

# Natural Selections

A NEWSLETTER OF THE ROCKEFELLER UNIVERSITY COMMUNITY

## Fighting Fatigue

EMMA GARST

Sometime in the last ten years, Jess got a tick bite. Maybe it was at our local park, where we would sometimes have picnics and watch the deer stroll by. Maybe it was that time we spent a night in Big Sur, our lopsided tent parked on a thicket of brambles. Maybe it was at Point Reyes, when she waded into a field of perfect golden grass for a picture. In the picture her hands are raised up in a classic Facebook “yay!” position, her face lit-up in a happy cackle. The grass tickles just under her armpits. It would be years before she looked on these forays into nature with any scrutiny. In the meantime, she became a scientist.

Jess knew at an early age what a scientist looks like. Her parents, first generation Jamaican and Guyanese immigrants, met at MIT, and they tried to instill a love for science in their children. “People ask me if I felt pressured into science—but I actually feel grateful to my parents for making it a very clear option.” She smiles across the kitchen table where we are whiling away a morning. “Sometimes it amazes me that anyone can get into science because it’s so intimidating. There’s this very specific idea of what it looks like to be a scientist, what it is to be a scientist.”

Making good use of our proximity to Stanford, in high school she began working in a lab that uses fly genetics to study how the brain develops. She learned how to mate flies and how to pull out their brains under a dissecting microscope. But the real impetus for her interest in neuroscience came from the community around her. “We were all super sleep-deprived, even in ninth grade. I just saw how it was affecting people.” Our high school was known for its high achieving students, but



it was also known for less happy things – anxiety, depression, suicides. “I was curious why teenagers were like this – I knew the one thing that really defined us as teenagers in Palo Alto is that we were all sleep-deprived.”

Jess continued her studies in neuroscience at Princeton. She developed tools that allowed researchers to image neural circuits, making beautiful tangles of color. She also learned how to traverse the rarified world of Ivy League science as a black woman. “In many spaces, it’s not *a priori* obvious you should be there,” she explains. “You have to project confidence and a sense of purpose. ... I’ve sort of developed that ability to always seem like I know what I’m doing.”

Throughout, she planned to use her training to study sleep. Jess is interested in sleep on a molecular level, and how sleep and psychiatric disorders are linked.

However, in her sophomore year of college she started feeling fatigued. She would be worn out, like she was recovering from a cold, and wake up every morning with a headache. When she went to the doctor, he checked her for mono. When that came back negative, he told her to sleep more. She was a college student after all.

Despite the seemingly close relationship between sleep and fatigue, these processes affect each other in complicated ways. Muddling the matter is how we use fatigue interchangeably with tiredness and sleepiness in our everyday language. These symptoms can be caused by lifestyle or sleep disorders – someone who fights strong bouts of sleepiness throughout the day might need more sleep, or they might be narcoleptic. Someone who feels persistently weak, dizzy, and listless (signs of

CONTINUED TO P. 2

fatigue) might need more sleep, or they might be an insomniac. Beyond sleep disorders, both sleepiness and fatigue can be caused by acute infection (think flu) and chronic immune dysfunction (think lupus). As a symptom, fatigue can be crippling. As a tool for diagnosis, it is practically useless.

During Jess's first year as a neuroscience graduate student at Harvard, her symptoms of fatigue started to get out of hand. It began to affect her work as a scientist. "[That] was the first time I consistently had moments when I looked at people, and they were disappointed in me," she recalled. "That experience was scary." After a year of rotations, Jess went on medical leave. She didn't know what was wrong with her, and her health was going downhill. "It feels like you're on a 21 speed bike but you're stuck in first gear," she explains. "You can go places, but there's no way to work up momentum." She thought medicine just might not have a solution.

Then in 2017, one of her doctors

suggested she be tested for *B. miyamotoi*, a tick-borne pathogen recently discovered in the United States. *B. miyamotoi* is closely related to the bacteria which causes Lyme disease – but unlike Lyme, an infection is unlikely to cause a tell-tail bulls-eye rash around the tick bite. The Centers for Disease Control report fewer than 60 documented cases of *B. miyamotoi* in the United States.

