the most. I wonder where the father is.”

“It says he stays close to protect the eggs and he actually knows which ones will hatch the healthiest chicks, by looking at the egg color. Brighter blue is better.”

Henry nodded.

“Those eggs looked pretty bright blue to me,” Charlie continued. “Would he abandon them if they were a duller blue—how could the father know the sun would damage them if they were a dull blue?” He would have kept rattling off questions, but Henry interrupted.

“They must understand something about it.”

“I wonder how scientists know that the brighter-blue egg color protects them from the sun rays? And where does that blue come from anyway? Robins don’t look like they carry blue coloring around with them.” Charlie’s head was buzzing from wondering.

Henry closed the encyclopedia with a snap. Father glanced up and smiled.

Charlie directed a question to him. “Dad, who should get to keep the nest after the babies have flown?”

“Hmmm...who found it first?”

“I did.” Henry spoke up confidently.

Charlie crossed his arms abruptly, his lips pinched.

“You know in the law world we have a solution for who gets to own discoveries. Even ideas. It’s called a patent. Whoever can prove they came up with the discovery first, gets to keep it. They have to put their proof in writing, then they get an official document saying it is theirs. They also pay something for the privilege of making it official. How about this? Whichever of you can prove you found it first, bring me your proof in writing and a nickel to make it official. Go work out your defense and come back and let me know.”

The boys looked at each other in surprise and sprinted out of the room to get paper and pencil and work it out on the front porch. In the end, Charlie had to agree that Henry had found it first. It was the start of a steady flow of nickels from the boys, and fewer arguments.

By the end of the summer, Charlie was out of nickels. He needed more to keep earning those patents. He had a plan. He gathered scraps of wood left over from shoring up the hay bins and built a stand for selling the family apples. Then as soon as he made a little money, he bought the ingredients to create his own fireworks which he added to his roadside store. It was the most money he had made, ever. He rushed to spend it at the hardware store as he needed more pliers and wire and nails to build a wagon from dug up farm equipment parts. It would help with his apple sales. School would start soon and apple season would be over. He needed enough nickels for a year of discovery patents.

Salamanders

The start of school, fifth grade this year, always signaled the migration of the salamanders. Charlie squatted on a rock, midstream, recalling how he found two dwarf salamanders last spring and kept them alive in his aquarium, capturing crickets and raising mealworms to feed them. But the summer had been blisteringly hot and even though he kept

his aquarium moist and provided plenty of moss and leaves for his salamanders to hide under, he wanted to deliver them back to a swampy pond, so they could build up their strength for the migration.

He created a small carrying cage for them by weaving together tall grass blades and slender sticks and headed back to the house. Both brown, slim creatures slipped out a couple of times on their way back to the small wetland, but he managed to get them there in time for them to crawl under some muddy leaves and cool off.

As always, he stuck around, turning over rocks to see what he could find. Tiny, wet, worm-like creatures wriggled away, to escape the sunlight suddenly cast on them as his boot toe lifted a rock. Charlie crouched to look more closely. Something moved in his side view. A turtle shoved into the water.

He watched the turtle's nose travel the surface of the pond. An S-shaped ripple on the other side reminded him snakes shared this space. It was followed by the familiar plunk of a frog moving a safer distance away and the slap of a muskrat tail giving a warning. Dragonflies dipped their tail ends in the water, laying eggs or dive bombed for mosquitos hovering over lily pads. A furry beaver head popped out of the water with a stick in his mouth. He swam towards a pile of sticks on the far bank.

Must be building his lodge for winter. Charlie sighed spellbound. There was so much living taking place all around him. His chest filled with air. Warmth filled his gut. Awe widened his eyes.

What he was seeing and feeling was beyond comprehension. He was sure there was a reason for all the wriggling, splashing, swimming, slapping, growing, living, and dying taking place right in front of him. Goosebumps crept across his forearms. He breathed slowly, reverently. He felt his own smallness and the vastness of the world surrounding him. He was a part of something very big and important.

A small salamander looked at him from a crack at the bottom of Charlie's rock perch. He pulled his thoughts back to the present, but memories of that moment of wonder, and many others like it, would remain tucked away in a special place in his head, guiding his decisions as he grew up.

He stared back at the salamander from his favorite rock by the stream considering whether to observe it in its natural environment or take it home. He decided instead to watch. It climbed up the rock allowing Charlie to count its toes. Four toes on each back foot.

