



## AMERICAN SOCIETY OF SAFETY PROFESSIONALS NORTH FLORIDA CHAPTER

SEPTEMBER 2018 NEWSLETTER

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### **Australian Experiment Wipes Out More than 80% of Disease-Carrying Mosquitoes**

In an experiment with truly global implications, Australian scientists have successfully wiped out more than eighty percent of disease-carrying mosquitoes; this occurred in

trial locations across north Queensland.

The experiment, conducted by scientists from the Commonwealth Scientific and Industrial Research Organization (CSIRO) and James Cook University (JCU), targeted *Aedes aegypti* mosquitoes, which spread deadly diseases such as dengue fever and Zika. This mosquito originated in Africa, but is now found in tropical, subtropical and temperate regions worldwide.

In JCU laboratories, researchers bred almost twenty million mosquitoes, while infecting males with bacteria that made them sterile. Then, last summer, they released over three million of them in three towns on the Cassowary Coast.

The sterile male mosquitoes did not bite or spread disease, but when they mated with wild females, the resulting eggs

didn't hatch. The population then crashed.

"The invasive *Aedes aegypti* mosquito is one of the world's most dangerous pests," said CSIRO Director of Health and Biosecurity Rob Grenfell in a statement, describing the experiment as a victory.

"Although the majority of mosquitoes don't spread diseases, the three mostly deadly types -- the *Aedes*, *Anopheles* and *Culex* -- are found almost all over the world and are responsible for approximately seventeen percent of infectious disease transmissions globally."

The successful experiment offers a potential new solution against diseases which infect millions every year.

Unfortunately, many mosquito-spread diseases are difficult to treat. Some don't have effective vaccines, pesticides can be unsustainable, and methods



such as clearing standing water are inefficient against mosquito breeding rates.

The Zika virus is an infamous example. Its explosive outbreak in 2015 infected millions worldwide, causing babies to be born with neurological disorders. Researchers raced to develop a vaccine, and many are still conducting trials.

### **The Mosquito Experiment**

Although the process used in the experiment, called the Sterile Insect Technique, has been around since the 1950s, it has never been used for mosquitoes like the *Aedes aegypti*.

"We learned a lot from collaborating on this first tropical trial and we're excited to see how this approach might be applied in other regions where *Aedes aegypti* poses a threat to life and health," Kyran Staunton from James Cook University said in a statement.

Scientists in the Cairns region of Australia have also used similar techniques,

replacing populations with mosquitoes that couldn't spread infections, according to ABC News.

This CSIRO-JCU experiment, however, aimed to eradicate those populations altogether, working in partnership with Verily, a health research organization owned by Google parent Alphabet.

Since the *Aedes aegypti* is an invasive species native to Africa, it is thought that wiping them out in Australia wouldn't do much ecological damage in the country.

"The main ecological impact would be to restore the ecosystem to how it was before the mosquitoes invaded," according to Verily.

The experiment has been limited to north Queensland for now, but Verily may hold further field trials, the organization said.

### **CNN**

Online Edition

July 10, 2018

[CNN](#)

## **Consumer and Industrial Products Now a Dominant Urban Air Pollution Source**

A new study has postulated that a surprisingly high level of air pollution is a result of paints, pesticides, and perfumes as vehicle emissions in the U. S. continue to drop.

According to a surprising NOAA-led study, chemical products that contain compounds refined from petroleum, such as household cleaners, pesticides, paints and perfumes, now rival motor vehicle emissions as the top source of urban air pollution.

According to the new assessment, people use a lot more fuel than they do petroleum-based compounds in chemical products - about fifteen times more by weight. Even so, lotions, paints and other products contribute about as much to air pollution as the transportation sector does, said lead author Brian McDonald, a CIRES scientist working in NOAA's Chemical



Sciences Division. In the case of one type of pollution, tiny particles that can damage people's lungs, particle-forming emissions from chemical products are about twice as high as those from the transportation sector, his team found. McDonald and colleagues from NOAA and several other institutions reported their results in the journal *Science*.

"As transportation gets cleaner, those other sources become more and more important," McDonald said. "The stuff we use in our everyday lives can impact air pollution."

For the new assessment, the scientists focused on volatile organic compounds, otherwise known as VOCs. VOCs can drift into the atmosphere and react to produce either ozone or particulate matter; both are regulated in the United States and many other countries because of health impacts, including lung damage.

