

HEALTHY PARTS



Hu.Art

Three,

HUMAN

Biannual Humanities and
Arts Journal for students
through high school.

Issue

Hu.Art Biannual Humanities and Art Journal 2014

2014

Part 1, Art

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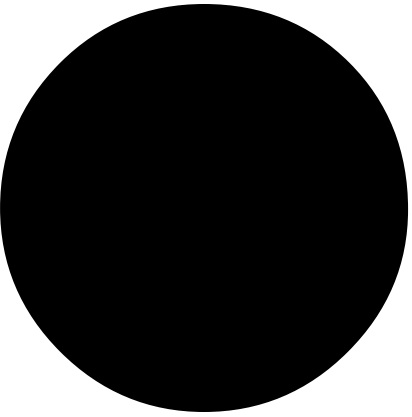
~~1875~~

Study in Blue

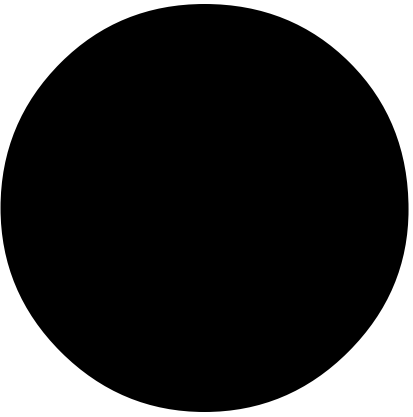
Katie

Borg

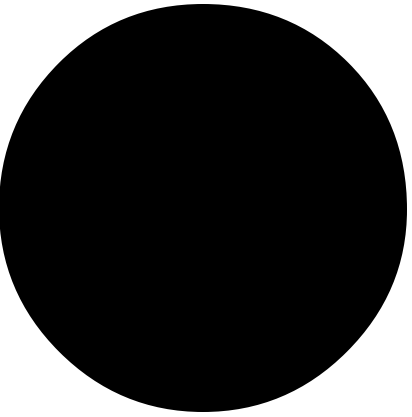




Katherine Borg is a homeschooled high school junior. She began drawing every day at age four and started formal art instruction at six. She learned Chinese brush painting from Evanston artist Mina Hsing, and has studied at the School of the Art Institute of Chicago, New Hampshire Institute of Art, Wellesley College Botanic Gardens, Vitruvian Fine Art and with Northbrook botanical artist Heeyoung Kim.



Katherine's work has won first or second place in her grade at the Glenview Art League Youth Art Fair six times, and she has won regional Silver Keys in the Scholastic Art and Writing Awards for photography and digital art. Her ArtByKatian store at the Galleria in downtown Evanston sells her Chinese brush paintings and notecards and jewelry made from them.



Katie Borg

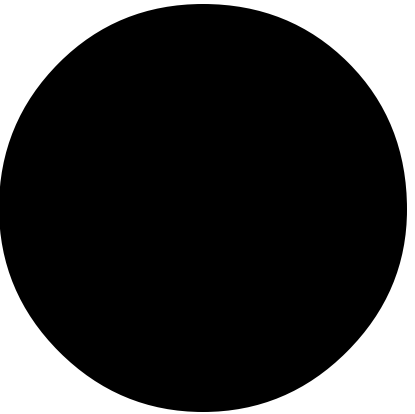
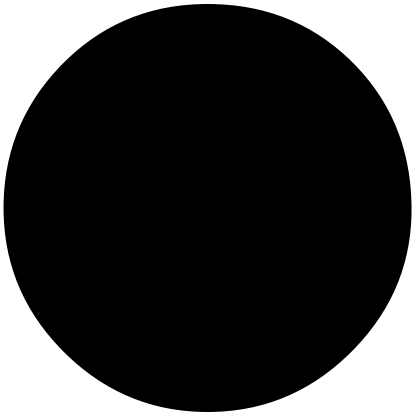
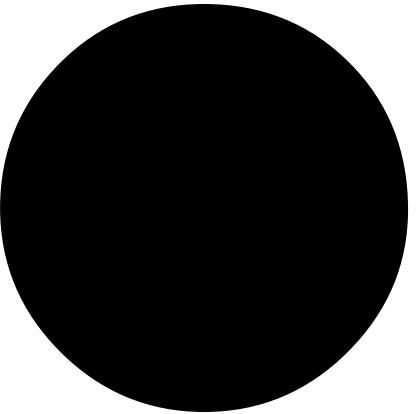
Sunset Over the Ocean

Maura

Gilbert



Maura has been homeschooled for 7 years and loves to draw. She mainly likes to draw abstract or cartoon characters. Maura also loves to play rugby and swim.



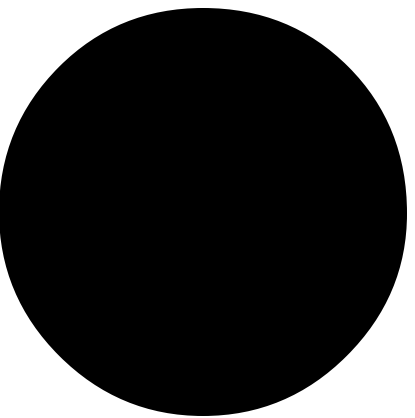
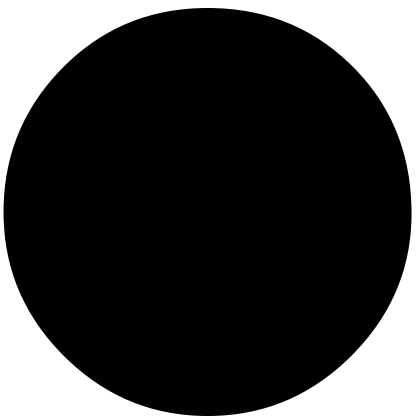
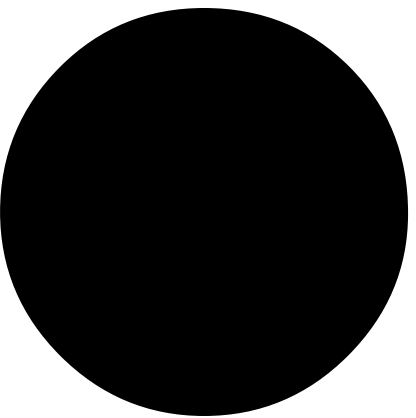
Maura Gilbert

Camellia

Isabella Kiedrowski



Isabella Kiedrowski is 13 years old and has been drawing ever since she could hold a pencil. She enjoys music which includes playing the harp, the piano, and singing. An ideal day for her would involve drawing, music, no mathematics whatsoever, and one of her chickens laying an egg.



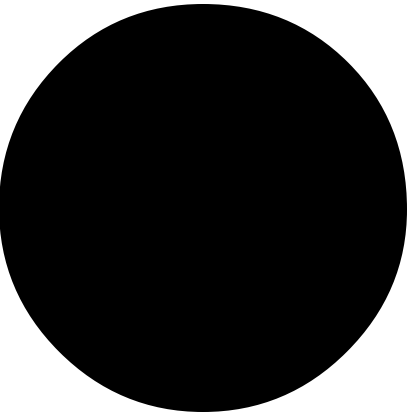
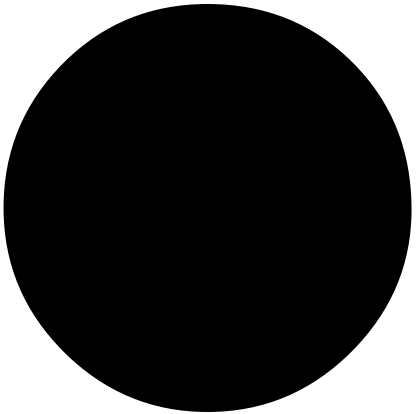
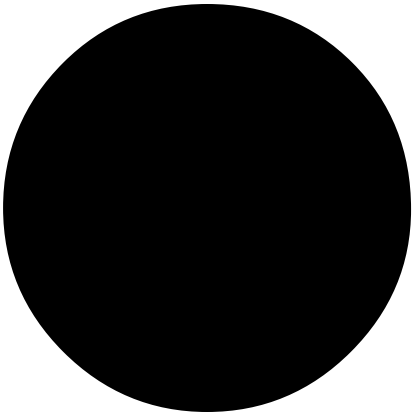
Isabella Kiedrowski.

Peregrine Falcon

Jam Schumm



Liam P. Schumm is a human who loves theoretical physics, mathematics, programming, and all the stuff in between. His drawing is an illustration of Falco perigrinus, inspired by the works of many famous scientists, including John James Audubon.



