tunity of living in health and safety in regions where such considerations are of vital importance. Maracaibo can be reached from New York City by the Red "D" Line in from ten to twelve days, and once at Maracaibo, the camps can be reached without difficulty.

In addition to these permanent camps, there is more or less exploration going on, and I was informed by two gentlemen that scientific investigators would be welcome with such exploring parties. Correspondence relative to this matter might be addressed to Mr. Grady Kirby and Mr. J. Whitney Lewis, care of The American Consul, Maracaibo. The Lake Maracaibo region offers an available field to collectors, and there are well-established and regular lake steamer lines, and from Encontrados, to mention only one of the railroads, a railroad extends to Estacion Tachira at the foot of the mountains at an elevation of 364 meters. Between the terminals of this railroad are two or more other points in desirable country for study and collecting. From Estacion Tachira there is an automobile road to San Cristobal, which is on one of the head waters of the Orinoco river.

E. B. WILLIAMSON

MATHEMATISCHE ZEITSCHRIFT

IN view of the numerous reports of the present hardships of German scientists it may be of interest to note that in 1918 a new journal devoted to mathematical research was started in Germany under the title *Mathematische Zeitschrift,* and that three volumes of this periodical appeared in 1919 while only two volumes were expected to be published annually according to the announcement.

This evidence of activity in mathematical research seems to reflect an optimism which one might not have expected under present conditions. The subscription price of the first four volumes of this journal was 24 marks per volume, for the fifth volume it was raised to 32 marks, and for the sixth it was again raised to 48 marks. The director of the journal is L. Lichtenstein, of Berlin.

G. A. MILLER

SCIENTIFIC BOOKS

Aids to Forecasting. By E. GOLD, F.R.S. Published by the Air Ministry. London, 1920.

This publication officially numbered Geophysical Memoir No. 16, gives a classification of the Daily Weather charts, 1905 to 1918. The weakness of any such classification is, of course, the assumption that like surface isobaric conformations are always followed by similar weather conditions.

The general principle which Colonel Gold uses in selecting 15 types and subtypes, recognizes the position of the anticyclone as the dominating feature. This we are glad to notice because for many years forecasters have centered their attention on the "low"; naturally enough, overlooking the fact that directive force and course of the "lows" are determined largely by the antecedent or adjacent "highs." Doubtless we shall have better forecasts for the North Atlantic seaboard when there is a fuller knowledge of the relation between advancing "lows" and those quick moving anticyclonic areas from the north known as "Labrador highs."

This series of British charts starts with the anticyclonic to the S.W. then moving east until over Western Europe, then S.E., E., N.E., N., N.W., and W.

Additional charts of special character are included, such as the indefinite area of low or high pressure, the trough, the dumb-bell depression and the depression centrally situated. The types were selected primarily with reference to the weather of southeastern England and northeastern France.

The forecaster fits his chart to the classified type and finds in a table corresponding type dates. Referring to the charts for those days he studies the general results. It is suggested that a local forecaster ought to have a set of synoptic charts interleaved so that he may study the weather in more detail.

The primary purpose of the arrangement is to assist in day-to-day forecasting; but the data can be employed in discussing from

a statistical standpoint the weather associated with different types.

Colonel Gold mentions the work of Captain Brunt during the war, showing the relation between the amount of low clouds in Flanders at different hours and the general direction of the wind. It appears that with the westerly type there was decreasing cloudiness.

The scheme of indexing, tagging and classifying pressure charts is of course, not new. Odenbach, Brandenburg and others have made classifications for limited areas in the United States, and Bowie and Weightman for the whole country, giving with much detail the storm paths.

Some of the notes made on the different types are extremely interesting: Thus, type I. is very favorable for west winds at night; and a notable instance occurred during the battle of Cambrai, November 20, 1917; the transitional type of fair weather in the evening and inland fog in the morning, occurred on March 20, 1918, when the Germans began their great offensive. Evidently the German forecasters picked the hour. And again May 27 to 31, 1918. Type III. is one that worries the forecaster, for squalls come when he expects fair weather. He forecasts rain in front of the trough and gets fair weather in front and rain behind. On August 26, 1916, seven British airplanes failed to return because of a squall coming from the west while the planes were over the German lines. A different type occurred in June, 1917, during the battle of Messines, for which a week's fair weather was accurately forecast. Type IX. means unpleasant weather. "The most noticeable example in history of this type," says Gold, "is the one which persisted for the first three days of August, 1917, during the battle of Ypres." Type VI. is the typical fair weather anticyclonic type. This type prevailed at the time of the German offensive in March, 1918, and also immediately after the armistice.

It is evident that the forecaster from now on takes his place in all military councils for both offensive and defensive operations.

A. M.

SPECIAL ARTICLES

LINKED GENES IN RABBITS

The so-called "English" rabbit possesses a dominant pattern of white spotting. A homozygous English mated with non-English rabbits produces heterozygous English young exclusively. These mated with non-English rabbits produce equal numbers of English and non-English young. Facts such as these show conclusively that the English pattern is dependent upon the inheritance of a single Mendelian gene. I have recently discovered that the gene in question is linked with another gene, that for intense *vs.* dilute pigmentation. Dilution is a recessive character alternative with intense pigmentation. Intense pigmentation is seen in rabbits of the varieties, gray, black and yellow. Dilute pigmentation is seen in blue-gray, blue, and dilute yellow rabbits.

Summary of	(1) Eng. Int.	(2) Non-Eng. Dil.	(3) Eng. Dil.	(4) Non-Eng. Int.
Oct., 1919.....	5	6	4	4
Feb., 1920.....	6	9	6	4
June 1920.....	9	10	5	5
July, 1920.....	3	3	1	3
Total.....	23	28	16	16
	Non-crossovers		Crossovers	

In a certain experiment, I crossed a black English rabbit with a blue non-English rabbit. A male from this mating was black English in appearance, but from his parentage was known to be heterozygous both for English and for intensity. He was subsequently mated with blue non-English females, which of course would be homozygous for the recessive member of each of the two character pairs. If no linkage occurred between the two pairs of characters, young would be expected of four classes all equally numerous, viz., (1) English intense, (2) Non-English dilute, (3) English dilute, and (4) Non-English intense. Classes (1) and (2) would represent the original, non-crossover groups, classes (3) and (4) would represent novel, crossover groups. In a series of matings ex-