

country. There the variation was found to be nine-tenths of a day to a degree of longitude. I have found that for North America it is on the average about eight-tenths of a day to a degree or four days for 5°.

MR. T. J. HEADLEE: In which direction from the base line?

MR. A. D. HOPKINS: If you begin at any point on any meridian in North America there will be a difference of about four days for each 5° of longitude, that is, any spring event, controlled by climate, will happen about four days earlier 5° west of the place and four days later 5° east of it. Isn't that clear?

MR. T. J. HEADLEE: That's clear; but it seems impossible.

MR. A. D. HOPKINS: We have conclusive proofs on this map, on which it is shown that the lines of equal phenological events, according to the law, are paralleled by the sea level isotherms, the lines of northern limits of wheat, barley and potato culture, tree growth, migration of birds, etc.

(Doctor Hopkins stated that he is preparing a paper on the subject for publication.)

PRESIDENT C. GORDON HEWITT: I will now call upon Mr. Henry Fox to read his paper.

## SUMMARY OF INVESTIGATION OF *LIGYRUS RUGICEPS* DeG.

By HENRY FOX, *Clarksville, Tenn.*

(Withdrawn for publication elsewhere)

PRESIDENT C. GORDON HEWITT: The paper is now open for discussion.

MR. E. N. CORY: I would like to ask Mr. Fox if he has made any survey on the eastern shore of Virginia.

MR. HENRY FOX: I have not been able to do so.

PRESIDENT C. GORDON HEWITT: I will now call upon Mr. J. W. McColloch for his paper.

## WIND AS A FACTOR IN THE DISPERSION OF THE HESSIAN FLY<sup>1</sup>

By JAMES W. MCCOLLOCH, *Assistant Entomologist, Kansas State Agricultural Experiment Station*

In the course of the field experiments on the Hessian fly the writer has had his attention called to many instances of serious infestations

<sup>1</sup> Contribution from the Entomological Laboratory, Kansas State Agricultural College, No. 22. This paper embodies some of the results obtained in the prosecution of project No. 8 of the Kansas Experiment Station.