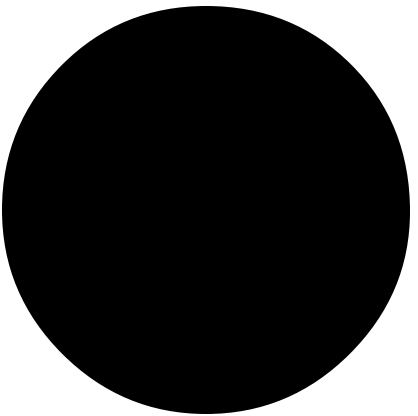
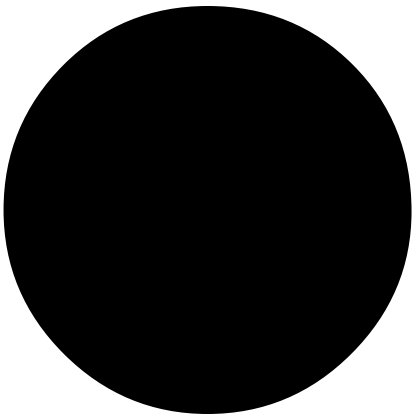
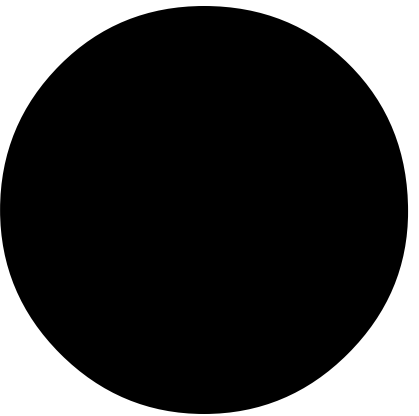
Liam Schumm

Soup Pot

Richard Medina



I am Richard Medina, award-winning and exhibited artist and designer. I have self-studied graphic design, filmmaking, and visual art for the better part of my life, and I currently take art and design classes from the School of the Art Institute of Chicago. I am interested in doing away with the need for suspension of disbelief, and creating temporary sensorial and therapeutic relationships between objects in space.



Richard Medina

Part 2, Hu

thesis is the high part
that is the hu part

the hu part

the hu part



It's The Arps Review

Kirk
Bowman

"Inspector Norse"

Starting off with what sounds like a radio transmission, the bouncy beat begins immediately afterwards, transcending the usual slow build up of the "good parts". Instead elements, equally intriguing and upbeat, are gradually added on, built up, and then removed. But this removal is not the more common letdown - instead, it makes perfect sense, because it times the drops and adds perfectly. For example, near the middle of the song, it adds more elements than anywhere else in the song, making it vaguely stressful (not that this song is stressful - it's one of the most optimistic I've ever heard), but then at the apex of this, it pops. Popping is a better analogy than exploding because explosions are violent, sudden, and often exciting after the explosion, but pops are expected, cheerful and amusing, just like "Inspector Norse." Rather than try to avoid or straddle the line between cheesiness and class, like some other artists do to varying effect, this song goes straight into the cheese, and fares all the better for it, somehow being so honest and non-ironic that it becomes less obnoxious. The perfect song to cheer yourself up, it outshines the other songs by a mile, partially because it never really fades away from this beautifully genuine happiness.

"Myggsommer"

Much differently from the other three songs on this EP, "Myggsommer" doesn't have a particularly recognizable beat, but even though you won't probably be bobbing your head, you will be appreciating the unexpectedly pleasant combination of otherwise unpleasant sounds. Not as interesting as the other tracks provided,

but perhaps this is for the best, as it provides a contrast almost necessary to appreciate how well-made the other ones are. And of course, being the worst song on "It's The Arps" isn't saying much.

"Swing Star, Pt. 1"

"...Pt. 1" is, unlike "Inspector Norse" and possibly "...Pt. 2," not a very good standalone song. However, it is one of the best build-ups to a song ever made. You'll be bobbing your head before you even get to the more opaque bass of "...Pt. 2," and it is an essential companion piece to the latter. Listen to these two songs together or not at all.

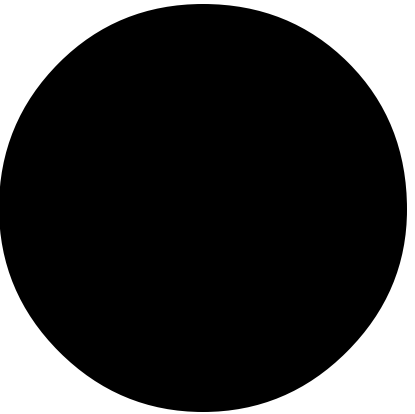
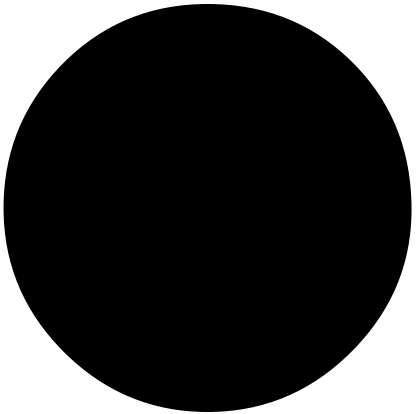
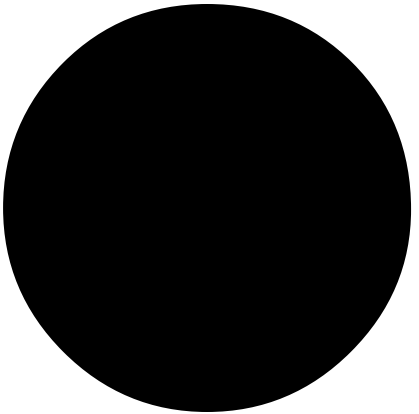
"Swing Star, Pt. 2"

Jumping straight into the missing beat of "...Pt. 1," "...Pt. 2" is the only song that really compares to "Inspector Norse" in pure head-bobbing bass. Yet, by the end, it travels back to the beginning, becoming yet again fading and looking in on itself and the subtle crescendos fading throughout the entirety of the second part. Best enjoyed as part of a whole with "...Pt. 1."

As a whole, "It's The Arps" does beautifully. It does seem that the other tracks are merely companion pieces to "Inspector Norse," but if they are companion pieces than they are the best companion pieces that could have been made, and, under any other artist, would likely have been regarded as excellent songs. Remaining upbeat and positive without becoming overwhelming, perfectly timed at a mere 21 minutes, the EP will likely not be forgotten, especially the bubbly catchiness of "Norse." "Myggsommer" is the only song

that doesn't work well on its own (if "Swing Star" is counted as one piece), but it remains interesting musically and works well in this context. "Swing Star" (parts 1 and 2) is a fantastic 11-minute of epic proportions, that never really goes over-the-top like many other progressive rock tracks of similar length. Together, these all piece together perfectly into an excellent example of a talent that remains the artist's best work.

I enjoy music, and, to an extent, writing, so I decided to write some reviews. One day I hope to be able to write for a commercial publication.



Kirk Bowman

The Differences between Life in the Year 1000 and Life in the 21st Century

Elizabeth Medina

The Year 1000 describes what happened at the turn of the first millennium; what people's lives were like, and what happened before and after that time. The authors, Robert Lacey and Danny Danziger, explain that people had to make their own clothing, houses, dishes, furniture, tools, and almost everything else. They even had to make their own ink, which was made from acid in a gall on a tree **that was then crushed in water or vinegar, thickened with gum Arabic, and mixed with iron salts.** Despite the differences between the two centuries, **there are many things that are the same in this century.** There is still war, a divide between the rich and the poor, the days of the week are the same, and we feel the same emotions.

The book describes the Julius Work Calendar and it uses the calendar to talk about life in the first millennium. The Julius Work Calendar contains a page for each month of the year. On each page is listed the name of the month and sign of the zodiac. Under that is a list of high and holy days; the days of the month; and lines of poetry about each month. Along the bottom of each page in the Julius Work Calendar "runs a delicate little drawing which **illustrates the task of the month - a bearded ploughman following the oxen, shepherds gossiping while they watch over their sheep, two men reaping in harmony while another takes a rest.**", (page 5).

The June chapter is about traveling and towns. It discusses burhs, which is the root word of borough, which is an English town (page 86). The chapter also talks about boats, the black economy; "with businessmen quietly doing deals between themselves, out of sight of the king's reeve and out of reach of his tools

and taxes" (page 88), the names of the streets, boat, and ports. The streets in many 11th century towns **were named after the jobs of the people who lived and worked there.** One street was called Shieldmaker Street because shields were made on that street.

