

# Natural Selections

A NEWSLETTER OF THE ROCKEFELLER UNIVERSITY COMMUNITY

## CHARMING SCIENCE

JEANNE GARBARINO

It was a chilly Sunday afternoon in January 2008. I was feeding my then 7 month-old daughter a lovely medley of mashed sweet potatoes and peas, a process which naturally led to her direct immersion into a warm bath. A few sudsy songs later, I wrapped my

squeaky-clean baby in her hooded ducky towel. Then, at my husband's request, I dressed her in a full New York Giants uniform (sans shoulder pads and helmet). That night, Big Blue was playing their first playoff game against Tampa Bay. They won. So, on every Sunday after that, my daughter had to eat that same meal, using the same dishes and utensils, followed by her bath using the same light blue washcloth and ducky towel, and getting dressed in her lucky Giants uniform. No detail was spared and we never deviated from that set routine. All of this hard work clearly contributed to

Eli Manning's ability to throw the winning touchdown to Plaxico Buress, making the NY Giants the Super Bowl XLII champions. At least that is what my husband thinks.

This type of superstitious behavior runs rampant in the world of sports: from John McEnroe refusing to step on white lines to Jason Giambi and his lucky gold thong (cue graphic imagery eraser now); however, it is not limited to sports celebrities and their fans. It is likely that most people have been exposed to or have taken part in ritualistic actions in order to achieve some desired outcome. This is especially true for scientists. When I first started working in a lab for grad school I was a little weirded out by our cloning shrine. But, when what I thought to be a simple and straightforward ligation reaction just wouldn't work, I made an offering. Low and behold, colony formation! Were good luck charms the key to scientific success? Unlikely. But that didn't stop me from littering the lab with figurines and toys, some of which have made the journey to my

current bench here at Rockefeller University (RU). If nothing else, at least they helped me laugh at my momentary failures.

Knowing that I was not a lonely participant in lab magic, I decided to survey a few friends to see what tactics others might em-

ploy in their struggle for perfect or, at the very least, not negative data. Apparently, human liver cells respond to whispers of sweet nothings and culturing primary mouse cells requires a jiggle dance for successful plating (although when caught by her co-workers, the inventor of this technique tries to attribute her shaking and moving to a weak bladder—not sure which is more embarrassing!). For all you out there studying urogenital development, be sure to count the amount of pipette tips in your box before and after the experiment.

Some may think

that engaging in superstitious strategies is a complete waste of time. However, research has shown that humans inherently need to find order and patterns in a mostly unpredictable world. Only time will tell who will win that match or whether your western blot worked. The anticipation can be painful and maybe these charms and rituals help us to downplay or maybe even cope with our anxieties about what's coming next. To many of us, perhaps these unscientific methods actually contribute to being better scientists by allowing us to maintain a hopeful and positive attitude. So, whether you look to the cloning gods to watch over your double digest or to that little bench top trinket for properly sized PCR amplification, know that you are not alone! But, considering the oddities that may be involved, sometimes we should get a good read on the situation before we reveal our secret ingredient, or not. I guess it depends on whether sharing your precious spell will affect its efficiency. But that's just being superstitious. ☺





A robin enjoys some berries outside of Smith Hall. Photo by Jenni Li

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## Wildlife on Campus

JESSICA WRIGHT

Every spring, a group of mallard ducks starts a long journey from their wintering grounds to the place of their birth. They travel not to a marsh, or a national park, but to a tiny patch of parkland within the densest urban area in the United States—Rockefeller University (RU) and our Faculty Club fountain. Our campus often feels like an oasis from the honks and sirens of York Avenue and the FDR drive, but the ducks are a reminder that we are not the only animals benefiting from our few square feet of green in the heart of the Upper East Side. With this in mind I set out to compile a list of the wildlife, both wild and otherwise, with whom we share our campus. The list relies entirely on anecdotal accounts and so is limited to those animals identified and identifiable by the RU community. It is certainly not comprehensive and possibly not entirely accurate, but it provides an interesting snapshot of the types of animal encounters experienced and considered notable by our human campus residents.