Jess had it.

After a course of horse pill sized antibiotics, there are no more bacteria circulating in Jess's blood—yet her fatigue persists. Since the apparent root cause of her sickness has been cured, Jess is in some ways back to square one. She has that nebulous diagnosis, Chronic Fatigue Syndrome, a condition without a cause. Nevertheless, she is heading back to graduate school. "You know, I'm coming back from medical leave but I'm not actually better. I don't know if I'm doing the right thing. No one has answers for that," she pauses, looking into her coffee.

"Right now I'm trying not to be in my scared place."

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## Natural Expressions

### **Performance**

Come see Amy Huang and Lilian Nogueira of the Nussenzeig Laboratory on Wednesday, July 10th as they perform an arial lyra act in "Summer Heat: A Single Point Aerial Dance Co. Showcase." The performance will be held at The Slipper Room on the Lower East Side with doors at 7 p.m. and the show beginning at 8 p.m. (21+). Tickets can be purchased for \$25 [online](#).

### **Art**

Join Megan E. Kelley of the Ka-

poor Laboratory at "The 5th Annual CCD Block Party" art show and music festival in Coney Island where she will be displaying her artwork. The Block Party features work by artists who have reimagined album covers as well as live music. This free event takes place Saturday, July 13th from 1 p.m. to 10 p.m. at the [Coney Island Brewery](#) (1904 Surf Avenue, Brooklyn).

### **Digital**

This month, Bernie Langs from The Rockefeller University De-

velopment Office announces the release of his song "Armoured Heart." This newly recorded pop song was composed and performed by Bernie with nods to "For No One" by Lennon/McCartney. Check out the release on [SoundCloud](#).

Email Megan E. Kelley at [mkelley@rockefeller.edu](mailto:mkelley@rockefeller.edu) to submit your art/music/performance/sporting/other event for next month's "Natural Expressions" and follow @NatSelections on Twitter for more events.

# The Elusive Egg Cream

AILEEN MARSHALL

How many of you have heard of an egg cream? Do you know what it is? Have you ever had one? If you are of a certain age and from the metropolitan area, you probably remember this beverage fondly. An egg cream is one of those disappearing iconic New York City foods. Lou Reed even wrote a song about it. “You scream, I steam, We all want Egg Cream.” Ironically, it has neither eggs nor cream. It is simply milk, chocolate syrup, and seltzer. While that combination may not sound appetizing, if made right, it can be delicious.

Until the mid-twentieth century, combination candy store and luncheonettes were common in the city. These were the type of establishments where there were registers up front that sold candies, cigarettes, and newspapers. In the back was a lunch counter and maybe some tables where one could get sandwiches, burgers, fountain sodas, and ice creams. This was the kind of place where you would go for treats such as an egg cream, an ice cream soda, or a malt. In those days, it was common to make the soda by mixing the syrup with seltzer from a tap.

It is not clear exactly where the egg cream was invented. The most popular attribution is to a Brooklyn candy shop owned by Louis Auster in the 1890s. It is said he sold as many as 3,000 egg creams a day. Auster made his own chocolate syrup in batches in the basement. His egg creams were so popular that a large ice cream manufacturer offered to buy the rights to his syrup recipe. He felt the sum was too small, so he turned them down. When an executive from the ice cream company heard of Auster’s refusal, he called him an anti-Semitic slur. Auster was incensed and vowed to take his secret formula to the grave. It is said that Auster’s grandson made the last batch of his chocolate syrup in 1974.

The competing claim to the egg cream’s origin is that it started on the Lower East Side in the 1920s. This candy store’s owner, a man named Hymie Bell, liked to add vanilla ice cream to chocolate soda. From there he got the idea to make a drink with cream, chocolate syrup, seltzer, and eggs. Competing stores quickly copied this drink, but removed the eggs to make it cheaper.

Bell’s concoction is one hypothesis as to how the egg cream got its name. Others say it came from a man named Boris

Thomashevsky, who was an actor in the 1880s. After returning home to New York from a tour in Paris, he asked soda fountain clerks to make a drink he had there, “chocolat et crème.” Possibly “et crème” sounded like “egg cream” to American ears. Another postulate is that Yiddish speakers would refer to the drink as “echt keem,” which means “pure sweetness.” This phrase got anglicized into “egg cream.”

