able decrease in the attendance at the University of Indiana, which is confined almost entirely to the arts and science departments, the law school and the summer session showing a gain.—At Johns Hopkins University there has been a gain in the academic department, a small gain in medicine, and no change in the enrolment of the graduate schools.

Last year we called attention to the fact that the medical schools showed a decided decrease in the great majority of institutions. A reaction seems to have set in this year, for while the decrease in a number of universities has continued, others show gains, the largest increase being recorded at the University of Pennsylvania. The Medical School of Columbia University has dropped into second place, Illinois now taking the lead. Columbia is followed by Northwestern and Pennsylvania, these four institutions having enrolments of over 500 students. The University of Michigan still has the largest law school, Harvard's being second, Minnesota's third and Columbia's fourth. Quite a number of law schools have suffered a loss in attendance. The scientific schools continue to draw large numbers, and at the majority of institutions are growing very rapidly. Cornell has by far the largest enrolment of scientific students, Michigan coming second, Illinois third and Wisconsin fourth. Harvard continues to have the largest collegiate enrolment. Its summer session was also the largest last year, Columbia being a very close second, with California third and Cornell fourth. Columbia with an enrolment of 709 students in the graduate faculties easily maintains the lead in this department, which it has held for several years. Chicago, its nearest rival in this field, has only a little over half as many graduate students as Columbia, Harvard and Yale follow closely behind Chicago. Northwestern has the largest dental school and also the largest school of divinity. The Columbia School of Pharmacy is more than twice as large as that of its nearest competitor, Northwestern University, and Teachers College of Columbia University also remains in a category by itself as far as the number of students is concerned. Syracuse University has the largest school of music, and Yale the largest school of forestry. The Minnesota School of Agriculture is more than twice as large as that of Illinois, which stands second. Columbia seems to have the largest teaching force, but the Harvard figures do not include the 25 teachers specially engaged to give summer courses in art and sciences and 31 instructors and lecturers in the summer school of physical training.

These figures tell their own story, but of course they tell little about the relative rank of the institutions from the standpoint of efficiency, a question with which this tabulation does not attempt to deal.

RUDOLPH TOMBO, JR.,
Registrar.
COLUMBIA UNIVERSITY.

AMERICAN ORNITHOLOGISTS' UNION.

THE twenty-second congress of the American Ornithologists' Union convened in Cambridge, Mass., Monday evening, November 28. The business meeting was held in Mr. William Brewster's museum, and the public sessions, commencing Tuesday, November 29, and lasting three days, were held in the Nash lecture room of the University Museum.

Mr. Charles B. Cory, of Boston, was re-elected president; C. F. Batchelder, of Cambridge, Mass., and E. W. Nelson, of Washington, D. C., vice-presidents; John H. Sage, of Portland, Conn., secretary; Jonathan Dwight, Jr., of New York City, treasurer; Frank M. Chapman, Ruthven Deane, A. K. Fisher, Thos. S. Roberts, Witmer Stone, William Dutcher and

Charles W. Richmond, members of the council.

The ex-presidents of the union, Drs. J. A. Allen and C. Hart Merriam, and Messrs. William Brewster, D. G. Elliot and Robert Ridgway are *ex-officio* members of the council.

Drs. Allen, Dwight, Merriam and Richmond, and Messrs. Brewster, Ridgway and Stone, were reelected 'Committee on Classification and Nomenclature of North American Birds.'

Three associates were elected to the class known as members, and one hundred and twenty-five new associates were elected—the largest number in any one year since the society was founded.

Interesting papers on the subject of bird migration were presented by Professor Wells W. Cooke and Dr. Louis B. Bishop, and the conclusions reached seemed reasonable.

Mrs. Irene G. Wheelock gave a detailed account of her studies, extending over many years, on the regurgitative feeding of nestlings. Her paper created much discussion.

Mr. E. H. Forbush referred to certain disappearing birds, the purple martin, plover, etc., and asked that information concerning them be sent to the Massachusetts State Board of Agriculture.

In his paper on the nesting habits of the flamingo, Mr. Chapman exhibited most excellent views from photographs of the birds which he had taken in the Bahamas. He made many new observations there concerning the domestic life of the species.

Mr. William L. Finley's papers on the land birds of Oregon and California and the sea birds of the Oregon coast, illustrated as they were by beautiful lantern slides, showed what exceptional opportunities he had had for studying the avifauna of the Pacific region.

Mr. Henry Oldys spoke of some interesting bird songs, and Mr. Fuertes gave imitations of bird notes and explained the habits of the birds.

A valuable paper on the birds of the sandhill region of Nebraska was presented by Dr. Robert W. Wolcott. His observations covered a section of country but little known from an ornithological standpoint.

Rev. Herbert K. Job showed a large series of lantern slides from photographs of shore birds, herons and water fowl, and explained the ingenious expedients to which he resorted in order to secure good results.

The report of the Committee on Protection of North American Birds, read by its chairman, Mr. William Dutcher, gave evidence that interest in the preservation of wild bird life was not lacking at the present time.

