

While it is known that the larvæ of these flies are parasitic in their habits, very little is known of their host relations.

*An intensive ornithological survey of a typical square mile of cultivated prairie:* ARTHUR R. ABEL.

*Bird records of the past two winters, 1918-1920, in the upper Missouri valley:* T. C. STEPHENS.

*A study of sociality in the phylum Coelenterata:* H. J. WEHMAN AND GERTRUDE VAN WAGENEN.

*On the parasites of the unios of the Lake Okoboji region:* HARRY M. KELLY.

*The 1919 outbreak of armyworms and variegated cutworms in Iowa:* H. E. JAKES.

*The pathology of lethargic encephalitis:* HENRIETTA CALHOUN.

*Descriptive notes concerning the American bald eagle:* BEN HUR WILSON.

*Some impressions obtained from a review of Professor Nutting's narrative of the Barbados-Antigua expedition:* A. C. TROWBRIDGE.

#### Archeology

*The material for a study of Iowa archeology:* CHARLES REUBEN KEYES.

*The Keokuk type of stone ax:* CHARLES REUBEN KEYES.

#### General

*The comparative stability of colors in wallpaper:* J. M. LINDLY.

*Iowa Section Mathematical Association of America Note on a generalization of a theorem of Baire:* E. W. CHITTENDEN.

A celebrated theorem of Baire states that the necessary and sufficient condition that a function  $F(x)$  defined on a closed set  $P$  in space of  $n$ -dimensions be the limit of a sequence of continuous functions defined on  $P$  is that if  $Q$  be a perfect subset of  $P$ , then  $F(x)$  has a point of continuity in every portion, however small, of the set  $Q$ . Professor Chittenden calls attention to the fact that a proof of this theorem given by Vallée-Poussin can be extended without difficulty to the case of a set  $P$  in an abstract space of a type studied by Fréchet. As a special instance,  $P$  may be a perfect set in a compact space of infinitely many dimensions.

*Notes on the history of indeterminate equations:* R. B. McCLENON.

Professor McClenon traces the history of some indeterminate equations found in the writings of Leonardo of Pisa, showing the contributions that

had been made to their solution by the Hindus and Arabs, as well as their further development by later writers, down to modern times.

*A pseudo velocity-resistance graph for low angle firing:* M. E. GRABER.

Mayevski's law for air resistance is unsatisfactory because the discontinuities introduced render numerical integration difficult. Professor Graber presents a smooth curve law for the velocity-resistance relation between the velocities of 750 ft./sec. and 1700 ft./sec. and compares it with a pseudo velocity-resistance standardization curve.

*What is number?* C. W. WESTER.

An attempt to state in a simple way some of the outstanding differences between current definitions of number, especially between what may be called the mathematical and the metaphysical definitions; and to suggest the lines along which a working agreement may be reached as to what shall be thought of as number in elementary mathematics.

*The teaching of limits in the high school:* J. V. MCKELVEY.

In this paper Professor McKelvey discusses certain popular misconceptions in regard to limits and outlines a point of view from which a rigorous and usable understanding of this seemingly bewildering subject may be obtained. No plea is made either for or against the teaching of limits in preparatory schools.

*The taxonomy of algebraic surfaces:* R. P. BAKER.

*The integration of the indefinite integral in the first course:* W. H. WILSON.

*A problem in summation of series:* JOHN F. REILLY.

*A geometric construction for the regular 17-gon:* LINN SMITH. JAMES H. LEES,

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