of the fungi. It is to be issued 'from time to time,' and is sent for the nominal charge of ten cents for the year. All who send this sum are enrolled as members of the 'Ohio Mycological Club,' and from the lists already published this club is certainly a very live and active one, since it enrolled nearly 150 names in less than a fortnight. While intended for the beginner, these bulletins, of which two numbers have been issued, are of interest to the worker as well. Professor Kellerman is to be congratulated upon having so successfully launched this useful little publication.

CHARLES E. BESSEY.
THE UNIVERSITY OF NEBRASKA.

CORNELL WORK FOR AGRICULTURE.

THE president of Cornell University in a recent address before the College of Agriculture of that university gave a very admirable summary of the work of the college and its relations with the state.

The college was founded under the Land Grand Act of 1862 and is, under that act, a state college; but the state of New York has done nothing for it until within a few years, and the annual expenditures of the university on free scholarships for the state have exceeded the sum total of all the contributions of the state to the work. This address refers mainly to the work of the college and of the university in scientific fields and in promotion more or less directly of the agricultural interests of the state.

The university provides about eight hundred scholarships at a cost of about $250,000 per annum. Of these, six hundred are distributed to the one hundred and fifty assembly districts of the state. They are 'state scholarships.' The others are open to all and secured by competitive examinations. The annual cost of the College of Agriculture is $141,061.27, as for the last fiscal year 1901–1902.

The state of New York does not appropriate a dollar of this nearly $400,000. It makes appropriations for the state colleges of forestry and of veterinary science, located at Cornell University but not its property, $35,000. It turns over to the university the less than $60,000 per annum coming in from the Land Grant Fund, which fund was the gift of the United States. It has built two buildings, which, however, remain the property of the state.

The College of Agriculture of Cornell University gives free tuition and has done so from the first. The students in regular course number about two hundred. There are enrolled in the Farmers' Reading Course 30,000 students; in the Farmers' Wives' Reading Course, 8,000; in the 1700 Junior Naturalists' Clubs, 30,000; in the Home-Study Courses about 15,000 teachers. Five hundred farmers have conducted experimental work on their own farms, under the supervision of the college. A correspondence school of large extent is carried on, which gives instruction to all agriculturists throughout the state. The experiment station has published 196 bulletins, of 20,000 in each edition, and 14 annual reports.

Members of the staff of the college are sent out whenever an outbreak of disease among either animals or plants is reported and, if familiar, it is extinguished; if unfamiliar, it is studied and a way found of preventing and curing it. In such an instance, that of the pear-sylla, a million dollars was saved to a single county, a few years ago.

This is work prescribed by the statutes and the charter of Cornell University. It is carried on mainly through the liberality, not of the state, but of Messrs. Cornell, Sage and other private contributors to the available funds of the university. Illinois, Iowa, Wisconsin and other states, similarly interested in agriculture, are providing handsomely for scientific work of this kind in their land-grant and state colleges. New York gains much, gives little.

Professor Robertson, Agricultural and Dairy Commissioner of the Dominion of Canada, after a three days' visit to Cornell, writes as follows:

"I do not know of another great university that is doing the same sort of work. Insti-

tutions of this kind generally confine their activities to the professional and scholastic classes, but here is one that is bringing its culture and its wealth of knowledge, based on careful research, to the help of the common people in their practical, every-day work."

R. H. Thurston.

THE INTERNATIONAL GEODETIC ASSOCIATION.*

The systematic reduction of the 52° parallel survey was published by the Central Bureau of the International Association under the title 'Lotabweichungen, Heft II.' The publication of the third part, which will contain the deflections along the northern geodetic lines of the 52° parallel survey, will be attempted this year.

Owing to the resignation of Dr. Schumann, who accepted the position of professor of geodesy, Fischer High School, the investigation of the curvatures of the meridians and parallels of the '*geoid*' could be but little advanced. Still, preparations for the computation of the triangulation through France, Spain and Algiers are in progress, and it is hoped that the final computations will be completed during the coming year.

Voluntary contributions of observations for variations of latitude during the year, from which to determine the motion of the earth's axis of rotation within its body, were received from only four observatories, namely, the observatories of Tokyo, Heidelberg, Leyden and Philadelphia. Unfortunately, the data thus furnished proved insufficient for an independent determination of the pole's motion. Utilizing these contributions, the results were compared with the motion of the pole as deduced from the series of special observations executed by the International Latitude Service, and it is gratifying to note that the comparisons proved the results to be satisfactory.

In this connection it remains to call attention to publication No. 6, of the Central Bureau, entitled 'Ergebnisse der Polhohenbestimungen in Berlin' during the years of 1889, 1890 and 1891, by Dr. Adolf Marcuse.

The work of the International Latitude Service made satisfactory progress during the year. Star-pairs were observed as follows:

Stations.	No. of Pairs Observed.	Observers.
1. Mizusawa	1,577	Kimura and Nakano.
2. Tschardjui	1,564	Medzwietsky.
3. Carloforte	3,386	Ciscato and Bianchi.
4. Gaithersburg	1,822	Davis.
5. Cincinnati	1,425	Porter.
6. Ukiah	2,014	Schlesinger.

The reduction of these observations was made immediately upon the receipt of the records by mail. In addition to these systematic computations, the Central Bureau also undertook the reduction of the *mean* declinations. The mean declinations were derived from Cohns' catalogue.

A list of the apparent declinations of the several stars thus observed, for the epoch of Greenwich culmination for the period November 2, 1902, to November 1, 1903, was prepared, and a copy sent to the observers for the purpose of enabling them to test and control their respective works by their own computations.

An abstract covering the most important results of this work is given by Dr. Albrecht in his article in No. 3808 of the *Astronomische Nachrichten*, entitled 'Resultate des internationalen Breitendienstes' for 1899.9–1902.0.

In this article Dr. Albrect calls attention to the fact that the motion of the earth's pole could no longer be satisfactorily represented by the expression:

$$\Delta\phi + v = x \cos\lambda + y \sin\lambda,$$

but that according to the suggestion of Professor Kimura in *Astrom. Nachr.*, No. 3783, an expression of the form

$$\Delta\phi + v = x \cos\lambda + y \sin\lambda + z$$

would have to be used instead. That is to say, the complete expression for the variation of latitude required an additional yearly term (z), wholly independent of the geographical longitude of the place of observation.

Determination of the Acceleration of Grav-

* Abstract of Professor Helmert's report on the activities of the Central Bureau of the International Geodetic Association during the year 1902, together with the proposed plan of work for 1903.