

served. What happens, however, is probably no more than a large increase of the viscosity of the gas at the jet. Because of the high temperature there, the jet with the flame lit temporarily conveys a much more viscous gas current. Thus the asymptotic cooling effects in figure 2 are accounted for (hot jet tube) as well as the striking steadiness of the phenomenon when the flame is on, and the disproportionately great effect of point flames. For in the latter, the colder blue base is lacking.

It follows from the above that if for any reason the flame is removed, there is an instantaneous excessive outrush of gas from the jet. When the flame is restored, this excess is at once cut off. Here then is a mechanism that contributes to periodic motion of flame and must be effective in turbulent flames. Since pin holes are sensitive at nodes, I have supposed that temperature occurrences might here be effective also; but this can not be the case in a phenomenon which is symmetrically either positive or negative, depending on the slope of the pin hole.

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THE ROYAL SOCIETY OF CANADA

At the annual meeting of the Royal Society of Canada, held in the city of Quebec, on May 19, 20, 21 and 22, the following papers were presented in Section V:

SECTION V—BIOLOGICAL SCIENCES

Presidential Address

Historical review of the red discoloration of food-stuffs: F. C. HARRISON.

Botanical

Luminous leaves: A. H. REGINALD BULLER.

Sphaerobolus stellatus and the dispersion of its spores by herbivorous animals: A. H. REGINALD BULLER.

The fresh-water algae of Central Canada: C. W. LOWE (presented by A. H. REGINALD BULLER).

Identity of the organism causing black-rot disease of the potato—Part I: B. T. DICKSON and G. A. SCOTT (presented by F. C. HARRISON).

Identity of the organism causing black-rot disease of the potato—Part II: B. T. DICKSON and G. A. SCOTT (presented by F. C. HARRISON).

The effect of various smut control treatments on the germination of oats: B. T. DICKSON and W. L. GORDON (presented by F. C. HARRISON).

The bacteriology of the Kingston cheese: C. D. KELLY (presented by F. C. HARRISON).

A study of the moulds in blue-veined cheese: N. S. GOLDING (presented by F. C. HARRISON).

Microbiological relationships in frozen soils: A. G. LOCHHEAD (presented by F. C. HARRISON).

Psychrophilic soil bacteria: A. G. LOCHHEAD (presented by F. C. HARRISON).

The toxic action of distilled water and the antagonism to it of cations: G. W. SCARTH (presented by F. E. LLOYD).

General

The origin of karyokinesis: A. B. MACALLUM.

Medical

After-effects of feeding thyroid to young rats: A. T. CAMERON and J. CARMICHAEL.

The action of absorbable intestinal toxins on metabolism: A. T. CAMERON.

The cranio-facial axis of Huxley—Part I, embryological considerations: JOHN CAMERON.

A further study of the question of utilization ("fermentation") of saccharose by B. diphtheriae: J. G. FITZGERALD and DOROTHY G. DOYLE.

The effect of insulin on the percentage of sugar in blood from different regions of the body: J. J. R. MACLEOD, J. HEPBURN, J. K. LATCHFORD and N. A. MCCORMICK.

The influence of insulin on the glycogen content of the liver and muscles during hyperglycemia: J. J. R. MACLEOD, E. C. NOBLE and M. K. O'BRIEN.

The soluble carbohydrates of liver and muscle and the influence of insulin on them: G. S. EADIE, J. J. R. MACLEOD and M. D. ORR.

Further observations on depancreatized animals: F. N. ALLAN and S. S. SOKHEY (presented by J. J. R. MACLEOD).

The effect of insulin on chloridzin diabetes in dogs: S. U. PAGE (presented by J. J. R. MACLEOD).

The behavior of the diastases in diabetic animals treated with insulin: J. MARKOWITZ (presented by J. J. R. MACLEOD).

Viscero-motor reflexes: FREDERICK R. MILLER and H. M. SIMPSON.

Pulse and cardiac records obtained with electropolygraph: FREDERICK R. MILLER and R. A. WAUD.

Amplification of heart sounds by radio apparatus: G. A. RAMSAY (presented by FREDERICK R. MILLER).

Classification of tumors arising from the trophoblast with illustrative cases: JAMES MILLER.

Zoological

Acaulis primarius Stimpson: C. MCLEAN FRASER.

Some results of the Belle Isle Strait Expedition, 1923: A. G. HUNTSMAN.

The distribution of pile borers on the Canadian Atlantic coast: R. H. MCGONIGLE (presented by A. G. HUNTSMAN) (read by title).

Certain features in the life-history of the shad: A. H. LEIM (presented by A. G. HUNTSMAN) (read by title).

Resistance of marine animals to high temperatures and their distribution in nature: A. G. HUNTSMAN and M. I. SPARKS (read by title).

A list of the nudibranchiate mollusca recorded from the Pacific coast of North America, with a note on their distribution: CHARLES H. O'DONOGHUE (read by title).