The July chapter covers the divide between rich and poor, hunger, and the social order. July was the month right before the first harvest, and most people's cellars ran low. The common, poor people had to mix in the coarsest grain, the last remaining food, to have something to eat, while the rich enjoyed enough food, and were able to pay the extremely high prices of food in July. The social order was of "those who worked (the peasants, traders, and craftsmen), those who fought and administered justice (the kings and lords), and those who prayed," (page 103). The last group includes the parish clergy, the monks, and the nuns. The monks sang in the middle of the night and two hours after that going to night office. The early **morning service was called Matins, the service at 6 o'clock was Prime. The five other prayer times were Tierce, Sext, None, Vespers, and Compline.**

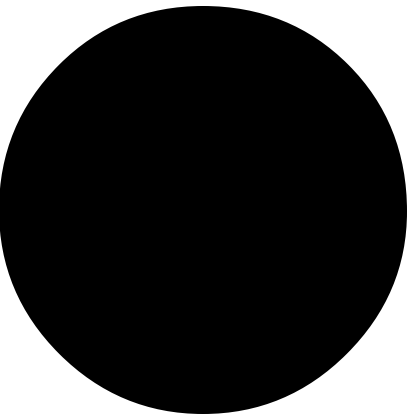
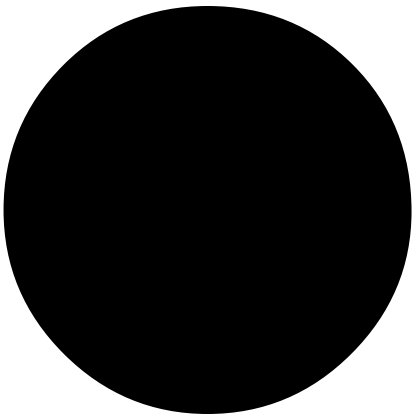
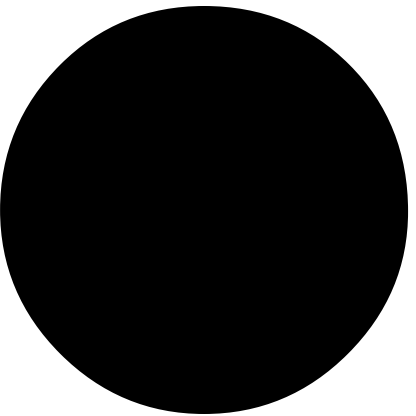
The chapter on September explains how the names of the days of the week originated. The Church reluctantly agreed they allowed the days of the week to be named after Norse and Roman gods and goddesses. The church had already accepted "Sunday" and "Moonday". "Tiw's-day" was named after the Norse god of war, "Woden's-day" was named after the Norse father of the gods, "Thor's-day" was named after Thunor, the Norse god of thunder, "Frig's-day" was named after the Norse goddess of growing things, Frig, and "Saturn's day"

was named after the Roman name of the evil father of the Greek gods.

The Year 1000 talks about the life in the year 1000, but it also covers the language. The Anglo-Saxon language was called Englisc, or Angle-ish. Town names in England have different endings that are related to which group originally settled there: the Anglo-Saxons, the Vikings, or the Danish. Anglo-Saxon towns often ended in **ham (as in Durham), ing (Reading), stowe (Felixstowe), stead (Hampstead),** or ton (Kingston). Viking towns ended in by, which meant a farm (Whitby). The Danish towns often ended in thorpe (Scunthorpe), toft (Lowestoft), or scale (Windscale).

I learned that life in the year 1000 is interesting and not so different from our own in some ways. "Skull measurements show that the brain capacity of a man or woman living in the year 1000 was exactly the same as our own. These were not people we should patronize. They were practical, self-contained folk, not given to excessive agonizing or self-analysis, to judge from the few who committed their thoughts to paper - the ideal type to choose as desert companions on a desert island, since they were skillful with their hands, and they could turn their hands to anything," (page 26). **This quote shows that the only difference between people living in the 11th century and people living in the 21st century is the advances of science and technology.**

My name is Elizabeth Medina and I am 12 years old. I have a dog named Bella and a cockatiel named Bowser. I am in the Elgin Youth Symphony Orchestra and I ride horses 3-4 times a week. This is the 3rd time I have submitted to the HuArt journal.



Elizabeth Medina

Knowing 'How far apart are your contractions' in Spanish wasn't helpful

Fiona Repp

The Dominican Republic is a small country that takes up roughly half of the island of Hispaniola, which is in the Caribbean. In the 16th century the entire island was controlled by Spain, and used as a place to import African slaves before they were sold elsewhere. Eventually, Spain ceded the eastern 5/8 of the island, which later became the Dominican Republic (DR). Through tourism and occasional influence from foreigners looking to invest in developing the country, the DR has gained a far better economy than its neighbor country, Haiti. However, the DR still does not have a very stable economy, and borders on being a third-world country. Sadly, that leaves the status of the Dominican reefs largely undocumented. That's where Coral Reef Regeneration (CR2) and our Remotely Operated Vehicle (ROV) team come in.

CR2 began in the 90s as a conservation initiative to give students an opportunity to engage in authentic scientific field research. CR2 advisor Beth Beyer contacted Dr. Reuben Torres, director of the DR chapter of the reef bio-inventory organization Reef Check. In 2013, I became a member of the newly formed CR2 ROV club and we started building our ROV. It started as a project with Shedd Aquarium's MATE ROV program. We asked permission from the Shedd to change our objectives to not only meet the needs of the MATE competition but to do reef conservation with the ROV as well. They agreed enthusiastically, as their final goal for the program had been to get kids doing authentic science, and we were jumping right to that part. At the Shedd's meet-up event prior to the competition, we got to talk to the Shedd engineers. When we talked about the trip to the Dominican Republic, they thought it was an idea made up simply for their benefit, and were very surprised

when we told them that we were actually going. We built it out of PVC tubing, with holes drilled along the tubes to let air escape when it's put underwater, and holes drilled at the joints for places to put screws. We tested all the metal materials on our ROV for their ability to withstand saltwater. The ROV was powered with 4 submersible bilge-pump motors with props attached and controlled with battery-powered switches at the end of a long wire tether. Our goal was to take the ROV to the Dominican Republic and collect video data of the reef and its inhabitants. In April 2014, the goal was achieved. The ROV recorded several minutes of video showing multiple kinds of coral, fish, and the transect line laid by divers on our team. Our trip lasted from April 6 to April 14.

To say the least, the airport in the DR is very different compared to the two United States airports I had already been to that day. For instance, the airport is open to the air outside, has a thatched roof, and has a very different way of transporting your luggage around the airport. In the DR, a person with a trolley comes up to you, puts your luggage on the trolley, and asks you where you have to go. It's a good thing that all of the people doing that have a uniform, because if they didn't it would have looked very much like people were stealing our luggage. But I think my most memorable experience from the airport is waiting hours to get a rental car and our missing reservation. Heavy rain came in through the thatched roof, and no one blinked an eye when it splashed onto the computers. My dad's extremely deadpan comment was "Well, I think I know where our reservation went." We finally got our car and went on to a minor misadventure regarding how to deal with unexpected tollbooths in foreign countries

(while rapidly approaching one). Our airport was on the eastern edge of the island, in a small town called Punta Cana. We stayed in two different places for the duration of the trip, and the first place was a resort in the southeast of the island. It was next to a town called Bayahibe, about two hours from where we were. On the way there we drove (on a surprisingly well-made road considering where we were) past sugarcane fields complete with herds of cattle being driven by ten-year-olds on horseback, a small jungle, and a half-built city that I later realized was Bayahibe. We eventually arrived at the resort called the Dominicus Beach, a decent resort, but not notably Dominican in flavor. The man at the front gate of the resort only spoke Spanish, immediately testing our ability to communicate. Our Spanish skills grew from that moment forward. We located the rest of the team and gratefully settled in. The one Caribbean thing we did notice was the immediate immersion in "Island Time." This can be quite an adjustment for a Chicagoan.

The resort did give us the opportunity to test our ROV prior to going out on the reef (and learn what ocean water tastes like! Blech.).

The next day was far more eventful, as all 3 of the families in our group got to go to Coral Point, a dive school in Bayahibe that was filled with exchange students who were all very excited about our ROV. One student from Switzerland was lamenting not having a chance to build one during her education. After all of five minutes, two out of three families in our group finished preparing our snorkeling stuff and settled in for the hour of waiting for the people who were going to be diving to prepare their stuff. Then we all set off in our boat. After another 40 minutes of riding in the boat, we arrived at fifteen-meter-deep water off the coast of a peninsula in the

southeast corner of the island called Parque Nacional del Este. Some of our group dove below to start a reef survey and the rest attempted to get the ROV to record video of the reef, or to snorkel above the reef. When everyone started to head back to the boat, our boat pilot dove (with nothing but a mask) to get a sea star to show our group. That went on for a while, and then we went to a natural pool. The name says it all: warm three-foot-deep water with sea grass, sea stars, and with sand the consistency of pizza dough.