Our largest group of co-inhabitants is the birds with over twenty different identifications. This list includes the common: robins, starlings, blue jays, cardinals, house finches, slate-eyed juncos, crows, mourning doves, common and

song sparrows, grackles, sea gulls drifting in from over the river, and the ubiquitous pigeons; as well as some slightly more exotic sightings: grey catbirds, mockingbirds, northern flickers, downy woodpeckers, peregrine falcons, red-tailed hawks, and unidentified hummingbirds and warblers. Birds live among us so seamlessly it is easy to forget that they are still wild animals. While some RU residents enjoy house finches and pigeons comically fighting over seed at a window feeder, others have described a more sobering view of our feathered friends. We might cheer on the peregrine that was seen ripping apart a pigeon from a window in Founder's Hall, but it can be difficult to watch as the many duck families compete, sometimes brutally, for limited fountain space.

Wild mammals are, unsurprisingly, under-represented. Notably, there are very few squirrels, probably due to the sparseness of trees in the areas surrounding campus. However, those of us staying a little too late in lab might have the opportunity to meet some of our nocturnal mammalian residents. The most unusual sighting is a possum, seen by a graduate student, casually walking down the 64th Street ramp. Several raccoons have also been spotted on the grounds, including one brazenly entering through the 66th

Street gate, presumably right past security. Bats have also been observed catching insects above the tennis courts at night. Their daytime place of residence remains a mystery, and is hopefully not on campus.

Perhaps the most telling campus animal stories are the ones that take into account the fact that our green space is not, in fact, wild. Just as the trees are planted and the grounds tended, most of the animals on campus are fed and housed by us. Several faculty-owned dogs entertain us by running around the campus lawns and, occasionally leash free, through our hallways. From the residences, cats peer out of windows at birdfeeders and caged birds chirp with their wild counterparts. Not to be forgotten are the many animals housed in the Comparative Bioscience Center (CBC), making the ultimate sacrifice in the name of our school motto.

The most exotic animal to have ever traversed the Rockefeller grounds comes from this last group. A photo, displayed on the third floor of Scholar's Residence, shows a baboon, having made a successful escape, walking along the outside of a RU building. The caption states that he was never found. We can only hope he somehow found his way to his own green oasis, one further away from the busy New York streets and its many human residents. ☺

# Dear Empty ½ Gallon Milk Carton, How May I Dispose of You?

CARLY GELFOND

Lots of things in this world can be overwhelming, especially when one is concerned with the good of the environment. I sometimes think it might be easier to pick out a wedding dress than an apple from the produce aisle. If you're anything like me, you stand there, bewildered by the choices. Oh, native New York Gala, you look so shiny, plump, and un-blemished, but your conscience is tarnished with the protection those pesticides have provided you with. Or you, organic Gala, you world-traveler, flown in from New Zealand on the wings of a fuel-guzzling jet, imperfect you may be, but natural.

Ah, and then there is decision-making involved in recycling. Recycling is the process by which we take a product at the end of its useful life, and use all or part of it to make another product. Sounds easy enough, no?

No. In reality, like the produce aisle, the world of recycling can be a tough place to navigate, too. Does the empty milk carton—a hybrid paper/plastic product—go with the paper goods or with the plastics? What about the bank statement envelope with the annoying plastic window? Paper, plastic, or just plain old trash? And that ever-so puzzling question that no doubt keeps you lying awake at night: to leave the bottle cap on or not to leave the bottle cap on? And what in the world are all of those little numbers inside of the recycling symbol on our plastic items trying to tell us?

Hold the Xanax, people. We can get through this together.

Before we go any further, I must implore you to brush aside that temptation to succumb to laziness and throw everything in together. If you've stayed with me this far, you probably wouldn't do that (would you?) but a little guilt-inducing finger-wagging can't hurt here. Anyway, there is a method to the madness, believe it or not, and it does, in fact, make sense.

