

ENTOMOLOGY

# Winds Blow Insects at Rate Of 100 Miles Per Hour

## Air-Borne Invasions Menace to Forests; Starvation Prescribed Against Cutworm; Ticks May Suffer Too

**A**ERIAL invasions caused by winds blowing large numbers of dangerous insects hundreds of miles in a few hours constitute a menace to our forests and agriculture, Dr. E. P. Felt, entomologist of Stamford, Conn., told the American Association for the Advancement of Science in Ottawa.

Dutch elm disease, now a serious problem in the eastern United States, is being spread presumably by wind drift of the European elm bark beetle, the principal carrier of the disease, Dr. Felt indicated.

Using balloons to measure the travel of insects drifting at considerable heights in air currents, Dr. Felt came to the conclusion that this mode of travel is more important than hitherto believed.

Winds may carry insects in large numbers for 800 miles under exceptional circumstances. Insects drifting at rates of 50 to 100 miles per hour are not uncommon.

The appearance each year of the southern cotton moth in New England and southern Canada is attributed to wind drift, and Dr. Felt believes that the recent distribution of the European spruce sawfly in a large part of New England is due to the wind.

### Insect Intelligence Service

Reporting insect plagues as fire-guards report forest fires, Canada's forest insect intelligence service, maintained by government and private agencies, performs a useful role in safeguarding the Dominion's timber resources, J. J. de Gryse of the Canadian Department of Agriculture told the meeting.

Last year the service made almost 3,700 reports accompanied by specimens, and gave valuable information concerning destructive insects and their distribution. Usefulness of such a service is emphasized by the fact that while forest fire reporting has long been actively carried out, insect reporting has not had the same amount of attention. Yet an infestation of a particular insect pest can frequently do as much if not more

harm to a timber stand than that done by fire.

### Scientific Starvation

Scientific starvation was prescribed as the best treatment for the cutworm, one of the most serious insect pests of the western plains of Canada and the United States.

Destruction of all vegetation in a field by plowing it under after it has reached a height of one and a half or two inches and delaying seeding for ten days kills off the young larvae of this pest. The larvae feed only on vegetation growing above the surface of the soil.

This was suggested by H. L. Seamans and P. J. G. Rock of the Dominion Entomological Laboratory at Lethbridge, Alberta, in Canada's grain belt. While the exact starvation formula might be different farther south in the United States, the same principle has been put to work there.

### Ticks May Suffer

With increasing realization that ticks of various species are among the most important pests and carriers of diseases, it may be some consolation to know that some of the infections they carry may affect the ticks themselves adversely.

Dr. Cornelius B. Philip, of the U. S. Public Health Service laboratories at Hamilton, Mont., also told fellow scientists that aside from their indirect and direct effects as parasites, disease-producing agents in animals, naturally or experimentally tick-borne, include a remarkably wide variety of organisms grouped under spirochaetes, sporozoans, flagellates, rickettsias and bacteria, as well as certain ultrascopic or filterable viruses.

### Drought-Resistant Plants

Specifications for root systems of drought-resistant plants were laid down for breeders by Prof. Paul J. Kramer of Duke University. The breeder who wishes to produce such plants, he said, "should attempt to produce plants with vigorous, rapidly growing, much

branched root systems, the growth of which is not easily checked by decreasing soil moisture. Furthermore, injury caused by inability to absorb sufficient water from cold soils would be greatly decreased if root systems could be produced containing protoplasm the viscosity of which was little affected by temperature."

### Insect-Resistant Plants

One way of fighting insects that is producing results is to develop strains or varieties of plants that resist attack by the insects, Drs. W. P. Flint and J. H. Bigger of the Illinois Natural History Survey reported. Research has progressed so far that corn and wheat more resistant to insect damage are available practically. Sometimes it is possible to breed plants that the insects do not like, while in other cases plants that resist the attacks can be produced.

*Science News Letter, July 9, 1938*

## ● Microfilm Documents

- P. KOENIG and W. DORR: On Tobacco Chemistry I (translated by M. F. Showalter)—*Biochemische Zeitschrift*—Band 263. 4-6 Heft. S. 295-301 15. Mai 1933. Document 1119. 17 pp. 37c.
- B. MAYMONE and A. CARUSI: The Correlation between Proteid Content and Lipoid Content of Sheep Milk (translated by J. C. Hackney)—*Berichten Des XI. Milchwirtschaftlichen Weltkongresses*—Berlin 1937. Seiten 528-532. Document 1120. 12 pp. 32c.
- BORIS EPHRUSSI—C. W. CLANCY—G. W. BEADLE: Genetics: Influence of Lymph on the Color of Vermilion Eyes in the *Drosophila Melanogaster* (translated by F. G. Walsh)—*Comptes Rendus Des Seances de l'Academie des Sciences*—Tome 203. Seances du 14 Septembre 1936. p. 545-46. Document 1121. 5 pp. 25c.
- BORIS EPHRUSSI—MORRIS HENRY HARNLY: Genetics: Concerning the Presence in Other Insects of Substances Intervening in the Pigmentation of the Eyes of the *Drosophila Melanogaster* (translated by F. G. Walsh)—*Comptes Rendus des Seances de l'Academie des Sciences*—Tome 203. Seance du 16 Novembre 1936. p. 1028-1029. Document 1122. 5 pp. 25c.
- OSIAS BINDER—PIERRE SPACU: Mineral Chemistry: The Action of Malonic Acid on the Chloride of Cobaltidichloro-Trans-Di-Ethylenediamine (translated by R. E. Clegg)—*Comptes Rendus Des Seances de l'Academie des Sciences*—Tome 202. Seances du 25 Mai 1936. pp. 1786-1789. Document 1123. 5 pp. 25c.
- JAROSLAV DRIZENECKY: A Survey of Agricultural Animal Production in Czechoslovakia (translated by S. T. Ballenger)—*Wiener Landwirtschaftlichen Zeitung*—Jrg. 85. Nr. 18. vom. 4 Mai 1935. S. 31-32. Document 1124. 13 pp. 33c.
- KARL ZIMMERMAN: The Physiological Anatomy of the Testa of Legumes. Contributions to the Problem of Hardness and the Significance of the Strophiole (translated by John B. Whitney, Jr.)—*Landwirtschaft Versuchs-Stationen*—Band 127. Heft 1/2. Pages 1-56. Document 1125. 67 pp. 87c.