



Cicadas are as fascinating as they are noisy! There are two especially curious species: the thirteen-year and the seventeen-year cicadas. The thirteen-year cicadas are mostly found in the southern states, but live as far north as mid-state Illinois. Those in our area are the seventeen-year cicadas.

What do the numbers 17 and 13 have in common?

This lifespan is key to the species' survival.

This year, parts of Illinois will have a double brood. That means that the thirteen-year and the seventeen years will come out the same year! What a mess!

How often does this happen?

When will it happen again?



What do the numbers 17 and 13 have in common?
They are both prime.

“The fact that the surviving periodical cicadas have life cycles built on prime numbers may have conferred key survival advantages. A prime-numbered lifespan means that predators cannot match their own shorter life cycles to the availability of cicada prey. For instance, if the cicadas had even-numbered lifespans, a predator with a two-year life cycle could expect a cicada feast, and a subsequent population bump, every few generations, because all even numbers are divisible by two. ... ‘a prey with a 12-year cycle will meet—every time it appears—properly synchronized predators appearing every 1, 2, 3, 4, 6 or 12 years, whereas a mutant with a 13-year period has the advantage of being subject to fewer predators.’”

Scientific American: “Deciphering the Strange Mathematics of Cicadas”

(Search for YouTube video: “**Why Are Cicadas So Good At Math?**” for a clear explanation of the significance of the length of their life cycle.)

How often does this happen? Every 221 years (13 x 17)

When will it happen again? 2245