

Cicadas: Thanks for the memories

This is an article that I wrote and published on July 2, 2008. Today, instead of 2 daughters, we have 3. My wife was pregnant as I wrote this article but we didn't find out that she was pregnant until about August 1, 2008. Also, my 2 oldest daughters (ages 23 and 21) have graduated from the University of Kentucky.

To my dear friends, the cicadas, I would like to wish you a fond farewell. As you appeared a few weeks ago, I knew that you were coming, but when I saw the first one of your brood XIV, I was still a little startled. You're not the easiest insect on the eyes. Speaking of which, your eyes are a little startling as well. You are one of the friendliest insects I've ever dealt with. You almost have a personality of your own. Why, just the other day, you and about a dozen of your friends rode on my clothes as I was mowing and trimming my yard.



BRYCE ROBERTS

That didn't bother me until some of your brood flew hard into my face and crawled down into my shirt. That wasn't pleasant, but I took it with a grain of salt, knowing that it may have been one of your last acts as a cicada. And when you and your buddies get together, you sure do like to make a lot of noise! By the time this is published, most of your brood will have gone on to greener trees in the sky.

I've had several questions about you while you were here, with the biggest one being, "When will they be gone?" But I reassured the questioners that you would only be here for just a few more weeks, as your life cycle is one of about 4-6 weeks or so. We know that you are now laying your eggs in the tips of tree limbs and that those nymphs will be born in about a month or so and then fall to the ground and bury into the ground where they will feed on the sap and

roots of trees for a few years (17 in fact).

Some other folks have wondered how much damage will you do to the tips of our trees and really you haven't done much. You may make some of the leaves on the tips of our trees turn brown after you laid your eggs, but they should be fine next year.

Although we actually have some cicadas every year (the dog day cicadas) here in Kentucky, they just aren't as fun.

Thank you for providing me something to teach my daughters, who are 6 and 4 years old. I'll have to say that you are a menacing sight to our younger folks and my daughters agree with that, but you are a terrific science lesson on life cycles. In fact, as I was telling my girls about you, one of your friends landed in my hand and acted as if it was participating in my lesson. But of course, the girls ran away as soon as it landed and the lesson had to be put on hold.

They, of course, are ready to

see you go as well, but I keep reminding them that your life is so short and that it will be almost 2 decades before your children return. By then, one of my brood will be out of college (hopefully) and the other will be in college (hopefully).

As you were helping me to finish mowing my yard the other day, I was taken back to 1991 when your parents were here. I had just graduated from high school and was about to go to the University of Kentucky. Since then, I graduated from UK, got married, had kids, worked in a chicken processing plant, and worked as a county agent. That's about as exciting as your life I suppose.

I'll remember the early summer of 2008 as the time I was able to spend with my friends, the Cicadas. I enjoyed watching you fly clumsily into the side of my house, but I

also will remember how many of you glided into and onto my hands and arms, just like you had known me for your whole life. You certainly were fun to

interact with. I'll make sure to tell your kids how fun you were to be with in 2025 when they make their appearance again.

Oh well. Mowing my yard will just go back to being boring I guess until 2025 when Brood XV makes their appearance. I'll just watch out for the wasps and bees and the occasional snake. Thanks for the memories.

Feel free to contact me at your Spencer County Cooperative Extension Service at 477-2217 or you can email me at broberts@uky.edu. You can visit the Spencer County Extension Services' website at www.spencerextension.com.

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Fireflies

Likely as children, we all collected fireflies in a jar and took them to bed to light up our rooms on a warm summer night. I remember getting my parents to puncture the lid of a mason jar so the magical insects could breathe. Well, it turns out that all that light flashing was about love. So, as you enjoy summer evenings outside maybe take a second look at all that firefly flashing in a different light.

Researchers at Tufts University and Brigham and Woman's Hospital have been observing the flashes of fireflies for more than two decades now and what they have uncovered may surprise you. The bioluminescence of the male firefly is his way of telling the female firefly that he is a worthy lover. Fireflies, which are actually bee-

gles, spend their entire lives looking for love.

Female fireflies are rather promiscuous, mating with dozens of males in her lifetime and simultaneously carrying eggs from many different fathers. She can control how many eggs are fertilized by her mates and she proves to be quite choosy, looking to a

male's flash pattern as an indicator of virility. There are hundreds of different firefly species worldwide and several out in the yard on any given night. The flash pattern also helps the species locate their own in a field of flashing singles looking for love.

