



The Merciless Battles Of Tiny, Barbarous Bees

October 26, 2014 10:08 AM ET

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Weekend Edition Sunday

2 min 58 sec

Researcher Paul Cunningham tells NPR's Rachel Martin about the epic battle between warring honey bee colonies in Australia, which he recently studied.

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RACHEL MARTIN, HOST:

In a land far, far away, species many millions of years old are mired in an epic war. It's a story of stolen lands, child labor, royalty in peril.

(SOUNDBITE OF "GAME OF THRONES" THEME SONG)

MARTIN: OK. It's not "Game Of Thrones," but it is all those things because for the first time, two scientists in Brisbane, Australia named James Hereward and Paul Cunningham have documented the merciless territorial struggles between two species of bees. We spoke with Paul Cunningham who told us these conflicts can last for many months over many battles and end in the destruction of entire colonies.

PAUL CUNNINGHAM: It is very much like these battles-of-old. You know, when you have, you know, one kingdom sending its troops into war and sacrificing their lives in war.

MARTIN: And the soldiers? They're tiny. The war is between two species of very small bees which don't even sting and are nearly identical.

CUNNINGHAM: One of them is called *tetragarlia carbonara*. The other species is called *tetragarlia hockingsi*.

MARTIN: Cunningham witnessed three clashes over three months. The hockingsi struck first at the carbonara's hive. Two swarms facing off, worker bee against worker bee.

CUNNINGHAM: So there was lots of bees locking in midair, and they'd fall to the ground in these death grips. And they don't let go of each other. So they hold on, and they both die.

MARTIN: So why is this happening? What is their motive? Cunningham says it's hard to know whether some queens just have bloodlust, or whether there are specific calculations that indicate when a hive might be vulnerable enough to attack. Both hives take significant losses in a head-to-head battle. During the next battle, a hockingsi swarm ruthlessly pillaged the enemy.

CUNNINGHAM: And this time, we saw that some of the workers were breaking through the swarm, and they were getting into the hive. And they were dragging out the young adults, and throwing them on the ground.

MARTIN: The carbonara bees defended their hive by forming a cluster on top, trying to keep the invaders out. The fight died down, but in terms of the war, the hockingsi now had the advantage.

CUNNINGHAM: And then there was a third fight a month later. And this one was just carnage.

MARTIN: A new hockingsi queen was installed on the throne, but most cold-blooded of all, Cunningham doesn't know what happened to the baby bees, the larva.

CUNNINGHAM: So either it's possible that they were kept and reared as slaves, and that they serve the new queen. And - or it could be that they were just being discarded as they emerged as adults.

MARTIN: Cunningham says there's a lot at stake in these battles - new foraging territory, a new hive, an expansion of the queen's genetic line. So next time you reach for the honey pot, remember the ruthless queens that brought you that sticky treat.

(SOUNDBITE OF TV SHOW, "GAME OF THRONES")

LENA HEADEY: (As Cersei Lannister) When you play the game of thrones, you win, or you die.

MARTIN: This is NPR News.

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