

ment would correspond to a finished picture. With such a conception I should prefer in Thesis IV. the metaphor of a kaleidoscope. The pattern at any one point will determine the pattern that succeeds, although, with an infinite number of pieces, the latter must always be different. But though differing, the successive patterns will resemble each other far more closely than those which are separated by wide intervals. Similarly, I do not think it is inconceivable that the arrangement of the ancestral units may have a determining effect on the arrangements which will succeed, in spite of the loss and restoration of half the units in each generation. Such a conception has the further advantage that it renders intelligible the action of external conditions on the germ-cells, either directly or through the medium of the body-cells. The ancestral units may be excessively stable, but the arrangements may be modified by a shock, just as the pattern in a kaleidoscope may be changed by a blow instead of the "normal" process of rotation (corresponding, of course, to the loss and restoration of half the units).

Oxford, November 16. EDWARD B. POULTON.

Town Fogs and their Effects.

THE influence of fogs on health, referred to in the very interesting paper by Dr. Russell (NATURE, November 5, p. 10), seems to call for further investigation. On the face of it, and judging by the composition of fogs, the discomfort they bring, their hurtfulness to plants, &c., fogs must surely damage health. And the injurious effect, I would point out, might not be *at once* apparent in the death-rate. What, on the other hand, is the precise nature of the beneficial effect of fogs (for such there seems to be)? If they plague mankind, they probably also plague those enemies of mankind, the minute organisms on which disease depends. And if so, we might even suppose some lives to be saved when fog comes on. It would be interesting to hear from hospitals for special diseases, how the patients are affected by fog. I understand that people suffering from asthma often rather enjoy a fog, or the sulphureous atmosphere of the Underground Railway. Has this ever been explained? M.

The Eclipse of the Moon.

I VENTURE to send some notes upon last night's eclipse of the moon, taken by me here up to 11.35 p.m., when the sky became rather suddenly and entirely overcast.

The first indication of the penumbra of the earth's shadow was distinctly visible upon the north-east limb of the moon a little before 10.25; and at 10.35 (time given by the almanac) her north-east limb was well in shadow, and hidden by a remarkably dense or black shadow. At this time the sky here was quite clear, and promised to keep so for some time. At 10.45 the shaded part of the moon was so dark as to be invisible upon the sky even through glasses. At 10.50 a very beautifully coloured prismatic "cock's eye" formed in the sky exactly opposite the shaded limb, taking a fan-like shape radiating from that side of the moon; the prismatic colours being repeated twice, as in a double quadrant of a rainbow; while the sky round the bright part of the moon was clear and uncoloured. At 10.55 a thin white cloud, with ring of prismatic colours, formed round the moon; the earth's shadow still remaining very dark, with well-defined edge, and little or no penumbra beyond it. At 11.5 the thin cloud entirely cleared, the shadow still very dark, the upper and lower edges of the moon's limb just visible as threads of light upon the sky; and at 11.10 a very slight warmish tint appeared about the north-east part of shadow. At 11.15 the sky very clear and dark about the moon, stars before invisible coming out brightly. The earth's shadow was now well advanced over the moon, strongly defined, and as dark as the sky beyond it. At 11.22 light thin clouds again gathered round the moon, a narrow crescent of her only remaining. At 11.25 the moon became wholly hidden by a dense cloud. At about 11.35 I caught a momentary glimpse of the moon through the cloud, a very small part of her south-west limb just showing. At 11.40 sky entirely overcast; a faint aurora or red colour spreading upward, apparently below this cloud or mist, from the north.

I have only to add that the *darkness and absence of colour* of the shaded part of the moon was even more marked in this eclipse—so long as I was able to observe it—than in that of October 4, 1884, which was then set down to an abnormal

density of the earth's atmosphere, and was supposed to have some connection with the strange sunsets and other phenomena of that period. I was not altogether unprepared for the same general character in last night's eclipse, as, so far as my own observations go, I am led by them to believe that the conditions then present in our atmosphere are still with us.

Southampton, November 16.

ROBERT C. LESLIE.

Comparative Palatability.

THE following observations were made during the last week of September and first of October:—

Two tadpoles of the small newt were taken by a "silver-fish." Three others, placed next day in the globe containing this fish and two goldfish, were not swallowed, though attempted from time to time. A brandling (*Allolobophora fatida*) was once taken by the same silver-fish; but refused the next day and afterwards.

A large frog (♀) ate brandlings readily. Two slugs were taken by frogs. Tadpoles of the small newt were disregarded.

A very interesting experiment was made with a brimstone butterfly (*Rhodocera rhamnii* ♂). It was offered to a frog which had just taken a *V. urtica*. Though fairly seized several times, the brimstone was always rejected. After one rejection, a second *V. urtica* was swallowed; after another, a *Spilosoma* larva. The butterfly was then given to a spider, which attacked it, but left it unwound. A *V. urtica* placed in the web was at once seized, partially wound, and sucked. Then the spider returned to the brimstone; but immediately left it again for the *Vanessa*, which was thoroughly wound, sucked, and moved higher up into the web. At dusk, the brimstone had been very imperfectly fastened. Next morning, however, it had been taken up by the spider.

That a frog is not much hurt by the nippers of *Ocyrops* is shown by the following experiment. A specimen which had been taken from the side seized the frog's tongue, was rejected after a few minutes, and removed by the forceps. The frog immediately after took a large earthworm.

Small frogs are exceedingly bold and voracious; often attacking prey which is as large as themselves, and which they could not possibly swallow. House- and harvest-spiders, hairy and smooth larvæ (among them those of *Spilosoma* sp. and *Mamestra persicariae*), ladybirds, earthworms, brandlings, and silver-Y moths, were all swallowed somehow; while large "devil's coach-horses" were invariably attacked. Tadpoles of the small newt were disregarded.

E. B. TITCHENER.

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The Inheritance of Acquired Characters.

WILL you allow me to call the attention of your readers to a sentence in Mr. Hemsley's review of Schimper's and Karsten's works on the mangrove vegetation? "Mangroves grown in soil free, or practically free, from chloride of sodium, develop foliage of less substance, furnished with a larger number of stomata." If this means, as I understand it, that the change takes place immediately with the change in the conditions of growth, it would be very interesting to have further details; as the fact would furnish a very strong argument that the peculiarities in the mangrove vegetation are the result of the inheritance of acquired characters.

ALFRED W. BENNETT.

St. Thomas's Hospital, November 7.

"The Darwinian Society."

IN your issue of November 5 (p. 19) information is given that a local Society is about to be inaugurated in Edinburgh, under the title "The Darwinian Society."

As the Society is apparently to be merely for the encouragement of the study of natural science in the University of Edinburgh, the name is surely too pretentious to be suitable; and it is one that might well, I think, be kept in reserve for bestowal in later years upon a chartered Society of similar magnitude and as far-reaching extent as that founded in honour of Linnæus. It is therefore to be hoped that a more applicable name than the one proposed may be found for the new Edinburgh University Society.

WILLIAM WHITE.

Sheffield, November 10.