

the Emperor moth, nay even the *Polypectron*, the gorgeous Malacca pheasant, the ocellated turkey with a row of eye-like spots at the end of the tail, may thus find explanation. Many of the small shore fishes, like the Gobies, and the Skulpin (*Callionymus*), exhibit in the dorsal fin one or more shining eye-like spots, often explained as due to sex-selection, as the males usually bear these ornaments; but they may be of a warning character.

*Trophic Coloration.*—Food is frequently potent in color production. Translucent young fishes may have a bright pink color over the abdominal area, due to Copepods, &c., undergoing digestion, while Salpae often owe their yellow color to diatoms swallowed as food. N. Chautard found that green chlorophyll remained unchanged in color when taken in by animals. Examples are green oysters among Mollusks, and the green Cantharides among insects. Medical men are familiar with the effect of digesting colored materials. Young children may be brilliantly tinted over the head, face, arms and skin after accidentally swallowing aniline dyes, and bird-fanciers, who give young canaries Cayenne pepper in their food, can deepen the yellow plumage, as the fatty Triolin of the pepper (not the Capsicin as often stated) passes to the feathers. Sauermann's experiments with white hens showed that the Triolin colored the breast feathers most markedly, but the head remained perfectly white. Red, in plumage, is often a very fleeting color, and Moseley found a South African stork whose brilliant rose-color was all washed out by a heavy shower of rain! The seasonal red-color of the crossbill, the brown linnet and red pole disappears, changing to a greenish yellow in the bird first-named, while the carmine breast and forehead of the latter fades away altogether, like the dark blue of the Indigo bird's feathers, which assume a dingy brown color for the winter. Trophic colors, or tints due to food have been as yet little studied although the Cochineal insect is of great commercial value, owing to the red color of the food stored up in the body of the wingless female, of which 70,000 dried specimens, I am informed, go to make 1 lb weight of the dye material. The caterpillar of *Bryophila* is yellow when it feeds on *Lichen juniperinus*; but grey when subsisting on the grey *Lichen saxatilis*. Such instances undoubtedly exemplify trophic coloration. Allied to trophic coloration and yet distinct from it, is