Although some team members had been to other locations as well, we all went to Coral Point again two days later. Except this time we went out to a reef about 500 yards off the beach at our resort. One observation that we made about the two reefs we had visited was that the one at the national park was significantly healthier than the one nearest the resort, which raises concerns about big resort companies pushing to build more resorts on national parks in places like the DR. This makes it more important to document and bring attention to the reefs like CR2 does, because reefs are maintaining the white-sand beaches and diving tourism the island's economy depends on, and become weakened when they're near resorts. When we got back from that excursion we checked out of the Dominicus and moved to a hotel in Santo Domingo.

I got to watch as my parents figured out conducting a manual gas station transaction in Spanish on the way there, which was a major bonus. Santo Domingo was about two hours away from Bayahibe, on the southern edge of the island, but we took an extra 40 minutes finding our hotel. The roads in Santo Domingo are tiny, with giant tire-destroying gutters on the sides. Driving there was like playing an elaborate game of Chicken where they had traffic lights, but no one had ever bothered to turn them on.

My dad's comment was, "Hmm. I must have leveled up," as none of us were used to people driving quite as recklessly as Dominicans. Upon finding the "Hodelpa Caribe Colonial," our next challenge was navigating the tiny one-way street it was on. Oh, and did I mention the end of the street that you enter from was being torn up? Yeah. A police officer (there was one stationed every so often along the block) had to stop traffic and lead us the wrong way on a one-way street. When we finally got into the hotel, check-in went smoothly and much faster than at the Dominicus. And when we came in and walked up to the desk, a person who appeared to be the receptionist's assistant pleasantly surprised us and gave my parents champagne and me orange juice with crushed ice in it. As you could guess, it was very much appreciated and earned the hotel major points in my opinion. Anyway, we went up to our room and found it to be much smaller than our previous room, but much better stocked. There was an honor bar (complete with refrigerated Coke and pretty much every other snack I had wanted at that moment), beds that I could have sworn had water mattresses, and my personal favorite – Wi-Fi that was free and worked far better than the previous resort. And then when I looked out the window it all got a bit overwhelming that I was in completely new place that didn't appear to have much logic to all the things happening in it. It's apparently called "culture shock," and I was surprised I didn't get it sooner in the trip. It might sound irrational to those of you who haven't experienced it, but that feeling isn't fun. So to deal with it, I spent the next half an hour playing Bejeweled and reading the slew of Skype messages from friends who must have thought I was going to have working Wi-Fi for the full duration of the trip. Once I became used to all the sights and sounds (sounds like people yelling in the street at 3 AM) and the pace of life in Santo Domingo, I actually preferred it to the generic, protected atmosphere of the resort.

One thing that takes some getting used to is that going anywhere unprotected (outside of hotels, etc.) is full of vendors who very aggressively try to convince you to buy their product or go to their restaurant. No one was mean or threatening. On the contrary, everyone was very upbeat and helpful; they all just really wanted us to spend our money with them. For instance: a random guy from the street walked up to us when we were going to get dinner and tried to convince us to visit some other restaurant. Apparently, it reminded my mom of Jamaica.

To show our support and maintain our contacts, we visited the "Acuario Nacional de Santo Domingo," which had some pretty cool lionfish and lobster specimens. The aquarium also had a tank with a tunnel going through it, so the fish could swim next to the tunnel. Although I'm pretty sure the fish thought we were the exhibits. There were a few different smaller shark breeds in the bigger tanks, as well as lots of really tiny reef fish.

On our last day there, we took the long way to the airport through the more northern and mountainous part of the island, and drove through a town called Higuey. We drove past the "Basilica de Higuey," and shortly after got stuck driving behind a pickup truck with a family (one of which had two live chickens in her lap), a few tires, some propane tanks, and a lot of fresh produce crammed into the back. Before the trip to the DR I had never seen so many people and their stuff on one moped. The majority of transportation there was motorcycles and mopeds, and our Hyundai Tucson was considered a large SUV. Most cargo appeared to be delivered by plastic crates hung precariously off of motorcycles, usually hung with just a broomstick or a tree branch. For a while after we left Higuey, the only thing you could see out the car's windows was emerald green hills with patterns of light and dark from the clouds above. But then we arrived at Punta Cana Airport, and the boring rental car process began again. Eventually, we dropped the car off, got our boarding passes and got through security (which was so far from state of the art that they still used Windows XP). And after the entire trip had elapsed, I finally found larimar (a blue stone only found naturally in the Dominican Republic) at a shop in the airport. So, our plane boarded, we flew home, and everything went smoothly. I think when I do go back to the Dominican Republic, I'd like to observe more of the culture there and hopefully find a way to preserve it in a way that's sustainable. Especially because tourism is increasing there and large, generic resorts not only threaten the reefs, but the traditional Dominican way of life.

Hi, I'm Fiona S. K. Repp, and I'm 13. I live with my parents, my grandparents, my cat (who is thoroughly convinced he's a lion), and my giant dog (who will jump up and hug people on command). I like knitting, video games, and really any book I can get my hands on.

Fiona Repp

Why Prevent Extinction?

Matthew Schumm

Shark Bay is a calm, shallow marine inlet situated along the shores of western Australia's hot, arid Gascoyne Province. The sheltered bay is an ecological haven for countless species of marine megafauna, including over two dozen species of threatened and endangered marine mammals. Species that are distributed sparsely and scarcely outside of the bay flourish within its confines. Green and Loggerhead sea turtles use the bay's secluded beaches as nesting grounds. About 10,000 dugongs (12.5% percent of this species' global population) breed in the bay and graze on its 4,800 square kilometers of seagrass beds. Bottlenose dolphins live there in large cooperative pods and use marine sponges lain across their snout to bulldoze through the bay's sandy bottom in search of benthic invertebrate prey (one of the few examples of tool use seen outside of humans). Large sharks and rays (the bay's namesakes) co-exist there in near-unmatched diversity and abundance. Shark Bay is nothing short of a marine Eden, an idyllic and near-unspoiled underwater paradise. But the amazing diversity of animal species beneath Shark Bay's aquamarine waters is not the reason we begin our story there. What makes Shark Bay truly remarkable – the impetus for its 1991 designation by the UN Educational, Scientific and Cultural Organization as a World Heritage Site – are the bleak, exposed pools of hypersaline water that lie around the southern periphery of the bay.

Wind, waves, bright sunlight, and high salt concentration make these pools almost uninhabitable for even the hardiest of intertidal invertebrates, and thus they are almost entirely bereft of life, with one exception

– sticky, dark-colored mats of at-first-glance unremarkable proto-algae. These cyanobacteria (bacteria with photosynthetic pigments that allow them to live off the Sun's energy) congregate together into these metabolically cooperative mats (or bio-films) by sending each other simple chemical signals; once situated, they cooperatively secrete a matrix of calcium carbonate that traps silt, sand and rock and eventually forms into a massive tower of stone as the bacteria pass through their life cycles and die off. Years upon years of bacterial bio-film accretion has left these pools filled with dozens of these craggy, irregular clumps of rock, etched throughout with the imprints of bacterial cells' structures and laced with reddish bands of oxidation produced as a byproduct of mass photosynthesis. Shark Bay is one of the only places in the world where these rock pillars, known to geologists as stromatolites, are still being formed. But there was a time when this process occurred across the globe – about 3.5 billion years ago, when cyanobacteria like these were among the very first living things to appear on our planet.

The origins of life on Earth, the mechanisms by which lifeless matter gave way to living cells, are still very much shrouded in mystery. The Earth was a tumultuous and inhospitable place 3.5 billion years ago, very different from the relatively geophysically stable planet we know today – parts of the Earth's crust were still solidifying, there were high levels of volcanic activity, and the chemistry of the oceans and the gaseous makeup of the atmosphere were in flux. In the 1950s, University of Chicago researchers

Stanley Miller and Harold Urey put into place the first (and possibly the most important) piece of the abiogenesis puzzle when they successfully simulated the spontaneous synthesis of complex organic molecules under presumed early-Earth conditions (heat, constant electrical storms, presence of gases like CO₂ and CH₄), establishing that the molecules that serve as the backbone for life could have been (and likely were) formed in early Earth's primordial seas. There is much debate and speculation as to what happened next, but the general gist is as follows: self-perpetuating "replicator" molecules (almost certainly nucleic acids from the beginning, but not necessarily DNA) were able to survive and self-perpetuate more frequently when surrounded by a spheroid liposome "bubble" that shielded them from the harsh Precambrian environment, and over time these bubbles acquired the ability to take in matter and energy from their surroundings and use it to grow and develop, becoming what we would consider to be living cells. Nearly all traces of these early cells' existence have been swept away by the near-immeasurable length of time that has passed between then and today, but one piece of evidence remains in chunks of eons-old sedimentary rock – ancient stromatolites, chunks of stone filled with fossilized cellular remains, layered in mats or films and often embedded within oxygen-rich layers of rock. We can see from these fossils that, by 3.5 billion years ago, these cells were living and breathing. We see that they had a cellular structure akin to – simpler, to be sure, but still very similar to – the cells we see in all organisms alive today. Study of fossil stromatolites reveal that many were not only photosynthetic but most likely used some of the same photosynthetic pigments plants and algae use today. The fossil record of stromatolites speaks to one of the most central and profoundly elegant principles of evolutionary theory: all life on Earth, from relics of the past like the cyanobacteria in Shark Bay's hypersaline pools to

relatively newly-evolved organisms like Shark Bay's dolphins and sea turtles, are descended from the same simple, bio-film-forming prokaryotic cells.

