

StoneSoup

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Editor's Note

I'm thrilled to finally share the winners of our Science Fiction Contest with vou, in this special Science Issue of the magazine. Each story is inventive, strange, suspenseful, and "scientific" in its own way. "Middlenames," the winning story, imagines a society that assigns you a middle name-which determines your identity for life-at birth. "Young Eyes" explores the dangers of technology, while "Mystical Creatures of Blue Spout Bay" and "Sunk" take on the environment. This issue also features nonfiction writing on scientific topics-from the solar eclipse to organ transplants—as well as three poems that engage with scientific topics and ways of thinking. I hope this issue serves as a reminder that writing and literature don't happen in vacuum; they aren't separate from other subjects like algebra, physics, or biology. As you read, I want you to think about your largest, nonliterary passion. How can you engage it in your own writing? As always, send the results of your experiment to Stone Soup! Enjoy-



Submissions: Our guidelines for submission are on the Submit page at stonesoup.com where you will also find a link to our Submittable online submissions portal.

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On the cover: 'Parker,' by Kate Duplantis, 13 Houma, LA

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How the Universe Came to Be



by Yutia Li, 9 Houston, TX

Once In the middle of nowhere There hid a Tiny speck of dust Smaller than The smallest microbe. With all the playful energy The miniscule pinprick contained, It couldn't wait A single moment longer To meet the world And make new friends. So The tiny speck of dust Exploded, Launching a shower Of vibrant reds, Oranges, And yellows Into the swirl of gloom above. And that was how The universe began.

Glamorous stars Blinked at each other In the inky night sky. Bits of cast off rock, Large and small, Sped around the stars Like race cars.

More and more rocks joined; The racetrack became too packed And the charging rocks collided Until gradually, Planet Earth Emerged from the chaos.

Back then, Our home planet Was a totally different world. Infuriated asteroids and meteorites Crashed into the Simmering surface.

But planet Earth Tired of its intense workout, Finally settled down, Falling into rhythm Around the sizzling sun.

All of a sudden, A stray ball of rock Came hurling through outer space, A furious untamed lion Ready to devour all in its path.

But our newborn planet Fought back, Cracking the foreigner into pieces, Sending a spurt Of dusty stone Into the air.

But the fight was not over yet— Some of the stone Was squashed into a ball, Forming our Now dearest companion, The moon.

Sights of life Finally appeared on Earth. Molecules linked together, And as more joined, Began to make Replicas of themselves. Membranes formed Around these molecules By fatty by-products. And humans finally made Their first appearance As invisible Single-celled organisms.

This, Reader, Is how our dazzling universe, Full of all its stunning wonders, Came to be.

I Wonder

by Sterling Waterfield, 11 Fort Wayne, IN



I wonder why we call bats "bats"why do we call them that? I wonder why little kids burp and crickets chirp and why snow is in the winter. Speaking of snow, why is it called snow and not sand? Why is music sometimes called a band? And why do people walk on land? And why do they die or cry or get mad or sad? Why are we the ones that can talk and the ones that have technology?

Why aren't hedgehogs a sophisticated species? Why do spiders give you the creepies? It doesn't seem right to me, why the world is this way. I think the world should be different but I can't make hedgehogs talk or fish walk. So I think that I will just burrow under the earth inspect the workings of the world and see what makes the world this messed-up way. But I kind of like the world this wayjust a little. So I will stay here where I am and watch the flow.

The Absence of Opposites

Many things are true, I know this is, too:

there is no cold,

there is only the absence of heat.

Heat is a fluid thing

that has no form

except for life-saving warmth.

Cold only happens when heat is not there.

Cold is not a *thing.*

It is a happening

that makes the body shiver and shake.

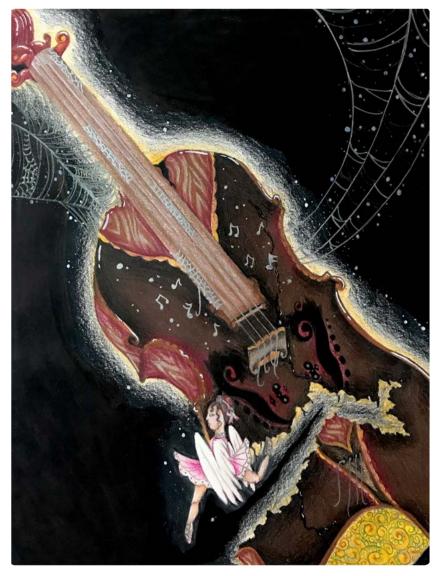
Heat relieves that pain, makes you sweat (and sweat can be a nuisance)

but



by Kieran O'Donnell, 11 Philadelphia, PA

> it is just heat reassuring you that it will always be there.



"The night after the concert I dreamt I was dancing across the surface of a viola dressed in ballet clothes, desperately trying to keep up with the flawless music. It ended with me falling off the edge into the dark abyss."

Graphite pencil, Copic fineliner pens, Prismacolor pencils, and an ink brush pen



by Avery Multer, 12 Chicago, CA

Middlenames

Winner of the 2018 Science Fiction Contest by Thomas Faulhaber, 13 Seattle, WA



Robin lives in a religious society where her identity is set at birth

In his book *Meaning*, Galer wrote, "God created the human race as an experiment; He wanted to see if life was capable of creating for Him. Ultimately, He wanted us to produce beauty." I felt that I had failed Him. I had been practicing from a young age, yet my music remained mostly devoid of beauty. And despite that fact, I continued to practice.

"It's for my family," I would always tell myself when I listened to myself play.

I wasn't referring to my mother or father, but to my mid-family, the Burkes. The Burkes have been famed for their music for the past 60 years (before that, they weren't really famous for anything). The most well-known singer's name was John Burke Raymond. The best composer was Sophia Burke Kasparov. Burkes weren't just everywhere in the music world. They entirely comprised it.

Even my music teacher, Ms. Tilson, was a Burke. She was very good at being a Burke. She didn't just play well; she played with a captivating, eccentric style. She would be famous if only her personality didn't reflect that to quite the extreme that it did. She was almost crazy.

I have never felt like a Burke. My

music was bitter to the ears. People sometimes asked me if my viola was broken. The pastor who gave me my middlename at baptism continued to insist that he had given me the correct one. The pastor was a Follower of Galer who had converted from an older religion after being "shown the way" by older Followers. As a result, he had no middlename. He went by Papa Chris, and everyone in town going back two generations loved him.