Firstly, it's a sad fact of life that you can't recycle every kind of plastic in NYC. This is because not all plastics are created equal. In this city, we pretty much only recycle plastic bottles and jugs (items with necks smaller than their bodies), of which there are lots in our particular waste stream, and for which there is a fairly strong market for remanufacturing into new products. Other plastics have weaker markets, or are present in far smaller quantities in our waste. And now you can sleep well, dear reader, because the answer is no: plastic bottle caps

are in fact not recyclable in NYC. Basically, it all comes down to the difference in melting point between bottle and cap, a difference of nearly 160 degrees Fahrenheit. What this means is that if you were to trip and fall right near the recycling bin and a cap were to accidentally get mixed in with bottles, the entire batch might be ruined because there could be un-melted plastic in the mix. (Note: while NYC does not accept plastic caps, metal caps can be removed from bottles and placed in the bin for recycling.)

But now to get back to decoding that mysterious coding system. The symbol with the number inside of it on the bottom of your probiotic yogurt tub is not actually there for you, the consumer. In fact, it's one of the Society of the Plastics Industry resin identification symbols used to identify the polymer type of plastic. The numbers are provided on plastic materials for use within the plastics industry.

So where does that leave us, the humble bewildered recycling consumers? As mentioned above, in the plastics category, NYC residents are directed to recycle bottles and jugs only. Though more than 90% of bottles and jugs are #1 and #2 plastics, non-bottle-or-jug-shaped #1's and #2's (think yogurt tubs, pro-biotic or otherwise, cottage cheese containers, etc.) are not recyclable in NYC. Therefore it is easier to determine which plastics are recyclable by looking at the shape, rather than just the number.

An interesting side note about recyclable items commonly given the #1 symbol, which signifies that the plastic is of the PET or PETE (polyethylene terephthalate) variety, is that these items (i.e. soft drinks, water bottles, mouthwash bottles, peanut butter containers, and salad dressing and vegetable oil containers, etc.) are often recycled into things like polar fleece, fiber, tote bags, furniture, carpet, paneling, and (occasionally) new containers. Some recyclable items labeled with #2's, or plastics made of HDPE (high density polyethylene) like milk jugs, juice bottles, some shampoo bottles, etc. may find a second life as pens, floor tile, drainage pipe, lumber, benches, doghouses, picnic tables, fencing, and maybe even (if they were really good in their previous life) recycling containers.

To further help you along, here is a brief list of various metal, glass, and plastic that **can be recycled in NYC**: metal food cans; empty aerosol cans; foil wrap and foil trays; household metals like wire hangers, pots and pans, cutlery

and utensils; plastic bottles and jugs for detergent, soda, milk, juice, water, shampoo, etc. (remember: any bottle where the neck is smaller than the body); glass bottles and jars; beverage cartons and drink boxes for milk, juice, etc. **And here are those that cannot**: motor oil or chemical containers; styrofoam; food containers for yogurt, margarine, take-out and salad bar; plastic wrap; plastic trays or tubs; plastic utensils, plates, cups and bowls; plastic appliances, toys, and furniture; lightbulbs; glassware; pump spray nozzles; and batteries.

When it comes to recycling mixed paper and cardboard, the following are **good to go in NYC**: newspapers, magazines and catalogs; white or colored paper, which includes all mail (yes, even those envelopes with plastic windows); wrapping paper; smooth cardboard, which includes cereal and other boxes (liners removed), tubes, packaging, etc.; paper bags; softcover and phone books; corrugated cardboard (flattened and tied). **Non-recyclable paper products include**: plastic- or wax-coated paper, such as candy wrappers and take-out containers; soiled paper or cardboard; soft paper, such as napkins, paper towels, or tissues; carbon paper; and hardcover books and books with spiral bindings.

