

Inheritance of the white seed coat character appeared to depend on a single factor difference, the white seeded parent being homozygous for a recessive factor which results in the absence of yellow pigment.

M. Sc.

ENTOMOLOGY

OSWALD PECK

SOME *ICHNEUMONIDAE* OF ALBERTA.

The major portion of this paper is a taxonomic study of the parasitoidal subfamily *Joppinae* (Family *Ichneumonidae*). Their hosts are species of the family *Noctuidae* and many of these are of economic importance in the prairie provinces. A taxonomic study of the western joppines, therefore, may be of value in biological control work. The methods of increasing the natural efficiency of parasitoids are reviewed, as well as the factors that modify or nullify attempts at control.

The taxonomic treatment of the subfamily *Joppinae* is preceded by descriptions of the external morphological structures that may be used in the identification of the various groups within the subfamily, special attention being given to the genus *Amblyteles* Grav. (s.l.).

The methods of classification by various workers are discussed and keys formed for all species reported from the province. The sole genus of major importance is *Amblyteles*, in which nearly sixty species are discussed. In most cases the type has been re-described, emphasizing the morphological structure rather than colour. Three new species have been named. Eleven others, mostly uniques, have been described and are probably new.

The thesis is in the nature of a preliminary survey.

M. Sc.

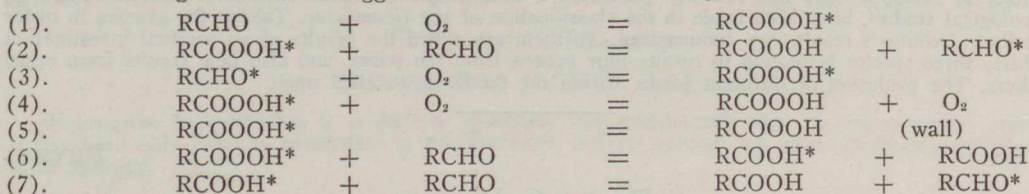
CHEMISTRY

SOLOMON ROSENBERG

KINETICS OF THE OXIDATION OF GASEOUS PROPIONALDEHYDE.

The kinetics of the oxidation of gaseous propionaldehyde have been investigated from 120 to 170°C by a static method. The reaction is a chain process and is similar to the oxidation of acetaldehyde. The rate is proportional to the square of the aldehyde concentration, and independent of that of oxygen. The apparent heat of activation is 15,400 calories per gram molecule.

The following mechanism is suggested for the oxidation of aldehydes:



In the absence of deactivation at the wall, this leads to 
$$\frac{-d(\text{RCHO})}{dt} = \frac{2 K_1 K_6 (\text{RCHO})^2}{K_4}$$

in agreement with experiment.

M. Sc.

GEOLOGY

GEORGE SHAW

THE GEOLOGY AND PETROGRAPHY OF VIEWMOUNT AVENUE, WESTMOUNT.

The Monteregian hills are composed principally of plutonic igneous rocks of alkaline character including such rocks as nordmarkite, nepheline syenite, tawite, pulaskite, essexite, yamaskite, montrealite, rougemontite and olivine essexite. A study of the analyses of the various rock types indicates an average composition approximating that of essexite. It is reasonable to assume, then, that the stem type magma had the composition approximating essexite. The variation diagram plotted from the analyses of the various rock types suggests that the nepheline syenite, nordmarkite, tawite, pulaskite and laurdalite on the one hand, and yamaskite, rougemontite, montrealite and olivine essexite on the other, are acid and basic differentiates respectively of the original essexite magma. The diagram suggests differentiation by deformation.

In the thesis area are exposed essexite, nepheline syenite, camptonite, fourchite and tinguite intrusives penetrating the trenton limestone. The nepheline syenite, camptonite and tinguite form igneous breccias which give an excellent indication in the order of intrusion of the various rock types. The sequence of