One night, after a particularly bad concert for the town's Winter Festival, when I was eleven, I asked Papa Chris if he was sure that he hadn't made a mistake in choosing my middlename.

"Of course not! I can see you improving every day!" he said. He was lying. I'm not sure why he lied, but the forced smile on his face made the lie clear.

"Even my mom winced!" I said in protest, as if I had a point to prove.

He went on to assure me that I would get better over time. Even Burkes weren't always prodigies, after all. Despite his reassurance, my viola still sounds like its voice is cracking whenever I try to play.

The night after the concert I dreamt I was dancing across the surface of a viola dressed in ballet clothes, desperately trying to keep up with the flawless music. It ended with me falling off the edge into the dark abyss.

These midnight terrors continue to this day: the most recent example involved me playing music for a party of fiery demons who would cook me alive if I failed. *Unreality*, Galer's book on dreams, says that dreams of this sort (dreams in which the subject is forced to do something for a party of festive demons) usually represent a need for flight. *Unreality* is not his most religious work.

My best friend then was Jonah Rosedale Beatty. The Rosedales were known for being aristocratic. They were envied by most, and they had formed a tight alliance among themselves over time. Rosedales often came to resent their status as much as it was envied by others.

Jonah, who hardly believed that he would become rich because of his Rosedale name, often joked about his place in society. When I would desperately attempt to play my music, he would cheer me on by saying, "When I become rich, I'll make you my head musician!" This made us both laugh, but I secretly wished that it would come true. I would daydream about conducting an orchestra in Jonah's mansion, being applauded by the nation's most powerful. It was one of the few things motivating me to continue.

Jonah had to leave last year. The riots in our city were getting especially bad, and Rosedales were the main target. As a result, Rosedale leaders started paying for their fellow Rosedales, whom they saw as their nieces and nephews, to leave the rioting cities. We lived in one of the safest parts of town, in a very open space where almost everybody was contented, but Jonah's paranoid parents took the money anyway.

A few months ago, I received this letter from Jonah:

Dear Head Musician,

The country is very boring. I can't tell my parents because that would be ungrateful, so I decided to send you a letter.

A lot of the kids here are Rosedales like me. It's the only thing we can really bond over. One of them, Mason, is from our school in the city. Do you remember Mason? I didn't until he approached me. I never even knew that he was a Rosedale!

The people in the countryside are excited to have us all here. They seem to be under the false impression that we'll draw people out into their towns. They think that wherever Rosedales go, everyone else will follow. Given how much people seem to hate us, I wouldn't agree.

The weather out here is usually very sunny and dry. In the winter, there was no snow. My parents say that I'll be able to visit them this winter. I guess we'll be able to see each other again! I'll be excited to see how much my chief musician has improved!

Please write back!

Yours truly, Jonah

"When I become rich, I'll make you my head musician!"

It took me a month to write back. I wrote a very short letter because I honestly couldn't think of much to say. I was especially reluctant because I didn't want to admit that I had not improved at all. Here is my letter:

Dear Jonah,

If you were hoping for improvement, you will probably be disappointed. It will be a while before I'm prepared to be your Head Musician.

It is good to hear that you are making new friends. I am looking forward to your visit.

> From your friend, Robin

He never wrote back again, probably because of my letter's disappointing detail in comparison to his. It is almost winter now, so I suppose I'll have to meet him soon.

This brings us to the beginning of the story that needs to be told—to the point at which things began to change for the first time in almost a century. I was at the center of this change. I might say that I even played my own small role in it.

The whole thing started when Ms. Tilson asked me to speak to her after a certain class, on November 24, exactly a month before our Winter Festival concert.

The conversation began when Ms. Tilson asked me to come to her desk.

"Robin, will you please come over here?"

Once I had reached her desk, she

said, "Would you like to play a piece in the Winter Festival concert, on behalf of the school?"

For a minute I seriously considered refusing. Then, after nearly a full minute of dazed, pointless contemplation, I realized that Ms. Tilson would not take "no" for an answer. She was the reason I played that solo in sixth grade. I had refused twice, to no avail.

"Okay," I said meekly, in a voice barely above a whisper.

Ms. Tilson's keen musician's ear picked up the sound. Her face immediately brightened with an eccentric smile, which was characteristic of her. She told me that I could play any song I wanted. Any at all. I ended up picking a song called "Katyusha." It was a simple song that I had seen Sophia Burke Kasparov play a few years ago, in tribute to her country, Russia. Despite its simplicity, she had made it sound so beautiful. I wanted to do the same. I had to.

The first thing I did when I got home was tell my mom about the offer. "I can't wait to hear you play, sweetie!" she said with a genuine smile, unlike the lie that Papa Chris had given me. "What song are you going to play?" "I'm playing "Katyusha." You know, that song that Sophia Burke Kasparov played at that concert last year?" "That's a good choice. I remember it being very Christmas-y," she said slowly, trying to remember that concert. I left abruptly to go to my room to practice.

I reached my room and sat down at my desk. I had the sheet music out and my instrument at the ready, and I began to interpret the notes on the page. I tried playing it slowly first, allowing the bow to quietly whine as I pulled it across the strings. I played faster, and I imagined the lyrics as I played.

I placed the bow on the strings and began to play the song in my head. "Rastsvetali yabloni i grushi," and I made the first mistake. A terrible noise was produced as my bow slipped onto the wrong string. Despite my mistake, I continued.

> "Poplyli tumany nad rekoy Vykhodila na bereg Katyusha Na vysokiy bereg, na krutoy."

I figured that this was enough for self-evaluation, as the rest of the song was a simple repetition of the notes in this verse with different words. Despite the short span of time, I had still made more mistakes than I wanted to count. My instrument sounded more like it was weeping then singing.

I continued to practice for over an hour. No matter how hard I tried, the music refused to sound like it was supposed to. Soon the hour became two hours, with little progress made. I practiced every day. Sooner than I thought they would, days became weeks, and then those weeks transformed into a month. After just six weeks, four of which had turned themselves into a month, my performance was one day away.

Coincidentally, a mass riot was supposed to happen on the same day as the concert, led by a man who thought that middlenames were the root of all suffering. The neighborhood that I lived in was very unlikely to be affected, though. It was so unlikely, in fact, that Jonah was going to be able to come to my performance. Here is the letter that he sent:

Robin,

Despite the rumors that my parents heard, about the rioting, I will still be able to come back for the planned week in the winter. See you then!

