Schistosomes, the parasitic worms that cause schistosomiasis, are well-known immunomodulators. A key feature of schistosomes is their ability to alter immune responses and inflammation at sites distal to their infection site. Given the significant geographical overlap between helminth infections and sexually transmitted infections (STIs), an area of biological and clinical relevance is how schistosomes might modify the female reproductive tract (FRT) microenvironment. It is well documented that infection with the bladder vasculature-dwelling *Schistosoma haematobium* can cause huge FRT damage, leading to infertility and increased susceptibility to STIs due to urogenital egg entrapment. However, it is not known whether any modulatory effects are observed in infection with intestinal vasculature-dwelling *S. mansoni*. Remarkably, we have discovered that murine *S. mansoni* infection induces dramatic and infection intensity-dependent uterine atrophy that coincides with perturbation of the estrous cycle, with a disproportionate number of infected mice in the proestrus stage. Associated with dramatic physiological changes in uterine size was a significant reduction in total uterine immune cells, including a near-complete loss of eosinophils. However, remaining FRT immune cells showed enhanced expression of canonical type 2 markers during *S. mansoni* infection. Furthermore, RNA sequencing analysis of the uteri of schistosome-infected mice has provided novel transcriptomic insight into how the uterine environment is affected by intestinal schistosomiasis. We identified over 500 differentially expressed genes between infected and naïve mice, with many of these related to sex steroid signalling, angiogenesis, and type 2 immunity. In ongoing and future work, we aim to identify which mechanisms are responsible for these schistosome-induced systemic effects and establish whether the infection-altered uterine physiology and FRT immune environment leads to changes in physiological processes, such as pregnancy.