For a full "who's who in recyclability" among those items covered above, as well as those which time and word-count prohibit me from delving into, the Natural Resources Defense Council has a wonderful website with easy-to-follow guidelines (<http://www.nrdc.org/cities/recycling/gnyc>). To help you find out which days are recycling days in your neighborhood, the Department of Sanitation can be of assistance, so go to <http://www.nyc.gov/dsny>.

Thank you for taking the time to participate in Recycling 101. As a final thought to leave you with, I'll say this: recycling is a good thing, maybe even a great thing, but it should be seen as a last option. First and foremost, we need to take a serious look at ourselves and what we consume, what we might be able to re-use, and what's left to throw out post-consumption. I'm not suggesting anything too extreme (for instance, the example set by my late Grandpa Harold, who did things like re-commission an old pool cue as a suitable replacement for a broken TV remote). Just that we put a little more thought into what's what and what goes where, and what we really need. ☺





Vincent Van Gogh (1853 - 1890), *Starry Night over the Rhône*, 1888, oil on canvas, Musée d'Orsay, Paris.  
Source: Wikipedia

## Art Review

BERNARD LANGS

For the final discussion in the three part series on selected works in New York City museums in the general vicinity of Rockefeller University, I will address the Museum of Modern Art (MoMA) in terms of the museum as experience.

On a recent MoMA visit, I had the good fortune to see the other *Starry Night* by van Gogh. MoMA owns and exhibits the famous work by that name, but its sister painting, *Starry Night Over the Rhône*, was on view for a special exhibit at the museum. When taking in the work, I realized that this was everything one could want from a painting. It is simply a display of stunning beauty and the work of a top-tier genius. I also knew that without the museum bringing it to New York, I might never have had a chance to take it in so completely, with the added pleasure of it being surrounded by so many other precious paintings by the artist.

There are some art historians virulently opposed to the concept of the museum. Some

of my own arguments against the way museums are structured center around crowd control. The same people who would never think of talking during a movie about superheroes sometimes have no problem laughing and speaking loudly about unrelated topics in front of the world's most serious pieces of art. I once watched as small children ran circles around a large Buddhist sculpture, nearly climbing it, as other visitors tried to meditate on its spiritual significance. But a more serious argument against the museum is that some art is deadened when taken out of its natural environment. I am thinking, for example, in terms of sculptures from Medieval German or French cathedrals and churches, or again, Buddhist statues from Asian caves or temples. The museum takes on an almost zoo-like quality with visitors staring at captured prizes. Perhaps such art is truly best appreciated in situ in its native setting and country.

But in the long run, I believe that for people who can't travel the world, the best way to learn of various cultural gems is through the museum experience. There is no doubt that Italian Renaissance art makes more sense to me because I've seen the Italian countryside and some of that nation's major cities, but there are many destinations I'll never be able to visit, and I am forever grateful to the museums, especially in New York, for bringing those places and their pasts to me. ☺

### NATURAL SELECTIONS



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*This month Natural Selections interviews Courtney McBride, Human Resources Assistant  
Country of Origin: USA*

## New York State of Mind

**1. How long have you been living in New York?** Since September 2006.

**2. Where do you live?** According to craigslist, I live in 'SoHa,' more commonly known as South Harlem. Craigslist also refers to my neighborhood as Central Park North—I often like to call it that because it makes me feel posh!

**3. Which is your favorite neighborhood?** I love the Upper West Side and the Lower East Side for different reasons. I love the space and the neighborhood feel of the Upper West. It is clean, pretty, near the park, and convenient. But the Lower East Side feels like real New York to me. Before I ever moved to New York City, when I imagined what the city would be like, the LES is what I pictured. I like the grittiness and I still feel impressed by myself when I can find my way around the streets that aren't numbered.