The decline of luncheonette style eateries and drinks like the egg cream started in the 1960s. With the growth of mass produced sodas, there was less demand for soda fountains. Egg creams are difficult to bottle or can. The syrup tends to settle on the bottom and the bubbles dissipate. This drink is best when freshly made.

Egg creams are traditionally made in a small, preferably chilled Coke-style glass. Whole milk is needed to get enough creaminess. There is debate as to whether one should mix in the syrup or the seltzer after the milk. Adding the seltzer first will result in a white head; the syrup first method leaves a brown head on the drink. Some devotees insist it should be Fox’s U-Bet Chocolate Syrup in an egg cream. Fox’s was invented in Brooklyn in the early 1900s. What makes Fox’s syrup stand out to aficionados is the lactic edge from the milk powder in the syrup. It’s best to add the seltzer from a pump to help the frothiness, but you can also whip it up by hand. However you make it, you want to strive for a balance between creaminess, sweetness, and bubbles. Here is a simple recipe from Serious Eats:

- 2 tablespoons Fox’s U-Bet chocolate syrup
- 1 1/2 ounces whole milk
- 3/4 cup seltzer
- In a tall glass, add chocolate syrup and milk. Tilt the glass slightly and pour (or spritz) the seltzer off your stirring spoon until you have a nice foamy head that’s nearing the top of the glass. Stir vigorously to mix the chocolate in and serve immediately.

If you don’t want to try to make one yourself, there are still places in the city where you can order an egg cream, such as the Times Square outpost of the famous Brooklyn eatery, Junior’s, or Eisenberg’s Sandwich Shop on Fifth Avenue at 23rd



A New York Egg Cream.



Egg Cream Components: Fox’s U-Bet, Seltzer and Whole Milk.

Street. Another famous location for egg creams is Ray’s Candy Store on Avenue A, near 7th Street. In the outer boroughs, you can find the retro Brooklyn Pharmacy & Soda Fountain in Carroll Gardens, the famous Eddie’s Sweet Shop in Forest Hills, on Metropolitan Avenue, near 71st Avenue. Queen’s also holds the last location of Jahn’s, the well-known ice cream parlor, in Jackson Heights on 37th Avenue at 81st Street. The price for an egg cream at these locations varies from \$2 to \$7. Keep an eye out the next time you are in a city diner or deli and see if they have an egg cream listed under beverages.

An egg cream is a traditional NYC treat. I would highly recommend rewarding yourself with one sometime after a hard day’s work.

Photos Courtesy of Jason Perlow | Wiki Commons

## Culture Corner

### *A Garden of Sports and Musical Delights*

BERNIE LANGS

The period of the mid- to late- 1960s and early 1970s in America was the greatest window in history to experience childhood and adolescence. The whole world had the opportunity to enjoy the fantastic and exciting revolutionary developments in the arts at that time. A new creative sensibility and awakening was flowing out like fine wine as we took in the music of The Beatles and other pop and rock-and-roll groups; heard sounds in jazz from Miles Davis, Ella Fitzgerald, Louis Armstrong, and Freddie Hubbard; and listened to Leonard Bernstein as an international conductor demanding that his audiences give twentieth century atonal classical pieces the respect he passionately believed they deserved. Film directors such as Truffaut, Kubrick, Hitchcock, and many others churned out thoughtful masterworks, and television expanded its comedic and dramatic programming for the better.

Stateside, if one adds the element of sports, those of us growing up in the Tri-State area were doubly blessed with a Golden Age of baseball, football, and basketball championships. In addition, several legendary players graced the roster of the New York Rangers hockey team. It was my great fortune that from late childhood to my teen years, I was able to enjoy the best of sports and music because of my frequent visits with family and friends to Madison Square Garden in Manhattan. I also saw games at Shea Stadium, where I witnessed the New York Mets rise to a World Series victory, and I watched the Jets from field level seats win a playoff game against the Oakland Raiders, which brought them to the Super Bowl. I visited Yankee Stadium where I enjoyed seeing Whitey Ford pitch and attended a game where Tom Tresh hit three homeruns, one landing smack into the baseball glove of a lucky fan just rows away from my seat. When Nassau Coliseum opened in 1972, my father got tickets for us to see the Islander hockey team and my brother bought us tickets there for my first concert in the mid-1970s featuring Bob Dylan and The Band.

