

that which may be distinguished as "*Physiological*" coloration. Thus the transparent colorless embryo bird acquires a pale pink tint, when red blood first begins to circulate through the rudimentary body. Red blood as in the *Chironomus* larva imparts color, as also does red blood and green blood in many Annelids. Doubtless the Chlorocruorin in the green blood has a physiological function similar to the Tetronerythrin in yellow sponges. Tetronerythrin converts oxygen into ozone. Oddly enough it is the substance to which the feathers of many birds owe their orange color. The Gephyrean *Bonellia* and the Coelenterate *Hydra viridis* owe their color to minute plant-like bodies filled with green chlorophyll granules. In many Planarians the same green particles occur and Professor Geddes proved that by them oxygen was liberated as indeed Dr. Joseph Priestley, towards the end of the eighteenth century, had discovered, finding that the carbondioxide in sunlight was broken up and the oxygen given off.* Some colors are "*Morphological*" or due to features in the anatomy of animals. Many shrimps appear patched with color. A dark patch in the cephalothorax is produced by the liver; and their viscera appear as color-masses. The longitudinal dark stripe down the back of the zebra follows the course of the spinal cord, while the white stripes on the face of the tiger coincide with the branches of the infra-orbital nerves.

Closely allied to physiological coloration is that which may be called "*Pathological*." White animals such as white crows, hawks, peacocks, † moles, eels &c., are abnormal, and known as albinos. Usually the eyes are red owing to the absence of pigment in the retina, as in the rest of the body, though white cats may have blue eyes, are usually deaf, as Darwin found out, and as a rule are tom-cats as Lawson stated. A white hedgehog (*Erinaceus*) i. e. one with the usually brown acuminate spines as white as ivory, was found to lack the normal integumentary nerve twigs. Albinos are evidently abnormal in regard to their peripheral nerve supply.

* Brandt regards such green particles in animals as parasitic plants in the tissues, or rather commensals supplying oxygen to the host.

† The surface of the feathers in the white peacock shows the 'eyes' and usual pattern just as a black horse shows a dappled pattern or glistening spotted appearance.