

ISSUE 17 — NOVEMBER 2017



RUTGERS
GREEN PRINT

TABLE OF CONTENTS

- 3 UNREST IN CATALONIA
- 5 MEXICAN EARTHQUAKES
- 6 WHAT I KNOW NOW THAT I WISH I KNEW THEN...
- 7 OZONE NEGATIVELY AFFECTS POLLINATORS' ABILITY TO LOCATE FLOWERS
- 8 THE FORGOTTEN R'S
- 9 ENDANGERED SPECIES OF THE MONTH: RED PANDA
- 10 PASSION PUDDLE PLAYLIST

UPCOMING EVENTS

- NOV 08** **Women in Energy Panel Discussion**
Busch Student Center
6:00 pm - 8:00 pm
- NOV 15** **Rutgers Climate Symposium: Climate Change and Cities**
Livingston Student Center
9:00 am
- NOV 17** **Rutgers Energy Institute Policy Seminar Series: A Deeper Look at Deep Decarbonization Pathways for the U.S. Economy**
Alampi Room,
Marine Sciences Building
10:45 am

DESIGN: Fione Chin & Quinn Chin
COVER IMAGE: Jessica Schoen

UNREST IN CATALONIA

By Andrew Cumming



Source: *The New York Times*

On Sunday, October 1st, soccer superstar Lionel Messi scored two goals for his club, FC Barcelona, as they beat Las Palmas 3-0. But it is not the team's win making the headlines this week; rather it is the fact that they played to a completely empty stadium. Fans were barred from entering due to the uneasy political climate in Catalonia. Catalonia, a region of Spain which contains the city of Barcelona, has been in disarray due to a minority section voting for independence from the country.

The referendum, which asked voters if they would like Catalonia to gain independence from the rest of Spain, took place on October 1st. Results show that 90% of the votes were 'yeses', however, not everyone in Catalonia voted. Preliminary polls claimed that only 40% of the region want independence, but the future of the region is still up in the air. The Spanish government, headed by prime minister Mariano Rajoy, does not recognize the legitimacy of the referendum. In fact, national police officers seized ballot boxes and forcibly prevented people from voting for the referendum.

Regional President of Catalonia, Carles Puigdemont, has been working with the Catalan government for the past year or so in an effort to gain independence. Many people in Catalonia feel that they have a democratic right to secede and that their culture, wealth, and heritage is distinctive from the rest of Spain. Catalonia is a wealthier region, and they feel that they are unevenly contributing their money to the government and getting little in return. Puigdemont has claimed that he will accept the results of the referendum.

The Spanish government does not want to let Catalonia leave and will invoke Article 155 of the Spanish constitution. Article 155 gives the government direct control of the region to “restore the legality of the self-governance of Catalonia.” For a country that takes pride in how its provinces can govern themselves, suggesting the use of this constitutional clause is quite drastic. Puigdemont, in defiance to the government, says he is ready to offi-

cially declare independence if the article is invoked. Considering the situation has already escalated to violence, the sovereignty of Spain is currently in dire straits; hopefully, these issues can be resolved peacefully.

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Source: Suffolk Journal



MEXICAN EARTHQUAKES

By Joshua Morales

In a little less than two weeks, the country of Mexico has been devastated by two major earthquakes. In the wake of these earthquakes, rubble from fallen buildings continue to be searched through for any survivors. The Mexican people are now having to cope with fact that many of their homes were destroyed, and many of their friends and family members have lost their lives.

The first earthquake hit late Thursday evening, on September 7th, 2017. As many slept, the 8.1 magnitude earthquake “was registered off Mexico’s southern coast...some 600 miles southeast of the capital”². Mexico and Guatemala both felt the powerful shaking of the earth. The earthquake’s epicenter was not on land. In fact, it was about 74 miles off the coast, which meant that tremendous tidal waves were headed for the western coast of Mexico and Guatemala. According to the National Weather Service’s Pacific Tsunami Warning Center, “tsunami waves taller than 10 feet (3 meters) [hit] the coast of Mexico”². Thousands of people had to evacuate because of the impending waves. An estimated 1.85 million homes lost their power.

