site of the ancient Lake Moeris in Egypt have been so fruitful that the Egyptian government has taken the matter in hand, and it is believed, that, by a small expenditure, the surplus waters of Bahr Yussef can be directed into the now dry depression. Preliminary surveys are in progress to determine the practicability and expense of restoring a state of things very exactly described by Herodotus, Strabo, and Pliny, as having existed in past ages.

Ancient Arabic inscription in the Sahara.— Le Chatelier furnishes an account of what may prove to be an important inscription in an artificial cavern at Timissao, near the wells and on the right bank of the wady of the same name, in the Sahara. The wady, coming from the south, turns here toward the west. Its banks are of conglomerate, in two horizontal beds, separated by a bed of gray schist in vertical layers. These schists have been dug out for a distance of over two hundred feet, forming a sort of gallery fifteen feet wide and six or seven feet high. The inner wall of the gallery is occupied by an inscription in Tifinakh lettering, the characters incised, and painted with red ochre. A more modern inscription in Arabic is simply painted on the roof. At the further end are some archaic incised figures on the wall, including those of five horses. The accounts seem to be truthful, though derived from the natives; and, if so, the deciphering of the inscriptions would be of great interest.

ASTRONOMICAL NOTES.

Eclipse of the sun, 1886, Aug. 28–29.—A bill has been introduced in congress, by Mr. Thomas of Illinois, to enable the secretary of the navy to fit out an expedition to observe the total eclipse of the sun which occurs on the 29th of August next. The sum of ten thousand dollars is appropriated for defraying the expenses of the expedition; and the secretary is authorized to detail a naval vessel to transport the party to a point near Benguela, on the west coast of Africa, almost the only seaport which is near the central line of totality. The bill was introduced in the house of representatives on the 11th of January, but has not yet come up for consideration A similar bill introduced in the senate has been favorably reported by the committee on naval affairs. It will be remembered that this eclipse is of rather more than ordinary interest on account of the long duration of totality, — $4^m\ 41^s$ near Benguela. Another interesting circumstance has been noticed by Dr. Herz of Vienna, in the fact that at totality two stars, 47ρ Leonis and 49 Leonis, are close to the sun, the latter within the corona. It is suggested, that, by means of measurements upon these two stars, something may be learned in regard to the refracting power of this peculiar atmosphere of the sun. The total phase will be visible in the West Indies; but the sun will not be in a good position for observation. According to *Nature*, at Carriacou, the largest of the Grenadine Islands, totality commences at $19^h\ 11^m\ 45^s$ local mean time, and lasts $3^m\ 21^s$; the sun's altitude being 20°.

Comet 1886 . . . (*Barnard*). — According to an ephemeris published by Mr. H. V. Egbert of the Dudley observatory, we may look for this comet to become quite a bright object during the early morning-hours in the latter part of May. Mr. Egbert's calculation shows that the comet on the 20th of May will be 360 times as bright as it was when discovered by Mr. Barnard, Dec. 3. Its position will be R. A., $2^h\ 53^m$; decl., + 20° 26′; that is, it will appear above our horizon about an hour before the sun.

ST. PETERSBURG LETTER.

THE last number (9) of the Journal of the Russian physico-chemical society contains an elaborate paper, by K. Kraewitch, on the relation between the elasticity and density of the air in a rarified condition. His experiments on the velocity of sound show, that at a temperature of 17.5° C., the velocity decreased from 330 metres, at a pressure of 761 millimetres, to 171 metres, at a pressure of 2.6 millimetres. At a pressure of 280 millimetres, the velocity is about the same as the mean air pressure; but it diminishes rapidly below 280 millimetres. He concluded that gases below this pressure do not obey the Boyle-Mariotte law.

