

## Shot of Drug Kills Tusko

By Claire Conley

A 7,000-pound researcher gave up his life for science Friday.

Tusko, the 10-year-old male elephant being boarded at the Oklahoma City Zoo, died shortly after injection with an experimental drug which has been administered to humans to induce mental illness for study purposes.

The drug is LSD, lysergic acid diethylamide. Tusko's reaction was a complete shock to scientists who attempted to save his life.

Dr. L. J. West, professor of psychiatry at the University of Oklahoma medical school, who has been directing a series of experiments for which the animal was brought here from Phoenix, said the dosage was .3 grams.

This is much larger than the proportionate human dose, but 50 percent smaller than the dosage ratio for members of the cat family, whose reaction to LSD has been extensively studied, he said.

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Dr. L. J. West bends over Tusko as Dr. Warren Thomas looks on.

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# Tusko Drops Dead

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L psychiatry at Veterans Administration hospital, had taken LSD prior to Tusko's injection. A dose from the same batch of the chemical given to Tusko was injected in one of the Zoo's large "cots" with no irreversible results.

The drug produces a temporary mental illness, similar to schizophrenia. Psychiatrists and other researchers often take it for a self-study of the mental condition.

Animals have been included in the studies, but this was the first attempt to give LSD to an elephant.

Dr. West believes an elephant brain is similar to a human brain, and much larger, making study easier.

The researchers were also interested in a unique mental illness of all male elephants, which occurs periodically.

The psychiatrists hoped that studies of this episodic madness, called "musth", would give clues to certain types of acute recurring psychoses in humans.

When an elephant experiences this yearly insanity, he becomes enraged and apparently intoxicated for approximately two weeks, then gradually returns to normal. The psychiatrists theorized that this reaction might be related to the secretion of the temporal gland, located on the side of the elephant's head, which produces a brown sticky fluid during the musth period.

They now feel this fluid may be similar to LSD.

"The fantastic sensitivity shown by Tusko to LSD, from which he collapsed within five minutes, was a most unfortunate but extremely valuable finding from the point of view of science," Dr. West declared.

He pointed out that bull elephants, when they reach sexual maturity at the age of nine or 10, become unmanageable and generally have to be destroyed.

"If the fluid in the temporal gland is the cause of this, we could remove the gland in young male elephants and be able to keep them."

He also reminded that the anatomical structure of the beasts prevents castration so they can be gentled and raised as steers.

An autopsy was performed by Dr. William E. Jacques, professor of pathology at the OU medical school and members of his staff.

The mysterious temporal gland was removed and body fluids were collected for chemical analysis. Cause of death was reported as anoxia from spasm which closed the huge beast's throat.

Tusko fell approximately five minutes after the injection. He was described as "intoxicated" for a short while until he lost muscular control.

Judy, the zoo's 15-year-old female elephant, went to help her companion.

"She thought he was sick," Dr. West explained. "This is characteristic of elephants. They try to help

sick animals, but if a member of the herd dies, they go away and leave him."

Judy seemed disturbed at first, but later went about her usual pursuits, eating hay and bathing herself from a pool.

"We will get her another mate as soon as we can," Dr. Warren Thomas, zoo director declared.

Of Tusko, Dr. Thomas remarked "he was no toy. He was getting hard to manage and had to be handled strictly from a distance. He might have been a potential killer."

The animal had received an injection of an antibiotic the day before in preparation for the tests, and suffered no ill effects.

Dr. Thomas expressed surprise that such a small dose could kill the massive beast.

He remarked that a research project he did for the government of Bechuanaland, Africa, a year ago was an effort to find a drug that could kill elephants.

There the beasts are a problem. They eat and trample the crops. The harsh crack of a rifle scatters the herd and it is hard to kill more than one or two.

"We thought if we could shoot a drug from an air rifle with a very low report, it would be possible to get more of the herd in one place."

He reported using a very potent drug, 20 c. c.'s of succinyl choline, enough to kill 30 to 40 antelope or deer. He said it took 30 minutes for the drug to kill one of the beasts, as opposed to Tusko's extreme sensitivity to LSD.

"Maybe LSD would be a more effective way of destroying herds in countries where they are a problem," he suggested.

The dosage Tusko received was less than an aspirin tablet.

Dr. West said that as a result of the unexpected fatality his department would send notices to research centers using the drug on humans warning against overdosing.