



Educating with Extension

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The Harmful Effects of Microplastics

By Madison Dorman, UF Intern

Single-use plastics and plastic (polyethylene) "microbeads" are having harmful effects on Earth's oceans and the species they support.

Single-use plastic items like straws, shopping bags, and bottle caps are some common items found during beach cleanups. These items do not decompose and instead just break down into smaller pieces.

As we all may love those super soft fleece blankets and throws, those fabrics are also made of plastic fibers! Instead of the natural fiber fabrics like cotton, bamboo, and rayon, these blankets use synthetics such as microfiber, polyester, nylon, and polypropylene. Every time these items are washed, tiny plastic fibers go down the drain.

Plastic fibers are one of the most common types of microplastics discovered in the ocean. Furthermore, those "scrubbing bubbles" found in toothpastes, facial scrubs, make-up, and deodorants are often-times plastic beads. When these microbeads go down the drain, they do not get removed during advanced wastewater treatment, thus ending up in the ocean.



Photo - ©iStock

Whereas the larger pieces of plastic are being eaten by animals like sea turtles and birds, potentially starving them to death, these microbeads are also consumed by

plankton, coral, fish, and shellfish. The animals mistake them as edible while toxins often stick to the surface of the plastics such as phthalates, brominated flame-retardants, and other persistent organic pollutants.

The United Nations Environmental Programme (UNEP) had concluded that these particles take hundreds of years to break down via oxidative or photo degradation routes.

According to U.S. scientists, more than 8 trillion particles enter U.S. aquatic habitats each day. In 2014, a study by scientists had also showed that when a tiny, freshwater crustacean called daphnia ate microplastics, 68% of its offspring were malformed.

As these plastics are found in many common household items and other consumer goods, there is positive progress being made in the removal of these harmful plastics.

On December 7, 2015 the U.S. Senate passed the "Microbead-free Waters Act," which "prohibits the manufacture and introduction into interstate commerce of rinse-off cosmetics containing intentionally-added plastic microbeads." The Act language defines microbeads as "any solid plastic particle" less than 5mm in size intended for use as an exfoliant.

On December 28, 2015, President Barack Obama signed into law the ban on these tiny plastic particles. The ban will phase out the microbeads in consumer products over the next few years, starting with a ban on manufacturing the beads in July 2017. This ban includes the sale of any cosmetic product containing microplastics beginning July 2018 and over-the-counter drugs containing microbeads in July 2019. Companies like Johnson & Johnson and Procter & Gamble have already committed to this phase out and are



Photo: Algalita/algalita.org

conducting tests for environmentally safe alternatives in order to protect our waterways.

While these items are being phased out, be sure to check the labels on your personal care products - polyethylene, polypropylene, PET, and nylon - and properly dispose of any with these ingredients. Together, every small change in consumer habits can make a big difference for the planet and for the Florida Keys.

Sources:

- ◆ rsc.org/chemistryworld/2016/01/us-bans-microbeads-personal-care-products
- ◆ unep.org/gpa/documents/publications/PlasticinCosmetics2015Factsheet.pdf
- ◆ https://marinedebris.noaa.gov/sites/default/files/MicroplasticsOnePager_0.pdf
- ◆ takepart.com/article/2016/02/07/new-microbead-ban



Florida Microplastic
AWARENESS PROJECT
www.plasticaware.org

Summer Plant Clinics

Kim Gabel and the Monroe County Master Gardeners are ready to help you with your plant and/or insect problems all summer long at the following locations:

KEY WEST

Gato Building / Extension Office

1100 Simonton Street, #2-260

1:00 to 4:00 p.m.

First & Third Mondays
(excluding holidays)

July 18

August 1 & 15

September 19

MARATHON

The Home Depot

4555 Overseas Highway

9:00 a.m. to 12 noon

Third Saturdays

July 16

August 20

September 17

KEY LARGO

Murray E. Nelson Government & Cultural Center / Extension Office

102050 Overseas Hwy., #244

9:00 a.m. to 12 noon

First & Third Wednesdays

July 6 & 20

August 3 & 17

September 7 & 21

Project Learning Tree (PLT) Workshop

What: PLT is an award-winning environmental education program. Through hands-on, interdisciplinary activities, PLT helps kids learn how to think, not what to think about environmental issues.

When: Thursday, August 11, 2016
8:30 a.m. to 4:00 p.m.