**4. What do you think is the most overrated thing in the city? And underrated?** The most overrated thing is shopping, particularly when it rains. Pushing through the crowds, lugging all of your things around, dealing with surly sales people—it's not my favorite. I must admit, when I visit my parents in the suburbs, I enjoy having a car and going to malls and shopping plazas. I think the most underrated thing is the public transportation system. I am just as likely as the next person to complain about my over-crowded unpredictable morning com-

mute, but when I step back and think about it, the subway system is pretty incredible! I love the 2/3 train. When it is running as it is supposed to, it is so fast!

**5. What do you miss most when you are out of town?** It would be easy to say the pace or tempo or energy of the city. But truthfully? It's my DVR. It may not be something that is quintessentially New York, but before I moved here I had never heard of it. Since I have had it in New York, DVR has changed my life. DVR may quite possibly be the coolest invention ever.

**6. If you could change one thing about NYC, what would that be?** The cost of rent. Enough said.

**7. Describe a perfect weekend in NYC.** The Faculty Club on Friday night. Brunch and a movie on Saturday afternoon. Out with friends Saturday night. Street hockey in Tompkins Square Park on Sunday finished up with some Chipotle on Sunday night. Go ahead and judge me, but I think Chipotle is one of the most delicious things in the world.

**8. What is the most memorable experience you have had in NYC?** It would have to be last Friday. I was on the subway, reading my book, headed uptown at about 10PM. The next thing you know, a man wearing a head-to-toe hot pink spandex body suit with a silver cape who is carrying a unicycle gets on the train, sits down next to me and



starts talking. Apparently I have a friendly face because this hot pink unicycling character sure was chatty! When he transferred to a different train, the lady across from me said, "Interesting friend you got there!" Only in New York.

**9. If you could live anywhere else, where would that be?** Probably Chicago or Boston.

**10. Do you think of yourself as a New Yorker? Why?** Yes. The defining moment was when I realized that for all of the places that I go to on a regular basis, I know which subway car I need to get in at my stop to get out at the most convenient spot to either transfer or be near the right exit at my destination. You can't help but feel pretty smug about that. ☺

## Recent Uplift

ROBERT BRONSTEIN

Even as I trudged up the Muir snowfield I refused to accept the fact that Big Tahoma sat perched above me. I had arrived in Seattle almost a week earlier and had yet to glimpse her weighty bulk. Eventually the reassurances of the guides rang true, as fleeting, razor-like slits in the cloud cover revealed Mount Rainier's massive southern ramparts. "Of all the fire mountains which, like beacons, once blazed along the Pacific Coast, Mount Rainier is the noblest," as John Muir stated.

For many years I have had a passion for the mountains and the myriad nuanced backcountry scenes that await me once I stepped off the beaten path. Mount Rainier caught my attention because it is commonly used as a stepping stone to harder, more technical climbs. It has a storied past, having launched the careers of many iconic American alpinists such as Lou Whittaker and Ed Viesturs. After some overly ambitious plans to climb in Bolivia fell through over the course of the previous winter, I committed myself to tackling this formidable peak. Possessing very little experience with steep glacier travel and

route finding in rough weather, I joined a group led by guides from RMI (Rainier Mountaineering Inc.). They are seasoned veterans, with several senior guides coming up on their 400th summit.

"Getting to the top is optional, but getting down is mandatory. A lot of people get focused on the summit and forget that." Viesturs was the first American alpinist to reach the summit of all fourteen peaks above 8,000 meters, without the use of supplemental oxygen. This general dictum was the first thing our lead guide Andres uttered as we sat down for pre-climb orientation. He then proceeded to meticulously check over all of our gear, tossing aside anything he deemed suspect.