A short 12 days later, on the anniversary of the devastating 8.0-magnitude earthquake of 1985, another tremor struck. This 7.1 magnitude earthquake was about 76 miles southeast of Mexico City¹. While smaller in magnitude, this earthquake was much more devastating than the one only days earlier, as the epicenter was on land. The earthquake spared nothing from its full force. Many buildings collapsed, including a school full of children. Nicole Chavez quotes the Mexican President, Enrique



Source: CNN

Peña Nieto, when he states, “22 bodies were found in the debris of an elementary school in Mexico City that collapsed.”³

These two earthquakes have caused many casualties. The combined death toll of both earthquakes are estimated at about 450 people. The September 7th earthquake claimed the lives of 90 people. Most of these casualties came from Juchitan, a city near the coast in Southern Mexico. Most of the city was destroyed by the initial jolt and “nearly 800 aftershocks of all sizes since [the] big quake”¹. The entire country of Mexico was not completely affected by this earthquake, but during the later ‘quake, almost all the Central American country felt the earth shake beneath them. This earthquake was far more devastating as it claimed the lives of about 350 people.

While both these earthquakes affected Mexico, they are said not to be connected. While Mexico is in a subduction zone, a part of the earth where one slab of crust is slowly moving under another, the earthquakes did not originate from the subduction zone. The

two plates that are currently sliding against each other are the Cocos Plate and the North American plate. The subduction zone between these two plates was not the cause for these two earthquakes. According to Matt Stevens, “both earthquakes that struck Mexico [last] month occurred within the sinking Cocos plate, rather than between the Cocos plate and the North American”⁴. If the tremor had originated from the subduction zone, the earthquake that ensued would be far more powerful and devastating.

While Mexico has been attempting to recover from the two strong tremors, less powerful quakes have continued to bombard the country. While some attempt to cope with their traumatic experiences, Mexican officials continue their effort to clear rubble in search

of survivors. The rebuilding process for the Mexican people will be long, as they attempt to restore power, water services, and rebuild fallen buildings.

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- 3-Chavez, Nicole. “Central Mexico Earthquake Kills Scores, Topples Buildings.” CNN. Cable News Network, 20 Sept. 2017. Web.
- 4-Stevens, Matt. “Why Two Major Earthquakes Hit Mexico, Explained.” The New York Times. The New York Times, 20 Sept. 2017. Web.

WHAT I KNOW NOW THAT I WISH I KNEW THEN...

The entrance hall of the Douglass Library is currently hosting an exhibition of inspirational messages written by Rutgers alum and friends, in celebration of the Douglass College’s Centennial. In homage to these professional women, here are our thoughts on looking back...

Jon wishes he bought more Sailor Moon DVDs.

Tyler wishes he knew that the cake wouldn’t deflate if he ran around the house with his siblings.

Jess wishes someone told her that the ‘freshman 15’ is real.

Emily wishes she spent more time reading.

Fione wishes she had spent more time outside.

Quinn wishes she could have stood up for herself more.

Dayvonn wishes he spent time everyday practicing basketball.

Casey wishes he started bird watching at a younger age.

Tyler wishes he knew how short childhood would be.

Jess wishes she knew how hard it is to make doctor’s appointments.

Dayvonn wishes he cursed out adults more.

Casey wishes he had established more of a routine.

Jon wishes he knew that 22 would not be the end of life.

Emily wishes she knew it was okay to change.

Visit <https://douglass.rutgers.edu/100-years> for more anniversary information and events.

OZONE NEGATIVELY AFFECTS POLLINATORS' ABILITY TO LOCATE FLOWERS

By: Andrew Cumming

Air pollution, primarily ozone, impedes bees' ability to interpret scent molecules emitted from flowers. Ozone is a secondary air pollutant, meaning it is not directly human-made, but rather it is created by reactions with other air pollutants (like nitrate and hydroxyl radicals) and sunlight. The main sources of the nitrate and hydroxyl radicals are cars and fossil-fuel burning power plants.

