periments that we have made, it was found that, like radium, it causes the diamond to phosphoresce, and exerts the same action as radium upon kunzite and willemite, with the possible exception that the emanations from the small quantity of substance seemed to become luminous before they touched the willemite itself. The surface that was affected measured two square inches, many times the surface of the actinium. The effect produced on willemite was somewhat different from that due to radium; the luminescence apparently penetrated the willemite, and at the same time it almost seemed as if a luminous emanation left the material.

It was also found that on applying some powdered and granulated willemite to the inside of a closed jar, 12 cms. high, and putting this over the actinium, which was in a paper, the emanations made the entire interior of the jar luminous.

On the other hand, they do not appear to possess the penetrating power through glass that the radium compounds show; for in the same experiment they failed to affect the willemite on the outside of the jar, although the glass was only $1\frac{1}{2}$ mm. in thickness.

A platinum-barium-cyanide screen immediately responded when the actinium was held against the black paper on the back. The abundance of emanations from the substance, rather than their penetrative quality, seemed to be its characteristic.

One of the properties of actinium which Professor Curie mentions in his letters, is the emitting of many emanations, which last for some minutes. This last feature, of endurance, was not observed. On the other hand, a peculiarity of actinium, as compared with radium, is that the emanations, although much more profuse, disappear in a few seconds. Another marked feature is a certain visibility or materiality of the emanations. This has been already referred to in some of the experiments above described in connection with willemite.

If actinium is placed in a paper over a screen of the phosphorescent sulphide of zinc (Sidot's blende), the screen will become illuminated, and on slightly blowing, so as to produce a current of air, the light is carried along the screen with the emanations. It was found that the diamond was affected quite as permanently as with radium; so was the spodumene variety, kunzite, and a specimen of willemite more than two inches square. Emanations of the actinium, which was in a double paper, rose in a cone-shaped form and spread out in an inverted cone on the base of the willemite, illuminating both.

GEORGE F. KUNZ,
CHARLES BASKERVILLE.

AMERICAN ORNITHOLOGISTS' UNION.

THE twenty-first congress of the American Ornithologists' Union convened in Philadelphia, Monday evening, November 16. The business meeting was held in the council room, and the public sessions, commencing Tuesday, November 17, and lasting three days, were held in the lecture hall of the Academy of Natural Sciences.

Charles B. Cory, of Boston, was elected president, Charles F. Batchelder, of Cambridge, Mass., and E. W. Nelson, of Washington, D. C., vice-presidents; John H. Sage, of Portland, Conn., secretary; Dr. 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.

Dr. Samuel W. Woodhouse, of Philadel-

phia; Professor Dean C. Worcester, of Manila, P. I.; Dr. E. C. Hellmayer, of Munich; Dr. Emil A. Goeldi, of Pará, Brazil; Dr. Peter Sushkin, of Moscow, and Dr. Herluf Winge, of Copenhagen, were elected corresponding fellows. Eight associates were elected to the class known as members, and one hundred and four new associates were elected.

At the opening of the congress Dr. A. K. Fisher delivered a memorial address on Thomas McIlwraith, who died in Hamilton, Ontario, January 31, 1903. Mr. McIlwraith was a founder and fellow of the union, and, although deeply engrossed in business, never lost his taste for ornithology. His writings relate mainly to the birds of Ontario, Canada.

Mr. Frank M. Chapman, in his account of an ornithological trip to the Pacific, brought forcibly to mind the exceptional opportunities afforded the eastern members of the union, by the Cooper Ornithological Club, to study the avifauna of the Pacific coast after adjournment of the special meeting of the American Ornithologists' Union held in San Francisco during May, 1903. Other results of the trip were shown at the present congress. Dr. T. S. Palmer spoke of the bird colonies of the California and Oregon coasts. Mr. Chapman exhibited most excellent views of Farallone bird life and described the different species found there, and Otto Widmann gave a list of the birds noted during a short stay in the Yosemite Valley.

A paper on bird life on Laysan Island, Hawaiian group—an interesting but little-known region—was presented by Walter K. Fisher and accompanied by fine examples of bird-photography. In the absence of the author the paper was read by Dr. A. K. Fisher, who also explained the slides. Laysan is said to be 'the greatest bird island in the world.'

Rev. H. K. Job showed a large series of lantern slides from photographs of birds taken in the bird rookeries of Cape Sable and the Florida Keys, and told of the ingenious expedients resorted to to secure good results.

