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# Spiders Help Men to Cope With Space

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Although his subjects — two cross spiders — died before returning to earth, Dr. Peter Witt, director of research for the N. C. Department of Mental Health, believes their experiences aboard Skylab II bode well for man's ability to cope in stressful situations.

"The prognosis for man is good. How good we don't know yet. If a comparatively rigid animal like a spider can adapt to these absurd conditions in space, think of how much better man should adapt," he said in an interview.

Dr. Witt, who is probably best known for his studies of the effects of drugs, alcohol and environmental stresses on the web-building patterns of spiders, recently aided the National Aeronautics and Space Administration (NASA) in an experiment of the effects of weightlessness on spiders.

In this experiment, two female cross spiders — Anita and Arabella — were put aboard Skylab II, and then observed to see whether they continued to build webs.

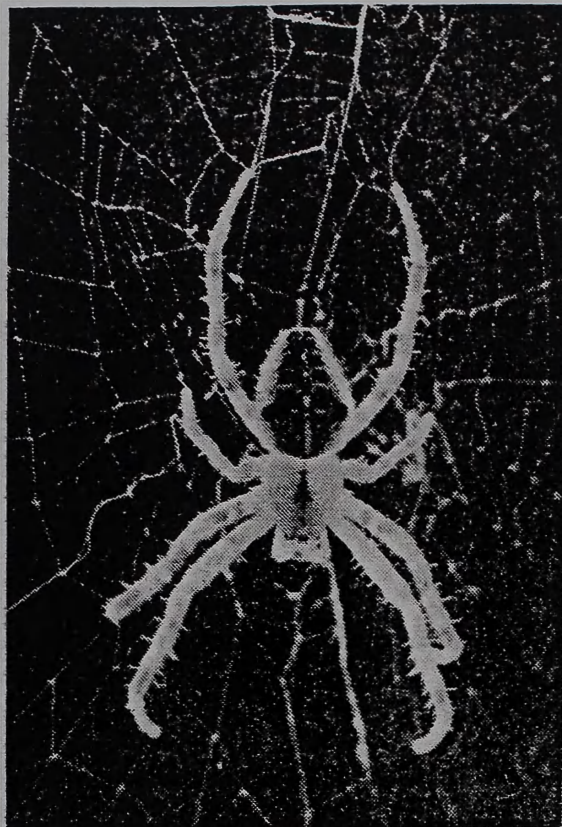
The result: After two days of swaying through the air on filmy strings, the spiders began to build slightly misshaped webs. Rather than using their traditional method of web-building, in which they hang down by threads, they used an alternate procedure, pulling themselves along their threads by constructing little disks."

"I didn't think they would adapt. They are a rigid animal and generally have difficulty coping with an unexpected situation. But the will to survive is such a strong drive, it's a central part within us, and spiders express this by building webs," Dr. Witt said.

Dr. Witt said it is difficult to draw anything but the most general of conclusions from the Skylab experiment. He has asked NASA for photographs of the webs in order to measure distortions from the norm, but has not received a response.

"Without the photographs we really know little. Once we measure the web distortions, we can see what they are comparable to. Would it be the same distortion as caused by drugs or by a brain lesion, for instance?" he asked.

By comparing the web distortions to known disturbances, Dr. Witt said, scientists might better understand the effects of space travel on man. "We might find out



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**Cross spider, the type sent on Skylab**

that we should be careful of what people think or say in space because it might be distorted," he added.

He would also like to know whether the webs improved or deteriorated over time, the frequency of the web building process and the amount of water fed the spiders. He said it would have been "ideal" if the spiders had been brought back alive when the Skylab II crew returned last month.

"I would have been interested to watch what kind of webs the spiders built when they returned to earth. How long would it have taken them to return to normal webs?"

Dr. Witt said he isn't sure of the cause of Anita and Arabella's death, but he suspects that it might have been improper feeding.

Anita died after three weeks in space and Arabella died shortly after returning to Houston.

"I don't know what caused that death. It may have been the pressures caused when returning to earth. But if the spiders died in spite of having been given enough water, we may conclude that invertebrates have a lesser chance of surviving in space than man," he said.