

ORKIN

P R E S E N T S

# CICADA

S Y M P H O N Y O R K I N S T R A

## XIII x XIX CYCLE OF THE CICADAS

A TRILLION PIECE PERFORMANCE, 221 YEARS IN THE MAKING





## A TRILLION PIECE PERFORMANCE, 221 YEARS IN THE MAKING.

For the first time since 1803, two cicada broods, Brood XIII and Brood XIX, are co-emerging across the US. To commemorate this once-in-a-lifetime experience, we bring you a once-in-a-lifetime concert that transforms the beauty of their combined chorus into the first-ever trillion-piece *Cicada Symphony Orkinstra*.

*Dedicated to Brood XIII & Brood XIX*

HOSTED BY	<b>IAN WILLIAMS</b> <i>Orkin, Board Certified Entomologist</i>
COMPOSED BY	<b>BRYAN RHEUDE</b>
ACCOMPANIED BY	<b>BROOD XIII</b> <i>Northern Illinois Brood, 17-year life cycle</i>
	<b>BROOD XIX</b> <i>Great Southern Brood, 13-year life cycle</i>
MUSIC DIRECTOR	<b>JIM GAILLORETO</b>
	<b>PROGRAM</b>
INTRODUCTION	<b>IAN WILLIAMS &amp; BRYAN RHEUDE</b>
SYMPHONY	<b>XIII x XIX: CYCLE OF THE CICADAS</b>
	<b>I: NYMPHS OF THE UNDERWORLD</b>
	<b>II: LAST MARCH OF THE CICADAS</b>
	<b>III: SHED YOUR SKIN AND FLY...ISH</b>
	<b>IV: BIRD BROOD FOOD</b>
	<b>V: WALTZ FOR NOISY ROMANTICS</b>
	<b>VI: A BUG'S REQUIEM</b>
	<b>VII: THE CYCLE BEGINS AGAIN</b>
Q & A	<b>IAN WILLIAMS &amp; BRYAN RHEUDE</b>



## MUSICIANS



**VIOLIN 1**  
Lisa Fako



**VIOLIN 2**  
Mark Angor



**VIOLIN 3**  
James Sanders



**CELLO**  
Jill Kaeding



**BASS ACOUSTIC**  
Daniel Thatcher



**WINDS**  
Jim Gailloretto



**TRUMPET**  
James Davis



**TROMBONE**  
Steve Duncan



**PERCUSSION**  
Joe Sonnefeldt



**KEYBOARDS**  
Bryan Rheude



**MALE CHORUS 1**  
Brood XIII



**MALE CHORUS 2**  
Brood XIX



“I was inspired by the broods’ 13- & 17-year life cycles, each with its own unique songs and rhythms. The symphony is comprised of 13-note themes and 17-note themes to reflect the asynchronicity and unexpected beauty between these two broods. **It was important to create a piece of music that didn’t just celebrate the cicadas, but that could be performed in harmony with their chorus—together, we’re creating this natural, wild, once-in-a-lifetime experience that will never be heard again.**”

— *Bryan Rheude, Composer*



“The unique biology and lifestyle of the cicada, to many people, is a blend of science fiction and horror. **The relatively unknown life of the nymph, the time frame required for development, and the massive number of loud adults that appear in a relatively short period stir the mystery and wonder of the cicada.** Taking the unique biology and habits, and putting it into motion with the music and narrative, has hopefully created a meaningful understanding and enjoyable presentation of this unique animal.”

— *Frank Meek, Orkin, Board Certified Entomologist*



## NYPHHS OF THE UNDERWORLD

### SCIENCE

After hatching, young cicada nymphs burrow 6 to 18 inches underground, surviving on sap from tree roots for two to 17 years, depending on the species. Using internal clocks and thermometers, they finally emerge when the soil reaches 64°F at a depth of 7–8 inches.

### SCORE

We open with a slowly rising bass drone, reminiscent of a cicada chorus. It's surreal—as if the cicadas are imagining their upcoming emergence. A solo cello introduces a 13-note theme for the 13-year cycle of Brood XIX. The clarinet and marimba introduce a 17-note theme, representing the 17-year cycle of Brood XIII. The two themes interlock, symbolizing the synchronization of these two broods for the first time in 221 years. Our two melodies weave back and forth in a dreamlike sequence, evoking the passage of time and hinting at the coming emergence.



## LAST MARCH OF THE CICADAS

### SCIENCE

Finally, it's time to emerge. Our immature nymphs tunnel to the surface using their powerful front legs. They journey to the nearest vertical object, usually a tree stump, and anchor their legs to the surface to transform into adulthood.

### SCORE

A slowly accelerating pulse, mimicking the trembling earth, quickens our cicadas' heartbeats, signaling it's time to emerge. Then, the rhythm of the march begins, interspersed with subtle cicada-like beats; we envision their first task: digging their way to the surface. Once above ground, musical twists and turns mirror our cicadas' meandering search for the perfect tree. As they begin their ascent, the melody turns from a marching pulse to an ascending arpeggio as they find a place to rest and get ready to shed their skin.



