



# RUTGERS GREEN PRINT

Issue 8 - October 2016

# Contents

3

Before Trickery and Treats

5

Landmark Paris Climate Agreement Effective November 4th

6

Endangered Species of the Month: Red Slate Ornamental Tarantula

7

Pipeline Controversy In North Dakota

9

Making Meaning From The Meaningless

4

The Little Things are Big Things Too

5

The Future of Farming

7

“Take Back the Tap” Targets Busch

8

Untitled

**RUTGERS**  
THE STATE UNIVERSITY OF NEW JERSEY

*Human Ecology Brown E Series Presents*

**Being Small In a Big World: The Struggle 'Over' and 'Of' Smallholders**

**Wynand Boonstra**  
Associate Professor, Stockholm Resilience Center  
Stockholm University

Smallholders all over the world perform a crucial role in maintaining local and regional food production. They typically work in ecologically fragile agrarian environments, with limited control and access to land, labor and capital. Despite these adverse conditions, they often prove capable of developing adaptive, efficient and sustainable forms of agriculture. Yet, the future of smallholders is insecure due to threats from environmental change, modernization of food production, and geopolitical struggles over natural resources. It remains uncertain if and how smallholders can adapt to these threats. For this seminar I would like to discuss ways to assess the responses of smallholders to threats, and how we can explain and qualify the diversity of their responses in terms of resilience.

Wynand Boonstra graduated in Rural Sociology (MSc and PhD) from Wageningen University, and currently works as Associate Professor at the Stockholm Resilience Centre. The thematic focus of his research can be summarized broadly as the social dynamics and relations that shape the primary use of natural resources. His case studies include investigations of how primary producers - farmers and fishers - impact and depend upon terrestrial and marine ecologies. He is particularly interested in understanding (mis)matches between the values, interests of farmers and fishers and the social and ecological opportunities to realize their preferred farming and fishing styles.

Location: Blake Hall, Room 131, Cook Campus  
Date: November 2, 2016  
Time: 12:30 to 2:00 pm

## Upcoming Events

October

28

*Taking Chances: The Coast After Hurricane Sandy*

🕒 1:00 PM

📍 Livingston Hall, Livi Student Center

November

2

*Being Small In a Big World: The Struggle 'Over' and 'Of' Smallholders: Wynand Boonstra*

🕒 12:30 – 2:00pm

📍 Blake Hall Room 131

November

9

*“You’re the Expert” Live NPR Podcast Taping*

🕒 7:00 PM

📍 George St Playhouse

## BEFORE TRICKERY AND TREATS

by Ramya Kappagantula

Not only is it one of America's favorite holidays, Halloween has very fascinating Celtic roots. It was originally a harvesting festival, known as Samhain (pronounced Sah-wain), which marked the end of summer. The Celts believed that it was during Samhain, when the seasons were changing, that they could have the most interaction with the spiritual world, allowing the souls of the people who died in the past year to make their way into the otherworld and vice versa.

Samhain was the most significant holiday filled with many festivities, all of which involved the visitors from the otherworld. As the spirits would pay a visit, offerings of food and drink would be left for them. When people had feasts, they would set aside a place on the table for the souls of the dead. There were also bonfires to honor the souls and guide them on their journey into the natural world. Furthermore, later customs of Samhain, guising and souling, led to what we know now as trick-or-treating.

When Christian missionaries reached the Celtic regions, they decided that All Saints Day, a day to honor every Christian saint, could coincide with Samhain. This way, it would be easier to assimilate the Celts into the new religion. All Saints Day, also known as All Hallows Day falls on November 1st; as a result, All Hallows Eve, now called Halloween, falls on October 31st.

In America, Irish and Scottish immigrants popularized Halloween in the 19th Century. During the 1900s, Halloween became commercialized as stores carried many costumes and a greater variety of candy. The [National Retail Federation \(NRF\)](#) estimates that Americans will spend more than ever, about \$8.4 billion, an all-time high, for the festivities this year. We have done it again, turned another sacred tradition into a billion-dollar industry.

## HARVEST SEASON

Fall is here, and along with it, the annual Scarlet Harvest! Taking place October 19 on the Douglass Woodlawn, this year's RUPA-sponsored Scarlet Harvest had the familiar harvest feel, mixed with some fresh new fall-themed events such as pumpkin pie eating contests, porcelain pumpkin painting, and tons of other free stuff.

To kick off the festival, up-and-coming Philadelphia band 'Post War Dream' performed a series of original songs off their debut LP, along with some sick covers of throwbacks like "Teenage Dirtbag" by Wheatus. People were out and about soaking up arguably the last warm day until Spring (unless climate change has other plans), while stuffing their faces with sweet potato fries, pumpkin pie, and vegan chili. If eating food the old fashion way just isn't your style, the pumpkin pie eating contest let everyone get down and dirty in a no-hands-allowed skirmish to see who could finish a whole pumpkin pie first.