> Sincerely, Jonah

I was not as happy about this as Jonah was.

The last day slipped by as I desperately tried to get the music to come out right.

"Poplyli tumany nad rekoy..."

Under the stress, the lyrics played incorrectly in my head. This did not help things in the slightest. I still felt that I had improved over the course of these six weeks, even if it wasn't perfect. It would at least be satisfactory, I thought.

My sleep that night was very restless. I could see myself playing onstage, and I was overwhelmed by a mix of excitement, dread, and terror. That night, I had the dream with the demons again.

During breakfast the next morning, my lack of sleep caused my head to ache, like a weight pulling me down. I ate my breakfast in silence, preoccupied with my own thoughts. I barely noticed my foot tapping the tune of "Katyusha." The minutes crawled by, and I practiced for an hour or so before lunch. Then I practiced for an hour or so after lunch.

Finally, night came. My mother had

dressed me formally for the occasion. We walked to the church, where the ceremonies would take place.

The Winter Festival was a holiday right before the holiest of holidays. It was a very festive occasion, full of music, dance, and other entertainment. However, it was also almost as important as the holiday it preceded. I could not afford to mess up.

When we got to the church, I was immediately brought to the corner of the room for a brief bit of practice. Ms. Tilson told me that my music sounded alright and that I should be ready to perform, which was honestly more than I expected. Mine was the second performance. I sat and waited through the first performance.

The first performance was supposed to be very long. A half-hour long, in fact. It was interrupted after 28 minutes by the sounds of breaking glass outside. Soon, the light of fire came through the windows. The church doors were broken down. A band of thugs participating in the riot had broken in.

One of the men who had broken in marched up to the stage. He was wearing dark clothes and dark glasses, like a criminal from a movie, and he was holding a torch in one hand and a piece of paper in the other. The paper seemed to be some sort of manifesto. He paused for breath, read the manifesto, and yelled: "This Festival is a celebration of the system of middlenames! The system that decides who should be rich, who should be famous, and who should be trodden upon! It is the superstitious system that has governed the lives of everyone for over 100 years! We will end its tyranny!"

Papa Chris stepped up to the stage. The girl who had been playing her music before the disruption had already fled. Papa Chris raised his hand, and the room went silent. It was as if the approaching inferno had been put on pause. He said, "Here, my son. I will prove to you that middlenames are real. Robin here is a Burke, a family well known for their music. Robin's music will certainly show you that the prophetic nature of the middlenames ritual is not mere superstition."

He beckoned for me to come to the stage, and I obliged. I looked into the crowd. It was full of men in dark clothes with torches. I prepared to play my song. I raised my bow to the strings of the viola.

What came next was the single noise that caused the avalanche to fall. Scra-a-a-tch-ch.

The man leading the rebellion laughed. The rioters began to burn the church, and we all fled. After running outside, I looked back. There was light visible inside of the church, but all that came out was smoke.

Apparently, these thugs had a point. The next day, the Eldest Brother, who was the greatest leader of Galer's religion, wrote to every parish in the country. His letter was read by every pastor. It was read by Papa Chris among the ruins of the church. To the People who want my decisive answer to this chaos, and to the future Scholars who want to see what it was all about,

Galer said in his final letter to his Eldest Sons, "This religion is an experiment with many parts, each devised by God, and each designed to bring peace, love, and tolerance to the newer generations of mankind." The middlenames system was clearly a failed piece. It forced many of you, my children, into situations that you never asked for. I am sorry.

> With Love to Everyone, The Eldest Son of Galer called Michael

Within months, no one had a middlename anymore. Jonah moved back into the city now that there were no more Rosedales, and people were slightly more pleasant to each other for the time being. We still loved Galer, and I still love Galer as I write this.

But, to the future scholars who want to see what it was all about: this was my perspective.

Young Eyes

2nd Place in the 2018 Science Fiction Contest

by Allie Aguila, 13 Miami Springs, FL



A pair of illegal goggles have the power to return you to the imagination of childhood

Douglas Wamboldt stared at the scrap of paper in his hand, careful not to crumple it. The words "Noodle Palace" were inked onto the paper in his associate's flowing handwriting. The cool night wind blew steadily, sending discarded newspapers and flyers down the deserted street. He stood in front of his destination hesitantly. The sign flickered, illuminating the words "Noodle Palace" for just a few seconds before flickering off. This was the place.

Douglas hurried toward the door, desperate to get away from the biting chill of the evening. He pushed open the door to be assaulted with different aromas of food. The restaurant was steamy and surprisingly nearly empty. Five booths lined the far wall and a few small tables were squeezed into the space. He approached the woman behind the counter nervously. Her eyes were sunken, and hard and grey like stone. Her dark hair escaped her bun in coarse, thin strands that hung limply around her face. An old scar lined the skin above her right eyebrow. Douglas fidgeted with his tie and the scrap of paper.

She watched him impatiently before Douglas leaned forward and

whispered to her, "I'm here for the goggles? The imagination goggles, I mean. The ones that let you—"

"Shut up," she snapped at him. "Follow me."

She swung herself over the counter with ease and latched onto Douglas's wrist, her fingernails digging into his skin. She led him to the back of the store, past the bathrooms and through a door. This door opened up to a stairwell, which she dragged Douglas down quickly. At the bottom of the stairs, a man at a desk sat waiting.

The woman shoved Douglas toward the desk and hurried back up the stairs.

Douglas rubbed his sore wrist and neared the man at the desk, so far confused with his treatment as a customer.

The man sported a buzz cut, dark skin, and an intimidating stature. "Name?" the man inquired.

Douglas stood up straighter, collecting any pride and resolve he had left. "Douglas Wamboldt."

"You wouldn't happen to know a Celia Spencer, would you?" Douglas added.

"Unlikely." The man shook his head.



"To Douglas's amazement, the moon loomed before him."

Watercolor



by Lingfei Li, 12 Shanghai, China "But, you see, she's been here before. She told me about it."

"Most of our customers tend to feel unsafe leaving their real names with us."

"Oh," Douglas responded. "Is there anything for me to sign?"

"Regarding the legality of this business, no. However, going into this, you should know that these goggles are not toys. They are basically untested technology and can be dangerous."

