

ENTOMOLOGY

A-Bomb Test Tags Moth

➤ A MIGRATORY MOTH that got mixed up in the French A-bomb test in the Sahara Desert has helped British entomologists bolster a long held theory—that some of their moths winter in Africa rather than Europe.

When France announced its first successful A-bomb test on Feb. 13, 1960, Dr. H. B. D. Kettlewell of the University of Oxford saw a chance to test the theory. If he could find radioactive moths in England, it could mean that they had come from the Sahara.

Dr. Kettlewell posted requests for specimens of early migrant moths in British and other European journals. Of the several hundred specimens sent to him, only one was radioactive. The moth was taken in March at Steeple Barton, Oxford, and was identified as *Nomophila noctuella*, a species with a one-inch wing span which is also found in the United States.

Dr. M. J. Heard of the Atomic Energy Research Establishment at Harwell, England, studied the moth and found a single radioactive particle in its chest.

All available evidence indicates that the moth and the particle were actually in the Sahara on test day. The particle is believed to be composed of fused silica colored by traces of metal and is "entirely typical" of particles seen after atomic explosions at ground level. Decay in radioactivity was about the right amount expected for particles made radioactive on the day of the Sahara test.

The particle could have drifted over Europe and been picked up there by the

moth, but the main radioactive cloud from the Sahara test did not pass over western Europe until Feb. 26, too long for very many particles of this size to remain in circulation.

Drs. Kettlewell and Heard report in *Nature*, 189:676, 1961, that the moth probably picked up the particle in the Sahara on test day and somehow traveled the 1,500 miles to England in less than a month.

• *Science News Letter*, 79:149 March 11, 1961

BIOCHEMISTRY

Drugs Tested for Effect On Brains of Animals

➤ WHAT GOES WRONG in the brain of a schizophrenic, a person with the most common form of mental disease, may be learned through tests on animals. Lysergic

acid (LSD), which is a potent brain poison, may interact with serotonin, a substance that occurs naturally in the blood and brain of animals as well as human beings.

Dr. Werner Koella of the Worcester Foundation for Experimental Biology, Shrewsbury, Mass., said that he had produced deviations in nervous activity of cats and rabbits with lysergic acid.

The animals show a large degree of variability in response, which is drastically reduced with LSD doses, Dr. Koella reported at a symposium on psychopharmacology in Boston.

"The next step is to learn more about the functional significance of serotonin in the brain," Dr. Koella said. "Possibly the effect of certain tranquilizers such as reserpine may through interaction with serotonin restore the brain to its normal balance."

Previous experiments have failed to determine whether schizophrenia is connected with a deficiency or excess of serotonin.

• *Science News Letter*, 79:149 March 11, 1961

ANIMAL PSYCHOLOGY

Chicks Like Bright Colors

➤ CHICKENS TEND to like bright colors and dislike dull or drab colors and black, a poultry scientist said.

However, chickens, like people, are individuals and also show individual preferences for different colors, Dr. George D. Quigley of the University of Maryland, College Park, Md., told *SCIENCE SERVICE*.

For instance, yellow is generally "disliked"

by the chickens Dr. Quigley is testing for color recognition and preference. Nevertheless, some of the chickens apparently "think" it is prettier than all other colors by the preference they show for yellow.

Dr. Quigley said he has had the nests of the chickens he is testing painted pink, red, blue, orange, yellow, tan, brown, black and metallic gray. He also uses such combinations as a brown nest box on a yellow background.

Dr. Quigley said a hen habitually lays its eggs in a certain nest. When the poultry scientist finds out where a hen lays its eggs the two nest boxes on either side of the one the hen uses are painted in colors different from the dull neutral gray of the unpainted nest. If the hen changes its egg-laying to one of the painted nests, it has recognized the color and shown preference for it.

Dr. Quigley said color preference does not seem associated with food preference. Also, as far as it has been determined, the color of the nest does not influence the hen to lay more or fewer eggs. On the other hand, the color a hen prefers may be a clue to the health of the bird, Dr. Quigley said.

The color perception of chickens is different from that of humans; they do not see as well in blue light as humans do but see better in red light than humans do.

Dr. Quigley plans to find out if baby chicks will be influenced by a color if exposed to it for only one to three days after birth. Using this method, called imprinting, Dr. Quigley will later expose the chickens to the same color, among many other colors, to see if they remember it.

He said that so far he has only preliminary results of the color tests but expects to have further results of his studies this summer.

• *Science News Letter*, 79:149 March 11, 1961



CHICK PICKS A COLORED NEST