

considerable friction must be applied to remove them from the surface of the spot. Neither the white nor the black hairs differ from the hairs of similar colour found on the elytra and other portions of the body. The hairs do not ordinarily grow singly, but bundles usually of from two to five spring from the same point, and at the base of each bundle there is a depression in the chitin; these depressions give the bared chitin an appearance as if etched with acid. The black hairs are dull black, the chitin shiny black.

Under the "eye-spot" the chitin is somewhat thicker than that of the remainder of the thoracic covering. In common with the chitin of the remainder of the thoracic portion, that of the eye-spot is divided into three layers. The outer layer is quite thin, hard, brittle, opaque and jet black, and probably forms a kind of enamel; the second layer is thicker, dark brown in colour, and dense and hard; the inside layer is softer, lighter in colour, and very tough; it is the thickest of the three layers, and appears to be somewhat vascular near its inner surface, though this appearance may be due to muscular attachments at this point. Directly under this inmost layer are the muscles of the thoracic cavity, in which could be seen the usual respiratory tracheæ. No special structures were observed, and certainly nothing suggesting the structures found in luminous organs. Certainly none of the specimens the writer has seen alive has been luminous.

While these spots appear to be somewhat more than merely a portion of the general scheme of pigmentation, it seems hardly likely they represent any special sense organ. The thickened chitin is opposed to this view. It may, of course, be a rather extraordinary development of protective colouration. In this connection it is of interest to note that related insects are found in various portions of North America, in some of which there is much more of the white colouration, with more pronounced "eye-spots" than in *oculatus*, while in some others these spots have dwindled until they are mere black specks.

Somewhat related to this question in *Alaus* is that of the yellow spots on the elytra of the Indian Buprestid, *Chrysochroa ocellata*, which Latreille reported to be luminous, and in which he has been followed by a number of writers. Through the kindness of Mr. H. S. Barber, of the National Museum, I was permitted to examine specimens of this insect and closely-related species. This large and beautiful insect is coloured mainly in rich tones of red, blue and green-gold; each elytron, however, bears a large, almost circular yellow spot, which lacks the metallic lustre