

# Skylab's Tar Heel Spiders Performed Well In Orbit

BY BILL LEE

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Anita and Arabella, the two space spiders who overcame weightlessness and spun their webs aboard the orbiting Skylab, may have proved something about human behavior in the process.

It is that we, as human beings, may be far more adaptable to unique experiences than we might have thought.

This is the preliminary conclusion drawn by Dr. Peter Witt, a researcher at Dorothea Dix Hospital in Raleigh, who studies behavior patterns in spiders.

In fact, it was Dr. Witt who bred and raised Anita and Arabella and chose them for the space flight.

IN A LIMITED SENSE, Dr. Witt said Thursday, the study of spiders can be applied to human beings. There are some things, he said, that are common to all animals in terms of their ability to modify behavior.

Spiders are unique, he said, in that "there is no other animal that leaves such a detailed record of his movements as the spider in his geometric web."

Anita, who later died aboard Skylab, and Arabella were sent into space to answer two questions, said Dr. Witt. First, if weight and gravity are crucial to the weaving of a web, what does a spider do in weightlessness? Secondly, how does a living being react to a stressful

and very unexpected, unprepared-for situation?

Dr. Witt was surprised that the spiders learned to weave their webs in outer space.

"I think it is most surprising because it took a readjustment of everything they have known before in their behavior," he said.

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"IF YOU THINK about the astronauts, how they adapted," he said, "they did it all by planning, by reading books, by making calculations, by having data from previous flights.

"None of this is true for the spiders," he said. "They went into this without forewarning and could not do things like

develop special shoes or handles to hold on to."

"So they had to do it in what you might call the instinctive way," he said, "and that is certainly different from the way we did.

"So, if we say that they are very much less adaptable than humans and do not have the ability of forethought and planning, then we would expect that they would be completely helpless," he said. "But it took them just two days to get over it and manage to spin their webs."

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FROM THEIR performance at the higher-than-expected level, Dr. Witt drew his conclusions.