

*Warning* coloration, called sematic by Poulton, implies disagreeable features disguised, it may be, under a very beautiful exterior. The strikingly colored skunk can be mistaken for no other mammal, the wasps, and similar offensive insects and many gorgeous larvæ repel animals, which might by mistake attempt to prey upon them, and be stung or poisoned. Many brilliant tropical fishes are said to be poisonous and unsuitable for food. Their coloration, as Mr. A. R. Wallace expresses it, is "an outward sign" of their non-edibility.

*Recognition* colors no doubt aid animals to readily detect their own kind. The white tail of the rabbit is believed to direct the young to follow their parents to safety when danger looms.

*Mimicry* involves not only protective colors, but also protective shape or form. The lappet moth, the stick insect, the leaf insect are familiar cases of color combined with striking form-resemblance. The mimicry is perfect.

It is clear that these types of color often overlap. Thus aesthetic and sex coloration may combine in the same examples. It may be that in some cases the coloration has as its end the destruction of the individual in the interest of the tribe. Thus the brilliant color of the male sockeye must attract the attention of bears, fish-hawks and other enemies. As a rule the number of males is excessive, their reduction is a benefit, hence they not only fight most fiercely and thus perish, but are exposed to numberless dangers by reason of their striking colors.

A vast series of examples of animal colors, must at present be classed as *indifferent*. Like the bright tints of marble or agate, or the colors of the diamond, they seem to serve no purpose. The gorgeously tinted Nemerteans living in similar surroundings are of the most various hues. The rose pink of the Arctic Pteropods serves no apparent end, for they are most tempting food for many animals. I have found Copepods of a rich emerald color, while others are reddish or brown. The solitary frog has a rich topaz eye, the young *Cottus* shows a St. Andrew's cross over its iris, and all these instances are difficult to explain. The palate of the orang outan is black, while that of the chimpanzee is bright