

A possible explanation for the sudden decrease in numbers of *Rathkea* may be found in observations made on *Cyanea* which were collected on December 30. Analysis of the stomach contents of these specimens disclosed the presence of *R. octopunctata* var. *grata* in abundance. As high a number as eighty-four were found in one *Cyanea*, which measured 6.3 centimetres in diameter. Further stomach analysis of each of the *Cyanea* revealed the presence of numerous fragments of *Rathkea*, including medusa buds, marginal tentacles, manubria and pieces of the bell.

ROBERT A. LITTLEFORD.

Chesapeake Biological Laboratory,
Solomons Island,
Maryland. April 20.

¹ Mayer, A. G., "Medusae of the World", Vol. 1, Carnegie Institution of Washington, Washington, D.C. (1910).

² Fewkes, J., *Bull. Mus. Comp. Zool.*, Harvard College, 8, 142, plate 1, Figs. 1-7 (1881).

Sound Absorption of Snow

I HAVE only just seen the letter of Messrs. Kaye and Evans on "Sound Absorption of Snow" in *NATURE* of January 14, p. 80.

During my expedition to the Jungfrauoch last summer, we had interesting evidence of the absorptive capacity of snow in a shaft which we dug in the firm. By the time this had reached a depth of about 35 ft., it was impossible for those at the top to hear the words of the men working below, even if raised in a shout, and it became necessary to signal, even at this small depth, by means of a bell.

G. SELIGMAN.

Warren Close,
Combe Hill Road,
Kingston Hill,
Surrey.

Points from Foregoing Letters

THE biological activity of anhydro-oxy-progesterone when given by mouth has been further tested by C. W. Emmens and A. S. Parkes, who find that it has metrotrophic, androgenic and oestrogenic properties. It causes cornification of the vaginal epithelium of the ovariectomized rat or mouse and progesterational proliferation of the endometrium, to a somewhat less extent than when given by injection, but is equally effective in producing an increase in the weight of the uterus.

It is stated by D. Rubinstein and L. Shekun that nicotinic acid is indispensable for the development of the moth *Galleria melonella*. As a very small dose of nicotinic acid, that is, 5-10 γ per 100 gm. of the deavitaminated medium is required, the development of the newly hatched *Galleria* larvæ can serve as a most sensitive biological test for detecting minute quantities of nicotinic acid.

The radiations from radiomanganese, ⁵⁶Mn, have been investigated by J. V. Dunworth using the coincidence method. β - γ and γ - γ coincidence measurements together with single counter β -absorption measurements enable a consistent level scheme to be suggested. An additional γ -ray of 600 kev. of high intensity was predicted and its presence in the ⁵⁶Mn spectrum has been confirmed by A. G. Ward using a pressure ionization chamber.

In following up earlier work suggesting the emission of mesotrons from (radium + beryllium), M. E. Nahmias, F. L. Hopwood, T. E. Banks, W. H. Rann and L. G. Grimmett find that the observed effects were due to gamma-rays excited by neutrons in the lead protection of the Geiger-Müller counter.

The nebular line at 3466.4 Å. in atomic nitrogen has been observed by J. Kaplan in a high-pressure afterglow in nitrogen. The unusually high relative intensity of the forbidden lines appears to be characteristic of afterglows which are generated by weak discharges. The weaker nebular line at 5200 Å. appeared on panchromatic plates.

H. P. Eckstein has shown that by irradiation of rare earths with short-wave ultra-violet a result can be obtained which is comparable to the effect of radium treatment. The trivalent samarium originally

present shows after irradiation the characteristic bands of divalent samarium produced by radium treatment.

J. H. Highberger and H. J. Kersten find that collagen fibres (prepared from the skin or the tendon Achilles of the ox), after they have been subjected to strong mechanical deformation by rolling or prolonged grinding in the Wiley mill, show an X-ray pattern practically indistinguishable from that obtained with tanned collagen fibres.

J. Farquharson and Miss P. Ady find from measurements of the magnetic susceptibility of dimethylbutadiene, as it polymerizes, that in the complete absence of accelerator there is an induction period during which there is a fall in diamagnetism, probably due to the formation of paramagnetic centres in the dimethylbutadiene. On calculating the concentration of such centres, it is found to be the same as the concentration of catalyst necessary to give a smooth curve.

G. Van Praagh finds that quartz dust which has been heated to 300° C. *in vacuo* does not affect the pH of neutral water, and suggests that the acidity usually observed is due to adsorbed carbon dioxide.

From observations on the absorption spectra in alcohol and in chloroform, Haruo Shingu concludes that the chelate structure of *o,o'*-dioxazobenzene is rather mobile in comparison with that of the *o*-mono-oxyazo compounds. It undergoes readily a reversible change which gives it an enhanced acidity and a marked tendency to the formation of metallic lakes.

S. Hiller has demonstrated in *Gymnolemmata* the existence of nerve connexions and transmissions of stimuli from one member of a colony to another. This shows a more general occurrence of such a system in Bryozoa.

The presence of the northern variety of *Anthomedusa Rathkea octopunctata* as far south as the mouth of the Patuxent River, Maryland, is ascribed by R. A. Littleford to the unusual low temperature, and to the high salinity in the previous month. The medusæ decreased in number due to the predatory activities of *Cyanea*.