Douglas stiffened, beginning to feel very apprehensive and regretful. "I see."

Still, Celia had recommended it as a way to get out of his head and escape his many anxieties, for a change. "That being said, loosen up. Have some fun, Wamboldt. Youth is precious. Not everyone gets a second go at being a kid."

Douglas nodded.

"Ready?"

He nodded again.

"Right this way, then," the man guided him.

They walked down a dimly lit hallway and paused in front of the fourth door on the left. The man pulled out a ring of keys from his pocket and searched for the right one. "You'll be going into Kitchen 2. It looks like your basic kitchen, but with these..." He produced a pair of thick-lensed goggles equipped with dials and gears installed in the frame. "It'll look like a whole new world."

Douglas swallowed his fear and delicately grabbed hold of the goggles. "How long do I get?"

"As your friend, I'd recommend under 20 minutes for your first try, but as a businessman, I'd recommend 45 minutes," the man answered honestly.

"Can't I do any longer?"

"We don't know what'll happen after an hour. We want to keep you somewhat safe."

Douglas cocked his head in confusion. "What could be so bad about the innocence of imagination?"

Ignoring his question, the man unlocked the door. "Remember, we've enhanced the overactive imagination of a child, so time will also feel exaggerated. We'll give you a stopwatch. When it beeps, your time's up. To turn them on, just say 'activate' and say 'deactivate' once you've finished." The man set the stopwatch and placed it on Douglas's wrist.

Douglas nodded, beginning to tense up in anticipation. "How much is it?"

"\$450."

Douglas placed the folded bills into the man's palm.

"Best of luck, Wamboldt." The man began to count the money. "The door will lock automatically once you're inside to keep you safe."

Douglas gulped and placed the goggles on his nose. He took tentative steps into Kitchen 2 and took in his surroundings. The kitchen had a traditional white tile floor, along with a pantry, a microwave, an oven, a counter, several cabinets, and a table with four seats.

"A-activate," Douglas stammered. He cleared his throat before trying again. "Activate."

The goggles flickered, startling Douglas. The click of the lock sounded with finality. The experience had begun.

Before him, the kitchen seemed the same, but his eves felt different. They were supercharged with excitement and playful energy. He felt the youth coursing through his body, all the way down to his fingertips and toes. His eyes sought out entertainment in the room. They were almost hungry for it. It didn't take him very long before the young eyes latched onto a broomstick that was leaning up against the floral wallpaper. His mouth stretched to form a rare smile and his legs were ordered by his eves to move. He gripped its plastic handle, and just like magic, he was no longer standing in Kitchen 2. The setting of his adventure had switched like a slideshow. A dense and hilly forest now surrounded him. His suit had transformed into an explorer's uniform. In his hand was a sleek rifle, waiting to be fired.

Through the brush, Douglas spotted a fluffy hare a few feet away. He lifted the gun and fired, catching his target right in the chest. A brisk wind swept through the woods and Douglas let out a triumphant yell. He began to run, unable to bottle in his energy any longer. He whooped and hollered as he raced up the steep path ahead of him. Douglas paused as he came to a break in the trees—a hill that overlooked much of the forest. An instinct overcame Douglas. He was compelled to bend his knees and spring up into the air. The wind caught him with sturdy arms and he flew. His fingertips brushed the tops of trees. The rifle had vanished and his digits seemed to be morphing into fine, gold feathers. Douglas flew so fast that his breath seemed to be sucked away by the air around him. He laughed gleefully as he continued ascending, breaking through the cotton clouds. The atmosphere did not deter his climb and he was soon soaring above Earth and into the depths of space. He was invincible, and he never wanted to leave this dream that he was living.

To Douglas's amazement, the moon loomed before him. The slide in the slideshow changed once again, placing Douglas in an astronaut suit and in a rocket on course for the cratered surface of the moon. The distant lights of stars twinkled cheerfully; the sun smiled at him. Douglas soaked in the feeling of being alive almost greedily, frightened that he might never feel it again.

As the rocket touched down on the moon, Douglas eagerly climbed out of the spacecraft and began to leap. He rose higher with every bounce and even attempted flips in mid-air. Once he was finished jumping, he noticed something strange about the rock he was standing on: it wasn't rock at all! Instead, slices of Swiss cheese coated the moon in generous layers. Douglas smiled and then began to laugh like he had never laughed before. The laugh was a stomach-shaking, side-aching, breath-stealing, chest-heaving, all-around-hearty belly laugh that he

He was invincible, and he never wanted to leave this dream that he was living really needed. It was as simple as that. Douglas needed to laugh (at cheese moons of all things).

And then there was beeping. Loud, incessant beeping that penetrated his astronaut helmet and rang in his ears. *Beep!*

Douglas didn't know why he was so sure, but he told himself that the sound could only have one source: an alarm clock.

"Just five more minutes!" he called out.

However, the beeping didn't stop. On and on it went, stubbornly insisting that it was time to go.

"I don't want to go!" Douglas whined.

The man from the desk was waiting outside Kitchen 2. He was almost certain that 45 minutes had passed. Why was Mr. Douglas Wamboldt taking so long? He heard the beeping, didn't he? Another few seconds passed before the man grew anxious. He called for his business partner, "Jia! I need you down here!"

She was downstairs in an instant, clamping her hand over his mouth. "What did I tell you about lowering your voice?" she hissed.

"It's been 46 minutes," he whispered in panic.

Jia's tired eyes widened. "Control room, now."

The pair dashed down the hallway and flung themselves into the control room. The man hurried from panel to panel, flipping switches nervously. Each switch was labeled with a four-digit number that Jia couldn't decode. "They're not working," the man informed her. "Let me try," Jia reached out for the panel in front of her.

The man held her hand back. "No. They won't work."

Jia's fingers twitched, aching for control over the situation. "When do the nightmares set in?"

The man's frantic eyes didn't leave his watch for a second. "After 53 minutes. We have—"

"Seven minutes," Jia finished grimly. "We have to break the lock."

"I'll get the tools," the man agreed. Douglas sat in his rocket, trying to ignore the incessant beeping. "Shut up!" He screamed desperately.

To his great surprise, the beeping listened to his command. It was now silent on the moon. Douglas stepped out of the ship cautiously and looked around for any indication of what had just happened. At first, the moon seemed the same as it had been while the noise had been torturing Douglas. He squinted at the barren landscape. He saw nothing but miles and miles of craters...and a shadow. The shadow was so faint and distant he could almost have imagined it, but it was there nonetheless. It could've been an oddly-shaped crater, but as it drew closer, it became evident that it was something else. Perhaps, even a sentient entity.

