ENTOMOLOGY

Bite Score: Over 1,000

➤ MORE THAN 1,000 mosquito bites within a six-month period is the score of Dr. Louis Roth of the Quartermaster General Laboratories in Philadelphia.

He gave himself the chance to be bitten this many—and more—times in order to find out just why mosquitoes are drawn to people they attack. His experiments were an outgrowth of the war-inspired quest for better mosquito repellents to protect troops in infested areas, he said.

Dr. Roth's tests consisted in cutting off different parts of the sense organs of two types of mosquitoes, then seeing how they reacted to his arm and to a heated glass rod after the operations. Their reactions were compared to those of normal mosquitoes.

The two kinds of mosquitoes were the disease-carrying *Aedes aegypti* and the *Anopheles quadrimaculatus* females. This Aedes is the only known yellow-fever-carrying mosquito in the United States. The Anopheles quad. spreads malaria.

When the antennae are removed from the Aedes, it is not attracted to man. When both the antennae and the palpi, the small feelers on either side of the mosquito's probe, are removed, the mosquito will bite only in rare cases.

Thus this mosquito usually finds its man through the antennae and palpi. The antennae serve as a guide to the heat waves sent out by humans, animals or objects in the vicinity. It is possible that the antennae also react to chemical stimulus, such as body odors, Dr. Roth states.

The Anopheles mosquito he studied behaves somewhat differently. The females continue to bite even after both the antennae and palpi have been removed. When this mosquito is near a host, Dr. Roth believes, its hind legs may serve as sense organs, detecting air currents resulting from heat radiations from the host.

Science News Letter, June 16, 1951

PHYSICS

One Radar Locates Storms

➤ LOCATING THUNDERSTORMS may become a much easier task if a system the British have worked out is successful. On show at a scientific exhibition at the National Physical Laboratory, Teddington, was an automatic recorder which picks up and computes signals received by a single radar. Now it takes three or four radar sets to do the job.

Measurement of the time interval between reception of a wave from a lightning flash as it travels along the ground and another wave from the same flash as it bounces off the ionosphere high in the sky is expected to do the trick.

The British scientists will test the new method against present ways of locating thunderstorms.

Both the British and Americans now use networks of radar stations to determine by triangulation the location of the thunderstorm. The only present American network covers an area with a diameter of 4,000 miles in the Caribbean region.

University of Florida scientists, under contract to the U. S. Army Signal Corps, have conducted field tests with equipment working on the same principle as the new British method. Signal Corps scientists at Fort Monmouth, N. J., declared that the tests showed the method was not feasible.

Wave shapes from lightning patterns, they said, were not clear enough to permit accurate placing of the thunderstorms. However, the Signal Corps scientists said, they used human calculation, rather than an automatic recorder as developed by the British.

Science News Letter, June 16, 1951

Question Box

ASTRONOMY

What are flare stars? p. 370.

What is a proposed method for finding the distance to a newly discovered asteroid? p. 382.

DENTISTRY

Why is tooth snatching now passe? p. 375.

ENTOMOLOGY

Why did a scientist allow himself to be bitten over 1,000 times by mosquitoes? p. 372.

ETHNOLOGY

What is a menehune? p. 379.

GEOLOGY

How will the origin of oil be probed this summer? p. 375.

GERIATRICS

At what age should the fight against old age diseases begin? p. 376.

MEDICINE

When is the danger period for polio after immunizing "shots"? p. 381.

OCEANOGRAPHY

How can you earn money on a seaside vacation? p. 370.

PSYCHOLOGY

What do children look for in comic books? p. 376.

TEXTILES

What are some of the latest developments in cotton? p. 378.

Photographs: Cover, Fremont Davis; p. 371, National Bureau of Standards; p. 373, George Washington University; p. 375, Johns Hopkins University; p. 378, Fremont Davis.

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