

From Parker TH, Barr IR, Griffith SC, 2006. The blue tit's song is an inconsistent signal of male condition. Behav Ecol 16: 10.1093/beheco/arl041:

It is often assumed that male sexual displays, such as bright feathers or song, signal the male's condition or quality. However, evidence in this regard is mixed, and a number of alternative models of the evolution of sexual displays do not predict condition-dependence. We examined the relationship between various measures of condition and songs in male blue tits (*Cyanistes caeruleus*), a small European songbird. None of the song variables were related to blue tits' ultraviolet-blue plumage, a display previously demonstrated to be a sexual signal. We found some evidence that the song variables we measured signaled male quality. There were correlations between body size and certain song traits, though neither male age nor male survival to the subsequent breeding season was related to song. We combined our results with previously published results comparing blue tit song to male quality variables using meta-analysis and found that a few song measures were correlates of male quality, though as in our field data, neither male age nor survival appeared related to song. Our relatively large sample sizes (>60), combined with our meta-analytical integration of 89 statistical tests, make the results regarding the signaling value of our measured components of blue tit song robust. These results demonstrate that (1) only certain aspects of signal variation may be condition dependent, and (2) even when components of a sexual signal appear correlated with condition in some studies, these signal components may be unrelated or inconsistently related to a variety of condition indices.