# III

## SHED YOUR SKIN AND FLY...ISH

### SCIENCE

As the nymph molts, its shell splits down the thorax, revealing a milky white body. The adult slowly pulls itself out of the nymphal skin. Once released, its soft nubby wings slowly inflate with fluid as the exoskeleton darkens and hardens. Finally, the males can begin to sing with their tymbal organ, a rib-like membrane that expands and contracts over 400 times per second.

### SCORE

A string quartet begins as the nymph settles in for its transformation. At their most vulnerable, the music mirrors this fragility with hints of our 13- and 17-note themes. Woodwinds and brass join in as the nymph emerges from its shell until it's time to fly...ish! A tenor saxophone introduces a bouncy, angular melody, mirroring the cicadas' clumsy, first flight. As the cicadas grow more confident, robust percussion joins the persistent cicada beat. The cicada chorus crescendos as the males finally belt out their long-awaited song.



# IV

## BIRD BROOD FOOD

### SCIENCE

As adult cicadas take flight in search of a mate, they also become vulnerable to predators like cicada wasps, mammals, and birds—cicadas can make up to 70% of a nestling's diet. During a large emergence, more than 80 species of birds will switch their diet to cicadas.

### SCORE

We begin with the calls of Brood XIX. A chaotic bass pulse slowly builds, creating a furious clash of polyrhythms. The mood shifts to darker, more dissonant tones. We hear the stabbing trills from upper register instruments, mimicking the song of an Illinois-native cardinal. Suddenly, the frenetic activity pauses as we reflect on the cicadas' mortality through a requiem-style chord progression, hinting at their eventual demise. The frenetic pulse resumes, highlighted by an avant-garde saxophone solo. The earlier bird calls are ingeniously inverted, with basses now articulating the piercing calls. The birds, satiated and plump, revel in their feast.



# V

## WALTZ FOR NOISY ROMANTICS

### SCIENCE

Once our adults emerge, the males join in chorus, singing to attract mates. Females signal interest by flicking their wings, which creates a clicking sound. Once a cicada finds its match they join abdomen to abdomen, hiding behind their wings. After mating, the female finds a young tree branch to lay her eggs in and the male finds its final resting place.

### SCORE

We begin with two melodic calls of our male cicadas. It's mating time, and their song is their pickup line. A two-note piano melody evolves into a quirky romantic waltz from the larger ensemble, symbolizing the males finally finding their voice. In return, we hear a clicking sound from a percussionist tapping the side of a snare drum—the females are responding. The melody becomes tender as a true waltz begins, and we imagine our cicadas finding their match. The music picks up as they mate... and then gently unwinds, just as the cicadas do. The track ends with an ethereal tone as the mother cicada finds a young tree branch to lay her eggs.



# VI

## A BUG'S REQUIEM

### SCIENCE

After the females cut slits into young tree branches to lay hundreds of eggs, exhaustion takes over and she dies too. After just 4–6 weeks above ground, cicada bodies collect at the base of trees and begin to decay releasing an odor almost as strong as their song.

### SCORE

We begin with a grand statement; a traditional requiem that honors the life of the cicadas. Within the fanfare, we find our prior 13-year melody turned upside down and played backward. It's a delicate passage that eases the cicada into death. This leads us into flutes playing the same melody as a repeating pattern, and then a somber yet triumphant pipe organ enters. The strings play a delicate chorus with a hint of vocals. Gentle cicada sounds symbolically start to fade as the tone becomes surreal. We finally herald the life of the noble cicada with a grand organ arpeggio and the Requiem theme for a last time.



# VII

## THE CYCLE BEGINS AGAIN

### SCIENCE

Six to eight weeks later, the cicada eggs will hatch. Microscopic nymphs will fall to the ground and tunnel below the surface. They'll feed on tree roots before emerging for another 13 or 17 years. Little do they know, the next time their species will co-emerge and sing together will be in 2245.

### SCORE

Our cicada song slowly diminishes, reflecting the cyclical nature of cicadas returning to their roots—metaphorically and literally. A pulsing rhythm emerges signaling the nymph is ready to hatch. Now the music is light and airy with a descending pattern as the nymph falls to the ground. It's nearly the end of our story, but just the beginning of a new generation that's introduced with a dramatic climax. The music tosses our melodies back and forth, playing various polyrhythms against each other. A theme of descending notes builds to a crescendo as the nymph reaches the ground. As it digs into the earth, the music becomes "grounded" and the music resolves into a peaceful tone once again, as we fade out...for another 221 years.



## A NOTE FROM ORKIN

As the largest natural invasion in our lifetime, the double-brood emergence is expected to reach noise levels of over 100 decibels. While their sheer numbers and sounds may be disruptive, cicadas are vital to a healthy ecosystem.

While underground, cicada nymphs contribute to soil health by aerating the earth as they burrow. During their brief life above ground, adult cicadas are an important part of the food chain, and once they die, become a valuable source of nutrients for the soil.

At Orkin, we have a deep appreciation for all insects. It's through our knowledge, expertise, and training that we're able to intervene only when necessary to protect your home, business, safety, and health.

Thank you for helping us pay tribute to these fascinating creatures and showing the world that cicadas deserve to be celebrated this year, and every year.

— The Best in Pests™







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