# Big Blue Goes Green

Department of Psychology
Environmental Club Newsletter Issue 2 Fall 2018

## Welcome!

We are excited to introduce the **second issue** of the Department of Psychology's Environmental Club newsletter! For those of you who are unaware, a group of graduate students have come together under the guidance of Dr. Fanli Jia in an effort to make our department and campus more environmentally conscious. In order to spread awareness of current initiatives and upcoming events, we decided to create a semiannual newsletter. We will also include current research regarding social and cultural psychology and environmentalism.

## Our Mission

*Photograph by Dr. Eric Podchaski*

With a new academic year, comes new initiatives. Between fall and spring semester, we plan to spread awareness of environmental efforts on campus and in South Orange with the purpose of increasing community involvement in pro-environmental activities. Additionally, we will be expanding our coverage of environmental news to various states across the country. We hope that by expanding the scope of the articles we present, we can demonstrate that environmentalism is more than a series of actions, it is a collective mind set.

## Join the Green Team!

Being a part of the movement to be environmentally conscious may seem like a daunting task when you consider your impact on a global scale. You might ask how adding a recycling bin or opting not to print out a ten-page research article will reduce carbon emissions. Well, it won't. At least not right away. However, these simple actions can provoke others to engage in a similar behavior. This chain reaction is what leads to change on a larger scale. We believe that our efforts are small, but important (hence our motto: Major Impacts in Minor Ways).

*Photograph by Dr. Eric Podchaski*

We also believe that everyone can contribute in their own way. Whether it's modifying your day-to-day habits or encouraging your colleagues, you can join the Green Team!

Go Green Together

If you are interested in joining the Psychology Department's Environmental Club, please contact us at EnvironmentalClubSHU@gmail.com or Advisor Dr. Fanli Jia Fanli.Jia@shu.edu

***A special Thank You to Dr. Eric Podchaski for the beautiful photographs included in our newsletter.***

# World News

## "Are You Going to Finish That?"

By Kaylise Algrim

Colleges have a food waste problem. Nationwide, colleges throw away 22 million pounds of food each year. While there is no single cause, dining halls make up a large part of the problem. Universities with campus dining, like Seton Hall, are set up to have plenty of food available to students. While it is a gift when in need of a midday sub sandwich, it also means dining halls end up with huge amounts of weekly waste.

Food waste is gaining more recognition as a serious threat to the environment. Globally, 25% of the world's fresh water is used to grow food that will never be eaten. The United Nations estimates one third of all food intended for human consumption is wasted worldwide. If food waste were a country, it would trail the United States and China as the third largest greenhouse gas producer on Earth.

Knowledge about food waste has grown in the last few years, and colleges and universities are exploring different ways to address the issue. The Kimberly Clark corporation offers grant funding to universities for sustainability projects, one of which was recently awarded to Butler University to share the cost of hauling pre-consumer waste to a composting facility. The University of Maryland is creating an online training system called GreenEdu, similar to AlcoholEdu, which educates students on meal planning and food waste prevention. While these initiatives will not solve the food waste crisis, setting attainable goals and consistently implementing them can make big changes in the long-term. So, what can a school like Seton Hall University do?

Reference: L. Poon, "When Food Is Too Good To Waste, College Kids Pick Up The Scraps," NPR, 27-Feb-2015. [Online].

## California Flare Ups on the Rise

By Ana Da Silva

If you've been paying attention to the news or scrolling through social media, you've probably noticed the string of natural disasters, such wildfires. Places one would not normally expect to experience wildfires have seen an increase in both frequency and severity of fires in recent years. It may be difficult to see such drastic changes in environmental events and not wonder if the fires are an effect of climate change in the area. Janice Coen, a meteorologist at UCAR, researched these severe wildfires using computer program models. These models gathered information about an area's temperature, humidity, air pressure, and wind speeds to build a simulation wildfire. The results demonstrated that megafires created a cycle of heat rising while simultaneously drawing down cooler air, creating a forceful air mass. Combined with the local trees and brush, lack of rainfall, and weather at the time of some fires, Coen's simulations recreated the megafires we see broadcasted on the news of late. This suggests that climate change does not directly cause the increase in deadly wildfires; however, it does point to climate change being an influential factor. The recent drought and water crisis of wildfire afflicted areas may be attributed to climate change, in part, as drier conditions were shown to be conducive to fires starting and continuing.

