

# Elephant ‘Trumpets With Relief’ After Week of Constipation

SEPTEMBER 12, 2018

<https://www.gastroendonews.com/In-the-News/Article/09-18/Elephant-Trumpets-With-Relief-After-Week-of-Constipation/52687>

How would you treat an elderly patient with stubborn constipation who can't tell you what's working and who, by the way, weighs more than 3 tons?

Meet Ruth, a 58-year-old Asian elephant (*Elephas maximus*) at Buttonwood Park Zoo, in New Bedford, Mass. She's feeling a lot lighter these days after the removal of a complete gastrointestinal obstruction and accompanying ileus that left her anorexic for three days and unable to pass stool for a week.



A much-relieved Ruth (right) nuzzles Emily.

Ruth likely experienced such a severe obstruction because she is down to her last set of teeth, said Susan Mikota, DVM, a co-founder and the director of Veterinary Programs and Research for Elephant Care International. Dr. Mikota consulted on the case and co-authored a case report on it in the *Journal of Zoo Biology* (2018;2[1]).

“The obstruction happened for a lot of different reasons, but one factor was that elephants have six sets of teeth in their lifetimes, and Ruth is on her last set, which comes in around age 40,” Dr. Mikota said. “So they’re pretty worn down.”

Treating Ruth presented a serious challenge, Dr. Mikota added. “It’s difficult to medicate an elephant that’s not eating food.”

Her treatment team resorted to the gamut of therapies, including oral laxatives, oral and rectal IV fluids, and oral and rectal stool softeners. They also turned to laser acupuncture to stimulate pressure points “known to impact the gastrointestinal system” and fecal transfaunation using

feces taken from Ruth's companion, 55-year-old Emily, which Dr. Mikota explained was the same process as fecal microbiota transplantation in humans. "We did that in case there had been a flora upset, since she had been in stasis in so many days and there was a possibility of bacterial overgrowth," she said. Feces from Emily were administered orally and rectally in gelatin capsules.

"It's hard to tease out exactly what was effective and say what one thing worked," Dr. Mikota said. After all, Ruth wasn't talking. "What we were focused on was getting the blockage out. We do feel that the acupuncture was effective."

When the obstruction was finally removed, Ruth expelled a bolus of compacted feces weighing about 100 kg (~220 pounds). (For comparison, a 160-pound person produces roughly 1 pound of feces per day.)

"She trumpeted!" said Whitney Greene, DVM, the first author of the case report and head of the veterinary hospital at Buttonwood Park Zoo. "She was very relieved."

A recent study of mammals, including elephants, found that despite their different sizes and variation in the lengths of their rectums—and, as a result, of their poops—species evacuate with surprisingly similar rapidity: a "nearly constant" 12 seconds (excluding bouts of constipation and diarrhea, of course). The study appeared in the journal *Soft Matter* (2017;13[29]:4960-4970).

Ruth has been at Buttonwood Park Zoo since October 1986, when she was found in the back of a broken-down truck in Danvers, Mass. Since her obstruction was cleared, Dr. Greene said, the pachyderm has been on a diet of cooked vegetables, bran and grain, as well as a growing variety of smoothies.

"We got a Ninja and it's wonderful; we've been making all kinds of smoothies, and she's liking them," Dr. Greene said, referring to the popular blender. "It makes it much easier for her to break down her food." —*Ajai Ra*