The establishment of the validity of concentric rings for age determination opens up a new field of possibilities for growth analysis of this widely distributed bivalve and constitutes a fundamental contribution to the solution of problems that are basic for the formulation of constructive conservation policies.

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Dec. 30.

[1] Weymouth, F. W., "The Life History and Growth of the Pismo Clam, *Tivela stultorum*", *Cal. Fish Game Comm., Fish Bull.*, 7, Contr. 1–120 (1923).
[2] Mead, A. D., and Barnes, E. W., "Observations on the Soft-Shelled Clam", 34th Rep. Comm. Island Fish., Rhode Island, 1904.
[3] Newcombe, Curtis L., "Growth of *Mya arenaria*, L., in the Bay of Fundy Region", *Can. J. Res.*, December 1935.
[4] Newcombe, Curtis L., "Variations in the Growth Indices of *Mya arenaria*, L., from Different Latitudes of the Atlantic Coast of North America", *Ecology* (in press).

Greenland Seal in British Waters

ON page 258 of "A History of British Quadrupeds" (1837), Thomas Bell states that ". . . it is a matter of great satisfaction to me that I am enabled to increase the catalogue of British Seals by the addition of two species, one of which, probably the Long-bodied Seal of Dr. Parsons, has been discovered on the coast of Ireland by Mr. Ball; the other has been taken in the Severn, the remains of two specimens of which are now in the Museum of the Bristol Institution". Later, on page 270, he states that Dr. Riley exhibited two crania at the meeting of the British Association at Bristol in August 1836, and that they were afterwards identified as *Phoca groenlandica*. Doubt was later cast on the identification by Robert Ball in a paper "On the Seals of Ireland (Phocidæ)", *Proc. Royal Irish Academy* 1836–7, Part 1, pp. 18, 19 (1837) and he "expressed his belief that the species was still to be determined".

Thomas Southwell, in "Seals and Whales of the British Seas" (1881), mentions the two skulls and says (p. 22): "These specimens are unfortunately lost". And in his "Mammals of Great Britain and Ireland", vol. 1, p. 345 (1904), J. G. Millais, after mentioning the occurrence of these two specimens of the harp (or Greenland) seal, proceeds: "The skulls have been mislaid and doubt has been cast upon the identification but Bell maintained his point, and the matter will remain in doubt unless the skulls are subsequently recovered".

Recently, on going through the osteological collections in the Bristol Museum and Art Gallery, I find that there are two skulls labelled *Phoca groenlandica* which are mentioned in an old catalogue and are the only ones in the collections. There can be no doubt that these are the two mentioned above, and Mr. M. A. C. Hinton, to whom the skulls have been submitted, has confirmed the identification on the skulls.

It can, therefore, be stated that the first record of the Greenland or harp seal (*Phoca groenlandica*, Fabr.) from British waters was from the Severn in 1836, and that the skulls of these two animals are in the collections of the Bristol Museum and Art Gallery.

Bristol Museum and Art Gallery. H. TETLEY.
Jan. 7.

Points from Foregoing Letters

PROF. G. HEVESY and Hilde Levi submit two tables, one showing the power of absorption, determined by them, of some rare earth elements for neutrons and another giving the periods of decay and relative intensity of the resulting radioactive elements, as determined by various investigators. Discrepancies in the published data appear to be due to the presence of small amounts of impurities.

The effect of 'screens' of various elements upon the amount of radioactivity induced in silver by neutrons has been investigated by J. Rotblat and M. Zyw. Of the two radioactive substances produced, the amount of the longer-lived component (half-period 140 sec.) is increased when the neutrons are scattered by any of the metals studied, with the exception of aluminium. The shorter-lived component (44 sec.) is strengthened by carbon, aluminium, copper and zinc, and weakened by mercury and by silver itself.

Graphs showing the energy of the gamma radiation excited in various elements (hydrogen, cadmium, chlorine, copper, iron) by bombardment with slow neutrons are given by S. Kikuchi, H. Aoki and K. Husimi. The γ-rays from protons (hydrogen nuclei) which combine with slow neutrons to form deuterons (heavy hydrogen nuclei) are found by the authors to have an energy of 2·2 million electron volts. The γ-rays from cadmium appear to have at least two components.

There exists a major discrepancy between e (the charge of an electron) obtained from X-ray diffraction methods ($4{\cdot}8029 \times 10^{-10}$) and that obtained by various methods involving e/m and h/e ($4{\cdot}7824 \times 10^{-10}$). A critical survey leads Prof. R. T. Birge to the view that either the Bohr formula for the Rydberg constant or the method of calculating e on the assumption of a geometrically perfect calcite crystal, is not correct.

A sudden rearrangement of the electronic configuration of an excited molecule may lead to dissociation, the effect being known as predissociation. Dr. Lochte-Holtgreven finds in the case of sulphur a marked dependence upon pressure. The pressure effect is interpreted by the strong mutual forces between the sulphur molecule considered and its neighbours. The interpretation holds for both absorption and emission.

Experiments by E. C. S. Megaw answer affirmatively the question whether it is possible for an oscillating cloud of electrons in a thermionic valve to give rise to a stable monochromatic radiation without the co-operation of a resonant electrical circuit external to the electron cloud.

Mixtures of heavy hydrogen gas with air or oxygen are found by Dr. W. Payman and H. Titman to have inflammability limits slightly different from those of corresponding mixtures with ordinary hydrogen.

Yeast which has been exposed to radium radiation has its sugar-reducing power permanently reduced, according to Dr. G. Harker. The effect apparently reaches a saturation value depending upon the intensity of the radiation.