

## MIMICRY—SOME OF NATURE'S STRATEGEMS.

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Nature teems with instances of what are called mimetic resemblances, instances of organisms closely imitating their neighbours for the sake of some advantage to be gained thereby. Thus is instituted a sort of system of false pretences, an elaborate series of confidence tricks which in their most interesting examples have the merit at least of being defensive rather than aggressive. It is rather curious that while protective colouration in the general sense has certainly been elaborated, not only for defence but for attack also, that manifestation of it, technically termed mimicry, seems to have been developed solely for the purposes of defence and escape.

The gradation between ordinary protective colouration and the most highly specialised form of mimicry is practically complete. Our green caterpillars, our butterflies with brown undersides to their wings, the colouring of certain birds, and the markings of certain birds' eggs, are all instances of ordinary coloured organisms. They do not resemble anything in particular. Their colours are such that in most of their daily circumstances they harmonise in a general sense with their surroundings, thus ceasing to be specially noticeable, at any rate so long as they are at rest. A further step is illustrated by the caterpillars of those geometrids usually called stick-caterpillars. These caterpillars are of such form and colouring that when stretched out stiffly, they have a strong resemblance to short dead twigs, sometimes even with buds and leaf-scars complete; while, to render the illusion quite perfect, they have also acquired the habit of resting in just the very poses that twigs might themselves take up. No better example of this can be found than the caterpillar of *Eunomus magnarius*, which when poised by the hind feet on a twig, with the body thrown backwards into space, may well escape detection by all except the keenest observer. Perhaps one of the most remarkable examples of special protective resemblance is seen in the leafbutterfly of Malay, *Kallima paralecta*. The wings of this insect so exactly resemble a leaf when closed, that it may pass altogether unnoticed. We find an elaboration here again of the protective instinct. These insects have a rapid flight, but they will drop suddenly and closing their wings as they alight, take on all the appearance of a leaf. Thus, they seem to completely vanish. The protective instinct may be observed in many insects. A butterfly which has been captured, fearing destruc-