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Winning the Worm War

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Since ancient times, one of the world’s most terrifying ailments has been caused by what the Bible calls “the fiery serpent,” now known as Guinea worm.

Guinea worms grow up to a yard long inside the body and finally poke out through the skin. They cause excruciating pain and must be pulled out slowly, an inch or two a day. In endemic areas like this district in Lakes State of southern Sudan, people can have a dozen Guinea worms dangling from their bodies.

Yet this is a good news column.

This district is, in fact, one of the last places on earth with Guinea worms. If all goes well, Guinea worms will be eradicated worldwide in the next couple of years — only the second disease ever to be eliminated, after smallpox.

For the last 24 years, former President Jimmy Carter has [led the global struggle](http://www.cartercenter.org/health/guinea_worm/index.html) against the disease. When he started, there were 3.5 million cases annually in 20 countries. Last year, there were fewer than 3,200 cases in four countries: Ethiopia, Ghana, Mali and Sudan. The great majority of the remaining cases are here in southern Sudan.

Mr. Carter, 85, told me a few years ago that he was determined to outlive Guinea worm. I called him by satellite phone from here and asked if he still thought he would win the race. He laughed and said he was increasingly optimistic that he would outlast the worm. “If I can survive two more years, I’ll meet my goal,” he said.

Among the sufferers of Guinea worm in its last chapter is Anyak Gol Marial, a boy living near the collection of huts known as Dor. Anyak said he thought he was about 8 years old. He had a painful blister on his thigh — a sign that a worm was underneath and might soon poke through.

Guinea worms spread because sufferers try to escape the burning pain by entering water. The worm then dumps its larvae into the water — which other people drink. Without humans to sustain their life cycle, guinea worms disappear forever.

Carter Center health workers are the only outside presence here. There is no school, no clinic, no store, not even a government road — just a path that villagers themselves carved through the bush. On my drive in, I came across several barefoot, barely clad hunters who had just killed a wart hog with nothing but spears. I have rarely felt so inadequate.

To detect cases of the disease, the Carter Center has set up a network of Guinea worm volunteers. Serving as a volunteer is prestigious and brings a reward of a T-shirt — the only real article of clothing some people own. One volunteer had reported Anyak’s blister, and a Carter Center field officer persuaded the boy to move into a compound here for treatment. This ensures that a victim doesn’t enter a pond.

Anyak leapt at the opportunity to move into the compound, partly because of the promise of a bed mat, a mosquito net and three good meals a day (at home he eats only once or twice a day). A moment later, he was riding in our vehicle to the compound — the first time he had ever been inside a car.

The campaign against Guinea worm is succeeding because — unlike many foreign aid projects — it puts villagers themselves in charge. Now that they understand that it is contaminated water rather than witchcraft that causes the disease, village elders have barred anyone with a dangling worm from entering a water source. Violators are fined, typically one goat.

Elders also encourage families to use a well drilled by Unicef, or if it is too far away to use filters handed out by the Carter Center. But it’s an uphill struggle. The well broke down while I was visiting, and I came across a family drinking filthy, unfiltered water collected from a mudhole.

When Anyak was in the compound, a nurse dripped water on his blister to fool the worm into emerging. In the morning, it did, looking like spaghetti. Anyak grimaced as the nurse carefully pulled the worm out a bit, spooled it around gauze, and bandaged it to prevent infection.

In recent decades, the world has learned that fighting poverty is harder than it looks. But the Guinea worm campaign underscores that a determined effort, with local people playing a central role, can overcome a scourge that has plagued humanity for thousands of years.

My favorite moment came when we were bouncing along with Anyak toward the Carter Center compound. I asked him what he wants to be when he grows up, and he answered with the most prestigious and altruistic position he could imagine: “I’d like to be a Guinea worm volunteer.”