

from successive cross-stripes, the spots arise, and these surface arrangements of color appear to continue long after the internal organs, the muscles, &c., have wholly altered their original anatomical arrangement. Further, the successive series of spots may unite later as longitudinal stripes, and such stripes we find in the post-larval ling (*Molva*). We thus have a key to the arrangement of color in a vast number of animals. Wild pigs, though uniformly tinted when adult, exhibit when young a spotted skin, says Mr. Alfred Tylor, and later become striped. The dark tapir shows white spots, like the Virginian deer, when young. The Canadian lynx is striped with dark reddish lines along its deep brown body, as described in 1883 by Mr. Montague Chamberlain, who hence deduced that it must be related to the Ocelot group of the Felidae. Chickens, ducks, and other birds are similarly striped, quite unlike their parents. No doubt the repeated spots, bars and patterns, seen in caterpillars and many larval insects, are really ancestral. Weissmann held that these stripes have come down from a geological time when jointed reeds, and ribbed grasses preponderated; but this is apparently not a primitive cause; but like the zebra's and tiger's stripes they were ancestrally-metameric and utility explains their persistence, and modification. The striped tiger is practically invisible in his haunts among the yellow sword-grasses of the jungle, while a troop of zebras on the African plain, moving as they do in the moonlight, are practically invisible, owing to their remarkable arrangement of colors. Many young birds, like the gannet, may be of a dull brown color until their third year, possibly a case of blurred spots or stripes, which disappear and give place in the species named to a creamy white plumage. The dark bars of the yellow perch (*Perca*) and of tropical fishes like the Chaetodonts, aid in obscuring these creatures amongst aquatic weed-blades. On the other hand, spots of color may be so modified as to resemble staring eyes, and may serve as Poulton suggested, to direct the attention of enemies to non-vital parts. The effect may, however, be the opposite and the eye-like spots may so suddenly strike the attention of enemies and startle them as to frighten them away.\* The peacock butterfly (*Vanessa Io*),

\* The eyelike spots on some larvæ of Lepidoptera may have this effect, e.g. the larva of the Elephant Hawk Moth (*Chærocampa elpenor*.)