The shadow sucked away the juvenile liveliness from moments before and Douglas's knees threatened to buckle. He hurriedly sealed himself inside the rocket and shut his eyes, repeatedly murmuring, "Leave me alone."

The shadow only drew closer. It didn't listen to him like the beeping had. He couldn't control it. After a few seconds, Douglas dared to open an eye. Thick darkness had enveloped the rocket completely. The clear windshield of the craft was covered in layers and layers of shadow. He searched for an opening, a slit of hope in the shadows, but found none. The darkness seemed alive and almost triumphant. It had caught him. Douglas felt his throat close up. The darkness was so thick that there was no longer air. It was suffocating him with fear.

"Help!" he gasped. He lifted his hands to his throat, but it didn't stop his attacker.

"Deactivate!" a female voice hollered.

The scene flickered and died. There was only the light of Kitchen 2. The woman from upstairs, and the man from the desk were watching him worriedly, waiting for his next few words.

"I want my old eyes back," Douglas decided.

The Mystical Creatures of Blue Spout Bay

3rd Place in the 2018 Science Fiction Contest by Marlena Rohde, 12 San Francisco, CA



Viola discovers a mysterious golden seaweed that has the potential to change the world

Viola, clad in her tight scuba mask and with the weight of her oxygen tank pulling her towards the water, leaned over the edge of her small boat, and fell through the soft, smooth surface of the bay. Viola adjusted her eyes to the pale sunlight streaking the sands and oriented herself as she did every day. A fish, a common Gray Spout, swished by her face, narrowly missing. That's funny, she thought, Gray Spouts are usually predators, but this one seems to be running away from something.

Just as she finished her thought, Viola saw a streak of glittering orange fly by her eyes. She looked after it and saw a fish that looked to be made of solid gold, unlike anything she had seen during her life by the sea. Viola had come by plenty of goldfish in her day, but nothing quite so massive. The girl immediately kicked off from a bit of coral, rocketing after the fish. Because the creature was going at a breakneck pace, it was quite a challenge for Viola to catch up to it, and the Gray Spout was long gone by the time she did. Viola watched the golden beauty retire into a home in a rock and disappear from sight before she realized what was living around it. Beautiful glittering seaweed towered above her, as far as the eye could see. It shimmered like nothing the girl had ever seen, and continued on in every direction. It was like a forest bathed in bright, full sunlight, the same color as that fish. Daisy would love this, she thought, thinking of her sister lying in her bed, yearning for the waves they had so loved in their childhood.

Viola snapped out of her awe and cut a small piece of the plant to inspect later, tucking it into a pocket in her wetsuit for further examination. She swam up, finally surfaced, and saw her boat nearly a mile away. Viola began the long journey home.

Viola arrived home, hair damp and very exhausted as she did every day.

"Daisy, I'm home," she shouted.

"I'm up here, right where I always am," a soft voice called back.

Viola leapt up the stairs, the seaweed in hand. It had a lovely odor, not one of salt water, but one of warm sunny mornings, a breath of fresh air.

"Look what I found," Viola exclaimed as she entered her sister's room. Daisy lay in her bed, very weak and pale from having been sick for one year. Viola showed her the plant, and the girl's face lit up.

"It's incredible," she gasped. "Where did you find it?"

"Out on the reef," Viola explained, telling Daisy of her adventures.

"I wish I could go with you," said Daisy. "I miss the days when we went diving together. But that plant, it smells fantastic! I wonder... Could you perhaps make a wonderful tea with it?" Viola figured that it couldn't hurt to try, and the seaweed seemed so magical.

If there was anything that could help her sister heal, it was the mysterious plant. She boiled some water and steeped the plant in it, then gave it to Daisy. To Viola's relief, her sister didn't die, but nothing else happened either. She called Max and in the meantime she began to inspect the plant.

"Mornin'," Max called as he stepped into the lab that Viola had made from the basement; he could always count on finding her there.

"Max, you'll never guess what I found!" Viola exclaimed, stepping aside so he could look through the microscope the plant lay under.

"It's beautiful," he murmured as he peered through the glass.

"I found it out on the reef," she

explained.

Suddenly, she heard a shout from above.

Viola sprinted up to Daisy's room where she stood, overwhelmed with joy, staring at her reflection in a small hand-mirror.

"Are you alright, Daisy?"

"Look at me," she said, trembling. "I look like I did before. . ." Her voice trailed off.

"Before you were sick," Viola finished, noticing for the first time that Daisy's cheeks were rosier, her thin face and limbs were no longer thin. She felt happiness that she hadn't felt since a year ago.

"Daisy, you're not sick anymore!" she exclaimed, hugging her sister closely.

At a floorboard creak, Viola turned and saw Max, stunned.

"Imagine how much money you could make from this," he said, but in a tone Viola had never heard from him before. He sounded as though he had a horrible idea.

Viola suddenly regretted telling Max of the seaweed, remembering what he had done a year ago, when Viola had discovered a new sort of fish. Max had taken it and sold it to a marine biology center, which named the fish after him. Max told her he needed the money to help his dad recover from a broken leg, but his expensive car and the fact that she had seen his father up and walking the next day said otherwise.

Before she went to bed, Viola took the seaweed and laid it in her bedside table, where no one could get to it.

Maybe I'm overreacting, she



"Beautiful glistening seaweed towered above her, as far as the eye could see." Watercolor



by Nicole Qian, 13 Auckland, NZ

If there was anything that could help her sister heal, it was the mysterious plant

thought. Max had been a good friend to her when her parents left them, when she had studied to become a marine biologist and turned her basement into a lab, when her sister fell ill. He had apologized extensively for the mix-up and said he had gone back to try and change the name of the fish, but why then had it stayed the same?

Viola expected to sleep that night like she never had before, without worry over her sister or what was to come. but she was roughly awakened by a cacophony of crashes and bangs, then her sister's scream. Viola jolted up, leapt out of bed, and dashed to her sister's room. The girl tiptoed quietly up the stairs, listening to the sounds grow louder and louder. Viola heard another muffled shout, which drowned out a creak she had made from stepping down on one of the wooden steps. The girl heard a gruff voice speaking indistinctly when she reached her sister's room. As noiselessly as she could, Viola opened the door. She saw a dark figure against the light of Daisy's fish tank; whoever it was was ransacking drawers while holding Daisy in a headlock.