The second day of the program consisted of mountaineering school, which was essentially a series of quick lessons in the glacier travel and rescue skills that are critical for negotiating the upper mountain. An important skill of the trade termed ice axe arrest was basically an excuse for a volunteer to be pushed off a precipitous slope so the guides could evaluate his/her commitment to self-preservation. Stopping the



slide, even with the assistance of an ice axe, was no easy feat in the icy bowl Andres had selected as the preferred classroom setting. Our final qualifying task would be walking as a rope team—the customary mode of travel on glaciated terrain. Walking at a steady and constant pace while keeping the rope taught in between climbers was important in case of a fall, at which point the remaining rope-team members would assume ice axe arrest positions to halt the downward motion of the tumbling climber. That evening several of us settled down at the base camp pub to sample the local IPA microbrews, and to cheerfully consider the adventure ahead.

Mount Rainier is a stratovolcano, which is essentially a cone of superheated lava ready to part ways with large chunks of its rocky encirclement at anytime. This particular beast is currently in hibernation; however geologists have hinted that spring could be just around the corner for Big Tahoma. These considerations, as well as ice avalanches and rock fall, were potent and omnipresent on the morning we set out for Camp Muir—our jumping off point for a summit bid the following day. This strip of rock and ice sits at 10,000 feet above sea level, perched precariously between the relatively care-free Muir snowfield approach and the intimidating Ingraham glacier above. We would spend the next eight hours here eating, hydrating, and attempting to get a few brief moments of sleep in-between the clanking of ice axes and the roar of the wind. When midnight rolled around, our three guides came crashing into the cramped bunkhouse with news of clear conditions and good weather; it was finally time to attempt the summit of Mount Rainier.

At precisely 1 A.M., eighteen climbers and six guides (the entire RMI contingent on the mountain) set out across the Ingraham glacier. Rest stops on a climb of this type are dictated not by the obvious exhaustion of the climbers, but rather by the location of objective climbing hazards such as rock fall and icefall. This is precisely the reason that climbers attempting the summit of Rainier generally leave Camp Muir at or around 1 a.m. so as to avoid the very soft snow conditions which let loose rock and ice during the heat of midday. As we snaked our way up the mountain all I could see in front of me were meandering lines of headlamps scattered on the route above. By the second rest break, above a particularly difficult section of the route known as Disappointment Cleaver (a cleaver is a rocky outcropping that signifies the divide between two glaciers), I was becoming increasingly cold—even



Photo provided by the author

View towards the upper mountain from Camp Muir and zigzagging trail visible on the far right. .

when wrapped in my enormous down parka. For me, the rest breaks were the biggest test of all, with the intense cold and loss of appetite I was experiencing high up on the route ever-present in my mind. We were down to a group of six climbers and two guides now, as some people had thrown in the towel and had to be escorted back down by their fearless leaders. The last hundred feet of elevation gain saw my last reserves of energy being very quickly depleted, but soon we were in sight of the crater rim and the rocks that lined its wind battered mote.

The crater of Mount Rainier is a bowl-shaped gulley filled with drifting snow and dozens of active steam vents. Even the fierce wind can't seem to dislodge the smell of sulfur dioxide from every nook and cranny of this barren landscape. Andres discovered a large geo-thermal area where we finally had a chance to rest out of the wind. Falling down on my pack I began to understand that getting to the top truly was only half the journey, as I looked over the vast and broken glacier sitting at the center of our route of descent. The only other mountain visible over the cloud cover was Mount Baker, another magnificent stratovolcano. With the wind finally howling elsewhere, our group of eight greedily absorbed the morning sun's first rays on the summit of Mount Rainier at 14,411 feet. ☉

## Thanksgiving Staycation

SHAUNA O'GARRO

For students and staff at the university not leaving to visit family, Thanksgiving break can be an odd time. Many friends are out of town, the city is quiet, and things can get boring pretty quickly. For those who, for whatever reason, will be hanging around the university this Thanksgiving break, there are plenty of things to do in Manhattan and nearby towns to keep you busy.

