would give no positive information as to how much the leaves and stems of plants collect, or how much of the water falls to the ground in such a way that the roots of the plants may utilize it, and that the chief benefit which delicate plants on the California coast obtain from the fogs is probably in the protection which the fogs afford against the heat of the sun.

CLIMATE OF SOUTH AFRICA.

J. R. Sutton, meteorologist of the DeBeers Consolidated Mines at Kimberley, South Africa, has published a paper on 'The Determination of Mean Results from Observations made at Second-Order Stations on the Tableland of South Africa' (*Rept. So. Afr. Assoc. Adv. Sci.*, Vol. I., April, 1903). The observations in Cape Colony are usually made at 8 A.M., Colony mean time, but other hours are used at other stations. It was in order that all these observations may be compared with one another that the present paper was prepared. The author has taken the observations at Kimberley, which are very complete, and has calculated from them the corrections which are needed in order to reduce the hourly means of all elements to the true means for each month and for the year.

CLIMATE OF SIERRA LEONE.

That Sierra Leone has some right to the unenviable title of 'the white man's grave' is evidenced by the fact that in the nineteenth century no less than eighteen governors or acting governors of the colony died at their posts or on their way home. This fact is brought out in a recent book on Sierra Leone by Major J. J. Crooks, who was governor at three different times ('A History of the Colony of Sierra Leone, Western Africa,' 1903). Major Crooks admits that 'in spite of sanitary arrangements now in force' the climate 'can not be said to improve greatly.'

THUNDER-STORMS AND PRESSURE.

A. J. Monné, the editor of the new Dutch meteorological journal, *Hemel en Dampkring*, has recently discussed the question of the frequency of thunder-storms under different conditions of pressure, and finds that (in Holland) thunder-storms occur most frequently when the pressure is slightly below the normal. Similar conclusions have also been reached by Prestel and Prohaska. It should, however, be noted that mountain thunder-storms often occur locally during hot, clear, anticyclonic days, when the pressure is high.

SIROCCO IN TUNIS.

Hann calls attention (*Met. Zeitschr.*, 1904, 44–45) to a temperature of 104.9° Fahr. registered at 9 P.M., August 27, 1902, at the meteorological station in Tunis. This remarkably high reading was made during a sirocco. The relative humidity at the same time was five per cent. The sirocco was accompanied by a fall of fine red dust and a few drops of warm rain.

BIRD MIGRATION IN ENGLAND.

Studies of the migration of birds made at the Kentish Lightship, in the English Channel, in the autumn of 1903, by Mr. Eagle Clarke, show that the immediate cause of the great migratory movements was a fall of temperature in the area of origin. When this fall occurs, the instinct to migrate appears to be suddenly aroused, and the movement takes place even under the most unfavorable meteorological conditions. The direction of the wind appears to have no influence.

THE WIND.

'Le Vent dans l'Antiquité' is the title of a paper by F. Hooreman, in *Ciel et Terre* for July 1, which may be of interest to many readers who are not especially concerned with meteorology. The subdivisions of this discussion are: Ancient theories regarding the origin and nature of wind; names of the winds; climatic characteristics of winds; the tower of the winds at Athens.

R. DeC. Ward.

Harvard University.

A STATION FOR THE STUDY OF BIRD LIFE.

Articles of incorporation have just been drawn looking to the establishment on a permanent foundation of the 'Worthington Society for the Investigation of Bird Life.' The

founder, Mr. Charles C. Worthington, will erect and endow, on his estate at Shawnee, Monroe County, Pennsylvania, the necessary buildings and equipment.

The Worthington Society will have for its purpose the consideration of bird life as it is found in nature, and will also have many birds under confinement for study and experiment.

The following is a summary of the chief topics that will present an immediate field for experimentation, which it is proposed by the liberality of the foundation to make continuous and exhaustive in the hope of reaching conclusive results.

1. The study and consideration of a bird as an individual. It is believed that by means of observation carried through the entire life of the individual, with a daily record, brief or elaborate, as exigencies may require, much will be learned regarding matters that are now obscure. Facts, such as growth, habits, health, temper, etc., will be daily reported.

2. The study of the occurrence, extent, nature and cause of variations in different representatives of the same species.

3. Changes in color and appearance correlating with age, sex and season.

4. Changes in color and appearance due to light, heat, presence or absence of moisture, and to food. How rapid a change in appearance can be effected by a new environment or a new set of conditions?

5. Heredity. What general characteristics are transmitted? Are acquired characteristics transmitted? The consideration of atavism, prepotency and telegony.

6. Experiments in breeding. Hybridity and the fertility of hybrids. The possibility of establishing a new physiological species.

7. Experiments in change of color due to moult.

8. Adaptability. The plasticity of animals. How great a factor is this in domesticating new kinds of animals?

9. The leisure of animals. How is this acquired? Being acquired, how is this employed?

10. Instinct, habit and the development of intelligence.

11. The possibility of breeding insectivorous and other beneficial kinds of birds to restock a given region or to increase native birds, as has been done in the case of fish, by the United States Fish Commission.

A temporary laboratory and aviary is being equipped, and preliminary work will begin with the installment of a large number of native and foreign birds early in September. Mr. Worthington has procured the services of Mr. William E. D. Scott, Curator of the Department of Ornithology at Princeton University, as director of the proposed work. Mr. Bruce Horsfall has been engaged as chief assistant and artist. The corps of assistants and workers will be increased as the plans of the Worthington Society develop.

SCIENTIFIC NOTES AND NEWS.

DR. S. WEIR MITCHELL, of Philadelphia, has been elected a corresponding member of the Paris Academy of Medicine.

DR. WILLIAM OSLER, professor of medicine at the Johns Hopkins University, has been appointed regius professor of medicine at the University of Oxford in the place of Sir John Burdon-Sanderson. *The Medical Record* says: "This news will be received with deep regret by a host of friends and admirers of Dr. Osler in this country, who have long looked on him as one of the leaders in American medical thought. Dr. Osler has passed all his professional life as a teacher of medicine, a vocation for which he is eminently qualified by his broad culture, profound medical learning, and an inborn gift of expression. He was born in Tecumseh, Ontario, in 1849, and was graduated in medicine from McGill University, Montreal, in 1872, For ten years, from 1874 to 1884, he was professor of the institutes of medicine at McGill, from 1884 to 1889 he was professor of clinical medicine at the University of Pennsylvania, Philadelphia, and since 1889 he has held the chair of medicine at the Johns Hopkins University, Baltimore. We beg to offer our congratulations to the new regius professor of medicine at Oxford, and at the same time to send anticipatory greetings to Sir William Osler, Bart. The Oxford School of Medicine is also and especially to be congratulated."