"Who are you?" Viola said, trying to sound unafraid even though her hands were shaking.

"Where is the plant?" the man shouted at her as Daisy looked up, and Viola realized with a pang of fear that the voice belonged to her best friend. Max.

"Don't do this, Max," Viola tried to reason.

"Tell me where the plant is," he continued, as if Viola hadn't said a thing.

"Why are you doing this, Max?"

"Imagine how much this thing would sell for. Think of it, a plant that cures all disease. We could be rich," Max said, and Viola began to realize how obsessed he was. "We could be immune. Now just show me to the plant; don't make me hurt someone you love."

He pulled her sister even tighter.

"I will show you, but only if you promise to stay away from me and my sister," Viola conceded, afraid for her sister, and hoping that she knew what she was doing.

They dressed in their scuba gear and in the dark, still night, a boat could be seen, very faintly, passing along the dark waters. The three dove into the bay, and in the harsh beam of the flashlight, Viola tried to find the coral she had pushed off from and the direction she had gone. The sisters held tightly onto each other, Daisy trusting Viola to save them both.

All of a sudden, a glow appeared, a golden one, the color of the fish Viola had seen and the seaweed she had taken. Viola swam towards it, and Max and Daisy followed. Soon, they were just in range of the glow, and they were stunned by what they saw. Hundreds of creatures swam in the golden lights, dancing beneath the illuminated seaweed that bent majestically with the waves. The light, they realized, came from the creatures, all of which were glowing gloriously. Viola and Daisy stared in awe, and Max tried to calculate the riches he would accumulate from the ecosystem.

Suddenly, from the corner of her eye, Viola saw something hit Max's oxygen tank. She looked in his direction and saw that a small hole had appeared in the tank. Max gasped as he breathed in a mouthful of saltwater, and Viola saw an illuminated swordfish go by. It was what the creatures wanted, Viola realized. The fish that she had followed earlier that morning circled around her and Daisy then swam over to the other creatures, beckoning her.

Viola looked at Max, who was trying to remove his mask, then Daisy, who was looking, wide-eved and longingly, at the creatures. She looked at the glowing light. It was so tempting ... Simultaneously, the girls drifted toward the glow, leaving Max, who was desperate for air, then joined the dancing sea animals in the amazing glow. As they swirled around in the beings, Viola noticed her sister's skin, bluish from the light of the ocean, slowly beginning to glow. She looked down and saw that her own hands were illuminating. Viola laughed and hugged her sister closely, and soon the magical marine life had become people, though not losing their shimmer. They were people the girls had never encountered and ones that had mysteriously disappeared from their town in the past. The sisters saw their parents in the distance, and soon Max appeared, smiling a normal, friendly smile.

Any lucky outsider who went diving in the early hours of dawn and happened to come by a festival of mystical golden creatures, would have seen two animals, a dolphin and a turtle, in the center of a glowing whirlwind. They would have smiled at the sight of the animals, like old friends, swirling around each other in euphoria, and then perhaps the outsider would take a small leaf of the golden seaweed beside them, and share its wonder with the world.

Sunk 4th Place in the 2018 Science Fiction Contest

by Benjamin Mitchell, 13 Davis, CA



After rising sea levels and global temperatures render the world uninhabitable, self-sustaining "Communities" are formed

Oswald awoke, as he did every day, to the grating sounds of his alarm clock buzzing insistently, until he swatted the off button with his hand. He really would have rather slept in, and, as he frequently found himself doing, he wished he could whack his ten-hoursyounger self for setting the infernal alarm the previous night. But he knew that today he couldn't sleep in, no matter how much he wanted to.

Today was The Day of Waters, the annual festival within his isolated Community. It was repeated each year as celebration of all that they had accomplished since the founding of the Community six years ago, although why their current state was worth celebrating was too difficult for Oswald to fathom.

Although he didn't feel like attending, the festival was a city-wide holiday, and attendance at the big ceremony was mandatory for all citizens. So what choice did he have, really? Plus, there was free, quality food, a rare luxury in modern society.

He kicked off the thin sheet he had lain under, sweating voluminously. He sat up, and walked to the bathroom to get a towel. He despised the weather, which had grown increasingly hotter since the ice caps had melted and started this whole nightmare. He glowered, remembering a vacation he had once taken, travelling to Hawaii for a week. Nobody could ever do that again, though, since all of the islands were underwater.

He pulled on a pair of light grey shorts and a thin short sleeve shirt. Even how people dressed had changed. Although the seasons' names didn't change, not for any reason other than nostalgia, they became fundamentally different from how they used to be. As the atmosphere trapped more heat, the hotter it became, no matter what season. Snow doesn't fall on the vast majority of the world, and in some places it is too hot for all but those with nowhere else to go, barely clinging to humanity, and their life.

Tapping his thumb against the pad to the left of the doorframe, Oswald trudged outside into the austere hallways of the Community. Many factors lent themselves to the feeling of cold emptiness that seemingly clung to the walls of the Community. There was the lack of plants, due to how inhospitable the hot environment had become to most plants. There were also very few windows showing outside the Community, but this was because there was nothing to look at. The extreme heat had dried out all of the plants in the vicinity, and the only source of water, a landlocked lake, was isolated from the terrain by the technology of the Community, which periodically siphoned some of the lake's pure water. The lack of plant life had severe effects on the ecosystem. Much of the flora died due to lack of things to eat, and without plants to hold it down, dust swirled around the barren landscape like the souls of the dead plants and animals. Not that it mattered—after all. because the Community was located in rural Nevada, crisis or no, there would still be nothing but dirt and sand to look at.

Oswald reached the end of the stark hallway and pressed a button, signaling for an elevator. This wasn't actually the worst it could get, he begrudgingly accepted. The Community, a safe house for people displaced by the disaster that had gripped the Earth in its hand, was one of the most wellequipped communities in the world. It housed over 10,000 refugees inside its shining walls and had stockpiles of food to last for ten years. Not that it needed it, though; the Community was self-sustaining. It grew crops beneath the compound, and collected rain water as well as purified the water from the nearby lake. And besides, it would all be over in about five years anyways.

