Relaxed Sexual Selection Following Introduction In The Small Indian Mongoose (*Herpestes auropunctatus*). M. Aaron Owen[1,2], Yadvendradev Jhala[3], David C. Lahti[1,2].

1. Department of Biology, Queens College CUNY 2. Department of Biology, The Graduate Center CUNY 3. Department of Animal Ecology and Conservation Biology, The Wildlife Institute of India

Sexual selection is the portion of natural selection relating to individual differences in the ability to acquire mates. Theory predicts that in nature, where resources are assumed to be limited, sexually selected traits should be condition-dependent such that only those in the best condition (i.e., highest energy reserves) can produce the best signal, representing a true indication of their quality. However, in rare situations of stable resource abundance, such as after introduction, a large majority of individuals are capable of obtaining a high condition, and can produce a dishonest signal of high quality. In this situation, we might predict that the utility of such traits will decay, relaxing sexual selection, and ultimately leading to the traits' reduction or loss. We test this prediction in the small Indian mongoose (*Herpestes auropunctatus*) by investigating changes in the anal pad, a sexually selected trait, between populations from the ancestral range of India, where resources are limited, and an introduced population in Hawaii, where resources are abundant. In line with a predicted relaxation of sexual selection, we found that Hawaiian males possessed a higher level of condition, and that despite them being larger in size, their anal pads were only 68% the size of Indian males. Additionally, the level of condition dependence of the anal pad was markedly weaker in Hawaiian males than Indian males. Strong additional support of our hypothesis stems from the lack of differences observed between Indian and Hawaiian females because the anal pad is not under sexual selection in females.