PUBLIC HEALTH

Mysterious Mexican Blindness Is Traced to Turkey Gnat

Sufferers Are Not Benefited by Chemicals But Appear To Get Well After Tumors or Cysts Have Been Removed

A MYSTERIOUS epidemic of blindness which apparently began in the heart of Chiapas, spreading to Guatemala and parts of Oaxaca, has been traced by Mexican government scientists under Dr. Rafael Silva of the Department of Health to a simulid fly which transmits filaria organisms to those it stings. Both whites and Indians are attacked, and the disease is spreading.

The fly, two species, *Simulium ochraceum* and *Simulium mooseri,* is known as the buffalo or turkey gnat in the United states. The disease, onchocercosis, is characterized by tumors, generally on the head, and an irritation of the eyes which prevents the patient from looking into the light or the sun and in serious cases ends in blindness. In some of the worst affected areas of Oaxaca nearly all the adult population is afflicted, and in the entire Mexican region where the disease occurs, it is estimated that many thousands are affected.

Irritate Eyes

When an infected simulid bites, small filaria pass through its proboscis into the blood of the victim, looking for a place to develop, forming cysts, generally in the head. Here they become mature, laying eggs which hatch immediately. The new filaria invade the entire body, and attracted by light, enter the eyes, irritating the cornea and causing lesions which in serious cases produce blindness.

A person wth cysts or tumors is a dangerous carrier of the disease. In the stomach of the simulid fly that bites him the filaria pass through a transformation similar to that of the malaria parasite in the gut of the mosquito. The filaria reaches a latent state and passes into the proboscis of the fly waiting to enter the blood of a victim.

A similar African disease, produced by the filarium *Onchocerca volvulus,* but not accompanied by blindness, is believed to be the forerunner of the American disease and to have been brought to America by Negroes. The cysts are identical. The American variation in its effects is not understood, but it believed due to some racial differences.

The Mexican Health Department is preparing five brigades to go into the affected areas of tropical Mexico in 1931 to fight the spread of the disease. No chemical has yet been found that will kill the filaria, but by removing the cysts the parasites appear to be eliminated from the body in the course of fifteen months.

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METEOROLOGY-AVIATION

Sudden Thunderstorms Trouble Night Flying

THUNDERSTORMS that come suddenly in the night are about the most troublesome feature in western aviation, and the hardest to guard against, Vincent E. Jakl, meteorologist of the Omaha municipal airport, told the American Meteorological Society in Pasadena this week. It is exceedingly difficult to predict the time or place of a thunderstorm, he said, and while aviators can usually see such storms in the daytime and fly around them, it is not always possible to see them at night in sufficient time to avoid them.

Other weather changes, Mr. Jakl said, are predicted with considerable success, from maps of the region prepared at three-hour intervals and from the larger maps prepared twice each day. Aviators flying over the region with which he is especially concerned, reaching from Chicago to Cheyenne, have fewer weather troubles in the western half of the area, because it is considerably drier than the eastern half.

As a possible improvement in airway forecasting, he suggested that special stations be established on either side of the air lanes, in addition to the present chains that lie directly along the lines of flight.

Science News Letter, June 20, 1931

MEDICINE

Cancer Patients Alive Five Years After Operation

MORE THAN HALF of the women given radium or X-ray treatments after operation for cancer of the breast had no recurrence of the disease for five or more years, Dr. George E. Pfahler of Philadelphia has announced in a review of 1,022 cases of cancer of the breast. Physicians require that patients be free from cancer for at least five years after treatment before concluding that the treatment has been successful. For this reason Dr. Pfahler's report was received with great interest.

Science News Letter, June 20, 1931

ASTRONOMY

Light Keeps Original Speed At End of 70,000,000 Years

LIGHT FROM the distant nebulae in the heavens that has been on its way some 70 million years does not weary in the least on its long trip, Dr. Gustaf Stromberg of the Mount Wilson Observatory reported to the meeting of the Astronomical Society of the Pacific in Pasedena this week.

Dr. Stromberg has been endeavoring to get a clue to one of the great mysteries of modern astronomy: Is the universe exploding? Measurements of the light from the very distant nebulae show that they are rushing away from us with terrific speeds up to 10,000 miles a second, the more distant ones moving faster.

It is possible, thought Dr. Stromberg, that the light from these great distances may not be the same as the light from less remote neighbors. To answer this he has measured its speed and found it to tally with the results of measurements on the earth.

Thus the very aged light beams have lost none of their youthful fire, still speeding along after millions of years at 186,000 miles a second. The result of his experiments checks with the requirements of the theory of relativity which