These places all had their appeal, but

there was nothing like the magic of being inside Madison Square Garden when the New York Knicks were locked in battle against their rivals or as the Rangers furiously skated around the ice. In music, nothing could compare to when the Rolling Stones and other mega-groups bounced around onstage in passionate performances at the venue.

My earliest Garden memories are of attending afternoon Rangers games with my father, brother, and sister. Since the games were replayed in the evenings on television in the 1960s, we would stroll by the announcers interviewing players between periods of action and later see ourselves on our fuzzy, black-and-white television at home. We went as a family to the final hockey game at the “old” Madison Square Garden in 1968, and I recall that the friend I brought returned from the restroom with a wooden sign in his hands reading “Men’s Room” and rationalized his vandalism as his chance to procure a vital piece of sports history. Seeing players such as Rod Gilbert and the talented goalie Eddie Giacomin are still among the happiest of my early memories. In addition, as a teenager I went to a Rangers’ game and sat with my father and his friend, the well-known retired NHL referee who made a name for himself as a TV hockey announcer, Bill Chadwick, known as “The Big Whistle.” I beamed in joy as Rangers fans casually greeted him with smiles and handshakes all evening.

We were fortunate at that time to witness the greatest basketball team that the New York Knicks ever assembled, featuring talented stars such as Walt Frazier, Dave DeBusschere, Willis Reed, Bill Bradley, and Earl Monroe. These gentlemen played as a unit and brought intelligence, grace and sportsmanship to the court. I went with a friend in the early 1970s to a game where future Los Angeles Lakers’ coaching genius Phil Jackson went to the free throw line for the Knicks towards the final moments of the game, a shot which would determine the outcome of the contest. The ball hit the front of the basket’s

rim, bounced backwards to the backboard, and we collectively gasped as it fell through the hoop. The crowd erupted in a wave of sound so loud it was as if we were standing next to the engine of a jet plane. It was a unique moment of euphoria that only the sharing of a live sports contest can elicit.

The first concert I attended at the Garden was by the rock band, The Who, in 1974. My friends and I were huge fans, but being in high school out in the suburbs prevented us from going to the New York box office at the Garden the day tickets were on sale. A friend called his father in Manhattan where he was working at his business in the Garment District near the Garden on 7th Avenue. His dad waited a couple of hours outside in a line for the tickets with hundreds of young people, and he got us the coveted seats. The Who gave a great show in 1974 at the Garden, playing hits from their 1960s and early 1970s repertoire. A few months later, we again enlisted this wonderful man to do the same for The Rolling Stones. That afternoon, a teenager in queue marveled to his friend that the line for tickets was huge and around the block. My friend’s dad turned to them and to their surprise said, “This is nothing! You should have seen how long the line was for The Who!”

When we trekked a few months later to the Garden to see The Stones, the stage was custom-designed for the band’s New York dates. As we heard the opening guitar chords of Honky Tonk Women, a huge, tightly-shut, silver “flower” opened to reveal the band that had been hidden inside of it, with lead singer Mick Jagger riding atop one leaf as it descended. Jagger and guitarist Keith Richards often tell interviewers that they truly love playing the Garden and how special the energy is in the arena.

I understand how lucky I was to have had many opportunities for such pure and positive experiences in the late 1960s and early 1970s at live sporting and music events. It makes me think of Mick Jagger crying out onstage between songs: “Madison Square Garden - Top of the World!”



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## Pets of Tri-I

POOJA VISWANATHAN

For this issue, *Natural Selections* interviews **House** and **Kima**, the forever kittens who live with me (Freiwald lab, the Rockefeller University), and sometimes, with my partner, Scott Rennie.

