

Drama in a Tomato Patch

Do plants talk? Yep! They talk to each other, they talk to animals, and they even talk to bugs. Even though plants don't use words like we do, they give messages loud and clear.

Sometimes you can see what a plant is saying. What is your withered tomato plant saying? "I'm thirsty." What is a prickly rose saying? "Don't pick me" or maybe "Don't eat me."

Sometimes you can *smell* a plant's message. That lovely scent coming

from an orange tree or a rose in bloom? That's their way of calling bugs to help pollinate them. How about the whiff you get from the leaves of a tomato plant—not so lovely. Those leaves are saying, "Don't eat me."

Sometimes you can see only the effects of plants "talking." Maybe you've noticed that milkweed grows in patches. You hardly ever see just one milkweed plant. That's because

milkweed spreads chemicals through its roots. The chemicals say, "This space is reserved for milkweed."

Bottom line: God created plants to "talk" to each other and to bugs. That's how the creation keeps on living and growing. See for yourself! Read this, then head outside, sit down in your yard or at the park, and watch plants talk. Got a tomato patch? Go there to watch a real drama.



The Real Drama

If your family has ever grown tomatoes, you probably know what a tomato hornworm looks like. It's a big, fat, green caterpillar with a "horn" on one end. This critter eats tomato leaves.

You don't want a hornworm on your tomato plant. Neither does a tomato plant. So when a tomato hornworm chews on a tomato plant, that plant calls for help.

When the hornworm chews a tomato leaf, the caterpillar's saliva mixes with leaf juice. The leaf juice and the saliva combine to form a gas. That gas drifts into the air, away from the plant.

Humans can't smell that gas, but a certain type of tiny wasp can. This wasp flies directly to the chewed-on plant, finds the caterpillar, and attacks it—stopping the caterpillar in its tracks and saving the tomato plant.

If there's only one hornworm, the plant sends a weak signal. Only nearby wasps may answer the call. If there are more hornworms, the plant sends stronger signals and more wasps come. The right amount of juice calls the right amount of wasps.

This system works perfectly for both plant and bug. Of course that's the way God made them!



Bossy Bushes

Creosote bushes grow in dry desert areas. Their roots spread way out from the plant and right up near the surface of the soil. That way they can get any drop of precious rainfall before it evaporates.

In addition to water, creosote bushes need certain minerals that are found in desert soil. If two creosote bushes grow closely together, they can't get enough of the minerals they need. So the first creosote to grow in an area sends chemical messages through its roots: "This is my space. No more creosote allowed nearby." Even its own seeds can't take root and grow nearby.

If you live near or travel through deserts in North America, you can find creosote bushes growing—all very evenly spaced. They've obviously been talking to each other. They're spreading themselves out so that they all will survive.



Call 911

Lots of people love the smell of newly mown grass. We think of it as a relaxing, got-my-chore-done type of smell.

Yet the grass making that odor is not relaxed. It's calling for help because something is damaging it. The grass "bleeds" a juice which quickly becomes a gas and floats away from the plant. It's calling for something to come and stop whatever is eating it.

Different grasses give different calls. And different bugs respond!



ILLUSTRATION BY SCOTT HOLLADAY

Wild Purple Party

Have you seen any fields, meadows, or roadsides absolutely packed with small purple flowers? Those flowers are called knapweed, and they're blooming wildly right now.

They love to crowd their heads together to form a carpet of purple . . . purple only. They don't want yellow, blue, or white flowers at their party. They much prefer to stick with their own kind.

So, long before they have their purple party, the roots of knapweed send out chemical messages saying, "Don't grow here unless you're knapweed." Other plants can't grow near them. Only more knapweed can.

In certain fields and roadsides, the purple party expands every year. Nothing can stop it. Except, probably, a certain kind of bug.

These flowers came to North America from England. Their "companion" bugs did not. That's why we have so many knapweed flowers!



Say It with Flowers

Look closely at the wildflower we call Queen Anne's lace, or close your eyes and imagine one. That blossom is not just one flower, is it? It's lots of tiny white flowers bunched together.

Then look closely at a dandelion. It too is a bunch of flowers—yellow—all on one stem.

Would a bug ever notice just one tiny white Queen Anne's Lace or one tiny yellow dandelion floret? Probably not.

That's why God bunched most tiny flowers—including goldenrod, daisies, milkweed, and asters—together on a single stalk. Bugs will notice a bouquet sooner than they notice one tiny flower. After the bug comes to investigate, it usually visits all the tiny flowers.



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