Overall it was an awesome day to be out jamming to tunes and saving a meal swipe all while getting into the fall spirit. Special thanks to RUPA for putting in the time and effort for another successful Scarlet Harvest. [Check out their Facebook group](#) to see other upcoming Rutgers events such as Six Flags Fright Fest and the Jets vs. Ravens at MetLife Stadium. Until next year!

*Jonathan Baier*

## Passion Puddle Playlist!

by Ian Montgomery

1. Daydreamin' (Instrumental) - Lupe Fiasco
2. Next To You - Alicks
3. The Suburbs - Arcade Fire
4. Myth - Beach House
5. Think - Kaleida
6. Race For The Prize - The Flaming Lips
7. Why Even Try - Theophilus London
8. Salad Days - Mac DeMarco
9. Easy Easy - King Krule
10. So What - Miles Davis



Photo: Emily Hunziker

## THE LITTLE THINGS ARE BIG THINGS TOO

by Emily Hunziker

This summer I had the privilege to travel to Indonesia as part of a study abroad program. The course focused on conservation and primate ecology, and I took part in activities that I would never have been able to had I travelled there independently.

The first week was spent in a remote research station in the heart of the Bornean peatland forest—probably the most adventurous I've been to date. We lived largely from resources the land provided us with, among orangutans, sun bears, and the other native plants and animals.

Not far from the campsite is the village of Tuanan. The people who live here are part of the Dayak tribe, an ancient and diverse indigenous group whose villages span many of the Indonesian islands. While their history is rich with magical tales, their lives are very simple. The river that we journeyed to reach our camp is an important aspect of their society; it grows their plants, cooks their food, but also carries all their bodily waste.

For years, village leaders asked the Western researchers who visited Tuanan for help with providing clean water alternatives, and this past summer we were able to put a plan into action.

The school teacher of Tuanan organized the day as a lesson to teach all the village people why their drinking water was unsafe. Then we worked together to make portable water filters, one for each household.

The materials were simple yet efficient; charcoal, sand, and other natural elements. We made sure to emphasize to each family that some of the materials must be replaced every six months to maintain functionality.

Being able to help these people, by making such a significant impact in their daily lives and overall health, was an incredibly uplifting experience. They were so gracious to us for giving them access to clean water, something some of them may never have tasted before. They served us lunch and the children performed traditional songs and dances. We even got to play volleyball together, a common past-time for the young men.

A side effect of implementing this project for a less-fortunate community is the contagiousness of the feeling one gets after helping others. At least from my perspective, I could spend every summer building water filters for remote villages across the globe, just to have that feeling again. I never thought I would be able to affect people's lives in such a personal and persistent way, but now I know I can do it again.



Photo: JP Calcitrai

## LANDMARK PARIS CLIMATE AGREEMENT EFFECTIVE NOVEMBER 4TH

by Ben Purzak

Almost a year after the groundbreaking agreement to mitigate climate change the time has come to ratify the agreement. This comes after 55 countries accounting for at least 55% of global emissions have adopted the agreement. 62 countries had already done so by the beginning of October but they only accounted for 52% of emissions. The recent addition of India pushed the threshold over the edge. In total, 73 of the 197 parties, accounting for 56.87% of the world's emissions, have come together to ratify.

So what is the Paris climate agreement?

In short, it is an agreement between nations that sets out to create a global action plan to put the world on track to avoid dangerous climate change effects by limiting warming to well below 2 degrees Celsius.

Some key elements include:

### ✦ **Mitigating emissions**

- Long term goal of keeping global temperature below 2 degrees Celsius.
- Need for global emissions to peak as soon as possible.
- Undertake rapid reductions in accordance with science

### ✦ **Transparency**

- Ratified parties come together every 5 years to track and set more ambitious goals.
- Report to each other and to the public on how well parties are doing in reaching goals.

### ✦ **Adaptation**

- Strengthen societies' abilities to cope with impacts of climate change.
- Provide international support for developing countries.

### ✦ **Support**

- Developed countries will continue to support climate action to reduce emissions and help developing countries in doing so.
- Developed countries intend to continue their existing collective goal to mobilize 100 billion USD per year by 2020 and extend it to 2025 with collecting more money.

These are just some of the factors that parties agreed to. It is the first step in many to come to create a world we can all live in sustainably and green.

## THE FUTURE OF FARMING

by Ryan Newland

If I told you that New Jersey was home to one of the largest and most technologically advanced farms of its kind ever developed, would you believe me? Well, maybe, you're reading the Green Print after all. But, what if I said that the farm in question was in Newark? And that it doesn't use any soil...or water...or sunlight for that matter.

