Although the deer have been fed in previous years in this region there has been no unusual number of deaths among the herds. Pierce[1] states the goat head bot is native in California on the deer but that there is little evidence of its effect. Herms[2] lists the genus *Cephenomyia* as being present in the black-tailed deer, *Odocoileus columbianus*. Through the courtesy of Dr. Sam McCampbell, deputy state entomologist of Colorado, Dr. Bourne, of the veterinary department of the Colorado Agricultural College, and Dr. T. D. A. Cockerell, of the University of Colorado, the identification of these larvae has been confirmed as being those of *Cephenomyia* sp.

The present rate of destruction of the deer from this cause makes the problem of game conservation in this region a serious one.

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SOLAR ECLIPSES

IN the issue of SCIENCE for May 24, 1929, page x, it is stated that Professor John A. Miller, of Swarthmore College, has just observed his seventh total solar eclipse, all seven having been clear. It is further stated that "no other astronomer has seen as many, though one has been to nine and another to eight." In this latter connection may I draw attention to the record of David Todd, professor emeritus of astronomy at Amherst College, who has been to the following eclipses: 1878, July 29, Texas; 1887, Aug. 19, Japan; 1889, Dec. 22, West Africa; 1896, Aug. 9, Japan; 1900, May 28, Tripoli, Barbary; 1901, May 18, Singkep, Dutch East Indies; 1905, Aug. 30, Tripoli, Barbary; 1914, Aug. 21, Russia; 1918, June 8, Florida; 1919, May 29, Brazil; 1925, Jan. 24, New York. Though the above list of attendance at eclipses is longer than that of any other astronomer, eleven in all, the majority were obscured by clouds, only four having yielded entirely successful results.

MILLICENT TODD BINGHAM

SCIENTIFIC BOOKS

Colour and Colour Theories. By CHRISTINE LADD-FRANKLIN. New York, Harcourt Brace and Co. 1929.

THE contributions of Mrs. Ladd-Franklin to color theory are familiar to all psychologists, but her work has never received adequate recognition from physicists, possibly for the reason that most of her papers have appeared in psychological magazines. These papers are now brought together in a volume of the International Library of Psychology, Philosophy and Scientific Methods.

Mrs. Ladd-Franklin first developed her theory of vision in 1892. She reported its essential features at the Psychological Congress held in London and published it in detail in the *Zeitschrift für Psychologie* in the same year. An English account appeared in *Mind* during the following year. These papers and her article on "Vision" in Baldwin's Dictionary (1902) are reprinted in full, together with several later articles which discuss specific visual phenomena and reply to various objections raised against the hypothesis.

The problems and difficulties of explaining color vision are too well known to need more than brief allusion. The three-component theory of Young and Helmholtz ignores yellow, which psychologists regard as a primary visual phenomenon. The six-component theory of Hering and others admits yellow, white and black as primary phenomena, but assumes that red and green result from antagonistic retinal processes, whereas actually they are not complementary. It is not surprising that physicists are inclined to favor the Helmholtz hypothesis and physiologists the Hering hypothesis, while psychologists find objections to each. Mrs. Ladd-Franklin's theory meets the objections to both these explanations by assuming that color vision originated first of all in a blue-yellow differentiation of the primitive achromatic retinal processes and that later the yellow component differentiated into green and red processes. It should be noted that this interpretation has found favor with a large number of psychologists, though her explanation of the black sensation is not so generally accepted. In the present volume are included a number of shorter papers by recent writers who have adopted the Ladd-Franklin theory, in which the black sensation and other visual problems are treated from her standpoint.

The book is provided with many excellent diagrams and color charts and has a glossary of technical visual terms. The exposition is clear and logical. It is to be hoped that physicists and others interested in color phenomena will have their attention drawn to this alternative theory of vision, which solves many of the difficulties presented by the classical theories.

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Meteorology. By DAVID BRUNT. 112 pages, 19 illustrations. Oxford University Press. 1928. $1.00.

IT is a rare pleasure to find an elementary work on any science that one can unreservedly recommend. This book by an important official in the Meteorological Office, London, affords that pleasure. It

[1] D. Dwight Pierce, "Some Milk Goat Problems in California," State of Calif. Dept. of Agriculture, Special Bulletin No. 22. 1922.

[2] William B. Herms, "Medical and Veterinary Entomology," Macmillan, New York. 1923.