The elevator beeped, and the doors slid open, letting Oswald step

inside. The elevator was already full of members of the Community, most of whom were dressed more elegantly than Oswald. The stainless steel doors slid closed, and the elevator rocketed up, fast approaching the Parlor. With another resolute ding, the elevator stopped, and the elegantly dressed party-goers disembarked.

The Parlor was the fanciest section of the Community, which is to say that there was no stainless steel in sight. Today it was filled with cushy red folding chairs, each facing the stage, where a classical orchestra was playing. Later in the day, the High Chancellor of the Nevada Community would be giving his Day of Waters address there. For the time being, though, the seats were empty, and all of the guests were bustling around, talking and eating. Oswald waded his way through the crowd of people, grabbing a cheesy potato gratin from a passing server as he walked. Or rather, it was a substitute for potato, since most of the potatoes had been submerged when the ice caps melted, raising the water level more than 200 feet over what it had been previously.

Oswald's stomach growled hungrily as he neared the food table. The table was covered with an assortment of foods, as exotic as they came these days. Although the Community couldn't serve any fish, sushi, or shrimp, as a result of the toxicity of the water, they made up for it by training skilled chefs to create top of the line pastries and elegant meals. But that didn't stop Oswald from craving sushi. He swiped a bear claw from the table and contemplated all the foods he couldn't eat anymore. Seafood was an impossibility, more trouble than it was worth: when the climate grew warmer, the permafrost in Alaska melted, revealing a nasty surprise for the people of Earth: there were about 800 million kilograms of mercury hiding there. That, coupled with rising waters, proved to be a disaster. Countries scrambled to contain the mercury. but they were too late, and it leached into the water, killing almost all ocean life in a span of a few months. At the same time, water rose, spreading the deadly waters inland, killing some people and destroying many crops and animals to the point of extinction. One such casualty was Northern California's wine country; although it was left mostly high and dry, the mercury in the water managed to leach into the ground and kill all of the crops.

Oswald scowled as he bit into his bear claw, chewing aggressively. The world was an astronomically different place now; many coastal countries, mostly in Europe, were unable to maintain their governments in the face of the disaster, and their lands had dissolved into anarchy. Larger countries, like America and Russia had been forced to retreat within their borders and build compounds like the Community. Only when people banded together could they survive the intense heat, toxic seas, mass extinctions, and lack of water. If the world wasn't at the brink of destruction, perhaps it could have been viewed as poetic. On that note. Oswald seized a chocolate-covered profiterole from the table and bit into it, feeling immensely better with each bite.

Loading a handful of truffles onto a plate, Oswald made his way to the seating area and sank into one of the cushy chairs. Taking a truffle in hand, Oswald proceeded to deposit it in his mouth, as the orchestra stopped playing, prompted by the appearance of the High Chancellor of the Community. He was smartly dressed in a simple suit and tie so dark they looked like a void in which everything had been devoured by some hungry creature.

He smiled crisply to the now seated members of the Community. Oswald ate another truffle.

"Hello, good people of the Community. I will try to keep this short so you may return to the festivities. I bid you good health on this auspicious day; six years ago today I founded this Community, to give the people of a downtrodden Earth a place to live while the effects of the melting ice caps persisted," said the High Chancellor. Oswald found it remarkable that the Chancellor could keep smiling this long.

"And today, I have some especially splendid news to impart on you. Now, before I tell you, let me explain. The world was in a precarious position prior to the disaster that brought you all here. It looked to many people like the world was going to end. They needed assurance that should humanity be pushed to the limits they feared, they could still survive, and even thrive in an apocalyptic landscape. And so the Community was created as a peacekeeping initiative, a way to keep the people at ease."

"We built the Community in an isolated area of Nevada and called it a

top-secret government base. It drew a lot of suspicion, but ultimately that was effective in keeping people from guessing the truth. You probably know of it as Area 51. We then set up water siphons in Lake Groom, the lake encompassed by Area 51. We created an artificial habitat here, a place that could trick its occupants into thinking that they really were trapped in a nightmare come true. Because it wasn't enough to show people that they could survive; people needed to know that they could survive. And so, a world-altering event was staged. One so terrible that nobody would question its believability. We sent a disaster warning to the surrounding counties, calling for a mandatory evacuation to the Community, where they'd be safe. You were called to live a lie so the rest of the world would know that, in the event of a disaster, they would still be safe."

He paused to let that sink in.

"But what I am trying to get at here is that it's over. The people around the world are reassured. And so: you can all go home now! The Apocalypse wasn't real! Isn't that great?"

The room was dead silent. The mixture of anger and happiness that radiated in the room was so palpable that even the High Chancellor's enduring smile faltered.

"Anyways, rejoice! Party away! Tomorrow you go home!" Still quiet. The High Chancellor looked a bit frightened of the mob at this point.

"You're all probably pretty shocked. I'll send some more drinks around, to lighten the mood." It was still as quiet as the grave.

"Well, I'd love to join you all, but I've really got to go; there's a lot of paperwork to be done, and I've got to cash in my paycheck. Enjoy the party!"



Saguaros at Sunset, watercolor



by Evelyn Yao, 11 San Gabriel, CA

Saguaros: Amazing Plants



by Marco Lu, 11 Champaign, IL

During my visit to Tucson, Arizona during the winter break, I had many close encounters with cacti on the hiking trail, including getting pricked by a jumping cholla cactus. However, I decided to research possibly the most iconic cactus in the world: the massive saguaro cactus.

The saguaro cactus is not very common; it is only found in Arizona and parts of northern Mexico. The Sonoran Desert in Arizona is one of the few places with naturally growing saguaro cacti. Saguaro cacti are amazing plants. For one thing, large saguaro cacti are incredibly valuable. This is because it takes a saguaro cactus several hundred years to grow to that size. In fact, the signature "arms" of the saguaro actually don't grow until the cactus is at least 60-years-old.

The saguaro cactus has a unique, accordion-like skin texture that can expand to gather more water in wet weather. Amazingly, some can expand up to 16 inches during a rainy season. Yet another adaptation that the saguaro and some other desert plants have developed is a thin web of roots just below the surface. This allows them to capture rainwater even if deeper soil is not very saturated. Weather significantly affects the growth of a cactus's arms. If a winter is unusually cold, the cold could weaken an arm and make it sag. If the damage is not too severe, the arm will continue growing in its new direction.

