devote a greater period of time to the work, while three conservatives prefer to view it as the balm for the doctorate candidate who is to be discouraged. Some readers may feel that the master's degree at present, as well as in past years, is largely meaningless. To the writer, however, the intergrading viewpoints expressed above as to the functions and requirements of the degree are in part at least responses to the prevailing atmosphere of the institutions granting them, and the largely local demands they feel they must meet. This is especially true of the colleges which have the troublesome care of graduate assistants.

As regards the time required in residence for completion of the requirements of the degree, sixty-one institutions indicate one year as the minimum period of study, while but two require two years. Thirty-one believe that the period of study should be prolonged beyond the normal time and generally to a period of two years in the case of assistants in instruction. Three limit the amount of service to be engaged in (three to fifteen hours), if the candidate desires to complete his work in one year, while but eighteen state that special consideration will be given the exceptional student if he endeavors, despite assistant's duties, to complete the work in the minimum period.

N. M. GRIER

DARTMOUTH COLLEGE

SAND FLOTATION

THE article on "Sand Flotation in Nature" given in SCIENCE for April 16, 1926, reminds me of certain observations I made on this phenomenon about twenty-five years ago. Surface tension is evidently the explanation of this flotation, but what especially interested me was the question how the sand, not necessarily in very fine grains, came to be deposited on the surface of the water so gently as to remain there. I found by observation that, in some cases at least, this occurs as follows: A gentle ripple, perhaps the last movement of a broken wave, runs up a beach, covering sand that has been dried and heated by the sun. As the water recedes, the very edge of it has a rolling motion, rolling toward the sea, and in this revolution it picks up some of the sand particles, probably by creating a partial vacuum over them for a moment, and then floats them off.

I have successfully imitated nature in this maneuver, using well-dried and perhaps slightly greasy sand in a domestic baking-pan. It is my impression that I published an account of all this in the *Youth's Companion*, probably about 1901.

EDWIN H. HALL

HARVARD UNIVERSITY

REQUEST FOR PUBLICATIONS IN THE FIELD OF ATMOSPHERIC ELECTRICITY

WE are planning to write an extensive treatise on atmospheric electricity and allied phenomena which will be published next year.

On account of the unfortunate shortage of funds of the libraries in the Austrian universities it is extremely difficult for us to obtain all journals and especially the bulletins and proceedings of the scientific institutions and societies in foreign countries.

It would be a great help to our work if the physicists and meteorologists in all English speaking countries would kindly send us reprints of their publications pertaining to atmospheric electricity including electric field of the earth and atmosphere, ionization of the atmosphere, thunderstorm electricity, electric properties of rain and snow, radioactivity of the earth and atmosphere, rays of cosmic origin, electric currents in the atmosphere, polar light, theories of the origin of the atmospheric-electric phenomena and propagation of electric waves around the earth.

All colleagues who are willing to assist us are asked to send reprints of their publications to the address given below.

H. BENNDORF
V. F. HESS

PHYSIKALISCHES INSTITUT,
UNIVERSITÄT GRAZ (AUSTRIA)

SCIENTIFIC BOOKS

Researches on Fungi. Vol. III, The Production and Liberation of Spores in Hymenomycetes and Uredineae. By A. H. REGINALD BULLER. Longmans, Green and Co., 1924. pp. 611.

THIS is the third volume of Buller's "Researches on Fungi," and at least one more is promised. It takes an ambitious, resourceful and trained scientist to turn out, as a side issue to teaching, work of the character of these books. The latest volume contains 611 pages of descriptive matter, including the table of contents and general index, and is illustrated with two hundred and twenty-seven drawings and photographs about equally numerous. The text includes not only observations made by the writer and his pupils, but also reference to work of previous investigators.

The book is divided into two parts of which Part I is by far the larger. This deals in the first eleven chapters with a technical discussion of the production and liberation of the spores in the Hymenomycetes; chapter XII treats of luminescent fungi; chapter XIII, with parasitic agarics; chapter XIV, with nocturnal spore discharge. Part II is concerned with the production and liberation of basidiospores in