Companion to the central evolutionary principle of shared commonality is the principle of limitless variety and diversity among Earth's species. Rates of speciation and diversification remained relatively low during life's first 2-3 billion years, then spiked dramatically about 600-900 million years ago, culminating in an veritable explosion of diversity (aptly named the Cambrian Explosion) that gave rise to nearly all of the animal phyla extant today. A number of different factors allowed for this outpouring of diversity, including increased genetic diversity generated by the advent of sexual reproduction, the evolution of complex gene families that served as substrate for further genetic diversification, and the evolution of multicellularity and differentiation in cells and tissues – but perhaps most noteworthy, and relevant to this essay, were the ecological factors behind the Cambrian Explosion. The foundations for this radiation of adaptations were in large part laid by species' co-evolutionary relationships with both each other and their surrounding abiotic environment. Predators and prey drove each other to develop new physiological and behavioral adaptations; mutually-beneficial symbiotic associations between organisms allowed species to find greater success through cooperation than they might have on their own; and, last but not least, the presence of living things on Earth – the minerals and nutrients in their waste and remains, the free oxygen gas they released into the ocean and the atmosphere, the protective ozone layer that developed as a result of high atmospheric oxygen concentrations – actively contributed to making our once-barren

planet conducive to flourishing biodiversity. As tens of millions of years passed by, a similar process of organic terra-forming occurred on land, with nonvascular plants (literally) laying the groundwork – through the gradual wearing-down of bleak rock and then the deposition of their own remains – for rich soil that would later on sustain other plants and then enormous varieties of both vertebrate and invertebrate animal species.

Fast forward to today: Earth is now home to 8.7 million species of living things. Of those 8.7 million (which probably amount to just 0.01% of all the species that have ever existed on Earth), many if not most have been around for millions or even tens of millions of years. They've evolved in tandem with and are closely attuned to the dynamics of both other species and of their abiotic surroundings, forming one vast and infinitely complex system of interconnectedness sustained by variety – sustained by evolution's limitless propensity for producing organisms with novel structure and function that fit into new environmental niches like cogs in a machine.

Humans are not alone on Earth; we share our planet with countless other life forms, life forms that share so much and yet are so different from one another, life forms that play unseen and yet in many cases critical roles in maintaining the complex ecological, chemical and geophysical cycles of their resident ecosystems. Our planet's biodiversity and the global ecosystem with which it is intertwined are resources that we see ourselves in, that we draw upon with every breath we take. There are a multitude of reasons why the protection and preservation of biodiversity – of each and every plant, animal, and microbe species on Earth – is beneficial to human society, if not absolutely essential to human society's continued existence.

It's important to note that evolution requires preexisting diversity on which natural selection can act; thus, the loss of a species (and with them their own unique genotype and phenotype) stifles the potential for future evolution and diversification. For an example, let's first look at the importance of diversity at the population level. The Florida panther is a critically endangered subspecies of *Puma concolor* (common names cougar, mountain lion, puma) that numbered less than 30 individuals in 1995. The 1995 Florida panther population was in the throes of what is referred to as an extinction vortex – in a small population, inbreeding and genetic drift (a term

that refers to the element of chance in inheritance; it has a much more significant effect in a smaller population than in a larger one) cause reduced fitness and reproductive capabilities (in the Florida panther's case, heart defects, tail deformities, poor sperm quality and low fecundity) that increase mortality rates and impede reproduction, thus leading to an even smaller population. Researchers increased heterozygosity (the variety of different alleles for a given gene present in a population), diminished the deleterious effects of bottleneck genetic drift and inbreeding depression, and brought Florida panthers back on their feet by introducing eight female cougars from Texas into the Florida panther population. In conjunction with new protections and conservation measures, this last-minute injection of genetic diversity into the Florida panther population has allowed their numbers to increase to over 160 individuals. Size is not the only determinant of a population's robustness and self-sufficiency; habitat fragmentation that splits populations apart can also send species into the death-spiral of deleterious inbreeding. An example of this is the American burying beetle (*Nicrophorus americanus*). Already a widely-spread species, their habitat and food sources (the carcasses of large animals, for these are carrion-eating beetles) have spread farther and farther apart, shattering populations; this has been a key factor in the 90% drop in burying beetle numbers over the last century.

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A healthy amount of diversity is just as important at the biosphere level as it is at the population level. The Cambrian explosion is an excellent example of this, of diversity – in new genetic frameworks, new basic body plans from which a whole new variety of morphological adaptations could arise, and in the fast-developing web of interactions between organisms – snowballed into an accelerated period of diversification. For an example of the inverse of this phenomenon, we turn to the mass extinction at the end of the Triassic period (about 201 million years ago). While the public at large usually remembers only one or two mass extinctions (the one that closed the curtains on the dinosaurs 65 million years ago, and the one that cleared their path to ecological ascension 250 million years ago), paleontologists recognize six major mass extinction events in geologic time (the sixth is happening right now – we'll get to that later). Each of them has been followed by a very long recovery period. The mass extinction at the end of the Triassic likely involved heavy acidification (caused by increased volcanic activity) and sedimentation (caused by massive erosion events precipitated by the loss of tree-like lycophytes) of shallow-water marine ecosystems, and resulted in the extinction of 34% of marine genera. The fossil record indicates that coral reef ecosystems did not re-establish themselves for at least 10 million years following the end-of-Triassic mass extinction. Biological systems like to operate by positive feedback mechanisms, self-amplifying cycles; diversity

allows for more diversification, while loss of diversity curtails diversification. By reducing species' populations to weak and inbred vestiges of their former selves, and by eliminating species altogether, we make it that much more difficult for evolution to restore biodiversity.

This is true for more reasons than one. Ecosystems' stability and resilience, their ability to withstand transient destruction and continue to provide for their host species in times of stochastic losses and disasters, depends on rich biodiversity. Elsa E. Cleland of the University of California at San Diego defines an ecologically stable system as “[an ecosystem] having low variability (i.e., little deviation from its average state) despite shifting environmental conditions”. Variability in an ecosystem is kept in check by ecological buffers, or negative feedback loops (the opposite of the concept of positive feedback in biological systems highlighted earlier). Let's use a forest ecosystem as an example. A decrease in the population of one insectivorous bird species might be mirrored by an increase in the population of an ecologically similar species, thus ensuring that insect populations in the habitat don't spiral out of control. If one butterfly or moth species has a bad breeding season, other species of butterfly will step in to fill their shoes as pollinators for flowering plants. Competitive interactions between different species of microbes maintain a stable soil chemistry. These redundancies and negative feedback loops are, as you can see, enormously dependent on species diversity. Thus, when species are lost, ecosystems are less resilient and less equipped to provide for remaining species.

In recent times, many ecologically destabilizing losses in biodiversity have been caused by a special kind of ecological destruction: the introduction of new, invasive species that wreak havoc with established stabilizing feedback loops. An example of this is the introduction of Pacific lionfish to Caribbean coral reef ecosystems; the lionfish gorge themselves on as much as 60 different species of small, mostly herbivorous reef fish that ordinarily keep algae populations in check. Without the ecological burden of herbivory, reef macro-algae are free to grow unchecked (and indeed to capitalize on dissolved nutrient levels driven dangerously high by agricultural runoff); reef macro-algal cover has doubled and tripled on some Caribbean

reefs, and reduced coral growth rates by as much as 37%.