The saguaro flower, the state flower of Arizona, is typically only open for one day. When it is open in the day, it is pollinated by various birds and insects, including bees and whitewinged doves. At night, it is pollinated by lesser long-nosed or Mexican longtongued bats.

The spines of a saguaro are very unique adaptations. While they resemble, say, a hedgehog's spines, they are actually modified leaves. Their first purpose of the spines of a saguaro is fairly obvious—to protect them from predators. But this does not deter all predators. For example, javelinas (a type of wild pig), tortoises, and pack rats are unfazed by the painful spines. The main reason that the leaves of a saguaro have evolved into spines is that spines lower the transpiration rate, or the rate at which water is lost via water vapor. Stomata are minute pores on leaves, which allow water vapor to escape. Since saguaro spines have no stomata, the transpiration rate is reduced. The third purpose of a saguaro's spines, surprisingly, is to provide shade for the cactus. While a single spine does not seem to provide much shade, multiply that spine by one hundred or one thousand, and

you will realize how much help these spines provide. The shade these spines provide helps lower the surface temperature of a cactus, which lowers the amount of water lost to the atmosphere.

The way a cactus has evolved to life in the desert is quite amazing. I can never forget the sight of hundreds of towering saguaros standing in the Sabino Canyon near Tucson. Despite their daunting appearances, they provide shelters to little birds and reach their arms out as if to welcome people to the Sonoran Desert.

The Eclipse

by Kyle Wu, 9 New York, NY

I walked out onto the balcony. I was barefoot and the balcony was hot, so I was jumping around. We were in South Carolina to see the eclipse. My dad put a blanket on the floor so I didn't burn my feet. I swiftly jumped onto it to save my poor feet from being burned by the intense heat. I then put on my special eclipse glasses. Now I could carelessly look at the sun without blinding myself. I saw the moon hovering over the bright sun, one quarter of the way to totality. I ducked down, and my mom handed me some cold, refreshing iced tea we had gotten just for this occasion.

I learned about the stages of a total solar eclipse on a NASA website.

P1 is called first contact. The moon looks like it is touching the sun but it's actually not covering it at all.

When it was halfway to totality, I ducked down again, took off my glasses and gazed at the ground, wondering what totality would be like. Maybe an explosion of blinding light? A dark light? I imagined in my head what would happen.

Now, at three-fourths the way to totality, it was much colder and much darker, like sitting under an umbrella. I slurped my iced tea and put on my special glasses, then I stared at the eclipse in amazement. For some reason, my mouth was wide open. I ducked down, removed my glass-



es, and pretended to be a tour guide. "Shade break. A beautiful experience," I said to my sister. She laughed.

P2 is second contact. It looks like the moon is covering the sun and there are more sun rays than the sun, but the sun still shows. It is the last instant before totality. It usually looks like a diamond ring!

I drank some iced tea and gurgled it in my mouth. Racing the clock, I put my glasses back on and looked up right in time to see...

TOTALITY!

In an explosion of light, the sun and moon seemed to pop out, then arranged themselves into a beautiful, shimmering, ghostly ring. Everyone around me cheered. My dad took pictures by putting his glasses onto his camera lens. I could not believe it.

Totality is the point when the moon covers the sun completely so you can only see the sun rays. Totality can only be seen in a path of totality, which is less than ten miles wide but sometimes more than 10,000 miles long. Totality only occurs because the sun's radius is approximately 400 times the radius of the moon, and the moon is approximately 400 times closer to the earth than the sun. This makes the sun seem smaller than the moon, so the moon can "cover the sun."

Afterwards, when the moon started to show the sun again, sunglasses were not needed anymore. Totality was really fun.

P3 is third contact. It looks like a mirror image of the diamond ring. It is the moment right after totality ends.

P4 is fourth contact. It looks like a mirror image of First Contact. It is the first moment after totality where the sun is not being covered by the moon, but some of the sun rays are.

Later on, I thought more about eclipses. I was amazed at the sun's brightness in the beginning and the darkness during totality. I would like to see an eclipse again and share my experience with others. I wondered what others thought of the eclipse and if they liked it as much as I did.

Pigs to the Rescue

by Taryn Morlock, 11 Chicago, IL

There is a need for organ donors all over the world. Many people lie in hospital beds hoping for a replacement organ. There just aren't enough available, and no wonder. To get just a few, someone young and healthy would have to die in a way that doesn't affect their organs. In the U.S. alone, an average of 10 people die every day because there weren't organs for them.

Scientists have worked with this problem for a while. First, they turned to animals like the monkey as donors. But most of these experiments failed. In 1984, scientists transplanted a baboon heart into a newborn. The heart seemed to work at first, but baby Fae lived for only 20 days. Two more men with livers transplanted from monkeys only lived a little longer, one living for 70 days and the other for 26. These experiments failed because our immune systems recognize the transplanted organs as foreign and attack them.

Recently, however, scientists have had a breakthrough, not with apes, but with...pigs! Pigs have organs of similar size to ours, and they have the same functions. But, as with the ape organs, there are problems. The two main issues are that pig cells are coated with a distinctive sugar that alerts our immune system that there's an intruder, and that the pig genome carries dormant viruses that could



hurt humans. These viruses are called Porcine Endogenous Retroviruses, or PERVs.

For this problem, scientists use a gene-editing technique called CRISPR. They are now able to knock out the gene for the sugars on the cells, and some groups are identifying and trying to cut out some of the PERVs.

It's a huge task. But progress has been made. One team of scientists identified 45 genes that need to be removed. On August 10th, 2017, 37 piglets lacking some PERVs were born in China. 15 survived. Another big step forward was the creation of a pig lacking 3 PERV genes. 30% of patients should be able to host those organs.

Even though the technology has leapt forward, I wouldn't count on a porcine organ anytime soon. Scientists have only gotten to testing the pig organs on apes, and those experiments have had mixed results. And even if they could identify all the PERVS and remove them and successfully create a litter of pigs missing the PERVS, there's no guarantee hospitals and doctors would accept replacement organs from pigs. The scientists definitely have a long battle ahead of them.

Honor Roll

Welcome to the *Stone Soup* Honor Roll. Every month we receive submissions from hundreds of kids from around the world. Unfortunately, we don't have space to publish all the great work we receive. We want to commend some of these talented writers and artists and encourage them to keep creating.

Honorable Mention in the 2018 Science Fiction Contest

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