Mr. Witmer Stone had gathered all obtainable material relating to John K. Townsend and William Gambel, and incorporated it in a paper of historical interest regarding these neglected ornithologists.

Mr. Geo. Spencer Morris spoke of bird life at Cape Charles, Va., and referred to the decrease in recent years among the water fowl found at that noted resort.

'New Bird Studies in Old Delaware,' by Samuel N. Rhoads and C. J. Pennock, brought out valuable ornithological facts relating to that apparently neglected state.

In his report of the Committee on Protection of North American Birds Mr. William Dutcher, the chairman, showed that satisfactory results had been obtained during the past year. This was made possible by the Thayer Fund money secured through the efforts of Mr. Abbott H. Thayer.

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

In Memoriam: Thomas McIlwraith: A. K. Fisher.

Notes on the Bird Colonies of the California and Oregon Coasts: T. S. Palmer.

Nesting Habits of Florida Herons: A. C. Bent.

New Bird Studies in Old Delaware: Samuel N. Rhoads and C. J. Pennock.

The Æsthetic Sense in Birds: Henry Oldys.

Notes on the Protected Birds on the Maine Coast, with Relation to Certain Economic Questions: A. H. Norton.

Exhibition of Lantern Slides of Young Raptorial Birds, photographed by Thos. H. Jackson, near West Chester, Pa.: Witmer Stone.

Views of Farallone Bird Life: FRANK M. CHAPMAN.

The Bird Rookeries of Cape Sable and the Florida Keys: HERBERT K. JOB. Illustrated with lantern slides.

A Winter Trip in Mexico: E. W. NELSON. Illustrated with lantern slides.

Some Nova Scotia Birds: SPENCER TROTTER.

Nesting Habits of the Whip-poor-will: MARY MANN MILLER.

Some Variations among North American Thrushes: J. DWIGHT, JR.

The Spring Migration of 1903 at Rochester, N. Y.: E. H. EATON.

Warbler Migration in the Spring of 1903: W. W. COOKE.

Some Birds of Northern Chihuahua: WM. E. HUGHES.

A Reply to Recent Strictures on American Biologists: LEONHARD STEJNEGER.

The Exaltation of the Subspecies: J. DWIGHT, JR.

Variation in the Speed of Migration: W. W. COOKE.

An Ornithological Excursion to the Pacific: FRANK M. CHAPMAN. Illustrated with lantern slides.

Bird Life on Laysan Island: WALTER K. FISHER. Illustrated with lantern slides.

Ten Days in North Dakota: W. L. BAILY. Illustrated with lantern slides.

Two Neglected Ornithologists—John K. Townsend and William Gambel: WITMER STONE.

Bird Life at Cape Charles, Virginia: GEORGE SPENCER MORRIS.

San Clemente Island and its Birds: GEO. F. BRENINGER.

Yosemite Valley Birds: O. WIDMANN.

The Origin of Migration: P. A. TAVERNIER.

A Contribution to the Natural History of the Cuckoo: M. R. LEVERSON.

Mortality among Young Birds due to Excessive Rains: B. S. BOWDISH.

Collecting Permits: Their History, Objects and Restrictions: T. S. PALMER.

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

The next annual meeting will be held in Cambridge, Mass., commencing November 28, 1904.

JOHN H. SAGE,
Secretary.

SCIENTIFIC BOOKS.

JOHNS HOPKINS HOSPITAL REPORTS. VOL. 11, NOS. 1-9.

THIS report contains three articles. The first is an exhaustive and valuable monograph on pneumothorax by Dr. Emmerson, covering 450 pages. The literature of the subject, going back to the works of Hippocrates, and coming down to the present time, is given in the form of abstracts, translations or quotations from the original articles. This necessitates much more space than is usually devoted to literature, but it must be admitted that in many respects it is more satisfactory than the references ordinarily made. The first chapter is devoted wholly to these abstracts. In Chapter II., entitled 'The History of Pneumothorax,' the facts stated in the abstracts already given are satisfactorily woven together. Chapter III. is devoted to the etiology and pathology of the disease, with clinical histories of cases. While there is much of interest in this chapter, it can not be said that it contains any important contribution to our knowledge of the disease. Chapter IV., on 'The Mechanism of Pneumothorax,' is, in our opinion, the most interesting, and in some respects the most valuable part of this monograph. Your reviewer has been especially interested in the work done by Dr. Emmerson, as well as the literature which he has collected bearing upon the composition of the gas accumulation in the chest in this disease. His conclusions are stated as follows: