plays some part in determining the length of the pupal period, and as Cousin and Ratcliffe have not controlled this factor in their work, it is probable that the discrepancy observed is due to variable humidity. The postulation of physiological races on this type of data is to be deprecated.

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Nov. 18.

¹ *Ann. Appl. Biol.*, **22**, 742 (1935).

² *Ann. Appl. Biol.*, **21**, 267 (1934).

³ *Bull. Biol. France Belg.* Suppl. 15 (1932).

⁴ *Parasitology*, **27**, 291 (1935).

Absorption of Residual Neutrons

DR. SZILARD has observed that although cadmium has a very high absorption cross-section for slow neutrons, the residual slow neutrons not absorbed by a cadmium filter are strongly absorbed by a thin sheet of indium¹. This, he points out, is in contradiction to the conclusions drawn from current theory as advanced by Fermi and others.

Since the absorption cross-section for neutrons is, for many elements, larger than the nucleus cross-section, it is possible that the neutrons may be captured in energy levels outside the nucleus. This

would at once explain why for many elements the cross-section is larger for slow neutrons than for fast neutrons, and further would account for the selective absorption effects observed by Dr. Szilard.

JOHN TUTIN.

¹ *NATURE*, **136**, 95 (1935).

The Thermometer Scale of de l'Isle

IN *NATURE* of September 7, p. 365, Dr. N. V. Nordenmark is credited with the remark "that the thermometer of Anders Celsius used the scale of de l'Isle, the freezing point being at 100°, the boiling point at 0°". As a matter of fact the scale of de l'Isle (who was a member of the Academy of Sciences of St. Petersburg from 1725 until 1747, when he returned to Paris) had the freezing point at 150°, the boiling point at 0°. De l'Isle's thermometer was used at the time in Russia. About 1750, M. V. Lomonosov constructed a thermometer with the inverted scale of de l'Isle, that is, with the boiling point at 150° and the freezing point at 0°, and used it in all his physico-chemical experiments.

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Nov. 15.

Points from Foregoing Letters

New finds of half-finished objects of gold and platinum, from Ecuador, are described by P. Bergsøe. The objects are either wrought or made from plate or wire, and throw light on the metallurgical processes used by South American Indians before the time of Columbus. Some of the objects show traces of having been melted on wood charcoal with the help of a blowpipe; platinum grains were apparently joined together by the addition of a little gold, and then alternately heated and hammered into homogeneous thin plates.

Small amounts of nitric oxide gas (0.1–1 millimol) are found by L. A. K. Staveley and C. N. Hinshelwood to reduce the rate of decomposition of certain organic compounds (diethyl ether, propionic aldehyde, etc.). The authors point out that if, as seems likely, the original reactions take place by means of short 'chain' reactions (that is, certain molecules possessing excess energy which persists through several cycles of chemical change), then one may explain the effect of nitric oxide as due to the breaking of such chain reactions.

From the relative intensity of the ionising radiation (probably gamma-rays) emitted under neutron bombardment by water and by aqueous solutions of boric acid and of a cadmium salt, S. Kikuchi, K. Husimi and H. Aoki have found that the mean cross-section for the recombination of a 'slow neutron' with a proton, relative to that for the capture process of a slow neutron by a cadmium atom, lies between 8.3×10^{-26} cm.² and 3.0×10^{-26} cm.².

According to theory, a beam of light, circularly polarised by passage through a thin quarter-wave plate of a doubly-refracting crystal such as quartz, should exert a torque on a similar half-wave plate, which changes the state of polarisation of the light beam. Such an effect was recently detected by R. A. Beth, and now A. H. S. Holbourn has measured the

torque and finds that, as expected, it corresponds to an angular momentum of $h/2\pi$ per quantum of circularly polarised light.

A masking of symptoms of the virus disease tobacco mosaic has been found by Dr. John Grainger when the host plant is grown below 51° F. Preliminary experiments to compare the optimum temperatures of host plant and virus suggest that the plant grows quickest at 75° F., whilst the virus has a different optimum—between 75° F. and 85° F.

The habitat of *Procerodes ulvae*, at Bardsey Island, Caernarvonshire, is described by K. A. Pyefinch. Pantin had pointed out that this planarian is most abundant in river estuaries where alternations of sea- and freshwater are most rapid. Pyefinch suggests that the nature of the substratum is of prime importance, the animal preferring moderate-sized stones resting on shingle.

Unlike previous experimenters, C. B. Redman King finds that the parasite insect *Trichogramma evanescens* lays its eggs within those of other insects (such as the Mediterranean flour moth, *Ephesia kuehniella*, the Noctuid moth, *Agrotis ypsilon* and the Eri silk worm moth, *Attacus ricini*) without distinguishing between fresh eggs and those that have been already parasitised.

J. F. G. Wheeler records that specimens of *Gorogonorrhynchus*, an unsegmented worm with branching proboscis, recently described from the coastal waters of New South Wales, has also been found at Bermuda, a fact which raises interesting problems in geographical distribution.

A. C. Evans states that the pupal period of the 'greenbottle', *Lucilia sericata*, is the same in Scotland as in France, and it is therefore unnecessary to postulate distinct 'physiological' races. The differences observed by other investigators may be due, he states, to the influence of moisture.