Where: Windley Key State Park
MM 85.5, Islamorada

E-mail Contact:

jessica.mcintosh@dep.state.fl.us

[Click here to see flyer.](#)

Maximum 20 participants

Lobster Mini-Season

By Dawn Thomas, Extension Coordinator

Dates: Wednesday, July 27 and
Thursday, July 28

Time: 12:01 a.m. on July 27 to
midnight on July 28

Where: Atlantic Ocean, Gulf of
Mexico, some canals are permissible

Where NOT: John Pennekamp Coral Reef State Park, Everglades National Park, Dry Tortugas National Park, Florida Keys National Marine Sanctuary, The Reef, or Biscayne Bay/Card Sound Lobster Sanctuary. Also, the waters within city limits in the town of Layton in the Middle Keys.

DOs:

- ⇒ Check the weather forecast and tides.
- ⇒ File a dive plan with a family member and/or marina.
- ⇒ Prep your boat before you launch and be courteous at the ramp.
- ⇒ Have the right equipment.
- ⇒ Bring a chart for local waters.
- ⇒ Have a ruler for measuring (lobster carapace must be at least 3 inches).
- ⇒ Know the water.
- ⇒ Be aware of activity around the boat.
- ⇒ Stash your trash.
- ⇒ Watch out for turtles!

DON'Ts:

- ◆ Anchor in the grasses.
- ◆ Steer clear of divers and snorkelers (at least 300 feet away).
- ◆ Wring the lobsters and leave the carcasses in nearshore waters.
- ◆ Captain the boat like a "googan" - an overloaded vessel, improperly equipped, running too fast, and too near other boats and divers.
- ◆ Touch the coral. In fact, just stay off the reef.
- ◆ Double dip - loading up lobsters, running home and dumping them off, and going out again.
- ◆ Give the FWC officers a hard time.



July/August Happenings

Hurricane Season

June 1 - November 30

http://monroe.ifas.ufl.edu/families/families_hurricanelinks.shtml

Independence Day

Monday, July 4

Extension Office Closed

32nd Annual Underwater Music Festival

Saturday, July 9

10:00 a.m. - 2:00 p.m.

Looe Key Reef in the Florida
Keys National Marine Sanctuary

lowerkeyschamber.com

305-872-2411

Monroe County Climate Change Advisory Committee Meeting

Monday, July 11

12:30 - 4:00 p.m.

Marathon Government Center
2798 Overseas Highway
2nd Floor, EOC meeting room

Lobster Mini-Season

Wednesday, July 27

Thursday, July 28

myfwc.com/fishing/saltwater/recreational/lobster/

TIP

Tax Information Publication

[Tax Information Publication](#)

Sales Tax Holiday

August 5 - 7, 2016

Back-to-School Supplies
First Day of School: August 17

Key West Lobsterfest

August 11 - 14, 2016
Street Fair, Live Concert
Saturday, August 13

Noon - 11:00 p.m.

Lower Duval Street

keywestlobsterfest.com



 <p>Family and Community Development News Alicia Betancourt</p>	 <p>Marine News Shelly Krueger</p>	 <p>Horticulture News Kim Gabel</p>
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Alicia recently accomplished the following activities:

- Led the Monroe County Climate Change Advisory Committee meeting and organized the AAA recommendation which will be brought before the Board of County Commissioners in July.
- Co-chaired the Southeast Florida Climate Compact Municipal Workshop, Climate Action 101. This workshop followed the “Borrow, Adapt, Adopt” model that was developed as part of the eXtension i-Three Corps initiative.



- Participated in UF Focus Team Initiative 3 - *Informed Community Decision Making*. The team identified strategies to assist agents in working with county stakeholders and showcase Extension Impacts.
- Collaborated with the Sea Grant Climate Workgroup to develop an in-service training for county agents.
- Created new greenhouse gas targets for Monroe County. Presented and explained the new target of 40% reduction by 2030 (based on the 2012 baseline) to the Board of County Commissioners who unanimously adopted the recommendation.
- Developed a display to provide Extension information at the Tropical Fruit Fiesta. Spoke to over 300 people about Extension programs.
- Worked with staff to formulate and submit two grant applications for water quality efforts.
- Spoke on US 1 Radio’s “Morning Magazine” and WFFG 1300AM about hurricane preparation and new GHG targets, energy, & water efficiency.

Shelly recently accomplished the following activities:

- Was nominated as the chair of the Outreach and Education Advisory Panel for the Gulf of Mexico Fishery Management Council and chaired the two-day meeting with Water Words that Work workshop.
- Participated in the Great Goliath Grouper Count, a partnership between Florida Sea Grant and the Florida Fish and Wildlife Conservation Commission but no grouper were observed.
- Taught one Florida Keys Water Watch (FKWW) workshop and recertified two volunteers. There are currently 48 sites from Key West to Key Largo.



