

but this does not lessen my regret at having unintentionally misrepresented the views of the distinguished leader of cell-research for whose splendid discoveries every investigator must feel such admiration.

EDMUND B. WILSON.

COLUMBIA UNIVERSITY,  
NEW YORK, December 19, 1896.

#### THE VELOCITY OF A FLIGHT OF DUCKS OBTAINED BY TRIANGULATION.

MEASUREMENTS of the heights and the velocities of clouds are now being made at the Blue Hill Meteorological Observatory by Mr. Rotch as a part of an international scheme for such work. The measurements are made with specially constructed theodolites in which a large conical tube, with crossed wires at one end and an eye-piece at the other, replaces the ordinary telescope.

On the morning of December 8th, while Mr. S. P. Fergusson and I were engaged in measuring clouds, a flock of ducks passed across our base-line, which is 2590.3 metres (8496 feet) in length. We succeeded in getting one simultaneous set of measurements on the apex of the flock from which its height was calculated, and one or two independent subsequent observations, from which the velocity was calculated. The height was 958 feet above the lower station, which is situated in the valley of the Neponset river, above which the ducks were flying.

The velocity of flight calculated from this measurement of height, and from the angular velocity measured at one end of the base-line is 47.9 miles in an hour, and from the angular measurements made at other end of the base-line is 47.7 miles an hour, making a mean of 47.8 miles. The wind was very light, having a velocity of only two miles an hour according to the automatic record made at Blue Hill Observatory, 615 feet above the valley station. The direction of the wind was from the north, and the ducks were flying from the northeast. These observations were not in our program, but they may prove of interest to ornithologists and students of aeronautics.

H. HELM CLAYTON.

BLUE HILL METEOROLOGICAL OBSERVATORY,  
READVILLE, MASS., December 21, 1896.

#### A TEST ON DIVERSITY OF OPINION.

TO THE EDITOR OF SCIENCE: It is always interesting to test diversity of opinion, particularly on questions of exact reasoning. It is quite difficult to obtain a test which is at once significant and general. I should be very much indebted to those of your readers who would be willing to send me answers to the following request.

Here is a piece of reasoning which is certainly capable of arousing criticism:

*Granted that A is B, to prove that B is A.*

*B (like everything else) is either A or not A.*

*If B is not A, then by our first premise, we have the syllogism:*

*A is B;*

*B is not A;*

*∴ A is not A; which is absurd.*

*Therefore, B is A.*

Is this reasoning correct or is it not? If regarded as correct, my request is to have the reasons for its correctness given as explicitly as possible. If it is regarded as incorrect, I wish in the same way a very explicit statement of the nature of the error. Answers are requested from all who are interested in the matter. I am particularly desirous of receiving replies from those whose interest in thought is a philosophical one, as well as from those who are more specially devoted to scientific pursuits.

JOSEPH JASTROW.

UNIVERSITY OF WISCONSIN,

MADISON, WIS., December 5, 1896.

#### SCIENTIFIC LITERATURE.

*A Geographical History of Mammals.* R. LYDEKKER. Cambridge Geographical Series. Cambridge (England) University Press. 8° pp. 400, col. map and figures in text. September, 1896. For sale by The Macmillan Company, 66 Fifth Ave., New York City. Price, \$2.60.

The subject of the geographic distribution of animals is not one to be mastered in a few weeks or months, and many are the pitfalls that lie in wait for the author who seeks to illumine its difficult problems. It is rare, indeed, that a writer in his first essay on this theme suddenly leaps to a position of authority, yet this is precisely what Mr. Lydekker has done. He has approached the subject from a new direction—