In 2003 Sara Lewis, an evolutionary biologist at Tufts University, and her graduate student Christopher Cratsley set out to understand the meaning of the firefly's flash and what they

found was a direct link between flash patterns and the "nutritional gift" the male gave to the female. Lewis explains that the "nutritional gift" is communicated in a male firefly's flash code. Far from random, these flash codes tell females that the male is of her species, is ready for her and has a "nuptial gift" that contain sperm and nutrition. This is where the code is important because the nutritional component is crucial for the eggs to develop because the firefly eats nothing in its adult stage. According to Lewis' research the duration of the male's flash is a predictor of the quality of the nuptial gift. More sperm and more nutrition mean more babies.

The science of it all is interesting and important as well. Bioluminescence has been understood for a long time now, but new light has been shed on the role

nitric oxide plays. In humans, nitric oxide acts as a messenger in the body, controlling the flow of blood and aiding in memory in learning; in fireflies it is the key component in controlling the flash of the abdominal lantern, it acts as the on-off switch.

In the lab researchers were able to determine that the abdominal lantern is dark and at rest while the mitochondria consumes the oxygen that is present in the cells (apparently mitochondria eat up oxygen quickly). When nitric oxide is produced it basically steals the oxygen from the mitochondria and the lights go on. It all happens in a split second and the beetle's nervous system keeps the flash code going all night long.

A firefly's flash or a peacock's feathers; it seems that humans are not the only ones that try to attract a mate by being a bit flashy!

3 Kentucky hospitals ranked among Newsweek's top 200 hospitals for cancer care

BY MELISSA PATRICK
KENTUCKY HEALTH NEWS

Three Kentucky hospitals have been named among the top 200 hospitals for cancer care in Newsweek's third annual ranking of America's Best Cancer Hospitals.

The University of Kentucky Albert B. Chandler Hospital's Markey Cancer Center in Lexington was ranked among the top 50 cancer centers nationwide, at 43. The report also highlighted its excellence in lung and breast cancer care.

Markey has been a National Cancer Institute-designated cancer center since 2013, and is one of only 57 cancer centers in the country to earn the NCI's Comprehensive Cancer Center designation, according to a university press release.

The other Kentucky hospitals making the list are Baptist Health Lexington, at 145, and St. Elizabeth Edgewood Hospital, at 165.

This year, more than two million people in the United States are expected to be diagnosed with some form of cancer, according to the American Cancer Society's Cancer Facts & Figures 2025 report. In Kentucky, which

leads the nation in both cancer cases and cancer deaths, that same report estimates there will be 30,420 new cases of cancer in 2025

Newsweek partnered with Statista, a research firm, to compile the list.

"To compile the data used in this ranking, tens of thousands of medical professionals and hospital managers participated in a nationwide online survey. Their responses were factored in alongside publicly available hospital quality metrics, patient satisfaction scores and patient-reported outcome measures implementation scores," according to a Newsweek news release.

A summary of the methodology says hospitals with a one-star rating with the Centers for Medicare & Medicaid Services were not eligible for the ranking, and hospitals with a very small number of beds were also not considered.

MD Anderson Cancer Center in Houston, Memorial Sloan Kettering Cancer Center in New York, Mayo Clinic-Rochester and the Cleveland Clinic were ranked as the top four cancer care hospitals.



JENEEN WICHE

New auto loan tax break may save buyers thousands, but will it boost sales?

BY DAVID A. LIEB
ASSOCIATED PRESS

Millions of people receive a federal tax deduction for the interest they pay on home loans. Under President Donald Trump's new tax-cut law, many people for the first time also could claim a tax deduction for interest on their vehicle loans.

The new tax break will be available even to people who don't itemize deductions. But there are some caveats that could limit its reach. The vehicles must be new, not used. They must be assembled in the U.S. And the loans must be issued no sooner than this year, to list just a few qualifications.

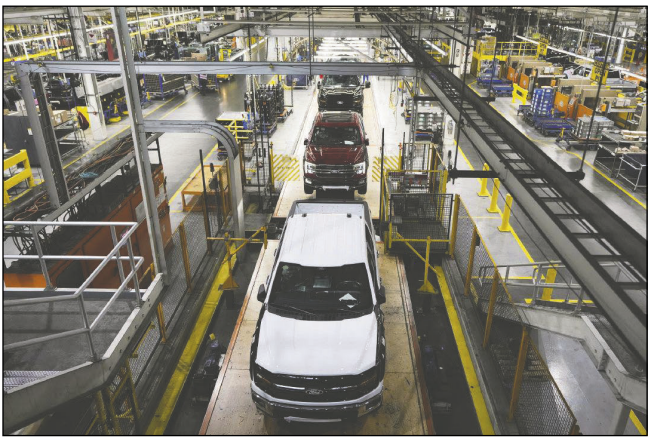
Here are some things to know about the new auto loan interest tax deduction:

CANDIDATE TRUMP PROMISED AN AUTO LOAN INTEREST TAX BREAK

Trump pledged while campaigning last year to make interest on car loans tax-deductible. He said it would make car ownership more affordable and "stimulate massive domestic auto production."