**Pooja Viswanathan: How old are you? In human years?**

**Kima:** We don't know exactly, but the humans guess about 1 in human years. In cat years, we are teenagers.

**PV: What are the names we gave you?**

**House:** My name is Gregory Mouser House, MD. I was named after a very important and smart doctor that I remind my humans of.

**K:** My name is Kima Lima Greggs. I was named after a fictional character in *the Wire*, a TV show my humans like.

**PV: What is your first memory?**

**H:** I wasn't feeling well, I was very sick. The humans who found me looked very concerned, but they were talking about youth in Asia.

**K:** I remember a shop window and humans brought me inside that shop. You told me it was the Petco at Lexington and 86th.

**PV: Do you remember when we first met?**

**H:** We met on a Saturday afternoon. I was sleepy, but I was also hungry, so I was falling asleep with my head buried in the food bowl. Scott decided right away that I was going to be your kitten.

**K:** I was meowing with my older cat friends in my foster home when you and Scott came to visit. You had already decided to adopt me, so I knew you wouldn't mind me pooping in front of you.

**PV: What did you think of each other when you first met?**

**H:** I thought she was a great playmate to have in my apartment. We wanted to play together instantly.

**K:** Hated him. Maybe you don't remember, but he used to be smelly, and acted like he owned the place.

**PV: Where do you live?**

**K:** We live with you! In Scholar's residence. Sometimes we live in Philadelphia with Scott. Scott is a postdoc at UPenn.

**PV: If you could live anywhere else in the world, where would you live?**

**K:** Anywhere that both of our humans could



POOJA VISWANATHAN | NATURAL SELECTIONS

live together. With any other animals we might grow to tolerate.

**H:** Where there are lots of things to hunt.

**PV: What are your favorite foods?**

**K:** House will try anything once, even things that never moved like carrots or avocados.

**H:** Kima's favorite food is whatever's on my dish. She hates tuna though. Don't try to give her tuna.

**PV: What is your favorite weekend activity?**

**H:** I like to chase Kima around.

**K:** I like quiet time to myself.

**PV: Besides us, who is your favorite human in the Tri-I community?**

**K:** Natalie is very sweet. She lives with us and feeds us when you're gone.

**H:** Natalie, Sofia, Tara, Margie, Liz, Vero, Madi, and Ceren are a few I can think of right away.

**PV: Do you have a funny story to share with us?**

**H:** One time we went somewhere and came back with cones around our heads. It was fun to try to get them off. Kima looked so funny.

**K:** That wasn't funny at all. You know what's funny? Every time the humans flush the toilet, House thinks it's a great big monster. He runs to the farthest corner of the apartment.

**PV: Is there some way others can see more pictures of you online?**

**K:** Yes, you have an Instagram account @majorpooper where you upload pictures and videos of us.

**PV: If you could have any human ability, what would it be?**

**H:** I have all human abilities.

**K:** I wish I could close the door on House whenever I wanted.





## ***Life on a Roll***

**BERNIE LANGS**

"The Lady and the Unicorn" tapestries are exhibited in Paris in the Musée de Cluny, also known as Musée du Moyen Âge-Thermes et hôtel de Cluny. The museum's building, now undergoing a comprehensive renovation, served as a residence for the Abbots of Cluny and is the oldest surviving Parisian and Gothic-style townhouse. Dating back to the fourteenth century, it incorporates ancient

Roman remains that are now part of the museum's lowest level. The sumptuous and stunning Unicorn tapestries reduced tourists from around the globe to a hushed state of awe the day I visited in March of this year. The six intricate tapestries were woven around 1500 in Flanders from designs drawn in Paris and are recognized as masterpieces of the late Middle Ages.





## ***Life on a Roll***

ELODIE PAUWELS

<https://elodiephoto.wordpress.com/>

The red walls of the Alhambra overhang Granada, Spain and hide several Nasrid-style palaces. This is the place Ferdinand II of Aragon and Isabella I of Castile agreed to fund one of Christopher Columbus' voyages at the end of the fifteenth century. A vivid description of life in and near the palace is offered by Washington Irving in his *Tales of the Alhambra*—a nice summertime read!