Flower scent molecules are complex hydrocarbons known as Volatile Organic Compounds (VOCs). Typically, a bee can identify a specific flower VOC from up to 4,000 feet away, however, ozone can have a drastic impact on this. Ozone is a highly reactive compound which breaks down organic molecules like VOCs. According to Jose Fuentes, a meteorological and atmospheric science professor at Penn State University, a scent may only travel up to 1,000 feet in highly polluted areas before being destroyed. Once destroyed, bees have a much more hindered ability to forage, causing them to spend a much longer time looking for flowers. This could possibly have an intricate, detrimental effect on plants, pollinators, and ecological communities as a whole.

Current EPA standards allow ozone concentration to be 75 parts per billion (ppb) over an eight hour period; however, Fuentes' team reported that concentrations of only 60 ppb (which is considered to be moderate by the EPA) were enough to thoroughly hinder bees' ability to identify floral scents. In highly polluted areas, such as Los Angeles or Wash-

ington D.C., the ozone concentration consistently rises above the standard limits, especially in the summertime.

This issue is of utmost importance because of how crucial bees are for the pollination of our crops, ecological interactions with plants, and overall understanding of air pollution and health standards. It is imperative that more research be done to fully comprehend the impact that ozone has on bees and other pollinators.

REFERENCES

<http://www.washingtonpost.com/wp-dyn/content/article/2008/05/04/AR2008050401737.html>

<http://news.psu.edu/story/416642/2016/07/06/research/bees-ability-forage-decreases-air-pollution-increases>

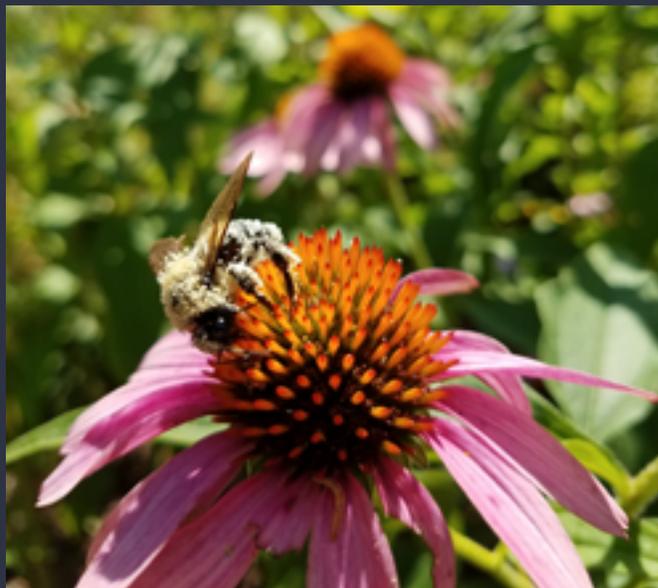


Photo by Michael Roswell

THE FORGOTTEN R'S

By Emily Hunziker

The importance of recycling is un-debatable. Single-use plastics and other such materials are notorious for having an eternal residence on our Earth's surface. But eliminating these from our consumerist lifestyles is not practical or likely. So, we focus on the things we can do something about.

The mantra of waste management is well-known: reduce, reuse, recycle. The three R's are intended to cut down on the waste that ends up in landfills and reduce our overall carbon footprints. Limiting our waste is one of the many things we can do to play our part in preserving the planet, and many people make sure to rinse their yogurts or soup cans so they can be recycled appropriately. However, recycling seems to have taken the forefront of the campaign, with scant effort towards 'reduce' and 'reuse' in comparison.

Kudos to the take-out spot that uses brown bags instead of plastic, but where does that brown bag go? The waste management mantra was created as a hierarchy, with primary emphasis on *reduce*. The less garbage you use, the less that needs to be recycled in the first place (a costly and energy-intensive process, intended as a last resort for many materials). Applying this concept to one's daily routine requires frequent internal debate: Is this something that needs to be done? Can I use something else for the same purpose? Is this something that I need? Limiting the number of products used and purchased can help to eliminate much waste.