The idea made it into the big tax-cut bill passed by Congress, which Trump signed into law July 4.

The law allows taxpayers to deduct up to \$10,000 of interest payments annually on loans for new American-made vehicles from 2025 through 2028. It applies to cars, motorcycles, sport utility vehicles, minivans, vans and pickup trucks weighing less than 14,000 pounds, a



Carlos Osorio / AP photo

The 2024 Ford F-150 truck is assembled at the Dearborn Truck Plant in Dearborn, Mich., April 11, 2024.

threshold referred to as light vehicles. But it only applies to vehicles purchased for personal use, not for fleets or commercial purposes.

The tax break can be claimed starting on 2025 income tax returns. But the deduction phases out for individuals with incomes between \$100,000 and \$150,000 or joint taxpayers with incomes between \$200,000 and \$250,000. Those earning more cannot claim the tax break.

MILLIONS OF BUYERS COULD BENEFIT, BUT MILLIONS OF OTHERS WILL NOT

U.S. automobile dealers sold 15.9 million new light vehicles last year, a little over half of which were assembled in the U.S., according to Cox Automotive. It says around 60% of retail sales are financed with loans.

After excluding fleet and commercial vehicles and customers above the income

cutoff, an estimated 3.5 million new vehicle loans could be eligible for the tax break this year, if purchasing patterns stay the same, said Jonathan Smoke, chief economist at Cox Automotive.

IT'S THE ASSEMBLY PLANT, NOT THE AUTOMAKER'S HEADQUARTERS THAT MATTERS

The tax break applies to vehicles assembled in the U.S., no matter where the company making them is headquartered. All Tesla vehicles sold in the U.S. are assembled in this country. But so are all Acura brands, the luxury model of Japanese automaker Honda.

Last year, 78% of Ford vehicles sold in the U.S. were assembled in this country, according to Cox Automotive. But customers wanting the tax break will need to pay attention to specific models. While the Ford



David Zalubowski / AP photo

A long line of unsold 2024 Bronco utility vehicles sit on display at Ford dealership in Denver, Nov. 28, 2024.

Mustang is assembled in Michigan, the Mustang Mach-E is built in Mexico.

General Motors assembles all of its Cadillacs in the U.S. But just 44% of its Chevrolets sold last year were assembled in the U.S., and just 14% of Buicks, according to Cox Automotive. That's a lower U.S.-assembled rate than Honda (60%), Toyota (52%) and Nissan (48%), which all are headquartered in Japan.

TAXPAYERS COULD SAVE HUNDREDS OF DOLLARS A YEAR

The average new vehicle loan is about \$44,000 financed over six years. Interest rates vary by customer, so the savings will, too. In general, the tax deduction will decline after the initial year, because interest payments on loans are frontloaded while principal payments grow on the back end.

At a 9.3% interest rate, an

average new vehicle buyer could save about \$2,200 on taxes over four years, Smoke said. The tax savings would be less on a loan at 6.5%, which is the rate figured into calculations by the American Financial Services Association, a consumer credit industry trade group.

SOME PEOPLE ALSO COULD SEE A REDUCTION IN STATE INCOME TAXES

Whereas the tax deduction for home loan interest can be claimed only by people itemizing on their tax returns, Congress wrote the deduction for auto loan interest so that it can apply to all taxpayers, including those claiming the standard deduction.

On a tax form, the auto loan deduction will come before the calculation of a taxpayer's adjusted gross income. That's an important distinction, because many states use a taxpayer's federal adjusted gross income

as the starting point for figuring their state income taxes. If that income figure is lower, it could reduce the state taxes owed.

THE VERDICT IS OUT ON WHETHER THE TAX BREAK WILL BOOST SALES

At Bowen Scarff Ford in Kent, Washington, customers started asking about the auto loan tax deduction before Congress had even taken a final vote on the tax-cut bill, said General Manager Paul Ray. So he decided to promote it on the dealer's website.

A website ribbon exclaims: "CAR LOAN TAX DEDUCTION NOW AVAILABLE" while also promoting an electric vehicle tax credit that is ending soon as a result of Trump's tax-cut law.

"I think it's going to help incentivize vehicle purchases through this year," Ray said.

Celia Winslow, president and CEO of the American Financial Services Association, concurred: "For some people deciding — should I buy it, should I not — this could be something that tips the scale."

Others remain skeptical. According to Smoke's math, the average annual tax savings is smaller than a single month's loan payment for a new vehicle.

"I don't think it moves the needle on somebody on the fence of buying a new vehicle or not," Smoke said. "But I think it could influence their decision to finance that vehicle instead of paying cash or instead of leasing a vehicle."