Ecosystems can only withstand a certain amount of degradation before they reach a tipping point, after which they descend into desertification. In Brazil, where losses in biodiversity due to logging and industrial development have left many ecosystems less naturally stable and less resilient to regular stochastic cycles of extreme weather, droughts, and forest fires, over 1.3 million square kilometers of territories are designated as at risk for desertification by the Brazilian National Action Programme to Prevent Desertification. Deserts are barren, biodiversity-impoverished ecosystems in many cases defined by their lack of stability and resilience with regards to ecosystem parameters like temperature. Ecosystems are amazingly resilient to stochastic disaster – examples of secondary succession like the re-establishment of surrounding forest ecosystems following the eruption of Mount St. Helens spring to mind – but extinctions, particularly extinction of ecologically vital “keystone” species, throw ecosystems into disarray and hasten their descent into irreversible degradation and desertification.

But, one might ask, isn't loss of species and ecosystems to some extent the natural course of things? Isn't extinction a natural, maybe even healthy phenomenon? Won't new species spring up to fill the holes left by extinctions? It's true that, as I mentioned before, the vast majority of species (9,999 out of 10,000) that have appeared on our planet have gone extinct. What's unnatural, unprecedented, and downright frightening about current extinctions are the rate at which they're taking place. Paleoecologists estimate that 195,000 years ago (the year anatomically modern *Homo sapiens* arrived on the scene), the rate of extinctions across all groups of organisms was roughly 1-10 species per million species each year. By this baseline, we should expect to see less than 100 extinctions per year given the roughly 9 million species currently extant. Instead, the extinction rate has soared to well over 10,000 species per year – Duke University professor Stuart Pimm's May 29th publication in *Science* suggests that we're losing several dozen species each day. Mass extinctions like the one we're now experiencing are the result of chronic, constant ecological disturbances that are simply too constant and too fast-moving for species to adapt in response. One of the most important parts of the process of evolution and speciation is time. Many generations need to pass before natural selection can craft new adaptations and new species. Even when conditions are at their ripest for rapid diversification and speciation – the dawn of the Cambrian period, or the adaptive radiation of Himalayan songbirds following the Pleistocene ice age – the

process of reproductive isolation and speciation often takes hundreds of thousands of years. Natural selection has already laid down some adaptations against anthropogenic environmental changes; an example is increasingly acidity-resistant biomineralization processes in purple sea urchins. But evolution cannot hope to outrace climate change, pollution, habitat destruction, and all the other side effects of a skyrocketing human population that is expected to reach 9.6 billion people by 2050 – the changes we've wrought in our environment over the last century outpace natural cycles of geophysical change by factors of a thousand or more. Humans, as Nature Conservancy staff scientist Peter Kareiva writes in his text *Conservation Science: Balancing the Needs of People and Nature*, “influence virtually every place on the planet, no matter how remote...it is safe to say that human activities have altered all of the planet's lands and waters in profound ways.” We are ecologically dominant, and there's no pretending that the rapidly accelerating pace of the environmental destruction we cause (and our increasing capacity to wreak ecological destruction – the ever-present threat of nuclear war comes to mind) is natural, normal, controlled, or safe.

The value of biodiversity and the ecosystems that sustain it (and, as we've seen, are sustained by it) manifests itself in ecosystem services, of which there are four typically recognized types: provisioning services, such as food, water, and other substances (medicines, fuel) we acquire directly from an ecosystem; regulating services, such as the purification of air by plants or the role of wetland vegetation in mitigating the effects of storms and floods; supporting services that indirectly support human existence by maintaining other services, such as pollination or the cycle of nutrients and minerals through water and soil; and finally cultural services, the satisfaction of our inherent fascination with and appreciation for the beauty of the natural world – what E. O. Wilson calls biophilia. The value of an intact and thriving global ecosystem often seems vague and nebulous, at least as discussed in popular culture – some sort of fuzzy, New-Age abstraction of harmony and interconnectedness – so perhaps it's best to present some of the numbers behind ecosystems' importance as society-sustaining resources. Of the 150 prescription drugs used in the U. S., 118 are derived directly from natural sources. 100,000 animal species (including everything from beetles to hummingbirds to bats) provide pollination services that make possible one-third of human food; the economic value of these natural pollinators in the United States is estimated to be as high as six billion dollars a year. Peatlands in the United Kingdom sequester 5 billion tons of carbon, helping to keep climactic cycles stable.

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The catastrophic loss of ecosystem services is not some far-off future threat; we've already seen destruction and devastation caused by lost ecosystems. One example is the near-eradication of the tall grass prairie, a unique grassland biome that spread across half of the present-day United States at the dawn of the Holocene 10,000 years ago, but was quickly plowed up by westward-bound settlers and is now represented by less than 1% of its original territory (less than 0.09% of virgin, unplowed tall grass prairie remains). Tall grass prairies are named for what lies above the ground, but prairie grasses' root systems constitute 75% of prairie flora biomass, reaching as far as six feet below the soil. When prairies in Kansas, Nebraska, Oklahoma, Texas, and Colorado were plowed up and replaced by farms in the early 20th Century, the loose, dry topsoil did not last long without the erosion-containing roots of prairie grasses – following a drought in the early '30s, strong winds stripped the land of tens of millions of tons of bone-dry topsoil, leaving 100 million of acres of land completely infertile and displacing millions of small farmers. A more recent example of the devastation resulting from loss of ecosystem services is the havoc wreaked and lives destroyed in wake of Hurricane Katrina in 2005. The rapid removal of Mississippi Delta wetlands – 1,900 square miles have disappeared since the 1930s, and a football field-sized chunk is bulldozed over roughly every hour – meant the removal of a millennia-old ecological cushion against tropical storms. The loss of these sponge-like marsh ecosystems has led directly to the deaths of hundreds and costs of tens of billions of dollars in storm damage. Re-establishment of prairie and wetland ecosystems is ongoing, but these efforts have yet to reverse the continual loss of these biomes, and restoration efforts are hindered by the extinction or near-extinction of species native to these ecosystems – mostly plants, but also animals like the Rocky Mountain locust, the black-footed ferret and the ivory-billed woodpecker. If 30-50% of global biodiversity is lost, a trend ecologists think is likely if current trends of

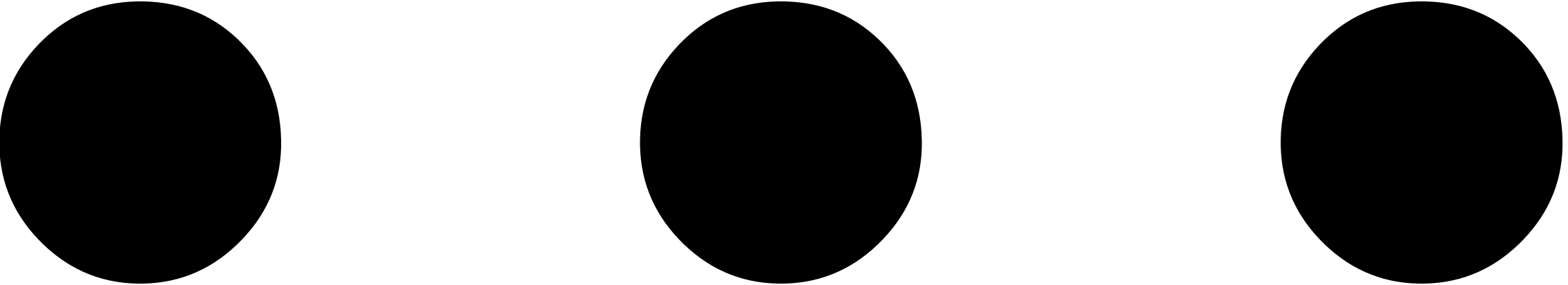
anthropogenic environmental degradation go unaddressed, the ensuing loss of ecosystem services could cripple human society, leaving us with hundreds of millions if not billions of ecological refugees with no means of supporting themselves.

Both the underlying homologies we see in life on Earth, and the variety of adaptations species have evolved over time, make global biodiversity a wellspring of information that could help us advance medically and technologically. The use of bacteria and deuteromycete fungi as biotechnological cloning vectors that has allowed us to synthesize large quantities of medicinal protein products like insulin relies on one of life's most basic homologies, the universality of the genetic code. Our use of mice in medical studies that uncover new treatments for everything from neurological disorders to cancer rely on physiological homologies shared by primates and rodents. Similarly, we can learn an enormous amount from species' adaptations that solve problems that we confront in our own lives; polar bears, now a threatened species due to anthropogenic global warming, are in a sense super-beings in that they can stave off loss of bone mass during periods of immobility, maintain kidney health despite months-long build-up of urinary wastes during hibernation, and avoid diabetes despite the obesity they self-induce prior to their long sleep – all feats that would save thousands of humans lives and billions of dollars if they could be replicated in humans. Nature also allows us to express our creativity and imagination, filling our artistic, emotional and spiritual needs. Animal life inspired some of the first art, the 20,000-year-old paintings on the walls of Lascaux caves, and it continues to inspire art and literature and to form the basis of many peoples' recreational activities, emotional attachments, cherished memories, and spiritual beliefs. In the words of the famous Transcendentalist Henry David Thoreau, “We can never have enough of nature. We must be refreshed by the sight of inexhaustible vigor, vast and titanic features, the sea-coast with its wrecks, the wilderness with its living and its decaying trees, the thunder-cloud, and the rain.”