Housed inside a 69,000 sq. ft. converted steel mill in Newark, AeroFarms finished construction on their vertical aeroponics facility back in September. While you might be familiar with the concept of hydroponic farming, growing plants by submerging their roots in a water/nutrient solution, aeroponic farming is a little bit different. Instead of growing in soil or in water, AeroFarms is growing its plants on a cloth made out of recycled plastic, and using LED lights and a nutrient mist to grow their crops. This technique claims to use 95% less water than traditional farming, 40% less water than hydroponics, zero pesticides, herbicides, or fungicides, and through changing the specific light spectrum of their LEDs, allows for control over size, shape, texture, color and flavor of the crops.

As a result of their technical advancement over traditional field farming, AeroFarms claims to be capable of producing 2 million pounds of crops per year! And because a facility like this could feasibly be built anywhere, aeroponic farms could be a fantastic way to help eliminate food deserts, which is specifically what they are trying to accomplish in Newark. Farming without sun, soil, or water: isn't it amazing what we can accomplish nowadays?



Photo: aerofarms.com



Photo: edinburgh247.com

## ENDANGERED SPECIES OF THE MONTH: RED SLATE ORNAMENTAL TARANTULA

by Jessica Schoen

In honor of a *spooky Halloween*, this issue is on the Red Slate Ornamental Tarantula.

The Red Slate Ornamental Tarantula's scientific name is *Poecilotheria rufilata*. They are part of the tarantula family. This particular tarantula is native to the South Western Ghats of India. It lives in tree hollows under the bark. Typically, the female is larger than the male. The female's body length is 8 cm while the male's is 3.5 cm.

This is a type of parachute spider. Parachute spiders jump out of a tree and sail to the ground when alarmed. This genus is known for their bright colors and size. On the upper side of the body, it is dull brown and gray coloration which is used as camouflage. On the underside, it is brightly colored. To ward off predators, it raises its forelegs and reveals bright colors underneath. This type of spider does not make a web rather it just hides until it's prey is seen; then the spider ambushes the prey.

The Red Slate Ornamental Tarantula is considered threatened. The continuous cutting of trees for timber has led to habitat loss for this spider. This species is limited

to less than five locations in the Western Ghats. When the spiders wander into the homes of people, they are often killed. The pet trade has also had a tremendous impact on the Red Slate Ornamental's numbers. Europe and America are the usual places where these trafficked animals go.

Fortunately, to curb the problem, India has placed this species on the Indian Wildlife Protection Act. It is also safeguarded under the Convention on International Trade in Endangered Species of Wild Fauna and Flora regulations but the species is still involved in the pet trade. Their numbers are still decreasing. More efforts must be made to continue the existence of this species.



## "TAKE BACK THE TAP" TARGETS BUSCH

by Andrew Cumming



Campaign coordinators Megan Kenny (left) and Hannah Mulligan (right)

Another semester at Rutgers means new objectives and tasks for clubs across campus. For the Students for Environmental Awareness (SEA), this entails a variety of campaigns focusing on environmental issues; Take Back the Tap is one of those campaigns run by junior Megan Kenny and sophomore Hannah Mulligan.

Take Back the Tap is an environmental campaign based out of Food & Water Watch, a national organization focused on healthy food and clean water for everyone. Their goal is to decrease dependence on privatized water sources like bottled water by increasing the availability and quality of tap water. In attempting to fix local problems, they also hope to address the issue of water privatization, the act of private corporations buying or operating public water utilities.

Last year, Take Back the Tap was able to team up with SEBS Governing Council to install water bottle fill stations in residential buildings across the Cook and Douglass campuses. A total of \$6000 was allocated for this task. This semester, they hope to accomplish a similar feat on Busch campus. Busch campus lacks fill stations in many buildings, and with the help of student organizations based on Busch, Take Back the Tap hopes to push for the funding of new fill stations in residential and academic buildings.

Campaign coordinators Megan Kenny and Hannah Mulligan shared their insight on the issue of water privatization with Green Print. Kenny, who joined SEA as a freshman, admitted to having little knowledge on water privatization prior to Take Back the Tap. "A lot of people are uneducated about this issue," said Kenny. "They

look at it from a conservation standpoint - turning off the faucet when brushing your teeth, for example. There's more to water politics than this."

"Water privatization is an interesting intersection between environmental and social justice issues," added Mulligan. "Water is a basic human right. We need to invest in water infrastructure." Both agreed that the issue of water privatization is one that affects everyone, and that water should be affordable and accessible to all.

"Water is our health," said Kenny. "Take Back the Tap allows our voices to be heard."



