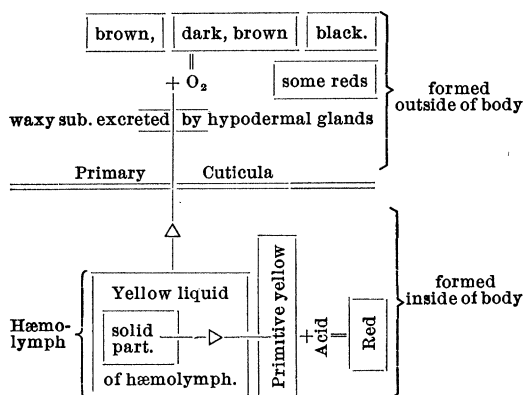


red is the acid differential of the yellow pigment. Acid may come from acid formed by metabolism (uric acid) or secreted by special cells.

Brown, dark brown and black are due to the oxidation of the yellow waxy pigment.

I may express the relation of these pigments in the following diagram :



*Notes on mammalian embryology:* CHARLES S. MINOT.

The author exhibited drawings, wood engravings made in Germany, and lantern slides illustrating the development of the pig. The work has been done in connection with the preparation of an 'Introduction to Embryology' for the use of students, intended for practical work. It is proposed to study a few of the most typical stages in a series of carefully selected typical sections, and to connect the descriptions of these sections with explanations of the relations of the embryonic organs to the adult anatomy on the one hand, and to the germ layers on the other. The principal engravings are being made by Probst in Brunswick, the author believing that the German method of wood engraving is better adapted to the representation of sections of embryos than are either the 'process' methods, or the American style of wood engraving.

*On the spermatogenesis of Peripatus:* THOS. H. MONTGOMERY, JR.

The spermatogenesis of *Peripatus balfouri* Sedg. is interesting, first, because it has essentially the type of that of Insects (as distinct from that of Crustacea as known for the Copepoda), and second, because the character of its cells is very favorable for the determination of the stages which occur in the synapsis stage (an anaphase of the last spermatogonic division). The reduction of the number of chromosomes (from 28 to 14) takes place in the early synapsis by a fusion end to end of every two chromosomes, those ends of the chromosomes joining together which are situated nearest that point of the cell where the centrosomes lie. Each resulting bivalent chromosome has the form of a U or V, whereby the bend or angle of the U or V is the point of union of two univalent chromosomes; this point of union is effected by a band of linin which appears to be a remnant of that continuous linin spirem thread present in the preceding prophase of the spermatogonic division. Later the two arms of each bivalent chromosome become longitudinally split. The chromosomes appear to preserve their separateness (individuality) during the following rest stage. In the first spermatocytic division each bivalent chromosome becomes transversely split (through the linin band joining its two component univalent chromosomes); in the second spermatocytic division each (now univalent) chromosome becomes longitudinally split. This account serves merely as a brief preliminary note to observations which will be soon published *in extenso*.

*Palæmonetes and salinity; an experimental study in evolution:* ROSWELL H. JOHNSON and ROBERT W. HALL.

A common shrimp on our Atlantic coast, *Palæmonetes vulgaris*, is provided with small spines on the beak or rostrum. These