# Science and Digital Briefs



By Shopper Editor Dave Bunting

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Giant Burmese python in Florida's Everglades

# **GPS-fitted possums and raccoons** help capture of invasive pythons

South Florida researchers are working on a new way to track and capture invasive Burmese pythons by using small mammals outfitted with GPS devices, according to reports.

The rapidly-increasing non-indigenous pythons result from pet owners losing or freeing their pets brought from foreign jungles.

The small animals that the researchers have been observing all have GPS collars, allowing the team to track the locations of the possums and raccoons.

After about five months, the researchers see a breakthrough when a possum collar used in the field suddenly stopped moving for a few hours then began once again.

The lack of movement triggered what researchers called a python location signal, but when it started moving again, the researchers had a hunch the small mammal may have been eaten by a snake

Though it takes a month for the researchers to locate the tracker as the snake moves in and out of Key Largo's labyrinth of caves, when they did, they found a 12-foot-long, 66-pound female python full of egg follicles. Such a snake has the potential of laying 100 eggs. Capturing one and removing it from the ecosystem can prevent hundreds of future snakes from being introduced into the ecosystem.

After euthanizing the snake, the Times reported, researchers were able to open the snake up and retrieve the collar so that it could be placed on another possum at a later date.

### A friendly touch can really ease anxiety

There's real science behind pleasurable touch: the connections between skin and brain that make a hug or just a touch feel so good.

A parent's reassuring touch. A friend's touch or warm hug. A lover's embrace. These are among the tactile joys in our lives.

Now, scientists at Mortimer Zuckerman Institute and two partner institutions report previously unidentified starting points in the neurobiological pathways underlying pleasurable, physical and otherwise rewarding social touch.

The findings also point toward touch-based therapies for alleviating anxiety, stress and depression, the researchers said. What's more, such therapies may hold promise for those with autism and other conditions that can make even tender touch unbearable.

Touch can ease pain, lift <u>depression</u> and even possibly increase the odds that a team will win.

"The pandemic made us all acutely aware of how devastating the lack of social and physical contact can be," Dr. Leah Elias said.

In circumstances where it's permissible, all of us like and even benefit from the friendly touch or the hug. These gestures can relieve tension and anxiety.

For our own benefit and to help others, we should do more of it—in acceptable circumstances of course.

Babies who are not held, nuzzled, and hugged enough, (preferably by both) parents can stop growing, and if the situation lasts long enough, even die. Researchers discovered this when trying to figure out why some orphanages had infant mortality rates around 30-40%.



### Cahokia's end not caused by tree removal

Cahokia, a city across the Mississippi from present-day St. Louis, with population 20,000 in 1150AD, was the largest city in North America. It had many mounds, the largest of which covers 14 acres and rises 100 feet, making it the largest structure in the western hemisphere. For unknown reasons, by 1400 AD the city had been abandoned. Politicians have suggested excessive tree removal causing flooding as the explanation.

Whatever ultimately caused inhabitants to abandon Cahokia, it was not because they cut down too many trees, according to new research from Washington University in St. Louis.

Archaeologists excavated around earthen mounds and analyzed sediment cores to test a persistent theory about the collapse of Cahokia, the pre-Columbian Native American city in southwestern Illinois that was once home to more than 20,000 people.

"There's a really common narrative in many places in the U.S. about land use practices that lead to erosion and sedimentation and contribute to all of these environmental consequences," said Caitlin Rankin, an assistant research scientist at the University of Illinois at Urbana-Champaign who conducted this work as part of her graduate studies at Washington University.

at Washington University.
"When we actually revisit this, we're not seeing evidence of the flooding," Rankin said.

In explanation: For vegetation removal to affect a local area, the wide water tributary land area, stretching usually many, even hundreds or thousdands of miles upstream, must be largely denuded of vegetation, which is more likely caused by large natural wildfires than by human activity.

## STEM toys that feel more like fun than homework

#### **Brain Flakes 500 Piece Build Things**

Although it may sound like a twisted breakfast cereal, the Viahart Brain Flakes are actually a unique spin on the construction toy. Containing 500 interconnected, multicolored discs, the Brain Flakes push children to think about basic engineering techniques as they manipulate the round bricks to build everything from vehicles to unicorns. Completely child safe for children as young as three (the plastic pieces are BPA free), it's one of the simplest and best toys because it requires literally no set-up. Just dump out the pieces and have at it. A little more versatile and creative than early LEGO bricks, the Brain Flakes exercise both the logical and imaginative sides of the brain. They also won't murder your feet if your kid leaves them all over the living room floor.

Read this week's Bible Readings for Transfiguration Sunday, Mar. 5: "Six days later, Jesus took with him Peter and James and his brother John and led them up a high mountain, by themselves.

And he was transfigured before them, and his face shone like the sun, and his clothes became dazzling white.

Suddenly there appeared to them Moses and Elijah, talking with him.

Then Peter said to Jesus, "Lord, it is good for us to be here; if you wish, I will make three dwellings here, one for you, one for Moses, and one for Elijah."

While he was still speaking, suddenly a bright cloud overshadowed them, and from the cloud a voice said, "This is my Son, the Beloved; with him I am well pleased; listen to him!"

Matthew 17: 1-5. NIV

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