Less than 1 in 10 species on Earth have been discovered; most living things on Earth (including most of the 30+ species that go extinct each day) have never been seen by human eyes. We don't even begin to understand the complex web of interactions between

species that allow for ecosystems to function; ecological research continues to turn up previously unseen connections between populations and species – just one example is the phenomenon of synchrony across widely-dispersed meta-communities in the northern reaches of Canada, the focus of University of Calgary professor and Dynamic Ecology blogger Jeremy Fox’s recent research. We haven’t even begun to fully tap into the molecular and structural innovation **that evolution has produced, and we haven’t come close to fully comprehending the extent to which we share biological functions with other species.**

Global biodiversity literally keeps us alive. Despite our artificial isolation from the global ecosystem – in E. O. Wilson’s words, “If all mankind were to disappear, the world would regenerate back to the rich state of equilibrium that existed ten thousand years ago” – our lives remain very much dependent on global ecological cycles and the biodiversity with which they are inextricably linked. Humans have come a long way as a species – the extent of our intelligence and enlightenment demands that we, rather than continue to wreak inadvertent ecological havoc, develop new strategies of surviving and thriving that consciously take advantage of and appreciate the multifaceted value of our planet’s biodiversity.



Matthew Schumm is a room-schooled 17-year-old, marine biology geek, bird biodiversity enthusiast, and avid reader and blogger. Matthew spends his time volunteering in the University of Chicago's Department of Ecology and Evolution, taking very long walks by Lake Michigan, reading socially-conscious early-20th-century literature, watching Henry Fonda and Alan Alda act, playing violin, and teaching others about science and environmental issues.

Matthew Schumm

Thoughts on Paper

Ysobel R. Gallo

When I see a blank document I automatically want to write. It is like a button. When you press the ON button on the dishwasher, it turns on. Or like a dog. When it sees something delicious it tries to eat it. When I see a blank piece of paper, or even just a pen, I want to - need to - write. It doesn't matter what about.

Writing for me is simply putting something onto paper for all to see. Thoughts on Paper. That is beautiful. That is why I write.

A thought. It is like a thread, hanging motionless, still, silent in the dark chasm of your head. You swing the headlights on it, it jumps and speeds away into the gloom. You have to snatch, to grab, reach out and touch that thought. Sometimes you never get it. Other times you grab just the tail and are left with only a snapshot before it wriggles through your fingers. The best times are when you get it all, grab it and hold it down, it can't get away, and you can see its intricate beauties. Writing is so that other people can see them too. No one else can see the beauty of your thoughts in just the way you can. I am bad with talking anyway, and when I need to explain one of my thoughts with my voice I can't most of the time. That's why I love to write.

Sometimes it is just a need. I'm thirsty, I need water. My fingers itch, let's write. Most of the time it is a tingle. A joy. The tingling starts in the head; it means I have the Thought. Then it streams down my shoulders, through my arms, into my fingers, and with a press of the keypad, the Thought squeezes through and is onto the paper. It is beautiful, magical; it is the wonder of writing.

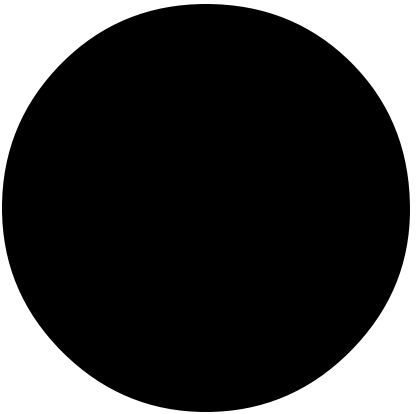
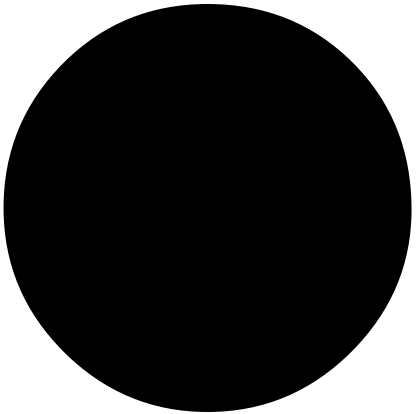
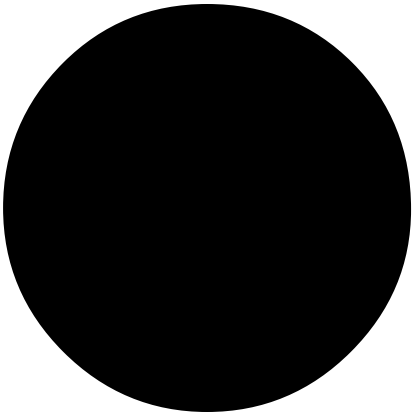
Of course there are bad thoughts too. Unspeakable

ones that you push away instead of grabbing at, or just plain normal everyday bad ones which you discard wearily, feeling a trifle guilty that you recognized those Thoughts at all.

I feel like I shouldn't write those. Not only because in writing you are admitting that Thought, but also because to write it, I would have to grab it, hold it down, study it, dwell on it, and that is not healthy. Of course, some people can pull on gloves over their hands so that they are not affected by those Thoughts the way I am. But my hands must be super sensitive because if I read or write those Thoughts, I will just replay them in my head, remember what they looked like, how they sounded... and they will burn my hands.

So overall, I write the beautiful ones. The paisleys, the red glowing colors, the sparkles, the music: Words in their all. That is why you write. That is why I write.

According to her mother, Ysobel has been creating her own stories and poems since she could talk. She loves the sounds of words and the pictures they create and usually believes that what she imagines is real. Besides writing, Ysobel enjoys singing, acting, and taking care of her pet chickens.



Ysobel R. Gallo

From a Horses's View

Nicola Stella

Chapter One

I take up heavy hoof in writing this, as my master no longer can. I remember, it was a hot July day back in 1754, and it was in the Boston market place. The clamoring people and the peddlers vociferously calling out their wares, made me wonder if they ever got tired. As I took a long, cool drink from the serene waters of the trough, the man from the horse stall came up with another man, whom I identified as a British grenadier officer by his bright red coat and black riding boots over his white knickers. The groom pointed in my direction with a short, fat finger, and the officer came forward with an ostentatious air that told me a little about his personality. He inspected my white coat with care, gave a few grunts, and with a surprised countenance, which I can not describe, returned to his conversation with the groom. I kept my ears open, for I have always wanted to get away from the stable, when I heard the words "...much...you...him"; I couldn't express my joy. The next thing I heard was "I'll take it". That point in my life has always been a milestone for me. The officer then placidly inquired about my name. Upon hearing this, the groom responded with my name, which as you might know is Nelson. And so began my adventures.

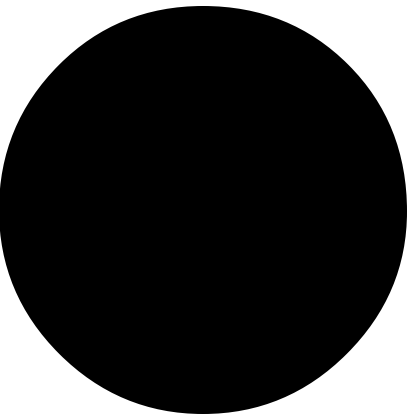
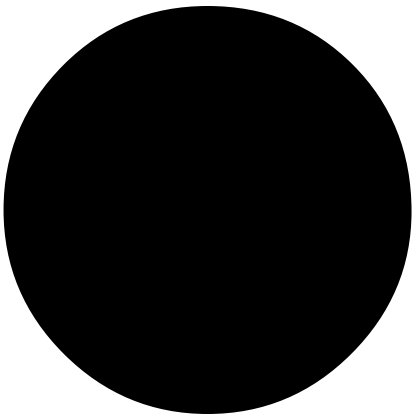
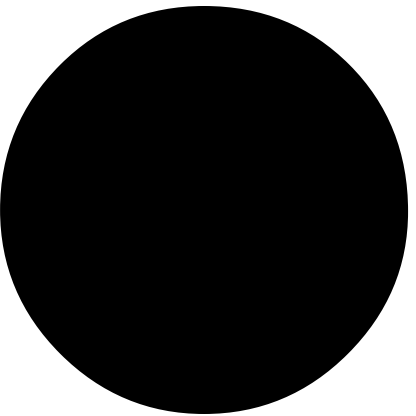
Chapter Two

