

The Mexican Loggerhead Turtle in Europe

THE Mexican loggerhead turtle, *Colpochelys kempi* Garman, is distinguished from *Caretta caretta* (Linné) by its colour, in possessing four enlarged infra-marginals instead of three on each side, and its smaller size. A native of the Gulf of Mexico and adjacent waters, it is so localized that few if any European museums possess specimens. Hence its appearance off the west coast of Ireland is of unusual interest.

Two specimens so obtained in 1928 and 1934 are now in the National Museum at Dublin and are No. 92—1928 and No. 108—1934 respectively. The straight carapace length of the former is 256 mm., of the latter 245 mm. These will be dealt with more fully by me in the *Irish Naturalists' Journal*.

The presence of *Colpochelys kempi* in these waters suggests that the common *Caretta caretta* which appears off Ireland is also derived from American waters, and not from the neighbouring south European seas. This opinion is further supported by a *Caretta caretta* in the Whitby Museum with the label "Washed aboard ss. *Ethelfreda* North Atlantic 1926".

It is thus very probable that the presence of *Caretta caretta* (Linné) in European waters is mainly if not entirely due to currents, for no definite breeding grounds exist on the European coast as on the American side of the Atlantic.

The possibilities of sea turtles as current indicators would thus appear to be considerable, and it is to be hoped that their importance in this respect will receive due recognition.

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Visual Image Produced by a Photoflash Bulb

A LUMINOUS visual image, very closely resembling some 'ball lightning' observed at high altitudes, may be produced by the firing, without warning, of a photoflash bulb just beyond the limit of an observer's normal field of vision.

The optical illusion produced will be described by the observer as a greenish or reddish ball that wandered into his field of vision from the side, became smaller and changed colour near its centre ("right in front") and finally faded and vanished. No two persons will give identical reports.

From the foregoing, it is suggested that certain (not all) reports of 'ball lightning' are actually descriptions of an optical illusion (probably a sort of after-image) produced by a brilliant lightning flash somewhere just outside the observer's visual field.

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Points from Foregoing Letters

COMMENTING on Dr. Neyman's remarks in a recent review of Pearson's "Grammar of Science", Dr. Harold Jeffreys states that the law of errors is a description of a distribution of chance, not of observational facts. It does not hold for all possible errors, even if the conditions postulated in the proof are satisfied. He also points out that the principle of 'inverse probability' was stated long before any 'frequency' definition.

An appreciable retardation in the growth of the roots of broad bean seedlings, after exposure in a cyclotron chamber to radiations from a beryllium target bombarded with a deuteron current of 10 microamperes, is reported by Prof. M. Nakaidzumi and K. Murati.

An enlarged reproduction of the lines 2317 and 2321 A. in the arc spectrum of silver, obtained under special arcing conditions, and showing splitting due to the electric field (Stark effect) is submitted by Dr. J. Huruiti and Prof. T. Hori. Their investigation throws light on the distribution of the potential drop and field intensity within the arc.

By applying a new limitation, arising from quantum-relativity relations, to an electron moving orbitally in an electrostatic field, Dr. H. T. Flint obtains a condition of stability which indicates that in atoms with atomic numbers larger than 96 the K-level cannot exist.

R. F. Barrow reports the observation and vibrational analysis of the ultra-violet band system of SiTe corresponding to the SiSe, SiS and SiO systems already described by him and Dr. W. Jevons.

A binocular illusion in which a regular pattern, by suitable adjusting, appears enlarged and suspended

behind the actual pattern, is described by J. D. Morton.

The Rev. W. L. S. Fleming corrects certain points to which Prof. MacBride referred in his article on "Antarctica and Glacial Ages" concerning the British Graham Land Expedition's geological discoveries. No rocks of "Gondwana" age have yet been found in West Antarctica and there is no evidence as to what climate this part of the world experienced during the "Gondwana ice-age". Existing evidence does not justify the conclusion that continental drift affords a complete explanation of all pre-Pleistocene glacial phenomena. Prof. E. W. MacBride admits two errors in nomenclature, but claims that by substituting "Weddell Sea" for "Ross Sea", the argument is unaffected.

The isotopic constitution of potassium contained in tumour tissue and normal tissue, mainly from the rat, has been studied by Dr. A. Lasnitzki and Dr. A. K. Brewer. Distinct, although slight, deviations from the norm were obtained with the potassium present in tumour tissue and bone marrow. The percentage of ^{41}K was decreased in the former case, increased in the latter.

C. V. Ganapathy and B. N. Sastri state that if the sulphhydryl group SH of the enzyme papain is oxidized by hydrogen peroxide, the enzyme loses its power to act upon peptone, but retains its hydrolysing power on gelatine, indicating that for gelatinase activity the SH group is not necessary.

Further experiments with sand cultures of soya bean, pea and broad bean carried out by Dr. G. Bond fail to confirm appreciable excretion of nitrogenous substances from these root nodules.