

very briefly to another of these factors put prominently forward by both Mr. Wallace and Dr. Beale, namely, "Obscure Colour."

We are not arguing about exceptional and individual cases, we are dealing with a general law, applicable or supposed to be applicable to the great majority of cases. Can it be said gravely that obscure colour has tended to the preservation of particular forms of life to the exclusion of others, not in a few exceptions, but as a general biological law?

Daylight, it will be admitted, is more likely to disclose an object than darkness. If we compare diurnal forms of life with nocturnal ones, we ought to find, if I read the tendency of the Darwinian argument rightly, that in the daylight when a sombre, obscure, or indifferent colour, would be of great service to hide an object, that there are a much smaller proportion of conspicuous forms of life abroad than at night when there would be no such need for obscurity, and a bright colour might be worn with impunity. Is such the fact?

Again, if we compare the animals and plants that live in tropical climates, where the light is intense, with those found in temperate and severe ones where the light is not so great and objects are not so prominent, do we find that the former has a comparative monopoly of conspicuous objects, or do we find rather that the reverse is the case, and that all the brightest objects we know in nature—the parrots, macaws, humming birds, butterflies, orchids, &c.—are found in the greatest profusion in the tropics, while we proverbially console ourselves for the absence of colour in our birds by boasting of their singing, and hang the beetles of Brazil in necklaces round our sisters' and wives' necks, while we crush our sombre representatives of the same class under our heels? Is it not equally true of the sea? In the Mediterranean, for instance, do not the brightly decked out gurnards and mullets far outnumber the dingier fish, while on the banks of foggy Newfoundland the sober tinted cod and ling are the prevailing types? In the former we have the clear blue water that washes round Sorrento pierced through and through by the blazing sun, while in the latter we have everything gloomy except the fisherman.

If we separate the animal world into flesh eaters and vegetable eaters, we ought to find, if this theory be true, that the former (which as a rule are not themselves the prey of other animals) are more conspicuous than the latter, since they have less reason for adopting a secret costume. But is it so? Are the hawks and owls and carnivorous beetles as classes more conspicuous than their victims? Is it a not fact that the most beautifully coloured creatures are as a rule the most helpless, weak, and accessible; that those animals which are supplied by nature with weapons of defence or are strong and can defend themselves, are as classes more obscure in colouring than those not so protected, and that the same rule applies to plants which are poisonous, nauseous, or protected by thorns? If these facts be true in the great majority of cases, we have another factor in Mr. Darwin's theory which is not satisfactory, and the cases quoted to support it become mere exceptions, which, by being exceptions, disprove the particular law he is maintaining. This letter has already exceeded reasonable limits, and I must postpone a further consideration of this and other objections to another occasion.

Derby House, Eccles

HENRY H. HOWORTH

MR. HOWORTH'S objections to the theory of Natural Selection have been fully answered. I therefore wish to direct attention to another objection which has been recently advanced, and which has not, so far as I know, been specially refuted. The objection is stated by its author in the following terms:—"And it has been affirmed that to 'the primitive properties of molecules' and 'Natural Selection' may be referred all the varying forms and structures known to us, as well as all the phenomena of the living world. But such terms explain nothing. By their use further inquiry is discouraged, and the mind bent upon investigating the secrets of Nature is misled at the very outset. Can any one of these very pretentious phrases be resolved into anything more than the statement of a fact or facts in the form and language of an explanation? Natural Selection is the formation of species, and species are produced by Natural Selection. Crystallisation is the formation of crystals, and crystals are produced by the operation of crystallisation."

This passage is extracted from p. 58 of "The Mystery of Life"—a little work by Dr. Beale, which was published a few months ago. Dr. Beale has a keen appreciation of the "ludi-

crous." He thinks Mr. Howorth's misrepresentation of the Darwinian theory "very curious and even ludicrous," and in the closing sentence of his letter in NATURE, he appears to have a bit of fun to himself which ordinary mortals cannot understand; and if he can prove that Natural Selection is a mere abstract statement of the fact that species are in some way or other formed, the Darwinian theory is the most "ludicrous" ever presented to mankind. Probably Mr. Wallace may take a different view of the subject, and he may even think that the objection is more ludicrous than the theory; at any rate, no harm can result from bringing Dr. Beale and the champions of Natural Selection face to face, so that stricter tests than the "ludicrous" may be applied to ascertain whether the truth lies in the theory or in the objection.

JAMES ROSS

Newchurch, July 24

THE last paragraph of Mr. Howorth's letter in NATURE of July 13 reminds me of a fact which I have often noticed, and which is, I suppose, well-known to botanists, viz. that certain creeping plants which root at the joints, flower sparingly unless the sprays are so disposed that they cannot take root. I refer especially to the *Lysimachia nummularia* (larger moneywort or "Creeping Jenny"). This plant blossoms comparatively little when allowed to trail in the moist soil which is its natural *habitat*, and in which alone the leaves look healthy and thriving. A spray trained off the flower bed on to a flag-stone, or a plant grown in a pot so as to hang over the edge and not be able to take root, will look sickly, but will be covered with flowers. I think I have noticed the same thing in connection with the periwinkle.

Gardeners cut off the runners of strawberries and the suckers of fruit trees to increase the crop, because, as they say, runners exhaust the plant.

But is not the case, rather, that the possibility of continuing its own life by taking root at the runners makes the plant's constitution, as it were, lazy about propagating its kind?

It is, perhaps, worth noticing that the cutting off the runners or suckers does not in any way weaken the plant, or cause it to become sickly, but it does prevent the indefinite prolongation of the individual life.

THE OWNER OF A "WEED GARDEN"

Recent Neologisms

WRITING, as I did, from a little Midland village, where access to an English dictionary was impossible, I am not surprised to find that three words, which I treated as recent coinages, were only re-introductions. *Survival*, *impolicy*, and *indiscipline*, are all so naturally formed, that, whether old or new, they are "welcome to stay." My end was answered by putting a brand on Mr. Wallace's *prolificness*, by way of contrast. If he is bent on using that monster, he will help to naturalise it by spelling it with *ck* (instead of *c*) like *thickness*. But surely he is not driven between the Scylla and Charybdis of *prolificness* and *prolificacy*, when *prolicity* is staring him in the face. For my part, I pray that the whole family will (to quote Sylvester again) "shake swift wing," and be no more seen. By-the-bye, I find the verb to *handwrite* in the *Quarterly Review*, April 1871, p. 332. That is a good, if not a new word, and well deserves re-introduction.

C. M. JINGLEBY

The British Association and Local Scientific Societies

It is to be regretted that the British Association does not exert its influence in stimulating local scientific societies towards greater efforts for the formation in their museums of collections representing the Geology and Natural History of their respective neighbourhoods, so that they might constitute local monographs. Such a system, combined with a central museum in London, representing an epitome of the collections throughout the country, would tend to the advancement of science with greater rapidity and accuracy than at present, when the provincial museums are little better than overstocked curiosity-shops, and with no recognised plan of arrangement which is greatly wanted. In general there is little space for additions of importance, from the fact that the museums already contain large miscellaneous collections, unconnected with the neighbourhood, and of little use to anybody. Many valuable private collections exist throughout the country, representing the geology, &c., of various localities, which are eventually too often dispersed and lost to