## PIPELINE CONTROVERSY IN NORTH DAKOTA

by Tyler Lepucki

Whether you've heard about it or not, there has been an important conflict occurring in the upper midwest over the past few months. Dakota Access, LLC has been moving forward with plans to build a pipeline that would pass through North and South Dakota, Iowa, and Illinois. This pipeline can potentially pollute the Rock Sioux's (a standing Native American tribe) water supply that is relied on by millions, and would plow through acres of sacred lands.

The Natives took action filing an emergency injunction against Dakota Access, LLC, that was swiftly denied. All the while, regular citizens and natives of the area have been peacefully protesting on-site (private property), leading to both physical violence from security and arrests of protesters. Some forms of violence being used are pepper spray and attack dogs, though guards may have the legal standing to do so, people on social media have been arguing that morally, this isn't right.

Of those being arrested, some pretty well known names made it to the list. Actress Shailene Woodley was arrested most recently. Amy Goodman was also arrested, and presidential candidate Jill Stein was charged with a misdemeanor. Until more legal progress is made, all that can be done is continued protesting.

**Untitled**  
by Connor LaMontagne

When you're home alone  
And you hear creaks or steps from behind  
Know this, dear friend:

Nothing waits for you in the darkness  
There lies only stillness and serenity  
Be at peace with the mystery surrounding you  
And see not

No shadowy arm protrudes from the depths  
And in time, you'll come to believe  
That the depths that hold all the fear in the world  
Are really not so deep

When at last you've turned your head  
To look where you can't yet see  
The dread and fear that once there lie  
Give way to curiosity  
Soon, blazing Sun or lighted lamp  
Shall be distanced from your mind  
So shut your eyes and soon you'll find  
A tender tune in the dark of night

All things wait for you in the darkness  
There lies a joy that you cannot see  
Be at peace with the emptiness surrounding you  
And see not, but feel all

No shadowy arm protrudes from the depths  
And in time, you'll come to believe,  
That the depths that hold all the hope in the world  
Are really all you need

## MAKING MEANING FROM THE MEANINGLESS

by Ian Montgomery

Recent studies suggest that there are two trillion galaxies in the observable universe. These galaxies, on average, have between 100 – 400 billion stars, with many having their own planets potentially like ours orbiting them. There may even be other advanced life, but we will likely never know as the expansion of the universe will prevent us from ever reaching them.

Something we do know, however, is that you will most likely die, your friends will most likely die, your family will most likely die, and they will all be forgotten. Even if you were able to technologically augment your body to live trillions of times the human lifespan, the heat death of the universe will ensure that current states of matter cease to exist.

Why do you care so much that the cute girl/boy turned you down? Why do you not make sacrifices today so that you can be a better person tomorrow? Why do you not try every single thing you can get your hands on? You won't have long to see everything. You didn't exist for billions of years and you won't exist for billions of billions more. You arose out of nearly infinite chaos, molded into order, and were given the brief chance to live on the only known habitable place in the observable universe to appreciate countless people, experiences, and opportunities. Stop caring about what others might think. Step out of your comfort zone. Meet someone new. Try harder. Learn something. Improve.

Or don't. It won't matter anyway.

## REFERENCES

Landmark Paris climate agreement effective  
November 4th

- [http://ec.europa.eu/clima/policies/international/negotiations/paris/index\\_en.htm](http://ec.europa.eu/clima/policies/international/negotiations/paris/index_en.htm)
- [https://www.washingtonpost.com/world/europe/paris-climate-agreement-to-take-effect-in-30-days/2016/10/05/7d16719a-8b1a-11e6-8cdc-4fbb1973b506\\_story.html](https://www.washingtonpost.com/world/europe/paris-climate-agreement-to-take-effect-in-30-days/2016/10/05/7d16719a-8b1a-11e6-8cdc-4fbb1973b506_story.html)

Pipeline Controversy In North Dakota

- <http://college.usatoday.com/2016/10/18/news-101-north-dakota-pipeline/>

Endangered Species of the Month: Red Slate  
Ornamental Tarantula

- Siliwal, M., Molur, S., & Daniel, B. <http://www.iucnredlist.org/details/63567/0>
- Poecilotheria rufilata. [https://en.wikipedia.org/wiki/Poecilotheria\\_rufilata](https://en.wikipedia.org/wiki/Poecilotheria_rufilata)
- Reddish parachute spider (Poecilotheria rufilata). <http://www.arkive.org/reddish-parachute-spider/poecilotheria-rufilata/>

The Future of Farming

- <http://aerofarms.com/>

*DESIGN:*  
Quinn Chin & Kris Khunachak

*COVER PHOTO & BACKGROUND PHOTOS:*  
Emily Hunziker, Michelle Arias, Ramya K & JP Calcitrai

Follow us on **Facebook!**