

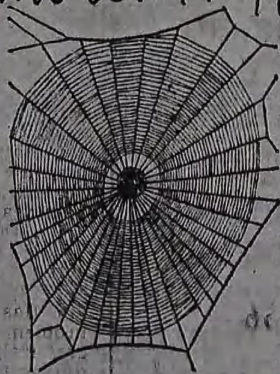
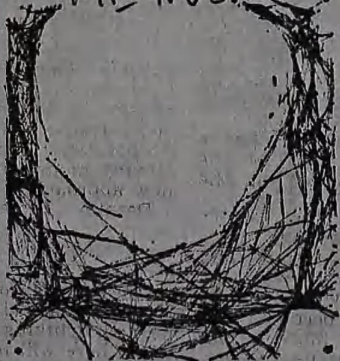
THE AUSTRALIAN OCT. 11th 1971

Oh, what a tangled web they weave ...

FOR THE past 22 years an American psychologist, Dr Peter Witt, has been systematically de-ranking spiders.

He has dosed them with mescaline, caffeine, carbon monoxide, amphetamines — and most of the other drugs or substances which have an ill-effect on humans.

The results of this work have been predictably horrifying and scientifically inconclusive. His stone spiders, among the most admired artificers of nature, have spun webs which are



Right, a web spun by a female spider without drugs and (left) a web spun by the same spider after a dose of LSD.

both ugly and inefficient at catching flies.

Normally every morning the spider makes the web in 20 to 30 minutes by laying down radii at set intervals and crossing the radii in pendulum and round turns to lay the insect-catching zones. Then it settles down at the hub with his eight legs spread on the radii to

pick up the vibrations from a captive.

Drugs radically interfere with this behaviour. Tranquillisers made them spin less often. The webs are smaller and lighter, with less thread and fewer turns and radii — which would make them less efficient for catching flies.

Under relatively high,

stimulating doses of amphetamine, the spiders tried to build webs at their normal frequency but the result was "highly irregular and unstructured." The webs lost their orbital shape, looked random in construction, and were ineffective as traps.

High LSD doses completely disrupted web building. Some spiders stopped spinning altogether. High but less incapacitating doses produced very complex three-dimensional webs which often appeared strikingly psychedelic.

Dr Witt is still uncertain how far his results apply to human beings.

He has proved that drugs disrupt an activity essential to life in spiders. But it could be argued that we already know as much from similar experiments with rats.

It is debatable where spiders come in the hierarchy of human sentiment. However, scientific interest in this field appears to be at a low ebb, so there is little likelihood of provocation among spider lovers.

John Ezard

But after feeding the drugs to his spiders and analyzing their webs, Dr. Witt concludes that mescaline primarily affects the muscle and psilocybin the brain. He said he tested the drugs on people but found they gave too many subjective responses to isolate a pure drug reaction.

Some time ago, the National Aeronautics and Space Administration heard about Dr. Witt's research and became very interested in it. This interest, sparked by the suggestion of a student in a NASA sponsored contest, has resulted in a research project involving spiders to be conducted on Skylab's second trip into space later this summer.

The object of the experiment, says Dr. Witt, is not to test drugs, but to test the stress of space travel on behavior of living beings as measured by web building.

The spiders to be used in the experiment, known as ED-52, are the same type used by Dr. Witt in his behavior and drug experi-

ments. Some time ago he forwarded his computer cards to NASA so that they could be adapted for use in the new computer to be used by the space agency. Trial runs on the NASA computer have already been made and the print-outs sent to Dr. Witt.

In general, the space test will involve a study of what environment—in this case, zero gravity—does to web geometry.

"The experiment will give us some reading on the effect that the strange space environment has on the behavior of the living organism," Dr. Witt says.

The spiders will be carried into space in a small box and as soon as possible will be placed into separate cages containing lights and photographic equipment. While in flight, the spiders will be fed food and water by the astronauts. The experiment will be carried out the second week of the flight and the webs that the spiders build (if they build any webs at all) will be photographed

and broadcast back to earth. Here, they will be measured, computer-analyzed and compared with "earth webs" by Dr. Witt to determine if changes in web-building have taken place in space travel.

According to Dr. Witt, the spiders themselves will not be brought back to earth but will probably die in space. This, he believes, will result in a less-effective experiment and one that is inconclusive in some ways.

"We need to determine if there are changes which are irreversible and the effect of long-term space travel on web building. I'm hoping that NASA will change its mind and bring our spiders back to earth," he said.

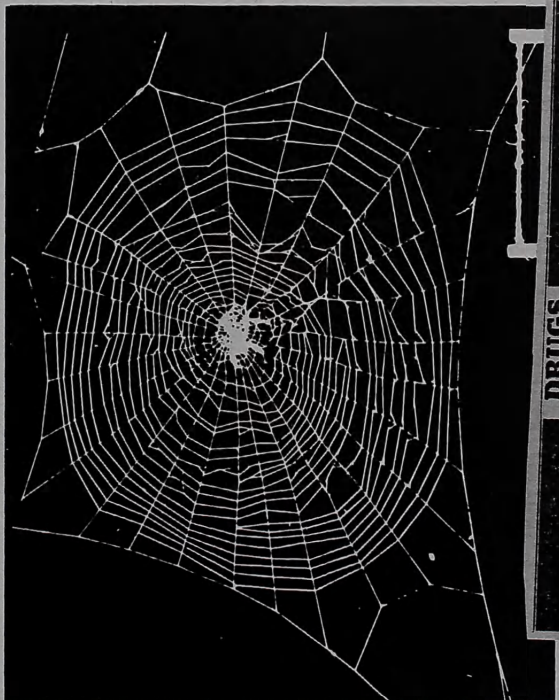
At any rate, spiders like Ar will be aboard Skylab's next space mission and the webs they do, or do not spin, will provide us with some meaningful data on the effects of space travel on living organisms.

Who said spiders can't go to the moon?

Normal Web



Low Dose Amphetamine



DRUGS

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