heated cone, and the water rushed down hill, gathering loose earth and rocks as it went.

JAMES GLAISHER.

JAMES GLAISHER, who died on February 7, last, although he contributed in many ways to the advancement of meteorology, will always be remembered chiefly for his famous balloon ascent on September 5, 1862, with Coxwell, when these two intrepid aeronauts reached a height of about 37,000 feet above sea level, and established a record for high ascents. With the recent rapid development of balloon meteorology, attention has naturally very frequently been directed to this famous balloon voyage, and Glaisher's account of it, published in his 'Travels in the Air,' has doubtless been more generally read within a few years than it was when the book first appeared. Glaisher made many scientific balloon ascents during the early '60's, the results of which were communicated to the British Association, and for more than fifty years he contributed reports on the meteorology of England to the periodical returns of the Registrar-General of Births, Deaths and Marriages for England and Wales. He also published some hygrometrical and temperature tables; a report on the meteorology of India, and another on the meteorology of Palestine, and was one of the founders of the Royal Meteorological Society.

ATLAS OF THE ATLANTIC OCEAN.

THERE has recently been published a second edition of the valuable 'Atlas of the Atlantic Ocean,' issued by the Deutsche Seewarte in Hamburg. This atlas, with the accompanying 'Segelhandbuch,' embodies the latest and most complete information concerning the meteorology of this ocean. Atlases and sailing directions have also been published for the Indian and Pacific Oceans. Of the charts in these atlases perhaps the most striking are those showing the generalized winds. These charts bring out, in the most emphatic manner, the great wind and calm belts of the doldrums, trades, horse latitudes and prevailing westerlies. It is a pity that no enlargements of these admirable charts of winds are available for school use.

NOTES.

IT is very significant of the advance that has been made within a few years in balloon and kite meteorology, that the results of the meteorological observations made in the free air during ascents from the Prussian aeronautical observatory have, since last November, been published daily in three Berlin newspapers. R. DEC. WARD.

GEOGRAPHY IN THE UNIVERSITY OF CHICAGO.

THE University of Chicago has established a department of geography, and Professor Rollin D. Salisbury, of the department of geology, has been placed at its head. The arrangement between the departments of geology and geography is such that Professor Salisbury retains his connection with the former, as heretofore, at the same time that he assumes the headship of the latter. The close connection of the two departments appears from the fact that Professor Salisbury will also act as head of the department of geology when Professor Chamberlain is not in residence, and Professor Chamberlin will act as head of the department of geography in Professor Salisbury's absence.

The department of geology has heretofore offered courses, both elementary and advanced, in physical geography, and elementary courses in meteorology. Other courses of a geographic character have been offered by other departments, notably geographic botany by the department of botany, zoogeography by the department of zoology, and commercial geography by the department of political economy. These courses will continue to be given, as heretofore, by these several departments, except that meteorology will be under the auspices of the new department. The new department will not duplicate the geographic courses already given, but will, at the outset, provide courses which supplement those already established. The immediate aim of the new department will be to occupy the ground intermediate between geology and

climatology on the one hand, and history, sociology, political economy and biology on the other. The courses offered at the outset will be those for which, within his field, there is greatest demand.

John Paul Goode, Ph.D., in charge of the work of geography in the Wharton School in the University of Pennsylvania, has accepted an assistant professorship in the department of geography, and will begin his work the second term of the summer quarter (July 27, 1903). No other appointment will be made this year. During his first year, Dr. Goode will be in residence during the second term of the summer quarter, and during the autumn and spring quarters. The courses which he will give during the first year will include courses on the economic geography of (1) North America, (2) Europe and (3) tropical countries. The central theme of these courses will be the influence of the physiography, the climate and the natural resources of these lands on their settlement, development and present commercial and industrial status. Research courses will also be offered for advanced students.

The geographic work of the university during the coming year will include the following courses, in addition to those given in the department of geography:

I. In the *Department of Geology*—(1) An elementary course in physiography, each quarter; (2) A local field and laboratory course, first term, summer quarter; (3) two field courses in geology and geography about Devil's Lake and the Dells of the Wisconsin, in Wisconsin, one month each, commencing June 18 and July 27, respectively; (4) a course in advanced physiography, autumn quarter; (5) a field course (for advanced students) in the Wasatch Mountains of Utah and vicinity.

Other courses which, while primarily geological, are fundamental to the proper conception of the evolution of the present geography of the continents, will also be given in this department.

II. In the *Department of Zoology*—Courses in zoogeography, summer and spring quarters.

III. In the *Department of Botany*—(1) An elementary course in plant geography (time not announced); (2) an elementary course in ecology, summer and spring quarters; (3) elementary and advanced courses in field botany, summer and spring quarters; (4) advanced courses in geographic botany, winter quarter; and (5) a course in physiographic ecology, summer and spring quarters.

IV. In the *Department of Political Economy*—Courses in commercial geography, summer, autumn and winter quarters.

V. In the *Departments of History and Sociology*. Certain courses in these departments have a distinctly geographic bearing.

School of Education.—In addition to the foregoing, courses in geography will be given by Miss Baber in the School of Education (the normal department of the university). These courses are planned primarily with reference to the needs of teachers in the grades. Miss Baber will also conduct a field course of one month's duration during the second term of the summer quarter, beginning July 27.

A BIOLOGICAL STATION AT BERMUDA.

HARVARD UNIVERSITY and New York University unite with the Bermuda Natural History Society in inviting botanists and zoologists to spend six weeks in the temporary biological station provided for the present season at Bermuda.

By special arrangements with the Quebec S. S. Co. and the Hotel Frascati it has been possible to make the total expense, including transportation from New York and return, and board and lodging for six weeks at Bermuda, one hundred dollars.

The Bermuda Natural History Society has expressed its intention to do everything in its power to make the summer's work as profitable and pleasurable as possible, and to this end has undertaken to provide, among other things, the necessary facilities for collecting, namely, a steam launch, thirty to forty feet long with crew; a sail boat with fish-well and crew; three rowing boats, and a carriage with two horses capable of carrying ten or twelve persons. The laboratory will be equipped with all necessary reagents and utensils except microscopes and dissecting instruments, which should be brought by each investigator.