Those of us living in cities and suburbs assume that much of the pollution we breathe comes from car and truck emissions or leaky gas pumps. And it is a good assumption as it was clearly true in past decades. But regulators and car manufacturers made significant, pollution-limiting changes to engines, fuels and pollution control systems. So McDonald and his colleagues reassessed air pollution sources by sorting through recent chemical production statistics compiled by industries and regulatory agencies. They did this by making detailed atmospheric chemistry measurements in Los Angeles air, and by evaluating indoor air quality measurements made by others.

The scientists concluded that in the United States, the amount of VOCs emitted by consumer and industrial products is actually two or three times greater than estimated by current air pollution inventories, which

also overestimate vehicular sources. For example, the Environmental Protection Agency estimates that about seventy-five percent of VOC emissions, by weight, come from vehicular sources, and approximately twenty-five percent from chemical products. The new study, with its detailed assessment of up-to-date chemical use statistics and previously unavailable atmospheric data, puts the split closer to 50-50.

The disproportionate air quality impact of chemical product emissions is partly because of a fundamental difference between those products and fuels, said NOAA atmospheric scientist Jessica Gilman, a co-author of the new paper. "Gasoline is stored in closed, hopefully airtight, containers and the VOCs in gasoline are burned for energy," she said. "But volatile chemical products used in common solvents and personal care products are literally designed to evaporate. You wear perfume or use scented



products so that you or your neighbor can enjoy the aroma. You don't do this with gasoline," Gilman said.

The team was particularly interested in how those VOCs end up contributing to particulate pollution. A comprehensive assessment published in the British medical journal *Lancet* last year put air pollution in a top-five list of global mortality threats, with "ambient particulate matter pollution" as the largest air pollution risk. The new study finds that as cars have gotten cleaner, the VOCs forming those pollution particles are coming increasingly from consumer products.

"We've reached that transition point already in Los Angeles," McDonald said.

He and his colleagues found that they simply could not reproduce the levels of particles or ozone measured in the atmosphere unless they included emissions from volatile chemical products. In the course of that work, they

also determined that people are exposed to very high concentrations of volatile compounds indoors, which are more concentrated there than outside, said co-author Allen Goldstein, from the University of California Berkeley.

"Indoor concentrations are often 10 times higher than outdoors, and that's consistent with a scenario in which petroleum-based products used indoors provide a significant source to outdoor air in urban environments."

The new assessment does find that the U.S. regulatory focus on car emissions has been very effective, said co-author Joost de Gouw, a CIRES chemist. "It's worked so well that to make further progress on air quality, regulatory efforts would need to become more diverse," de Gouw said. "It's not just vehicles any more."

#### ***Science Daily***

Online Edition

February 15, 2018

[Science Daily](#)

## **ASSP Foundation Invites Students and Professionals to Apply for \$370,000 in Aid**

The American Society of Safety Professionals (ASSP) Foundation will accept scholarship and grant applications from Sept. 1 to Dec. 1 for its annual disbursement of financial awards in 2019.

More than \$370,000 is available through nearly 100 awards to occupational safety and health students and professionals, thanks to the generosity of corporate donors and the ASSP community.

Scholarships are available to undergraduate and graduate students, including full-time, part-time and international students studying in the United States. [Applicants](#) must be enrolled in an occupational safety or related degree program and have a grade point average of 3.0 for undergraduates and 3.5 for graduates. Professional education grants are available



to established safety professionals looking to further their careers through certification, college coursework, conference registration or similar learning opportunities.

“Our scholarship and grant program has helped hundreds of students and professionals advance their education and careers in a meaningful way,” said ASSP Foundation Chair Linda M. Tapp, CSP. “Our donors have consistently supported the occupational safety and health profession by contributing awards that range from \$500 to \$15,000. Their involvement every year demonstrates that safety careers are vital in helping to protect workplaces everywhere.”

Candidates must only complete one online application to be eligible for all available awards. Recipients are matched with the criteria set forth by the fund’s donor, and those selected will be notified in April.

“Your generosity has inspired me to help others, continue to work and study hard, and to eventually be able to help students reach their academic goals in the same way you are helping me,” said Slippery Rock University student Makenzie Herbinko, who previously received a \$10,000 Bechtel Corporation Impact Scholarship to study safety management. She expects to graduate in 2019.

Scholarship and grant applicants can get more information on the program by reading [frequently asked questions](#). Additional questions should be directed to the ASSP Foundation at [asspfoundation@assp.org](mailto:asspfoundation@assp.org) or 847.699.2929.

