

slum boxes were weak and malnourished as compared with the more fortunate mice babies born in happier surroundings.

Then Prof. Crew acted like a thoughtful social worker. He tried the experiment of taking the expectant mouse mothers out of their slums into better conditions where they had plenty of air, light and food. Then the baby mice were healthy and normal in spite of the

fact that their mothers had lived in the slums.

Prof. Crew found that the slum conditions affected some mice individuals much less than others. He declared that by his eugenical box experiments it is possible through artificial selection to produce a "cockney" race of mice that do not mind being overcrowded by slum life.

*Science News Letter, October 11, 1930*

#### METEOROLOGY

## Air Pressure Varies With Sun Spots in Monsoon Regions

### Observations of Polish Scientist Indicate That Solar Radiation Influences Earth Through Area of Monsoons

**D**ISCOVERY by Dr. S. Hanzlík, of the Meteorological Institute at the Charles University, Prague, that atmospheric pressure in the monsoon regions of the earth varies directly with the number of spots on the sun, may bring a step nearer the complete understanding of the relation between solar conditions and terrestrial weather.

In a report to the British scientific weekly *Nature*, Dr. Hanzlík announces that his studies have revealed the fact that for a large area in central Asia, south of latitude 55 degrees North, east of Caspian Sea, Mesopotamia, Persia, Afghanistan, Baluchistan, east Turkestan and the plains of the Indus the air pressure and sunspots increase together. A second such area lies north of latitude 10 degrees and extends from the Arabian Sea across southeast India, and the Bay of Bengal to Burma and Siam. Still a third such area, he finds, covers most of Australia and Java and extends eastward across the Indian Ocean to southern Madagascar and Natal.

#### Also Negative Relation

"These three fields," states Dr. Hanzlík, "cover approximately the greater part of the Indian monsoon area within the tropics. The fact that the sunspot period manifests itself always in the same way within this area suggests that sunspots affect the general circulation of the atmosphere through pressure conditions in the monsoon regions." The monsoons are the periodic winds that blow steadily for part of the year from one direction, reversing their

direction during the other part of the year.

Dr. Hanzlík has also sought for a region where there is a negative relation between sunspots and pressure, that is, where the pressure goes down as the number of spots increases. This is not so well defined, he says, but if there is any such area, it is probably a long strip stretching across the Pacific south of Hawaii and north of the equator.

If his theory is correct, and the influence of solar radiation on the earth is through the monsoon regions, the reason why other parts of the earth are not similarly affected might be due to a lag in the effects reaching them.

*Science News Letter, October 11, 1930*

#### MEDICINE

### Maggot Treatment Success Due to Unknown Reaction

**S**OMETHING more than a scavenger reaction is behind the successful healing of wounds by the new maggot treatment, its discoverer, Dr. William S. Baer of the Johns Hopkins University, told a group of scientists gathered for studying bone diseases and cancer of the bone.

A specific reaction between the serum of the body and the maggot itself probably causes the healing of wounds to which maggots are applied. Just what this reaction is has not yet been discovered, he said.

Dr. Baer told how his experiences as an army surgeon during the World War



#### SUN SPOTS

*New evidence of their effect on the earth's weather has been found. This picture was taken in the light of a single wave length with the spectroheliograph and shows details invisible to the eye.*

started him on the investigations leading to the new treatment. Two men were brought in who had been lying in the field for seven days without food. They suffered from abdominal wounds and from compound fracture of the thigh bone. The wounds were covered with maggots, the tiny larvae of flies. The men were hungry, but otherwise their condition was good.

In the hands of the best surgeons, the mortality for compound fracture of the thigh bone was 80 per cent., Dr. Baer knew. In other words, four-fifths of the persons who suffered from that condition died. In the hands of the maggots, the mortality for those two men was nothing, he found. Instead of the bad infections commonly found in such injuries, Dr. Baer found only a few harmless organisms.

For ten years he puzzled over these cases, particularly when treating children suffering from osteomyelitis. This disease of the bone is the result of an infection, is more common in children than in adults, and is extremely difficult to cure. If it reaches the chronic stage, recovery is often delayed for years. Finally he tried the effect of maggots on some of these cases. In six weeks the children were entirely well. Dr. Baer has used this method on 300 patients during the last two years. All the children have recovered entirely. With adults the treatment has been successful in four-fifths of the cases.

*Science News Letter, October 11, 1930*