

the late Professor J. W. Hinchley in 1931, and was appointed to succeed Professor Hinchley in that office on the latter's death.

THE report of the council of the Zoological Society of London shows that the number of visitors to the gardens during December was 19,887, the receipts amounting to £387. The total number of visitors for the year up to the end of December was 1,557,791, and the receipts £47,536, showing a decrease of £353 as compared with the same period of the previous year and a decrease of £14,635 as compared with the average for the corresponding period of the previous five years. The number of visitors to the aquarium during December was 4,792, the receipts amounting to £116. The total number of visitors for the year was 263,438, the receipts amounting to £8,820, showing a decrease of £331 as compared with the same period of the previous year. The number of visitors to Whipsnade Park during December was 1,278, the receipts for admission amounting to £70. For the year the visitors numbered 433,429, the receipts amounting to £18,759, showing a decrease of £3,364 as compared with the corresponding period of the previous year. There were 444 fellows elected and re-admitted during the year, an increase of 63 on the year before and a decrease of 120 compared with the average for the corresponding period of the previous five years.

THE British Ministry of Agriculture states that an order has been made by the minister under the Destructive Insects and Pests Acts, 1877 to 1927, and by arrangement with the Forestry Commissioners under the Forestry Act, 1919, with the object of preventing the introduction into Great Britain of diseases which might prove injurious to forest trees. This order, which is entitled the Importation of Elm Trees and Conifers (Prohibition) Order of 1933, and came into operation on December 1, 1933, prohibits the landing in England or Wales from any country other than Scotland, Northern Ireland, the Irish Free State, the Isle of Man, or the Channel Islands of any living plants of the following eight genera of the Order *Pinaceae*: *Abies*, *Larix*, *Picea*, *Pinus*, *Pseudotsuga*, *Sequoia*, *Thuja* and *Tsuga*. The importation of living trees from any European country has been prohibited since January 15, 1927, by the Importation of Elm Trees (Prohibition) Order of 1926. That order is now revoked, but its provisions have been embodied in the new order and extended to elm trees from any country other than those mentioned in the preceding paragraph. The order further requires that the health certificates prescribed under the Importation of Plants Order of 1933 to accompany living plants imported from abroad must include a statement to the effect that the consignment does not contain any plants of the genera now prohibited.

DISCUSSION

IONIZED ARGON IN THE SPECTRUM OF UPSILON SAGITTARI

WHILE attempting to identify the many peculiar lines in the spectrum of the supergiant Upsilon Sagittarii I have found that all of the strong lines in the laboratory spectrum of Λ II coincide with faint lines in the spectrum of the star. Of sixteen argon lines which are present nine are sensibly unblended. The two strongest laboratory lines in the spectral range $\lambda\lambda$ 4000–4900, located at $\lambda\lambda$ 4348 and 4806, are represented by unblended lines of moderate intensity in the stellar spectrum. Several of the lines are included in J. S. Plaskett's¹ list of wave lengths; the others were measured on Yerkes one prism spectrograms.

W. W. MORGAN

YERKES OBSERVATORY,
WILLIAMS BAY, WISCONSIN,
MAY 8, 1934

THE ROTATION OF THE EARTH

A CORRESPONDENT of the Smithsonian Institution, Mr. W. F. Fletcher, writes: ["Owing to] the heating

¹ Publications of the Dominion Astrophysical Observatory 4: 115, 1928.

and consequent expansion of the atmosphere, offering a greater depth of atmosphere on the afternoon side of the earth than on the forenoon side, the increase of leverage [for the action of light pressure] on the eastern limb would tend to cause or maintain a west to east movement [as seen] in the known rotation of the earth."

I do not recollect to have seen this suggestion in the literature. Can any of your readers inform me if it is old? Apparently the sun must thus exercise an accelerating influence. It would be interesting for some one to compute how large this is compared to the sun's retarding influence through the tides.

C. G. ABBOT

SMITHSONIAN INSTITUTION

THE ISOTOPIC FRACTIONATION OF WATER BY PHYSIOLOGICAL PROCESSES—AN ADDITION

DURING the course of an investigation, still in progress, on the separation of the isotopes of hydrogen and oxygen by the electrolysis of water, it has been found that commercial oxygen prepared by the fractionation of liquefied air is slightly heavier than