Another dwarf salamander. Why is this the only salamander with four toes? All the rest have five.

Another mystery to solve. His mind spun again with ideas.

School

Charlie raised his hand halfway. His front row seat in the classroom made it easy for him to be noticed.

“Charlie?” This year’s teacher did not hesitate to call on him, unlike last year’s, who at one point told him to stop asking so many questions.

“Why can’t one be a prime number?” he asked.

There was an audible groan from behind. Not deterred, Charlie jotted a few notes as the teacher explained. He loved math. It was so organized and logical. He raised his hand again.

“Is zero an even number?” More restless noises.

The teacher smiled. “When the class goes to recess, stay a bit and I’ll fill you in.”

A snort from the back of the room drew her attention, but Charlie nodded eagerly without turning around. He couldn’t wait to ask more questions once the rest of the class was dismissed.

As the kids lined up at the door, several glared at him, but he sat dutifully waiting for them to leave. Once they stepped out onto the playground, he knew they would race to get a ball or be first in line for hopscotch, their grudges set aside.

“So Charlie, yes, zero is an even number. Zero divided by 2 is zero which is an integer. So it fits the definition. Now, I think you should get some fresh air and head out to the playground with the rest of the kids.”

“Yes, ma’am,” he rose from his desk. But his mind was whirling again.

If zero is an integer and an integer is a whole number, then zero is a whole number. How can that be when zero means nothing?

Head down, he entered the playground and was woken from his reverie by a ball. He gave it a solid kick, aiming for the group of boys staring at him with grins on their faces and headed for a hopscotch grid that was newly empty.

A childhood of crossing his farmland stream on steppingstones made him an expert. A few kids gathered around as he swiftly completed an entire round on his own without once losing his balance.

Even the hopscotch squares don't include zero as a number.

He kept his eyes on the squares as he ruminated over this new puzzle, ignoring the kids watching him. When the bell rang, he was the only one who raced to the door to get to class.

Library was next. His personal copy of The Swiss Family Robinson was at home, but he knew exactly what page he was on. He grabbed the library copy and found a quiet spot to read.

Only 150 pages left. How are they going to keep the boa constrictor from hurting them? After all the amazing ways they have figured out to survive on their own, this can't be what beats them!

Charlie dove into the world of the Robinson family and their stories of endurance and survival. He knew he would read the book again once he finished.

Our farm home is a little like the island the Robinson family lives on. We take care of each other. We grow our own food. I wish I could do all of my learning at home, then I wouldn't have to deal with the kids who don't like my questions at school.

Clocks

On the porch, Charlie found Henry hovering over the latest cast-off from the local clock merchant, brought home by their dad. It was spread out in several pieces.

"Do you think we can get it working again?" he asked.

"Let's take it upstairs and listen to our radio, while we figure it out."

"Maybe there'll be some music this time. I wish the Will Rogers' show was on."

They gathered the clock pieces into a shoe box and carried it upstairs. A crystal radio was on the long desk they shared. Henry set the box on the desktop while Charlie fiddled with the radio knobs. It crackled and a signal broke through the static.

"This is KDKA coming to you from Pittsburgh, Pennsylvania!" Charlie shivered. The sound of a voice coming through the air and into his room, here in the Carolinas, thrilled him every time. Commercial radio was new to everyone and by tinkering with the broken-down gift

from their uncle, the boys had gotten the old crystal set to work again. Some day he would understand better why it worked.

The boys set about fixing the clock, cognizant that whoever got it to work first could proudly present a nickel and paperwork to their dad for the patent and get to keep it.

Proing, a small spring vaulted through the air as Henry tried to reattach it.

“Got it!” Charlie caught it midair. “Let me try—there.” The two stepped back to examine their work.

“It’s missing another spring,” Henry reported.

Charlie pulled a thick box out from under the desk, one he had hammered together from scraps of found wood.

“I think we’ve got a spare in the junk box.” Charlie pulled out several gears before shuffling through the smaller parts in the bottom. “Too big?” He held up one to show Henry.

Henry, hands on hips, examined the small spring pinched between Charlie’s fingers.

“Too big,” he confirmed and sighed. They’d been at it for two hours. “Hold the box below the desk here.” He shoved the collection of parts towards the end of the desktop.

