

article were offered in the hope that they would assist in settling the difficulties that had arisen between members of the staff and the council.—EDITOR, NATURE.]

Ball Lightning.

AMONGST the notes in NATURE of August 4, 1921 (vol. 107, p. 722), is a reference to the occurrence of ball lightning during a thunderstorm at St. John's Wood on June 26. The phenomenon, it is added, is of great rarity. The following therefore, apparently another instance of this phenomenon, may be worthy of record in NATURE. It was communicated at the time to the Meteorological Office in Sydney. On the evening of January 13, 1920, a very severe thunderstorm with heavy rain occurred in Sydney. About 9 P.M. I went out on to the verandah of my house at Neutral Bay, which overlooked the harbour, to watch the progress of the storm. This was soon after its beginning, and the lightning was very vivid and frequent and the rain heavy. Looking towards Mosman Bay, I saw descending, rather slowly in an oscillating way, a large ball of light, seemingly about the size of a Chinese lantern. This took about two seconds to descend and be lost to sight in the hollow towards which Mosman Bay itself lay. The light seemed to have a violet tinge. No rays emanated from it. No noise was heard.

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The University, Adelaide, South Australia,
May 8.

Ouramoeba

I SHALL be glad to know whether any readers of NATURE interested in the Rhizopoda have met with specimens of Leidy's *Ouramoeba botulicauda*? While examining some squeezings of Sphagnum from Woodbury Common, near Exeter, a few days ago, I found an active individual and had it under observation for some time. Fig. 14 on Pl. IX of Leidy's "Fresh-water Rhizopods of North America" might have been drawn from my specimen.

It is now generally conceded that the characteristic jointed appendages are filaments of a parasitic alga, and Archer described amoebae in this condition, from Ireland, in 1866, but I am anxious to ascertain whether similar observations have since been made in other parts of Great Britain?

F. R. ROWLEY.

Royal Albert Memorial Museum, Exeter, June 8.

DR. W. L. POTEAT of Wake Forest College, N.C. (U.S.A.), published in NATURE of May 24, 1894 (vol. 50, p. 79), a letter recording his finding of *Ouramoeba* in Wake Forest, N.C., and asking for citations of other records. To this inquiry Mr. Rowley's note furnishes a late reply, for there has been no other (in NATURE) in the interval. There is now, however, a good deal of literature on the subject. *Ouramoeba*, as Dr. Poteat was the first to demonstrate beyond doubt, is simply *Amoeba* spp. (*A. nobilis* Penard, *proteus* Rösel, *bimucleata* Gruber, *villosa* Wallich) infested with fungal spores and filaments. In 1898, Mr. Martin F. Woodward of the Royal College of Science sent Dr. Poteat drawings of an infested *Amoeba* presumably found in the neighbourhood of London (*Science*, N.S. viii., 1898, p. 781). There does not appear to be any other record for England. The latest memoir by E. W. Gudger, "On Leidy's *Ouramoeba*," is in *Journ. Elisha Mitchell Sci. Soc.*, xxxii., 1916, p. 24.

R. KIRKPATRICK.

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The Elliptic Logarithmic Spiral.

WITH reference to Dr. Rowell's letter in NATURE of June 3, p. 716, it may be pointed out that his curve, so far from being new, is briefly discussed in Besant's "Dynamics" (Besant and Ramsey, "Treatise on Dynamics," pp. 101-2). The equations of the curve may be written

$$\begin{aligned}x &= a\xi + \beta\eta \\ y &= \gamma\xi + \delta\eta\end{aligned}$$

where (ξ, η) lies on a certain logarithmic spiral. The curve is thus obtainable from this spiral by a homogeneous strain, whence, amongst others, it will have the property that its various branches cut a radius vector at the same angle: this angle differing for different radii vectores.

C. E. WRIGHT.

Artillery College, Woolwich, June 19.

Seasonal Incidence of the Births of Eminent People.

IN order to find, if possible, the causes which underlie the production of increased numbers of eminent intellects at certain periods (as, for example, the year 1809 and a year or two before and after it), I collected statistics of the dates of birth of more than two hundred eminent persons. The list consists chiefly of creative intellects,—poets, literati, musicians, painters, architects, men of science, explorers, and inventors, with a few statesmen and military men. Analysis of the dates shows that the greater number of these persons were born in the colder months of the year; but the distribution of the numbers is somewhat erratic. February is distinctly the richest month, having produced a galaxy of eminent persons; December comes next; August and June are the richest among the warm months.

Sixty pre-eminent names, chosen for no reason but their pre-eminence, were found to be distributed as follows:—In warmer months: April, 4; May, 6; June, 7; July, 2; August, 5; September, 3; total, 27. In colder months: October, 4; November, 1; December, 9; January, 5; February, 9; March, 5; total, 33.

The difference is more evident when the months are taken in groups of three, as follows: December to February, 23; March to May, 15; June to August, 14; September to November, 8.

In order to find whether this distribution corresponds with the ordinary distribution of births through the twelve months, I compared the numbers with the average of twelve years taken at a venture from the Registrar General's Quarterly Returns, namely, the period 1844-55. The figures are too numerous for quotation, but it may suffice to say that I could find no correspondence between the ordinary distribution of births and the distribution of births of eminent persons. In the Registrar General's Returns the order of average frequency for the quarter-years was as follows: April to June, July to September, January to March, October to December.

Climate can scarcely explain the distribution. (See letter from Dr. Robert W. Lawson, NATURE, June 3, p. 716.) Cold weather is not unhealthy for children, and in fact the diseases of the hot months are among the most fatal for them. I suggest that the reproductive organs, especially the germ cells, are more vigorous at certain seasons, producing offspring of higher quality. The many eminent persons born in the winter months, December to February, were conceived in the spring, the time of increased vigour of most living things; whereas the few born in the autumn months, September to November, were conceived in the winter.

F. J. ALLEN.

Cambridge, June 17, 1922.