The second 'R' relates back to the point about the paper bag. Bags in general are very useful



Photo by Emily Hunziker

to help carry all our STUFF. Reusable bags are becoming quite popular as well. I don't leave home without them, because they're stored in my trunk, ready to shop at a moment's notice. The extra step of bringing the bags back to your car is the main conscious effort it will take to make this simple change. To further *reuse*, there are many great alternatives to finding smart deals on everyday goods such as [Craigslist](#), [Freecycle](#), [Goodwill](#), and [Plato's Closet](#). Try one of these, or your own local thrift shop, instead of perusing a Walmart next time you're looking for something specific.

This is not to knock on recycling by any means. Recycling is clearly our strongest suit of the three R's, although even this could be exercised to a greater extent. Recycling is actually mandated by law in New Jersey, but based on the scarcity of public recycling receptacles this is largely an individual endeavor. There is no way to enforce the other 2 R's either; the forgotten two. It requires daily personal contributions with little immediate incentives, save for concern for the future.

For more tips on how to reduce your waste, visit <https://www.conserve-energy-future.com/reduce-reuse-recycle.php>.



ENDANGERED SPECIES OF THE MONTH: RED PANDA

By Jessica Schoen

The red panda (*Ailurus fulgens*) is a mammal native to the Eastern Himalayas and South-western China. They are often referred to as “the lesser panda” or the “firefox.” Scientists have a hard time classifying the red panda. As of now, they are considered to be a relative of the giant panda and the raccoon.

Their habitat consists of rainy temperate forests in high-altitudes. They spend most of their time in trees which is where they most often eat and sleep. They mostly munch on bamboo but occasionally eat small mammals, birds, eggs, flowers, and berries. They cannot digest cellulose; therefore, they must digest

a lot of bamboo. When looking for food, they most often do it at dusk or dawn. They generally weigh 12 to 20 lbs and are 56 to 62 cm long.

The red panda is territorial and only gets together with others during mating season. Females give birth in the spring and summer. They typically have one to four babies. The dads usually leave at this point, leaving all the work to the moms. Babies stay in their nests for about 90 days. They reach their adult size after 12 months and become sexually mature at 18 months.

The red panda is considered endangered. It is estimated there are less than 10,000 red pandas left in the wild. Because of slow rates of reproduction, the red panda has difficulty with recovering from population declines. Much of the decline can be blamed on deforestation. Many people living in the area depend on the red panda's habitat for survival. Deforestation leads to fragmentation of the red panda population. In addition to this, the red panda is very heat sensitive and cannot survive in temperatures over 77 °F. Therefore, as greenhouse

gases continue to exacerbate climate change and increasing temperatures, we could see an even more severe decline in the population.

There are reasons to look forward though. Most countries are acknowledging climate change as a given and therefore are working to mitigate things such as temperature increase. In addition to this, fortunately, there are organizations that work to protect the red panda. One such organization is the Red Panda Network (redpandanetwork.org). You can adopt a red panda or donate to the cause.

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National Geographic. (2017). "Red Panda". Retrieved 12 October 2017 from <http://www.nationalgeographic.com/animals/mammals/r/red-panda/>

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PASSION PUDDLE PLAYLIST

By Dayvonn Jones

1. Shook Ones, Pt. II by Mobb Deep
2. Draco by Future
3. Butterfly Effect by Travis Scott
4. XO Tour Llif3 by Lil Uzi Vert
5. Portland by Drake Feat. Quavo, and Travis Scott
6. Blem by Drake
7. Ice Melts by Drake Feat. Young Thug
8. Roll In Peace by Kodak Black Feat. XXXTENTACION
9. Live Up To My Name by Baka Not Nice
10. Gyalchester by Drake
11. I Get The Bag by Gucci Mane Feat. Migos
12. Crew by GoldLink Feat. Brent Faiyaz, and Shy Glizzy
13. Habaesha by Ramriddlz