

# Smart Stuff

with Twig Walkingstick

## Q. Dear Twig: What goes on in a septic tank?

A. To quote the bard, "Things you wouldn't understand. Things you couldn't understand. Things you *shouldn't* understand."

Ha ha! Just kidding.

My own treehouse has a septic tank. It's buried in the yard, the usual place for one. It holds 1,000 gallons, a typical size for one. Inside, **bacteria** digest **waste** and **water** that drain from the house's pipes. The bacteria, called **anaerobic** ("an-uh-ROE-bik") **bacteria**, don't need any oxygen. (Good thing!) The pipes include the pipes that come from my **toilet**, **bathtub** and **kitchen sink**.

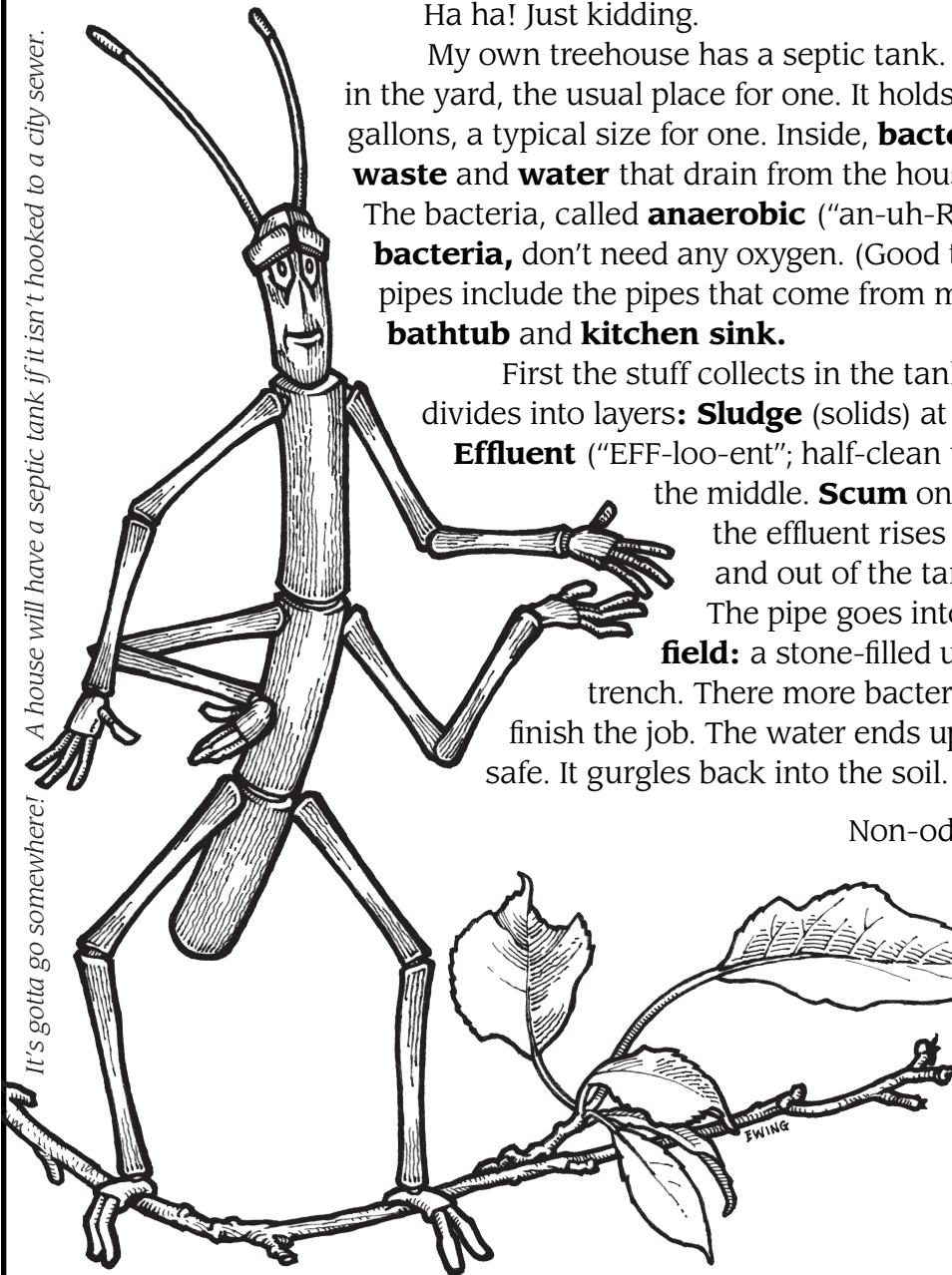
First the stuff collects in the tank. Then it divides into layers: **Sludge** (solids) at the bottom.

**Effluent** ("EFF-loo-ent"; half-clean water) in the middle. **Scum** on top. In time the effluent rises and goes up and out of the tank by a pipe. The pipe goes into a **leach field**: a stone-filled underground trench. There more bacteria help finish the job. The water ends up clean and safe. It gurgles back into the soil. Hurray!

Non-odorously,

Twig

It's gotta go somewhere!  
A house will have a septic tank if it isn't hooked to a city sewer.



From your scientific friends at The Ohio State University — specifically, the Ohio Agricultural Research and Development Center ([www.oardc.ohio-state.edu](http://www.oardc.ohio-state.edu)) and OSU Extension ([extension.osu.edu](http://extension.osu.edu)).



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**Notes:** In North America, an estimated 25 percent of households — 1 in 4 — use a septic system to dispose of their wastewater. Ohio State scientists say 980,000 households in Ohio do so. Not that most folks would ever consider it, but, "Never enter a septic tank," warns Ohio State University Extension's "Septic System Maintenance" fact sheet (<http://ohioline.osu.edu/aex-fact/0740.html>). "Any work or repairs should be made from the outside. The septic tank produces toxic gases that can kill a person in a matter of minutes." Find a non-toxic tankload of details — how a septic system works, how to keep one working right, etc. — at <http://ohioline.osu.edu/>. Click on "Search," then type in "septic."

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