

apparatus and method, exhibiting Ewing's experiment for demonstrating Weber's molecular theory of magnetism, and showing the magnetic field by use of iron filings. The apparatus, which was very simple, is described as follows: The object to be exhibited is placed on a base (which in the speaker's apparatus consisted of a 60 by 75 centimeter drawing-board covered with white paper). Against two nails driven into this base near the back a large plane mirror is placed, and inclined forward at any desired angle by means of a wire attached to the top of the mirror and passing through a binding post screwed into the back of the base. To each upper corner of the mirror is clamped a 50-candle-power General Electrical Company 'stereopticon' lamp protected in front by metal half shades. These brilliantly illuminate the object and obviate shadows. The apparatus can, of course, be made permanent by hinging the mirror to the base and fastening the lights permanently. It will be seen that the apparatus has many applications in the teaching of the biological as well as physical sciences in exhibiting objects that can not be turned on their edge. The apparatus has the advantage over the projecting lantern with horizontal attachment, first that it does not require a darkened room; second, opaque objects can be exhibited; third, the size of the object to be exhibited is limited only by the size of the mirror; fourth, the apparatus is not only easy to operate, but can be put together from materials usually found in any laboratory.

At the close of the regular meeting, the annual business meeting was held. The annual report of the secretary was received. The following officers were elected for the ensuing year:

President—Professor F. S. Shiver.

Vice-President—Professor S. W. Reaves.

Secretary—Dr. F. H. H. Calhoun.

Members of Council—Dr. J. H. James and Professor F. T. Dargan.

HAVEN METCALF,
Secretary.

SPECIAL ARTICLES.

ASSORTATIVE MATING IN MAN.

As was pointed out in *Biometrika*, Vol. II., No. 4, 1903, "Darwin has given the name of sexual selection to the general conception of differential mating. As opposed to pure random mating within the population, we have first *preferential* mating, in which male or female classes with certain values of a character find it less easy to mate than other classes with different values. Secondly, we have *assortative mating*, in which, while all classes of males and females find mates, certain classes of males appear to be attracted to certain classes of females. If the male class of a given character tends to mate with a female class with generally like character we have a tendency to *homogamy*. Homogamy as one type of assortative mating is simply measured by the correlation between the two characters in the male and female of the pair. The influence of homogamy on the character of successive generations of a population may be very great indeed, and the whole range of effect from pure random matings to perfectly homogamous unions within a population is almost but not quite as important as the difference between self and cross fertilization in plants. It has the distinctive features as compared with self fertilization, that (1) it may have any degree of intensity, (2) it may be confined to special characters, and (3) it is not complicated by any of the supposed harmful effects of inbreeding."

In the paper from which the paragraph I have just quoted was taken we dealt with assortative mating in man with respect to a character—longevity—concerning which there could not possibly be any *conscious* selection. The characters dealt with by Pearson in former papers¹ are also—at least, probably—not made the object of conscious selection. The coefficients of correlation between man and wife in all these cases average about .2—or 'husband and wife are as much alike as uncle and niece, and probably as much alike as, if not more alike than, first cousins.'

¹ *Phil. Trans.*, Vol. 187, A, p. 273, and Vol. 195, A, p. 113; *Biometrika*, II., p. 353.

It seemed to me to be of interest, now, to test the strength of assortative mating with respect to a character in which there is known to be *conscious* selection. The ages of the two members of the pair at once suggested itself. It possesses an added interest because of the former work upon the age at death. I accordingly tabulated the ages of twenty-five hundred couples as given at the marriage license office at Chicago during the spring of 1904. Grouped in three-year classes they are as shown in table.

The data are a little unsatisfactory because of the unfortunate but undeniable proneness of humanity to a lapse of honesty in the matter of age, especially in this connection.

The writer has on hand data which show that this principle applies to certain insects and spiders as well as to man. So that we are doubtless dealing here with a real biological factor as well as one of sociological interest.

FRANK E. LUTZ.

STATION FOR EXPERIMENTAL EVOLUTION,
COLD SPRING HARBOR, N. Y.

CURRENT NOTES ON METEOROLOGY.

PROGRESS OF KITE AND BALLOON METEOROLOGY.

A FEW years ago no one would have foreseen that a regular publication would be started in 1904, devoted to the physics of the free air, and even to-day scientific men generally must be surprised to see the quantity

TABLE OF AGE AT MARRIAGE.

WIFE.

	13-15	16-18	19-21	22-24	25-27	28-30	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54	55-57	58-60	
HUSBAND.																	
16-18		2															2
19-21	1	113	147	25	5	3											294
22-24		76	334	169	32	4	4	1									620
25-27		59	217	197	101	20	3	1	1								599
28-30		14	74	117	100	52	16	3	4	2							382
31-33		3	21	35	48	34	20	7	4	4							176
34-36		2	13	26	29	23	21	11	3	5	4		1	1			139
37-39		1	2	12	16	15	9	8	15		6	3	1	1			89
40-42		1	3	7	10	8	4	9	10	8	1		2				63
43-45				4	2	5	6	6	6	5	6	2		1			43
46-48				1	3	3	3	2	4	5	3	2	2				28
49-51						2		4	1	3	2	4	4	2	1		26
52-54			1			3	1	2	1	2	3	4	1	1	1		20
55-57										2	2		1		2		7
58-60				2						2		1	1	1	1	2	10
61-63														1			1
64-66															1		1
	1	271	812	597	347	172	87	54	49	38	27	16	13	8	6	2	2500

So that the figures, instead of telling the exact truth, show us the state of things, modified somewhat by man's ideas of how he thinks they had better be. This undoubtedly raises the coefficient of correlation slightly. It possibly also accounts for some of the extreme skewness of the curve for the wife's age.

However that may be, the coefficient of correlation between the ages of man and wife, as given, is .764. If this be compared with that of stature (.280), span (.199), forearm (.198) or longevity (.223), it will make it possible to appreciate more clearly the precise extent of the unconscious assortative mating.

and the quality of the contributions which deal with the meteorological conditions of the free air. A recent number of the *Beiträge zur Physik der freien Atmosphäre* (No. 3, 1905), besides the paper on cyclonic and anti-cyclonic temperatures by Clayton, mention of which was recently made in these notes, contains a study of the results obtained during synchronous kite flights from Berlin and Hald (Jutland) from the summer of 1902 to the spring of 1903, and also a short note, by Professor Hergesell, on recent observations on the meteorological conditions of the high warm stratum of air which was first noticed