

SCIENCE

Some Cultured Conversation For Scientific Advancement

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Backster's experiment—titled "Evidence For Primary Perception in Plants"—was given wide circulation in the best-selling book, now a paperback, "The Secret Life of Plants."

After his initial, almost accidental, discovery that plants registered reactions on a lie detector when they were threatened, Backster spent two years designing an experiment that could prove that plants feel emotion, which they show through electrical vibrations that can be picked up by a lie detector. Finally, he decided to drop live brine shrimp into boiling water and measured the reaction of philodendron plants with a lie detector.

He found once again that the plants reacted violently to the death of the shrimp and concluded that plants have some form of primary emotion.

But when three students at Cornell University, along with their professor, Edgar L. Gasteiger, tried to repeat the experiment, they got no responses from 60 killings. Oddly enough, Gasteiger said, the students started as believers in Backster's work and received help from him. Another believer, John M.

Kmetz, also failed to repeat Backster's experiments at a well-equipped laboratory in San Antonio, Tex., called Science Unlimited Research Foundation that was set up with a million dollar grant to prove that plants can communicate.

He was aided by Backster in planning the experiment and used more than 100 plants and more than 200 brine shrimp. In contrast, Backster made only 13 attempts at killing shrimp.

"There is no correlation whatsoever between the killing of brine shrimp and getting a reaction from a plant," Kmetz said yesterday.

Backster, though, insisted that both Gasteiger and Kmetz—despite his advice—varied from his experimental design in ways that made the difference between his success and their failure.

"He comes to me and gives suggestions on what I should do," said Kmetz. "When I do what he says and don't get the results he wants, he comes to you and says I didn't do it right."

Backster faulted the Cornell group for changing the equipment. "This has been one of the bugaboos as far as replicating the experiment," he said. Gasteiger,

however, insisted that Backster had approved equipment changes in advances because they improved the experiment.

"Our experiment," Gasteiger said, "was done more carefully than the one that Backster published."

The audience was divided into two camps: the true believers, who backed Backster, despite the failure of other scientists to repeat his experiments, and scientists in the field of plant physiology, who never believed him anyway.

Galston, the Yale plant physiologist who arranged the program, said there is ample evidence of voltage differences between the tip and the base of a plant. This electrical field that exists in a normal, healthy plant can be changed by adjusting the salt concentration in the plant or merely by tipping the plant over, altering the gravitational pull on it.

Galston said that half his Yale students talk to their houseplants and half of that group believe it does some good.

"They are rational people who believe something about the universe that most scientists don't believe. It probably does some good to those people who talk to plants."