The most obvious activity is the Thanksgiving Day Parade. The annual event start-

ed in 1927 and is still going strong. Features include giant balloons, floats, marching bands, dance troupes, and a variety of celebrities. Although children enjoy the supersized floats depicting their favorite cartoon characters, the parade is for people of all ages and is a must attend event for those who have never witnessed it. It does get crowded though, so if you want a good view of the street you should show up early. This year there is a new parade route, as follows:

The parade starts at 77th Street and Central Park West, heads south down Central Park West until it reaches Columbus Circle at 59th Street, turns east at Columbus Circle along Central Park South, turns south at 7th Avenue, and continues along 7th Avenue through Times Square until 42nd Street. At 42nd Street the route turns east for one block until 6th Avenue, turns and continues south on 6th Avenue to finish in front of Macy's in Herald Square at 34th Street. For

those who don't want to go through the parade madness, they can watch the floats being inflated the night before. Crowds gather near Columbus Avenue and 77th Street to see floats, including crowd favorites such as Snoopy, Pikachu, and Buzz Lightyear, before the main event.

If you want to indulge in another seasonal tradition, you can check out the Rockettes at the Radio City Christmas Spectacular. Although the Rockettes are the most well-known aspect of the show, there is also the parade of the wooden soldiers and a live nativity scene. If you'd rather just check out the creatures for free, the animals from the nativity scene, which include camels and donkeys, are walked around the block daily at 7 a.m.

Central Park always offers up things to do, even when the weather gets chilly. Besides simply walking around and enjoying the variety of views, you can stop at the Central Park Zoo, which will still be open. Many of the creatures, such as the penguins, snow leopard, sea lions, and polar

bears, are fine with the colder weather and will be as active as any other time of year. If you'd like to try out your ice skating skills, visit Wollman Rink, which is located near the 62nd Street entrance. Take advantage of the rink's late weekend hours and avoid the crowds by going after 7 p.m. Weather permitting, you can also rent a row boat at the Boathouse between 10 a.m. and dusk. Boats are only \$12 an hour, but the Boathouse only takes cash.

There are also quick daytrips available for those of you who want to escape the city, but don't want to travel too far. Atlantic City is already a popular Thanksgiving destination, and the new Aces trains providing direct service from Penn Station makes getting there even easier. Tickets are \$29 each way. Once you reach Atlantic City, the buffets and restaurants offer Thanksgiving-themed meals for those who want to maintain tradition. There are two ways to lose your money in Atlantic City: gambling and shopping. Many casinos will have special Thanksgiving promotions and giveaways for people

gambling at their establishments. And on Black Friday, the biggest shopping day of the year, the Atlantic City outlets have huge sales on their already discounted products.

If you're looking for a dose of culture, you can visit Beacon, NY. Beacon is a small, artsy town located on the Hudson. Besides spectacular views and hiking, it also has a main street with lots of interesting shops and restaurants. One of the main draws of the town is the Dia:Beacon museum, which houses the Dia Art Foundation's permanent but (until now) rarely seen collection of art from the 1960s to the present. It is currently the premiere viewing space for modern and contemporary art. Beacon is accessible by the Metro-North train, and the 80-min ride costs \$24; the special roundtrip fare plus entrance to the museum is only \$27.75.

There are hundreds, if not thousands, of activities and cool places to visit in NYC and the surrounding areas during the Thanksgiving holiday. If none of these daytrips appeal to you, hopefully you will find a staycation that fits your needs! ☺

## Science and the Sillimans

ZEENA NACKERDIEN

Thousands of Yale University students have passed through the corridors of Silliman College without paying heed to its name. Benjamin Silliman (1779–1864), born to Gold Selleck Silliman and Mary Fish (Noyes) Silliman of Fairfield County, entered Yale college at the tender age of thirteen and graduated with a law degree. His mentor, Dr. Timothy Dwight (eighth president of Yale), encouraged him to continue studies in chemistry and natural history.

