

## **Abstract**

Sexual selection is an important mechanism of evolution. In addition to precopulatory sexual selection, arising when males compete for female partners, there is also postcopulatory sexual selection (sperm competition), when females copulate with more males. Even though most avian species are socially monogamous, most of them are also partially promiscuous. In such species, sperm competition is an important factor increasing variability in reproductive success between males. Male's success in sperm competition is primarily determined by sperm concentration, total sperm count and morphology and motility of spermatozoa.

My bachelor thesis summarizes knowledge about the hormonal and physiological mechanisms that influence semen quality. This is especially the effect of sex and other hormones, physiological and oxidative stress, environmental conditions, antioxidant mechanism and composition of sperm cell membrane. Besides evaluating their influence on ejaculate quality on intraspecific level, I also describe their differences between avian species with respect to the differences of sperm competition.