In the absence of Professor C. F. Hodge, of Worcester, Mass., so well known for his successful experiments in rearing ruffed grouse in confinement, Miss Helen A. Ball explained a series of lantern slides showing the development of the grouse from the chick to adult plumage. She stated that the young became very tame—eating from the hand—and that two adult wild birds placed in the enclosure with the others, soon exhibited no fear, and in a short time it was impossibe to distinguish them, either in plumage or habits, from those raised in confinement.

Following is a list of the papers read at the sessions:

Jonathan Dwight, Jr.: 'A Review of the Gulls which have Light-colored Primaries.'

Wells W. Cooke: 'An Untenable Theory of Bird Migration.'

Irene G. Wheelock: 'Regurgitative Feeding of Nestlings.'

Louis B. Bishop: 'The Direction of Flight in the Fall Migration at New Haven.'

Henry Oldys: 'Some Interesting 1904 Bird Songs.'

Louis B. Bishop: 'The Status of *Helminthophila leucobronchialis* and *Helminthophila lawrencei*.'

JONATHAN DWIGHT, JR.: 'Wear in its Relation to Subspecies.'

WM. R. LORD: 'The Psychological Conditions of Bird Study.'

E. H. FORBUSH: 'Some Disappearing Birds and Suggestions for their Protection.'

FRANK M. CHAPMAN: 'Florida Notes.' Illustrated by lantern slides.

WM. L. FINLEY: 'The Land Birds of Oregon and California.' Illustrated by lantern slides.

C. F. HODGE: 'Experiments in Rearing Ruffed Grouse in Confinement.' Illustrated by lantern slides.

HORACE G. SMITH: '*Cyanocitta cristata*, and other Eastern Birds, at Wray, Yuma County, Colorado.'

A. H. CLARK: 'The Birds of the Southern West Indies.'

B. S. BOWDISH: 'Ornithology of a Churchyard.'

FRANK M. CHAPMAN: 'The Nesting Habits of the Flamingo.' Illustrated by lantern slides.

WM. L. FINLEY: 'The Sea-Birds of the Oregon Coast.' Illustrated by lantern slides.

H. W. GLEASON: 'Illustrated Readings from Thoreau's Journals.'

WM. DUTCHER: 'Report of the Chairman of the Committee on the Protection of North American Birds.'

ROBERT H. WOLCOTT: 'Observations on the Birds of the Sand-hill Region of Nebraska.' Illustrated by lantern slides.

HERBERT K. JOB: 'The Season's Experiences with Shore-birds, Herons and Water-fowl.' Illustrated by lantern slides.

The next annual meeting will be held in New York City, in November, 1905.

JOHN H. SAGE,
Secretary.

SCIENTIFIC BOOKS.

The Jurassic Flora. By A. C. SEWARD, F.R.S. Part I., *The Yorkshire Coast,* London, 1900. Part II., *Liassic and Oolitic Floras of England (Excluding the Inferior Oolite Plants of the Yorkshire Coast)*, London, 1904. Catalogue of the Mesozoic Plants in the Department of Geology, British Museum (Natural History). Parts III., IV.

The first two parts of this important catalogue were reviewed at considerable length in SCIENCE of June 12, 1896 (N. S., Vol. III., pp. 869–876). These relate to the Wealden flora, and their great value to science was fully set forth. The third part, dealing with the Jurassic flora of Yorkshire, appeared in 1900, and now the fourth part, embracing the remainder of the Jurassic material in the British Museum is out, and these two parts may be conveniently treated in a second review, as were the first two in the previous one.

The Jurassic flora of Yorkshire is one of the oldest and best known fossil floras of the globe. It was to it that Williamson first gave his attention more than seventy years ago. His first contribution to science consisted in 'an excellent drawing and description' of the plant first called *Cyclopteris Beanii,* since referred to *Otozamites,* collected by his father at Gristhorp Bay. He sent the drawing and description to Messrs. Lindley and Hutton, who were then at work on their 'Fossil Flora of Great Britain,' and they were embodied with commendation in the second fascicle of that work (pp. 127–129, pl. xliv.), which bears date 1833. Between thirty and forty species from the Oolite of Yorkshire are published in that work, most of which were contributed by Williamson. Earlier work in this line had been done by Young and Bird (1822, 1828), by Brongniart (1828) on material sent to him, and especially by Phillips (1829). Of course, only a small part of this rich material is in the British Museum, but Mr. Seward visited many other museums where it is deposited and he reviews the literature of the whole subject. Indeed, as is his custom in these catalogues, he goes over the whole ground not only of the Jurassic flora of Yorkshire, but of that of other parts of Britain and, in a comparative way, of other countries, especially the continent of Europe, but also of Asia (Siberia, Persia, China, Japan, India), of North America and of Australia, even mentioning discoveries in Franz Josef Land and in Argentina. This preliminary correlation of the data of the whole world is an important feature of these catalogues and greatly increases their value. This value is still further enhanced by his critical analysis of the species, in which his latest decisions as to their affinities, and what he considers to be their proper designations, are given.