“Wait!” Charlie grabbed a lever before it fell into the box with the other scraps. “This is just what I need to fix the latch on my cricket cage.”

The rest of the clock pieces dropped into the box.

Could there be enough parts in here for me to make a clock from scratch. Maybe tomorrow I’ll try that. I could invent my own discovery!

Fireflies and Sisters

Another day of school behind him, Charlie gathered apples for his stand. But as soon as dusk arrived, he could be seen racing back and forth in front of the house, running in zigzags, his butterfly net over his head, his binoculars bouncing against his chest. There were still a few fireflies coming out in the evening.

The plan was to capture as many as possible, put them in a jar, and watch them, using his binoculars. Henry spotted his brother from their bedroom window and trotted out of the house with his net. He didn't want to miss this.

Older sisters Mary and Ellen were cozied into the rocking chairs on the porch and watched with interest.

"Charlie, you'll catch more if you stand still." Mary, the eldest, spoke with a commanding voice. Charlie slowed.

"Now Charlie," Ellen's gentler drawl broke in, "Mary has a point. Try standing in one spot," she coaxed.

Henry, more experienced in these matters, had captured three fireflies which now climbed the inside walls of a covered jar on the porch deck.

"Got one!" Charlie exclaimed.

"Remember they are delicate," coached Mary.

"Ask Henry to help you put them in the jar," suggested Ellen.

Charlie, net folded over to prevent an escape, showed his brother his catch. He didn't seem to mind his sisters' constant suggestions. In fact, he was glad they loved to play teacher as he liked to pretend to be their student.

With a jar full of ten fireflies, Charlie stopped chasing and started observing. The binoculars were not ideal for looking at something so close, but they gave him a different perspective. He could see more clearly the stripes on their wings, their antennae searching, and their rear ends throbbing with light. He lifted his binoculars to look out over the front yard.

"Oh wow!" By the far apple tree there seemed to be a swarm that he hadn't noticed without the binoculars. "It's like the apple tree is surrounded by moving stars."

"Let me see," Henry put his hand out for the binocs.

Everyone took turns. Charlie and Henry remained out in the yard while Mary and Ellen used them from the porch.

The screen door squeaked. Mother stepped out on the porch. She picked up the jar.

"Why don't we let this light up the dinner table tonight? Come on children. Dinner is ready."

After dinner, Mary and Ellen wanted to play teacher. Charlie, as usual, would be their student. Henry went to do the second milking.

“Spelling practice,” called out Ellen.

“Pugnacious... simplistic... territorial...,” Mary continued. Of course, Charlie spelled them all correctly. “Charlie, we need to teach you some harder words,” she concluded.

At bedtime he carried the firefly jar to his room and set it on the shared desk. His binoculars still hung from his neck. From his top bunk there were only a few inches of window left for looking at the night sky. He lay low and peered through his binocs.

Wow, a shooting star! What other things are up there that we can’t see?

He closed his eyes and remembered that on the weekend coming up, he would go to his grandma’s in Charleston. As usual she would take him to the museum. This time, with his binocs, he could study more carefully the skeleton of the Atlantic Right Whale that hung suspended from the ceiling.

Falling asleep, he hoped he would dream about flying again, but instead he dreamt he went swimming in the ocean, exploring the mysteries of the marine floor alongside an Atlantic Right Whale. He had no idea that in 40 years, his dreams and his unstoppable curiosity would guide him to discoveries and inventions beyond anything he could imagine as a boy.

Years Later

Years passed and the kids grew. Henry became a renowned entomologist (one who studies bugs) and became a world authority on Ichneumon wasps. Mary became a children’s librarian, Ellen a teacher, Aurelia (the baby) a musician, and George, born later, a lawyer. By age 19 Charlie had completed two degrees at his local college, Furman University, and was ready to explore more deeply the field of his choice. He later received The Nobel Prize for his work. Can you guess what career he decided to follow? The internet will tell you if you follow enough of the clues in this story.

Today everyone uses some form of the device that grew from Charlie’s spirit of wonder and discovery. It’s in our homes, in hospitals, in cars, in outer space, and used under the ground. After several years of exploring in his field, what did he discover early one morning as he sat on a bench thinking about how things work? Once the internet locates him, you’ll know!

Email your answer to Carla: Carlakesslerauthor@outlook.com

I’ll send you a stuffy of Merlin and share a few more secrets about the real Charlie and me.