Abstract: Female promiscuous behaviour has been observed in many vertebrate groups but its evolution and potential benefits to promiscuous females remain unclear. To explain female promiscuous behaviour, both adaptive and non-adaptive hypotheses have been proposed. According to adaptive hypotheses, females are promiscuous, because they gain benefits through multiple male copulations. These can further be divided into direct benefits hypotheses, where females are assumed to benefit directly from promiscuity by gaining more resources to themselves and improving their own survival, and indirect (genetic) benefits hypotheses where fitness gains to promiscuous females are through improved quality of their offspring. In contrast, according to non-adaptive hypotheses, females do not gain any benefits from promiscuous behaviour and female promiscuous behaviour is a result of male offensive strategies to gain paternity. Adaptive hypotheses, especially those concerning genetic benefits, are highly debated and existing studies often differ in their conclusions. The aim of this thesis is to provide a review of studies evaluating adaptive and non-adaptive hypotheses to explain female promiscuous behaviour in vertebrates.

Key words: Promiscuity, sexual conflict, sperm competition, good genes, genetic complementarity, extra-pair offsprings, adaptive hypotheses, direct benefits, indirect benefits