was evident that such a scheme would be impracticable and undesirable.

The following is a list of the papers read at the sessions:

The Fringillidæ of Dodge County, Wisconsin. WILL EDWIN SNYDER.

An Ornithological Tour in Yucatan and Mexico, illustrated by lantern slides. FRANK M. CHAPMAN.

Some New England Birds Nests, illustrated by lantern slides from original photographs. WILLIAM BREWSTER.

The Philadelphia Vireo (Vireo philadelphicus). JONATHAN DWIGHT, JR.

The Moult of the Song Sparrow (Melospiza fasciata), and of the Red-eyed Vireo (Vireo olivaceus). JONATHAN DWIGHT, JR.

Notes on the Black Rail (Porzana jamaicensis) in Southern Connecticut. JOHN N. CLARK.

Notes on the Birds of Oregon. C. HART MERRIAM.

Some Notes on the Nesting Habits of the White-tailed Kite (Elanus leucurus), with exhibition of eggs. CHESTER BARLOW.

Two Curious Birds' Nests. WILLIAM BREWSTER.

A Series of Redpolls. WILLIAM BREWSTER.

On the Terns of Penikese Island, Massachusetts. GEORGE H. MACKAY.

On the Terns of Muskeget Island, Massachusetts. GEORGE H. MACKAY.

The next meeting of the Union will be held in New York City, beginning November 8, 1897.

JNO. H. SAGE,
Secretary.

NOTES ON INORGANIC CHEMISTRY.

IN an inaugural dissertation (Amsterdam, 1896), W. P. Jorissen makes a contribution to the knowledge of 'active oxygen.' When a number of substances are slowly oxidized in air or oxygen a part of the oxygen becomes endowed with peculiarly active properties. On studying the oxidation of triethyl phosphin $P(C_2H_5)_3$, Jorissen finds that oxygen is taken up from the air in quantity corresponding to the formation of the oxid $P(C_2H_5)_3O$; but if indigo, which is not oxidized by ordinary oxygen, is present, twice the quantity of oxygen is consumed and the indigo is also oxidized with loss of color. Other substances act in a similar way. The conclusion drawn by the author is that in the slow oxidation of a body the same quantity of oxygen is rendered 'active' as is taken up in forming the primary product of oxidation.

IN the last number of the *Berichte* of the German Chemical Society, Victor Meyer and Max von Recklinghausen give an account of a series of experiments on the slow oxidation of hydrogen and of carbon monoxid by potassium permanganate. Pure hydrogen in a test tube or a flask inverted over a solution of the permanganate is slowly but completely absorbed. Similarly carbon monoxid is in the course of a few days completely oxidized to carbon dioxid. When the solution and gas are shaken in an agitator the same reaction takes place provided the permanganate solution is alkaline or neutral. If, however, it is acid, there is an evolution of oxygen, the quantity being about half that of the hydrogen absorbed. With carbon monoxid and acid permanganate solution there is on agitation also an evolution of oxygen, but not much more than half as much as is the case with hydrogen. This evolution of oxygen is difficult to account for, as in every other known case of oxidation by potassium permanganate the oxygen is wholly consumed in the oxidation process, and none of it escapes. Prof. Meyer suggests a possible similarity of this phenomenon with those of slow oxidation studied by van't Hoff and Jorissen (see above note), where the oxygen molecule seems to divide into two portions with different properties. According to this a molecule of oxygen from the permanganate would divide, one-half going to oxidize the hydrogen, while the other escapes to form molecular oxygen.

IN the same journal G. P. Drossbach describes an investigation of monazite sand in which he finds what he considers to be a new metal, differing somewhat in its prop-

erties from any of the known rare earths, and possessing an atomic weight of about 98 or 99. An element of this atomic weight and with the properties the author describes could not find a place in the periodic system. Mendeléef's eka-manganesium would have this atomic weight, but its properties would be very different from those of the new element. The author hence considers the element may not be a simple substance.

J. R. RYDBERG has made further study of the gas evolved from cleveite, and confirms the view of Ramsay that helium is a mixture of two gases. This conclusion is reached from a study of the spectrum of helium.

A FURTHER study of the amount of argon in the atmosphere has been made by Schloesing, in which a remarkable uniformity appears in air from different sources. The average value is found to be 1.184 per cent. of the total volume of nitrogen and argon.

A STUDY of the heat of formation of lithium hydrid by Guntz gives a value of 21.6 calories, a magnitude which might be expected from the great stability of this hydrid. Its dissociation tension at its melting point, 680°, is about 27 mm. J. L. H.

ASTRONOMICAL NOTES.

THE Astronomical Society of the Pacific will publish shortly an interesting account of observations of the eclipse of last August. This eclipse was successfully observed in Lappland, whither an expedition had been sent by the Russian Astronomical Society. An account of the expedition, to be published by the Astronomical Society of the Pacific, has been written by M. Rydzewski, one of the members of the expedition, and will be accompanied with reproductions of several very good photographs of the corona obtained during totality.

THE Academy of Sciences of St. Louis has published a paper on Flexure of Telescopes by Prof. M. Updegraff, of the University of Missouri. The question is treated from a theoretical standpoint. The author points out that the small systematic errors which are often found in the results of declination measures with meridian circles may be the effects of 'unsymmetrical action of gravity on the telescope tube.' H. J.

SCIENTIFIC NOTES AND NEWS.

THE DECIMAL DIVISION OF TIME AND ANGLES.

THE *Revue Scientifique* for October 31st contains an article by M. J. de Rey Pailhade, advocating the introduction of the decimal system in the measurement of time and of angles. The author states that attention was first attracted to this subject when the metric system of weights and measures was introduced into France. Laplace and Poisson made use of the plan proposed at that time, and one measurement, the 'grade' ($\frac{1}{100}$ part of $\frac{1}{4}$ circle), is still in use in the Geographical Survey of the French army. The subject was discussed before the Paris Academy, in 1870, by MM. d'Abbadie, Yvon Villarceau and Wolf, but was not again brought prominently forward till 1893, when it was taken up by M. Pailhade in a paper read before the *Congrès des societés françaises de geographie* at Tours. Since then other scientific societies have recommended the serious study of the question by men of science. Among these may be mentioned the Association française pour l'avancement des sciences, the Société astronomique de France, the Société de topographie de France and the International Congress of Geography held in London in 1895.

All those who are engaged in making elaborate calculations would reap, it is claimed, great benefit from the system. Not only would the time required in computing results be very much shorter, but the chance of error would be greatly decreased. Men of science chiefly, therefore, should be interested in this reform, for though it would also benefit the general public it would do so in a less degree. M. Pailhade lays stress on the fact that the system can only be introduced very gradually, and