It is important to be mindful of various environmental factors previously discussed, but also to social and political factors which may contribute to the severity of these extreme natural disasters. For example, local and federal politics affect environmental protections and the funding available for emergency services and preventative programs. For many years the Environment Protection Agency used federal funds to assist local governments clear weeds, brush, and other vegetation that, if left uncontrolled, provided fuel for smaller wildfires. The current federal administration has pulled back from funding various environmental protections and funding for preventative measures concerning natural disaster relief. After seeing reports on the destruction of these fires in California, many are left wondering if the federal and local governments could have done more to help the area before, during, and after these disasters. This begs the question: Should citizens be putting pressure on their local and state representatives to change environmental policies and help prevent these extreme tragedies?

Reference: J.L. Coen et al. Deconstructing the King Megafire. Ecological Applications. Vol. 28, September 2018, p. 1565. doi: 10.1002/eap.1752.

*Photograph by Dr. Eric Podchaski*

## Cooperative and Competitive Priming Impacts Participatory Environmental Action

By Daniel Curtin

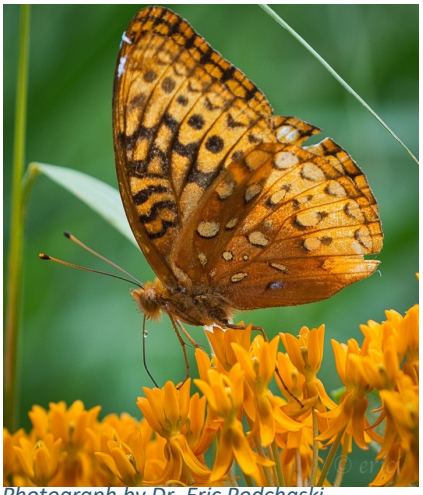
Environmental issues are becoming increasingly prominent in today's psychological research. Some researchers identify cooperation as a possible underlying facilitator of pro-environmental values, or pro-environmentalism. However, previous studies had not directly addressed how manipulating cooperation and competition could influence environmentalism. This study addressed this gap in previous literature by cooperatively, competitively, or neutrally priming participants and comparing their respective environmental attitudes, environmental actions, and environmental identities. 155 participants were recruited from introductory psychology classes at Seton Hall University. Participants were randomly placed into one of three conditions and primed by writing a short passage regarding a significant personal experience acting either cooperatively, competitively, or neutrally. Subsequently, they took a battery of surveys to measure environmentalism. It was predicted that participants primed cooperatively would score the most pro-environmentally on the measures, those primed competitively would score least pro-environmentally, and those primed neutrally would score between the cooperatively and competitively primed groups. It was found that there was no significant difference in environmentalism based on the priming groups, and no significant difference among groups in each environmental measure: environmental action, environmental attitude, environmental identity. However, those in the cooperative priming group scored marginally higher on environmental action than people in the competitive priming group and the results indicated a significant difference by priming groups on participatory environmental action.

Reference: Curtin, D. (2018). Cooperative and Competitive Priming Impacts Participatory Environmental Action. (Unpublished Master Thesis). Seton Hall University, USA.