At the general meeting of the physico-chemical society in December, the coming eclipse of Aug. 18, 1887, was discussed. Prof. S. P. Glasenap showed a map on which the path of the total eclipse was marked. As it traverses an immense extent of Russia from Kiev to south-eastern Transbaikalia, and appears also on the shores of the great ocean at Possiet harbor, and as a total eclipse will not appear in Russia for thirty-six years after 1887, he concluded that the best use should be made of the opportunities offered by the eclipse to study different problems relating to solar physics. Prof. N. G. Egoroff followed with a communication on the corona and the opportunities offered by the eclipse for its study. The last paper was by Prof. A. Woeikof, on the meteorological side of the question. Observations on the amount of cloud prevalent in the region show a cloudiness of about 51; that is, half the sky is

clouded on the average, from the western part of the totality to Lake Baikal, the region on both sides of the Ural Mountains excepted, where it is above 6. Probably the conditions will be a little better than those indicated, as the eclipse will take place in the later morning hours, when cloudiness is somewhat less than in early morning and the afternoon. In southern Transbaikalia the cloudiness is even less. There is no doubt, according to Woeikof, that, if the observing parties are well distributed on the path of the eclipse, some of them will certainly have good atmospherical conditions, it being impossible that the sky be everywhere overcast on so extensive a territory. The great interest of barometric observations during the eclipse was then dwelt on, and the subject illustrated by the results of the American expedition to the Caroline Islands. The results would be especially important as bearing on the theory of the daily variation of air pressure.

At the annual meeting of the Academy of sciences, Jan. 10, the most interesting feature was a report on the progress and future prospects of the expedition to the New Siberian Islands under Dr. Bunge. It was to begin with an exploration of the Yana Basin. Among other matters, some results of last year's observations at Werkhojansk were mentioned. The mean temperature of January, 1885, was — 52°.7 C. (— 62°.9 F.) and the minimum — 68° C. (— 90°.4 F.). Thus the low mean winter temperature at this place is more than confirmed by new and reliable observations, and it has the coldest winter weather yet known on our globe.

Colonel Prejevalsky has not yet arrived at St. Petersburg. He is to lecture at Moscow to-day on his last travels.

The annual meeting of the geographical society was held to-day. It was principally devoted to a review of the year's work of the society by the secretary. The annual awards followed. The highest, the Constantine medal, was awarded to N. D. Jurgens, the chief of the Russian Lena expedition. The Lütke medal was awarded to Colonel Pewtsow for his extensive travels and explorations in Mongolia; the great medal of the section of statistics, to Terestchenko, for his statistical description of several districts of the government of Poltava; the great medal of the ethnographical section, to Dmitrowsky, for his translation, with numerous additions of Otono Kigoro's Japanese account of Korea. The small gold medals were awarded to W. N. Maïnow, for his anthropological and ethnographical description of the Mordwa (a Finnish tribe of eastern European Russia); to W. Fuss, for the calculation of the results of the Siberian levelling; to Prof. R. E. Lenz, for his useful work as president of the section of physical geography for seven years; and to Mielberg, for magnetical observation at Tiflis in connection with the polar stations.

The next number of the Iswestia of the society will contain an important work of Gen. A. A. Tillo on the level of Lakes Ladoga, Husen, and Onega. In round numbers, the first was found to be five metres, the second eighteen, the last thirty-five metres, above the mean level of the Gulf of Finland. This is considerably less than admitted till now. For the altitude of Lake Ladoga, a height of about twenty metres was generally received; and for Onega, seventy metres.

When the results of the levelling of Lake Ladoga were first calculated, they were received with distrust, and a levelling on another road was made; but the result was confirmed. Other levellings are begun by the Ministry of public works, under the direction of General Tillo, among others, on the upper Volga. The general result is to make the level of the waters lower than they were admitted to be till now.

A movement is under way for establishing a female medical school at St. Petersburg. A few years ago, ladies received instruction at one of the military hospitals, and some of the graduates are practising with honor. Later this instruction ceased, as the minister of war would not continue the subsidy given before, nor allow the use of the buildings. Now the matter is under discussion in the duma (city assembly) of St. Petersburg. There are also private subscriptions for this end, and lately the great importance of female physicans is especially insisted upon for central Asia and eastern Transcaucasia; that is, provinces where the great mass of the people are Mohammedans. O. E.

St. Petersburg, Jan. 17.

NOTES AND NEWS.

THE subject of bird-protection is receiving increased attention in England. A 'bird-protection league' has been organized through the instrumentality of Mr. G. A. Musgreave, F.R.G.S., the members of which pledge themselves neither to purchase birds of beautiful plumage nor to shoot rare birds.

— The council of the Practical naturalists' society of England have appointed Dr. J. W. Williams to make a survey of British bird-migration, and prepare a list of migratory species, including those rare and extinct.

— In connection with some letters which have recently appeared in these columns, the following sentences from Mr. Keltie's report will be of inter-