The ASSP Foundation – the charitable arm of the Society that was chartered in 1990 – receives contributions from society members and their families, its chapters, regions, common interest groups and corporations motivated to support the occupational safety and health profession.

It has awarded more than \$3 million in scholarships and professional education grants, helping more than 1,300 safety students and professionals. The ASSP Foundation provides resources for educational advancement, leadership development and research. For more details on the ASSP Foundation and its many programs, visit [foundation.assp.org](http://foundation.assp.org).

#### ***Safety News Alert***

Online Edition  
August 30, 2018

[Safety News Alert](#)

## **OSHA NEWS**

### **OSHA’s On-Site Consultation Program Shows Annual Benefits of More than \$1 Billion**

OSHA recently published an [analysis](#) showing how the agency’s On-Site Consultation Program contributes \$1.3 billion to the national economy



each year. The [On-Site Consultation Program](#) provides free, confidential safety and health services to small and medium-sized businesses. Employers who implement the workplace improvements suggested by OSHA consultants can reduce lost time due to injuries and illnesses. This in turn can lead to higher employee morale, increased productivity, and lower workers' compensation insurance premiums.

#### ***OSHA Newsletter***

E-Mail Edition

August 15, 2018

[OSHA Quicktakes Index](#)

### **New Compliance Assistance Resources are Available for OSHA's Silica Standard**

OSHA's silica standards require employers to limit worker exposures to respirable crystalline silica and take steps to protect workers. OSHA has several new resources to help

employers meet the requirements of the standards.

- A customizable slide presentation can be used to help train construction workers.
- A five-minute video shows how to protect workers from exposure to silica dust.
- A series of short videos demonstrates the proper use of specified dust control methods for six common construction tasks.

An FAQ page provides answers to frequently asked questions about the Respirable Crystalline Silica Standard for Construction.

#### ***OSHA Newsletter***

E-Mail Edition

August 15, 2018

[OSHA Quicktakes Index](#)

## **Job Market Links**

[ASSE](#)

[BCSP General Safety Jobs](#)

[BCSP Construction Safety Jobs](#)

[BCSP Industrial Hygiene Jobs](#)

[EHS Careers](#)

## **ASSE Chapter Links**

Find us on the web at:

[ASSP NFL](#)

Find us on Facebook at:

[ASSP NFL](#)

## **Local Chapter Officers and Chairs**

### **Elected Officers**

- President - Steve Brown
- President Elect - Bob Dooley
- Secretary - Steve Wilson
- Treasurer - Yaniv Zagagi
- Delegate - Dave Bedsole

### **Appointed Chairs**

- Membership Chair - Eric Gray
- Program Chair - Tom Drygas
- Newsletter Chair – Bob Dooley
- Social Chair – Ben Yancy



- SPY Awards Chair – Ben Yancy
- Social Media Chair - Vernon Adams
- Past President - Dan Hemsall

## Local Chapter Information

The North Florida Chapter of the American Society of Safety Professionals, formerly the American Society of Safety Engineers, was chartered in 1952 and currently has more than 165 members.

Professional meetings are held nine times per year in the Jacksonville area. Meeting notices are distributed and RSVP's are returned by email. If you are a member of ASSP and are not receiving notices by email, please email the [secretary](#).

## Local Chapter Meeting Schedule

**Date:** September 19, 2018

**Topic:** LEAN Safety

**Speaker:** Mr. Jerry Bussell, Bussell Lean Associates

**Time:** 11:30 Lunch & Networking

12 Noon Meeting and Technical Session

**Location:** Northeast Florida Safety Council

1725 Art Museum Drive  
Building B, Classroom D  
Jacksonville, FL 32207  
904-399-319

## Future Meeting Dates and Topics

**Date:** October 17, 2018

**Topic:** Smith Driving System

**Date:** November 21, 2018

**Topic:** Hazardous Waste / RCRA

**Date:** December 2018

**Topic:** Winter Social

**Date:** January 16, 2019

**Topic:** Zoo Safety

**Date:** February 20, 2019

**Topic:** Fire Academy

**Date:** March 20, 2019

**Topic:** Annual OSHA Update

**Date:** April 17, 2019

**Topic:** KAMAN Aerospace Facility Tour

**Date:** May 15, 2019

**Topic:** Construction Safety

Stay tuned for further details on time, location, and topic.