## Revisiting Environmental Belief and Behavior among Ethnic Groups in the U.S.

By Vincent Medina

The environmental hierarchy of needs theory, which pulls from Maslow's hierarchy of needs, has commonly been used to suggest that ethnic groups hold less environmental concern than their White counterparts (Van Liere and Dunlap 1980). Given that, minorities are more likely to focus more on the physiological needs necessary for survival, and in turn generally have less time and resources to worry about other problems. Environmental protection naturally becomes a secondary concern. This style of "stereotypical" thinking was first popularized in the 1970's. However, many of the cross-ethnic environmental studies conducted in the following decades have produced highly conflicting evidence about the conceptualization of pro-environmental behaviors in different ethnic groups (Head, Klocker, & Aguirre-Bielschowsky, 2018). In this article, we first reviewed past studies on environmental belief and behavior selectively from both national surveys and regional representative samples (excluding convenience samples), paying attention to the emergence of ethnicity. We then identified conceptual and methodological issues that are important to consider for the future research. *For more information, click on the reference below.*



*Photograph by Dr. Eric Podchaski*

Reference: Medina, V., Deronda, A., Ross, N., Curtin, D., & Jia, F. (Submitted). Revisiting Environmental Belief and Behavior among Ethnic Groups in the U.S. Manuscript submitted for publication. *Journal of Frontiers in Psychology.*

# Wildlife Research

## Crow Facial Recognition and the Broader Perspective

By Vincent Medina

Research on the corvid family of birds (e.g. crows, ravens) is important to the field of animal cognition. Crows specifically have been a focus of animal intelligence studies because they are considered to rank near primates in terms of cognitive ability. They boast an impressive list of social learning abilities, such as: long-term facial recognition, self-recognition, and intelligent tool use. One major topic to be discussed here is their facial recognition.

A foundational study on crows' ability to recognize faces was the crow mask study by Dr. John Marzluff (University of Washington). The motivation for this study was that, leading up to that point, crows previously captured by certain experimenters would prove difficult to catch when those same experimenters were involved. So, the procedure consisted of experimenters either wearing a "dangerous" mask or a "neutral" mask. Initially, both would wander around campus, but the ones with "dangerous" masks would capture crows and band them before releasing them. After some time, the masked experimenters walked the same routes simultaneously on campus and did not bother crows for months. The reaction was that crowds of crows would ignore the experimenters with neutral masks, and scold (i.e. make raucous sounds at) the ones with dangerous masks. The significance of this was two-fold. Firstly, the number of raucous crows exceeded the number of banded crows, which suggested that they are capable of fast learned threat recognition. Secondly, this effect persisted and became stronger over time. When Dr. Marzluff wore the same mask through campus two years later, there was an even greater increase of crow scolding. This was consistent with the experiences of other corvid researchers, who would either wear different costumes to avoid difficulties in capturing crows from the same flock or would be followed or harassed by crows that had been fed or captured in the past, respectively.

Overall, long-term facial recognition and a range of other cognitive abilities give crows an evolutionary edge regarding survival. To consider a broader perspective and tie this back to environmentalism: animal research is one reason why environmental engagement is so important. Pro-environmental engagement (i.e. positive environmental action and participation) is helpful in promoting the conservation of animals, many of which have gone endangered and even extinct as a direct result of human actions. From an academic perspective, animal conservation is important so that scientists can continue to discover different aspects of animals (e.g. behaviors, cognition, biology) and continuously apply new knowledge. More generally, animal conservation is important to maintain the careful balance of ecosystems. Either way, while we can learn more about the world around us through animal research, we should be more diligent when it comes to environmental engagement in order to support the livelihood of those animals.

Reference: J. Vadala, "The Intelligent Crow: Exploring Human-Animal Relationships Cross-Culturally," *Explaining Human Culture*, 06-Aug-2018. [Online]. Available: http://hraf.yale.edu/the-intelligent-crow-exploring-human-animal-relationships-cross-culturally/.

## *Bee* Aware

By Nadia Meshkati

When we ponder the impact of bees on our earth, we initially think of the liquid gold produced and used in various delicious recipes. However, bees do a lot more than create the precious honey used in many people's morning tea. Bees are the world's most essential pollinator of food crops! Their presence is vital in the pollination that our food source relies on. Excluding the occasional and unfortunate painful stings, much can be said about how bees have positively affected our lives. But what can we say about our impact on bees?

