The avian eggshell colouration is caused by specific pigments deposited into the eggshell. These pigments differ in colour, chemical structure and the eggshell deposition place. The function of the eggshell pigmentation is traditionally considered to have cryptic or thermoregulatory role. However, most recent hypotheses provide a new perspective on the function of eggshell pigmentation. As between species variability in the eggshell pigmentation is under strong genetic control, within species variability is considered to be a result of adaptation to environmental factors affecting physiology of female bird. This work focuses on the description and characteristics of particular eggshell pigments, their synthesis, deponation process and also the importance of variability in the avian eggshell pigmentation and its physiological aspects.