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Skinny 'Science Fiction' Insect Invades Southeast Kansas Field

MANHATTAN, Kan.—They looked like science fiction: Pencil-thin or thinner insects, as long as your palm is wide. Their jointed legs seemed too spindly to function across plowed ground, up plant stalks and out onto leaves.



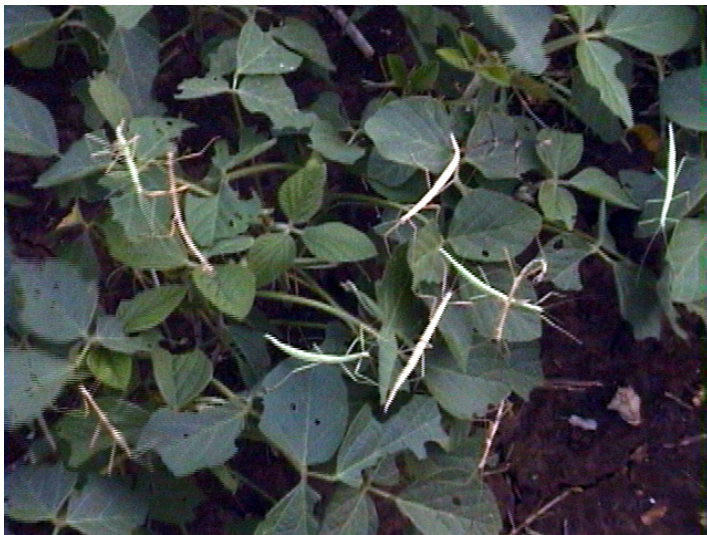
Above: These gentle, plant-eating stick insects are about the width of your hand.

Yet, a hoard of the skinny, slow-moving creatures appeared this month in border rows of a southeast Kansas soybean field.



Above: We had never encountered so many walkingsticks at one location.

The grower was worried—and bewildered. He didn't know what to do about self-propelled tree twigs that turn lush soybeans into nude stems.



Above: Where the walkingsticks were present, all soybean foliage was being consumed.

So, the farmer phoned Scott Gordon, Allen County Extension agent. Gordon thought the situation sounded pretty weird; he volunteered to consult entomologist George Lippert at Kansas State University's southeast area Extension office in Chanute.

Lippert also thought the phenomenon sounded strange. He drove to the farmer's field east of Moran and saw something that's never appeared in an entomology textbook. A green-and-brown plant eater commonly

called the walkingstick had infested the soybeans like a plague of locusts. The twiggy insects were so numerous Lippert could catch 25 to 100, just scooping his hands up once through the plants.



Above: Walkingsticks massed at the leading edge of damaged area within the soybean field.

In fact, the infestation was so odd that Lippert decided to call Randy Higgins, a K-State Research and Extension entomologist based in Manhattan.

"I grabbed my video camera and left immediately," Higgins said. "The sight was remarkable. Tens of thousands—no, probably hundreds of thousands—of walkingsticks had defoliated the outer rows of the field and were steadily moving into the field proper. Before the walkingsticks began to feed, the soybeans were about 12 to 15 inches tall with four or five trifoliolate leaves. Where the insects had passed, little remained."

After a few minutes of kneeling to film the event, the entomologists' pants, shirts and arms were covered with walkingsticks.



Above: Walkingsticks would climb on and cling to anything in their path.

"Fortunately, their mouthparts are more suited for eating leaves than piercing human skin," Higgins said.

The entomologists then investigated the bluestem prairie and wood border adjacent to the field. They also examined the weeds growing in the soybeans.

To their surprise, Lippert and Higgins found almost no walkingsticks in prairie, woods or weeds. They had to look hard to see any plant damage.

"In the prairie we finally found a number of stripped stems that once were a type of broadleaf plant, reaching above the bluestem canopy. Obviously, these were the source of the soybean field's hungry insects. The walkingsticks apparently went looking for more food and just stumbled onto the 'beans,'" Higgins said.



Left: Scurf pea stripped of foliage in prairie.

Right: Mating pair of walkingsticks on scurf pea.

He took samples of the prairie host's stems and seed pods back to campus. He also made plans to post his video footage on the entomology "pages" that are part of K-State Research and Extension's public-access Internet Website (<http://www.oznet.ksu.edu>).

Just two hours after Higgins left, a thunderstorm dropped nearly 2.5 inches of wind-driven rain in the Iola area. When Lippert returned to the infested soybean field the next day, he found its walkingstick population was halved. Trapped, dead insects littered the mud.

This outcome was somewhat of a relief, Lippert said, because no product on the market today is labeled for controlling walkingsticks on soybeans. Beyond that, the rain would help the farmer's drought-stressed 'beans add new leaf tissue and—with luck—outgrow much of the insects' damage.



Above: Entomologist George Lippert inspecting walkingstick-damaged areas. Prairie on left.

At K-State, plant taxonomy professor Ted Barkley identified the walkingsticks' prairie host as a plant Kansans call wild alfalfa or scurf pea (depending on the part of the state). Cattle often gobble the weed with gusto, so it tends to disappear where grazing is continuous. But the plant is a prairie native that particularly likes the edges of woodlands.

"Obviously, this particular species of walkingstick found it delicious, too," Higgins said. "And when they ran out, the insects created a very odd problem in the history of Kansas soybean production."

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Color photographs of walkingsticks in soybeans taken by R. Higgins and G. Lippert