James Crall, a researcher working in the lab of Benjamin de Bivort led a study that observed the effects of exposure to the most commonly used pesticide, neonicotinoid pesticides, on the behavior of bees. Previous studies have indicated that exposure to these pesticides may have an impact on the foraging behavior of bees, which leads to the interest of examining other behaviors that may additionally be affected.

In line with prior research, an impact was seen in the social behaviors of bees after exposure to neonicotinoid pesticides. Specifically, bees spent less time tending the larvae and were less social than other bees. Furthermore, other tests were conducted to assess additional effects of exposure to pesticides on bees' behaviors. Researchers found that exposure to neonicotinoid pesticides can diminish bees' ability to warm the nest and construct insulating wax caps around the colony.

The overall findings should encourage greater awareness from individuals on how human activity is directly impacting the behavior of organisms. After reflecting on the many helpful ways that bees have influenced our lives, it is important that we contemplate better methods thatdo not negatively affect our ecosystem.

Reference: James D. Crall, Callin M. Switzer, Robert L. Oppenheimer, Ashlee N. Ford Versypt, Biswadip Dey, Andrea Brown, Mackay Eyster, Claire Guérin, Naomi E. Pierce, Stacey A. Combes, Benjamin L. de Bivort. Neonicotinoid exposure disrupts bumblebee nest behavior, social networks, and thermoregulation. Science, 2018; 362 (6415): 683 DOI: 10.1126/science.aat159

# Meet the Green Team

## Current Members

**Ana Da Silva** I am a first-year graduate student in the M.S. in Experimental Psychology program, working toward a career in mental healthcare. I have a growing concern about the amount of plastic polluting our environment. My goal is to spread awareness about alternative materials to plastic and improve my own personal practices.

*Photograph by Dr. Eric Podchaski*

**Alyssa DeRonda** I'm a second-year graduate student in the M.S. in Experimental Psychology program. As an environmental activist, spreading awareness about environmental initiatives, such as the Final Straw, and conservation efforts, such as Panthera, are very important to me. Over the last year, I've become a member of Dr. Fanli Jia's environmental psychology laboratory and a writer for the Big Blue Goes Green newsletter as a means to promote and participate in environmental initiative on campus.

**Kaylise Algrim** Hello! I'm a first-year graduate student in the M.S. in Experimental Psychology program. I have one younger brother, I love old movies, and I think national parks about the coolest things around. I just moved to New Jersey from the Midwest and I'm excited to learn about environmentalism at Seton Hall and beyond.

**Vincent Medina** I am a second year in the M.S. in Experimental Psychology program. My thesis investigates a memory illusion and how susceptibility to it changes in relation to past and future thinking, visual imagery, and age. I have been exploring factors affecting environmental engagement through Dr. Fanli Jia's lab since last year.

**Nadia Meshkati** I am a first-year graduate student in the 3+2 Experimental Psychology B.S./M.S. program and minoring in Asian Studies. I am dedicated to becoming more mindful of the impact that my presence has on our planet by educating myself on ways to reduce waste. I hope to spread awareness of ways that we can improve our treatment of the Earth.

**Fanli Jia** As a cultural and developmental psychologist, I am interested in cultural differences and multiculturalism among Easterners, Westerners, and immigrants with regard to their identity development.

## Department of Psychology Environmental Club Alumni

**Daniel Curtin** After graduation, Dan spent the first few months on a trip visiting National Parks across the U.S. He is currently applying for research positions in the private research industry with plans to return to academia in a few years.

**Naquan Ross** After graduation, Nay started an online blog, ReNaytionships, that promotes awareness and starts conversations about relationships. His goal as a psychology researcher and life coach is to help people understand the complexities of our intimate relationships and equipt them with healthy tools.

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