A couple of days later, I was treading back to camp with the same officer who had bought me. When I arrived at camp I got a nice surprise. I was to be a young colonel's horse. Although the officer had trusted to be good company, I was glad to be with someone new. The officer, with an obsequious glance towards the gen-

eral's tent, handed over the reins. The young colonel then headed towards the tent where he had emerged while coaxing me along. At the tent, he veered left and turned into a stall, where I made myself at home. He then went into the tent where an audible clamor had arisen. In the morning I heard footsteps. They were coming from the tent and I soon saw the colonel. He fed and watered me, as any good horseman would do. He didn't really show much personality. He did seem to have a knack for animals. He sometimes talked to me while he fed me, which showed that I had come to the right place. In the mornings we had our own little routine, he would: say good morning, place new straw on my bed (Wednesdays only), feed and water me, and go on the morning ride. During our morning ride we would take two laps around the camp and ride into the woods a little. It went on like that for a few months, without anything interesting happening. It all changed when my young friend saddled me up early in the morning, before he had even fed me. That part didn't bother me too much, for I had had a large dinner and could wait till lunch for food, but he acted a little differently. It seemed like he was eager, yet he acted nervous. I didn't realize what was happening until I heard the camp's vexatious bugle call signal that we were going to get up and move on a march that could be long and perilous. We .While marching along a great deal of acquiescence was felt, but there seemed to be something else in the air.

To be continued...

Nicolo Stella is usually found either book in hand or ball at the feet, a soccer ball that is. He is eleven years old and lives in Oak Park.



Nicolo Stella

Sebastian

Zola A. Price

My name is Sebastian. Sebastian Shaper Plus Hair Spray is my full name, if you'd like to know. Today is Friday, by the never-failing wall clock, though perhaps unknown to me, it is Thursday or Saturday. However, patterns of life are most easily recognized, and Friday is the day when my life force is drained in a way most vile by the turpitudinous "Holly Locklear" of Charleston, West Virginia. It seems that every Friday, with the exception of those rare times when she is forced to visit her relatives, she attends certain social gatherings involving several others like her; all I can think of is how many of my dear cousins and brothers were drained before such functions. How much I would prefer to be used by a professional, my contents sprayed on the hair of celebrities and upperclassmen instead of teen-aged girls. Holly tends to curl her hair with my friend Carl to the right of me, and then uses copious amounts of my bodily fluids, of which I am still have, thankfully, until she throws me away, alas! How I wish that the garbageman was more sympathetic; I pray that I am recycled rather than smashed and burned.

She walks in now, her ash blonde hair primed for priming, her fair skin coated in enough foundation to smother a kitten. A cute kitten. A nice little grey tabby one. Well, I've gotten off on a tangent now, probably enough time for that evil creature to make a Stygian mess of her hair. Ugh, she has used another few ounces of my strength. It feels as though I've been moved a few inches closer to hell again. Why must I be such a cynical being? I should have been born a living, breathing creature, one with more feeling, with more vigor. I can imagine myself as her; though I would be

so contemptible, I would be so blissful, with moving parts, a rubicund countenance—not only aerosol and plastic wrappings.

I don't see much in this humble bathroom. A window above the latrine shows a small vista of the street; occasionally a child runs by screaming, or Holly's father mows the lawn. That is the best source of my knowledge of the world. The rest of her family comes in here quite a bit. Unfortunately for me, they don't tend to talk to themselves at all, otherwise I would know so much more. Holly tends to sing in the shower. Most of her songs involve the concept of "love", one I am not terribly familiar with.

With nothing to do here, I usually just fall asleep and dream of the happiest times in my life, when I was fresh and new, still packaged on the shelf where I was free to converse with hundreds of my kin, and the kin of their kin. Of course, all of us were named Sebastian by our manufacturer, but the can next to me liked to go by Florian. He said it was the best name in the world, and to his credit it rolled off the tongue, made him sound smart instead of the stupid thing he was, that we all were. He taught me all the best ways to sound smooth and calm, polite and sensible, he taught me everything I know, and for that I will always be indebted to him. He is the thing I dream of most, yes, what I dream of most is one event in particular that was most likely the most important moment of my life, and every time it replays in my head, my fate seems more damned.

"One thing you need to understand, Sebastian, is that we are hairspray bottles, with nothing to gain, and nothing to lose.

If we are proud, it is not because we have something to be prideful of. To me, this wasted wit and charm came naturally, as if it had been infused in my very soul. The only reason it isn't a waste is because of you, dear Sebastian. You are the only thing I have to be proud of. You may have only what you learned from me, but that is enough to take you as far as you will ever go." Of course, I wouldn't call this speech inspirational, but it made me realize that the deck of cards I've been dealt are all I am ever going to get. They're what they are, and nothing more. And of course they aren't anything more! I was made for one purpose only, and that purpose is to style people's hair. I'm not going to run for governor. I'm not going to lead a crusade. I'm going to sit here and do what I was meant to do, no matter the circumstances. Florian also knew this, but he didn't wish to hurt my nonexistent pride. I had to figure it out for myself. I'm just a commodity. Any object that is useful, and able to be sold can be traded like a commodity. Humans like to think that they have rights, that human trafficking is a crime, when many of their peers are slaves to their employers, sacrificing themselves so that they, in turn, can use the fruits of their labor for their own benefit, which they use to buy a commodity that someone else is selling, and the cycle continues. Everything is a trade, barter system or not. So in essence, I'm simply an infinitesimal sacrifice in the grand scheme of things. Even Florian's uplifting messages couldn't change that, couldn't save me. And

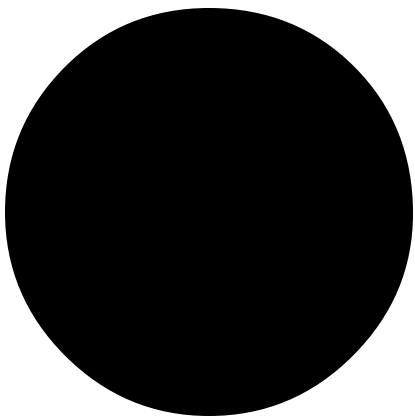
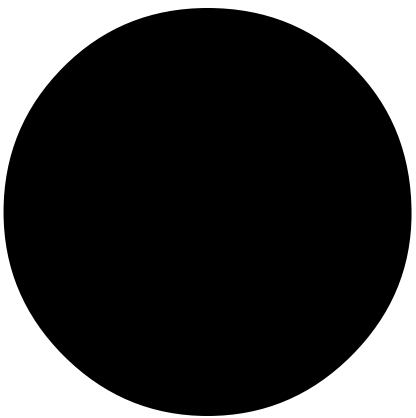
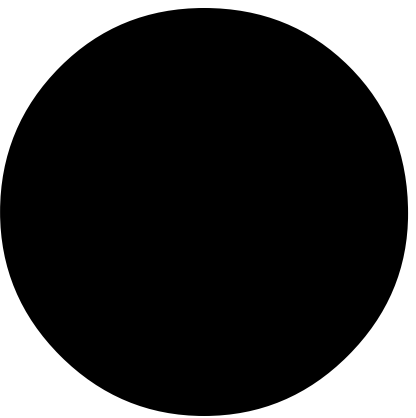
so I fell. Down, down, down, until I got to where I am now.

Now at this moment, Holly's mother happened to come into the bathroom. It appears that on this particular Friday, The whole family was planning to go to a party on this weekend, and for that reason she required Sebastian's services.

I hear a noise, footsteps—Holly's mother. This is the finale. On some Friday, in particularly balmy weather, I will die. I will die now. I will die swiftly. And now, I feel myself fading away. Goodbye then, dear reader. I can only hope you enjoyed your time with me. "This hairspray bottle is out of gas, damnit! Holly! D'ya have any hairspray in your room?" "Really, mom? Why would I keep hairspray in my room?" "Well now I have to go get some real quick, I'll be right back." "MOM! We're going to be late!" "Fine then, I guess you'll just let your mother be seen with what looks like a muskrat on her head."

THE END

Zola lives in Chicago, Illinois. She thinks the best kind of wood for cabinets is cherry and certainly not maple. Her eyes are green, not hazel, or blue, or grey.



Zola A. Price

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A NOTE FROM THE EDITOR

Thank you to everyone who submitted their artwork and writings! This journal is biannual, so another issue will be coming out in December.

Check out the Hu.Art website, huart.weebly.com, for past issues, video interviews, and more!

-Richard Medina

Hi Art

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