His travels to London and Edinburgh to study the physical sciences coincided with Napoleon's preparations to invade England. Silliman witnessed the British admiral Nelson defeat the French and Spanish navies at Trafalgar, while he was settling down to the business of science. He chronicled his travels to England, Holland, Scotland, and Quebec in two editions of a well-received journal. His subsequent teaching tenure at Yale in chemistry, mineralogy and geology garnered him more praise. Audience members would sometimes travel from as far afield as New Orleans and St. Louis to attend his lectures. Besides his teaching duties, he also brought paintings of the American Revolution by Trumbull to Yale University, thereby encouraging student interest in the fine arts.

In 1807, he traveled with Professor Kingston to a meteorite site in Weston, Connecticut, chemically analyzed the fragments and published the first scientific account of an American meteor. Some of his other findings include discovering turquoise embedded in the rocks of Mount Chalchuitl, New Mexico. The gift of turquoise by Montezuma to Cortez for the Spanish crown, underscores the fact that ancient Mexican Indians were already aware of the value of the stone. Silliman analyzed the turquoise and surmised that its blue color came from variable amounts of copper oxide deposited in the rocks.

The naming of the mineral, sillimanite (aluminum silicate), bears

testimony to his numerous discoveries in the field. His goal was to "put knowledge in the hands of all who could do anything to promote its growth and usefulness." To this end, he founded the longest running scientific journal, *American Journal of Science*, as well as writing and editing textbooks. He founded the first graduate school in America, an institution that produced the likes of J. Willard Gibbs and Daniel C. Gilman.

Benjamin Silliman Jr. carried on in his father's scientific footsteps (1816–1885). As a chemistry professor at Yale, he wrote extensively on the merits of petroleum, which he had fractionated by distillation, as a high quality illuminator. His research provided the impetus for the speculators Bissell and Eveleth, to market oil discovered in western Pennsylvania as an illuminant. His other discovery, the lubrication properties of petroleum, would prove useful in the upcoming mechanical age. Unfortunately, he was much less successful as a mining consultant, providing advice on potential oil sources in California that did not pan out.

Further information on the Sillimans can be found in papers at the Yale Peabody museum and Johns Hopkins University. ☺

### REFERENCES

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## In Our Good Books

MEGAN WESTFOX

*A Left-Hand Turn Around the World: Chasing the Mystery and Meaning of All Things Southpaw*, by David Wolman

David Wolman is left-handed, and there is a secret fraternity of southpaws into which he will offer you a glimpse in the opening pages of his book. The author spent a year investigating all the nooks and crannies of left-handedness and found some interesting and enlightening paths to travel.

More wide-ranging than many single-topic non-fiction books, this work investigates handedness from all sides, from a moral perspective (the bend sinister is one term for left-handedness, and there was a reason that left-handed writing was drilled out of many students at Catholic schools) to a biological one.

Wolman investigates some left-handed truisms, such as “only left-handed people are in their right minds” by going through a surprisingly in-depth description of the discovery and function of Broca’s area, an area in the left hemisphere of the brain primarily

responsible for articulate speech. He even goes on a pilgrimage to view the original brains investigated to discover this area.

Some side-trips are disappointing and somewhat pointless, such as a trip to Scotland to view a left-handed staircase and a stay at a palmistry camp. However, the forays into the science of handedness, including the possibility that genes may in fact code for right-handedness and not-right-handedness, and the fact that certain animals have handedness (in monkeys, scientists measure this based on feces-throwing behavior), gives the reader an entertaining lay introduction to a number of difficult scientific concepts.

In fact, while it is ostensibly a study of handedness, much of the book is devoted to science, including the vagaries of funding, the problems of working in an underappreciated area of study, fads and trends in science, and the difficulties of studying complex genetic effects. While not heavily foot-noted, some of the references are quite scholarly, and the author seems to have not only interviewed but visited nearly all of the experts in the small field.

This is an excellent, quirky book that popularizes certain aspects of science and science history with an interesting twist. Highly recommended, especially for “sinistrals” and those who love them. ☺

## Life on a Roll



*Explorer Explored* by Daniel Andor

