

The object of such advance in scientific education is not, necessarily, to evolve a corps of researchers, tho doubtless a few geniuses may thus be discovered, but to so increase our general intellectuality that we may truly respond to the widespread popular belief that the Weather Bureau observers, section directors, and forecasters represent a very high type of government official.

This appeal is to the young men in the service—some of us are too old to be accepted as college students.—*C. A.*

#### WEATHER BUREAU MEN AS UNIVERSITY STUDENTS.

By JOHN K. HOOPER, Observer. Dated New Haven, Conn., July 18, 1908.

The Editor suggests that I write an article for publication in the MONTHLY WEATHER REVIEW, showing how it has been possible for me to take a special course of study at Yale University while performing the regular duties of assistant in the local office of the Weather Bureau at New Haven, Conn.

During the several years devoted to reading and study incident to preparing for the examinations required in the Weather Bureau as tests of educational efficiency, I became anxious to obtain a more extended knowledge of the branches of science germane to meteorology, than a mere course of reading could accomplish. I then decided that whenever an opportunity offered I would take up a course in those branches, under competent instruction.

The opportunity came to me when I was assigned to New Haven station in 1903. I made an added effort to complete the Weather Bureau examinations as soon as possible, and was able to register in the graduate department of Yale University at the opening of the college year in 1906.

By the advice of the university authorities, to whom I had explained just what I hoped to accomplish, and, with the permission of the Chief of Bureau, I took up the following preparatory course of study:

Elementary physics, three hours per week, Monday, Wednesday, and Friday, 2 p. m. Elementary laboratory physics, three hours per week, Thursday, 2 p. m. Analytical geometry and calculus, three hours per week, Tuesday, Thursday, and Saturday, 11:30 a. m.

These were the undergraduate courses of the academic department. They continued thruout the year.

The following year I took: Introduction to theoretical physics, three hours per week, Monday, Wednesday, and Friday, 11:30 a. m. This course continued thruout the college year of 1907-8.

During the first year I arranged to be excused from station duty on Monday, Wednesday, and Friday, from 2 to 3 p. m. then returned to the office and worked that much longer on those days. On Thursday I was excused from 2 to 5 p. m. and after the period in the laboratory, I remained at the office until the evening observation, and the work connected with it had been finished, eating the evening meal after that time.

It was not necessary to make any especial arrangement for mathematics on Tuesday, Thursday, and Saturday, as that period was during my lunch hour. To save time, however, I brought my lunch with me on those days and ate it in the office after 12:30 p. m. I did this same way during the second year on Monday, Wednesday, and Friday.

The studying was done at home in the evening. I did not attempt a regular schedule for each day, but took as much time as the various assignments required, sometimes being up until quite late. I allowed myself at least one evening each week for recreation, and took a complete rest on Sunday with the exception of station duty in the evening.

I do not say that this course has been taken without some self-denial and discomfort, but I am certain that with this additional knowledge of physics and mathematics I am now better equipped to pursue the study of meteorology, and this

more than counterbalances any inconvenience I may have undergone while obtaining it.

I do not consider that I have accomplished more than is possible for the majority of Weather Bureau employees. Many are even more conveniently situated than I have been, particularly those whose stations are located in university buildings or on university ground. The hours of duty in the service are such that any man so inclined can pursue some branch of study helpful to himself, and thru him of benefit to the Bureau.

Other branches of science are looking to meteorology for the solution of many of their own problems. Geographically we are the best fitted of any nation to solve the problems of the atmosphere. This should be a sufficient incentive to the men of the United States Weather Bureau to do all in their power to place meteorology in its proper position in coordinated knowledge—among the exact sciences.

#### RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Librarian.

The following titles have been selected from among the books recently received, as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Most of them can be loaned for a limited time to officials and employees who make application for them. Anonymous publications are indicated by a —.

- Association française pour l'avancement des sciences.**  
Compte rendu de la 36<sup>me</sup> session. Reims 1907. Notes et mémoires. Paris. 1908. 1718 p. 8°.
- Baden. Centralbureau für Meteorologie und Hydrographie.**  
Anleitung für die meteorologischen Stationen in Grossherzogtum Baden. Karlsruhe. 1908. 48 p. 8°.
- Bemmelen, W. van.**  
On the rainfall in Java. Results of the observations at more than 700 stations in the period 1879 to 1905. Batavia. 1908. 83 p. 8°.
- British Guiana. Botanic gardens.**  
Report... 1896-1907. Georgetown. 1898-1907. 1°.
- Claudel, J.**  
Handbook of mathematics. New York. 1906. ix, 708 p. 8°.
- Colorado college observatory.**  
... Semiannual bulletin no. 5. Meteorological statistics for 1907. Colorado Springs. 1908. p. 101-135. 8°. (Colorado college publications. General series no. 36. Science series v. 12. no. 5.)
- Durand-Gréville, E.**  
... Le mammatus. Paris. 8p. (Extrait du Bulletin de la Société astronomique de France, Janvier 1901.)
- Egypt. Survey department.**  
Instructions for the meteorological observers [English and Arabic]. n. t. p. 7 p. 1°.
- Foerster, Wilhelm.**  
Von der Erdatmosphäre zum Himmelsräume. Berlin. 1906. 115 p. 8°.
- France. Bureau central météorologique de France.**  
Annales. Année 1905. II. Observations. Paris. 1908. v. p. 1°.  
Same. III. Pluies. Paris. 1907. (8), 145 p. 1°.
- Hedrick, U. P.**  
The relation of weather to the setting of fruit; with blooming data for 866 varieties of fruit. (New York Agricultural station. Bull. no. 299. March, 1908. Geneva. 138 p. 8°.)
- Hejas, E. and Rethy A.**  
Die Häufigkeit des Niederschlags in Ungarn nach 15-jährigen Beobachtungen (1886-1900) von 20 Stationen. Budapest. 1908. 23 p. 1°. (Aus den Jahrbücher der königl. ung. Reichsanstalt für Meteorologie und Erdmagnetismus. 35. Band. Jahrgang 1905. 4. Theil.)
- Hörmann, Ludwig von.**  
Wetterherren und Wetterfrauen in den Alpen. (Sonderabdruck aus der Zeitschrift des Deutschen und Österreichischen Alpenvereins 1907 (38. Band.) München. 1907. p. 93-114. 4°.)
- Innsbruck. Universität. Meteorologisches Observatorium.**  
Beobachtungen... 1905. Innsbruck. 1907. n. p. 8°.
- Italy. Ufficio centrale di meteorologia e di geodinamica.**  
Annali... Serie seconda. v. 17. Part 3. 1895. Roma. 1907. xii, 283 p. 1°.
- Manchester university. Meteorological department.**  
Report on the investigation of the upper atmosphere carried out at the Howard estate observatory, Glossop... 1906-1907. Manchester. 1908. n. p. 4°.