Codophila varia (Fabricius, 1787) (Heteroptera: Pentatomidae) is economically important species in most of Europe countries and in Turkey where it feeds on umbelliferous and graminaceous culture plants and also on weeds. The aim of present study is to investigate the reproductive morphology and histology of the male reproductive system of C. varia. Adult males of C. varia were collected from Ankara, in July 2011, Turkey. Structure of the male reproductive system of C. varia is studied morphologically and histologically using both light and scanning electron microscope. The male reproductive system of C. varia consists of two testes, two vas deferentia, two seminal vesicles, two ectodermal sacs, one ejaculatory bulb, one ejaculatory duct and a pair of accessory glands. Paired testes lie on either side of the digestive tract. The testes are lined with the tunica propria and peritoneal sheath with embedded tracheoles. The red pigmented testis is roughly oval and consist of seven testes tubules which enter the vas deferens. Three development zones were noted within the testes tubules; the growth zone, the maturation zone, the differentiation zone. The spermatozoa migrate to the vas deferens, they are transferred to the seminal vesicle. Vas deferens, which extend posteriorly from the testes to the seminal vesicle, are also red pigmented. The vas deferens and the seminal vesicle are same. The walls of vas deferens and seminal vesicle consist of an inner layer of simple epithelium which is surrounded by a network of muscle fibers extending in various directions. The seminal vesicle receives and stores the spermatozoa. Seminal vesicle are connected with the anterior medial portion of the ejaculatory bulb, which is covered by the investing epithelium and thrown into folds. Ejaculatory duct extends from the base of the ejaculatory bulb to the aedeagus. There are multiple accessory glands in C. varia which are situated in the posteroventral region of the male, milk white in color and sack-shaped. The accessory glands consist of three different parts: the muscle layers or muscularis, the secretory epithelium and the lumen. It is continuous with the aedeagus and covers the cuticle. In this study, we tried to explain the morphology and histology of male reproductive system of C. varia for obtaining the key information for future research about the reproductive biology of the Heteroptera.
Fig. 1: Spermatogonia in Codophila varia testis

Fig. 2: Spermatocytes and spermatids in Codophila varia testis

Fig. 3: Spermatids and spermatozoa in Codophila varia testis

Fig. 4: Bulbus ejaculatorius, ductus ejaculatorius and accessory glands in male reproductive system of Codophila varia