- Gave a presentation, “Water Watch: Citizen Science Water Monitoring Programs for South Florida” and moderated one session at the ANREP/NACDEP (Association of Natural Resources Environmental Professionals / National Association of Community Development Extension Professionals) joint conference “Building a Path to Resiliency” in Burlington, VT and participated in the ANREP Southern Region breakout session.
- Organizing the annual Sea Grant Extension Program meeting in Key West, August 15-19, and will host Florida Sea Grant leadership, agents, specialists, and staff for this three-day meeting.
- Spoke on US 1 Radio’s “Morning Magazine” about global illegal unreported and unregulated fishing.



Kim recently accomplished the following activities:

- Held four “Landscaping on the Rock” workshop sessions at the Gato Building and a field trip to Bayview Park in Key West, along with Alison Higgins, Key West Sustainability Coordinator and Karen DeMaria, Key West Urban Forester. Fifteen local residents attended to learn about Florida Keys environmentally-friendly practices: “Right Plant, Right Place,” “Invasive Plants, Wildlife, and Mulch,” “Attracting Wildlife,” and “Managing Yard Pests Responsibly.”
- Attended the 129th Annual Florida State Horticulture Society conference in Stuart, FL, held June 12-14.
- Was co-coordinator of the Tropical Fruit Fiesta held on June 25 at Grimal Grove on Big Pine Key. Over 1,100 people came to learn about tropical



- fruit, buy fruit trees, taste fruit, and participate in a raffle and silent auction. Twenty-two Master Gardeners volunteered at the event.
- Held three Summer Plant Clinics with six Master Gardeners assisting ten clientele.
- Proctored four pesticide exams: two CORE and two Public Health.
- Spoke on US 1 Radio’s “Morning Magazine” twice about the Tropical Fruit Fiesta.

UF/IFAS/MONROE COUNTY EXTENSION

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102050 Overseas Hwy., Suite 244, Key Largo, FL 33037

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General e-mail: monroe@ifas.ufl.edu
Newsletter Editor: Dawn Thomas, Extension Coordinator
This newsletter can be accessed online at:
<http://monroe.ifas.ufl.edu/newsletter.shtml>

County Extension Director: Alicia Betancourt



We're on the Web at <http://monroe.ifas.ufl.edu>
 Facebook Twitter

SOLUTIONS
for *your* LIFE

<http://SolutionsForYourLife.ufl.edu>

Extension programs and activities are open to all persons and do not discriminate with regard to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations.

INDEPENDENCE DAY - JULY 4

Guess who's turning 240 years old on 7/4/2016? AMERICA, that's who! To celebrate, here's some 4th of July songs to sing on her birthday:

America the Beautiful	Battle Hymn of the Republic
Born in the USA	God Bless America
Living in America	Our County 'Tis of Thee
Philadelphia Freedom	Star Spangled Banner
This Land is Your Land	Yankee Doodle Boy

Did you know that NYC has the biggest fireworks display in the United States? It's true!

QUOTE OF THE MONTH

"If you want a symbolic gesture,
don't burn the flag; wash it."

Norman Thomas, Activist, 1884-1968

edis Publications

Zika Vector Control for the Urban Pest Management Industry

Zika is a mosquito-transmitted virus that has recently spread to the Americas. Zika virus (ZIKV) was discovered in 1946 in Africa where it was isolated from a Rhesus monkey in the Zika forest of Uganda.

In 2007, a disease outbreak occurred on the Yap Islands in Micronesia, and in 2013, an outbreak occurred in French Polynesia. In 2015, a large outbreak occurred in Brazil, and ZIKV has since spread through the Americas.

As of April 18, 2016, 15 counties in Florida had reported travel-associated Zika cases. This 7-page fact sheet provides an overview of ZIKV, including its incidence and distribution, transmission and symptoms, and the connection between Zika virus and infant microcephaly.

This article also explains the biology and identification of the mosquito that vectors the virus with a focus on how to manage the vector using inspection, larviciding, adulticiding, monitoring, and personal protective equipment.

<http://edis.ifas.ufl.edu/in1131>

Creative Foods

"Penguins" made out of eggplants



UF/IFAS/MCES QUARTERLY CONTACTS

	Apr	May	Jun	Total
Phone calls	110	155	195	460
Office visitors	24	23	26	73
Visits to clients	7	12	16	35
Learning events	32	37	32	101
Participants	818	510	1538	2866
Media submissions	5	5	6	16
Publications distributed	512	463	501	1476
TOTAL contacts	1508	1205	2314	5027